



Harmony *i*PC

Industrial PC, Edge Box and Display

schneider-electric.com

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Harmony

Discover Harmony

Advanced operator interface and industrial relays

Harmony operator interface and industrial relays enhance operational efficiency and equipment availability across industrial and building applications. **Harmony** includes intelligent connected products and edge terminals that visualize, gather and process data, enabling informed operator decisions.

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- [Harmony Signaling Devices](#)
- [Harmony Electrical Relays](#)
- [Harmony Safety](#)

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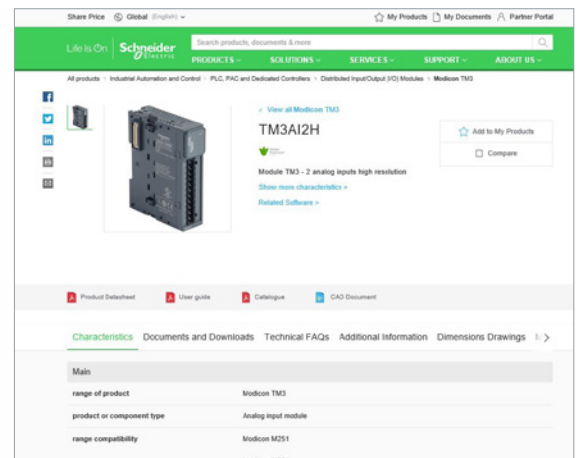
Quick access to product information

Get technical information about your product

References

Modicon TM3
I/O expansion modules for Modicon controllers
Analog I/O modules

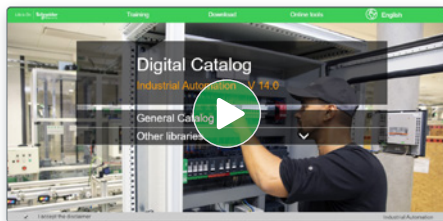
Number and type of channels	Input range	Output range	Resolution	Input terminal (pin)	Reference	Weight (kg)
2 enhancement inputs	-10...+10 VDC 0...20 mA, 4...20 mA	10 mA or 10 mA + sign	12 bits or 12 bits + sign	28/29	TM3AI2H	0,100
4 enhancement inputs	-10...+10 VDC 0...20 mA, 4...20 mA	10 mA or 10 mA + sign	12 bits or 12 bits + sign	28/29	TM3AI4H	0,100
4 enhancement or temperature inputs	-10...+10 VDC 0...20 mA, 4...20 mA Thermocouples (PT100, RTD, Ni100, Ni200, Pt100, Pt200) -10...+10 VDC 0...20 mA, 4...20 mA	10 mA or 10 mA + sign	12 bits or 12 bits + sign	28/29	TM3AI4T	0,100
4 differential temperature inputs	Thermocouples (PT100, RTD, Ni100, Ni200, Pt100, Pt200) -10...+10 VDC 0...20 mA, 4...20 mA	10 mA or 10 mA + sign	12 bits or 12 bits + sign	28/29	TM3AI4D	0,100
2 enhancement	-10...+10 VDC	10 mA or 10 mA + sign	12 bits or 12 bits + sign	28/29	TM3AI2H	0,100



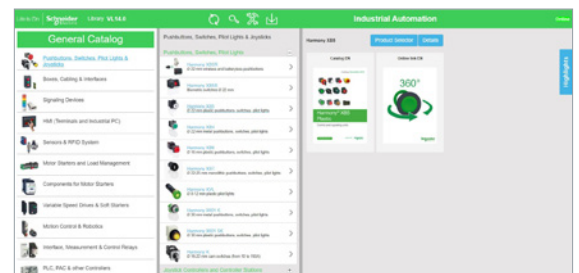
Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

Find your catalog



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- > Consult digital automation catalogs at [Digi-Cat Online](#)

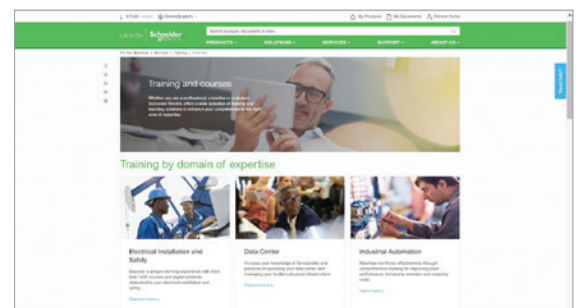


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General presentation and selection guide

Harmony Industrial PC, Edge Box and Display

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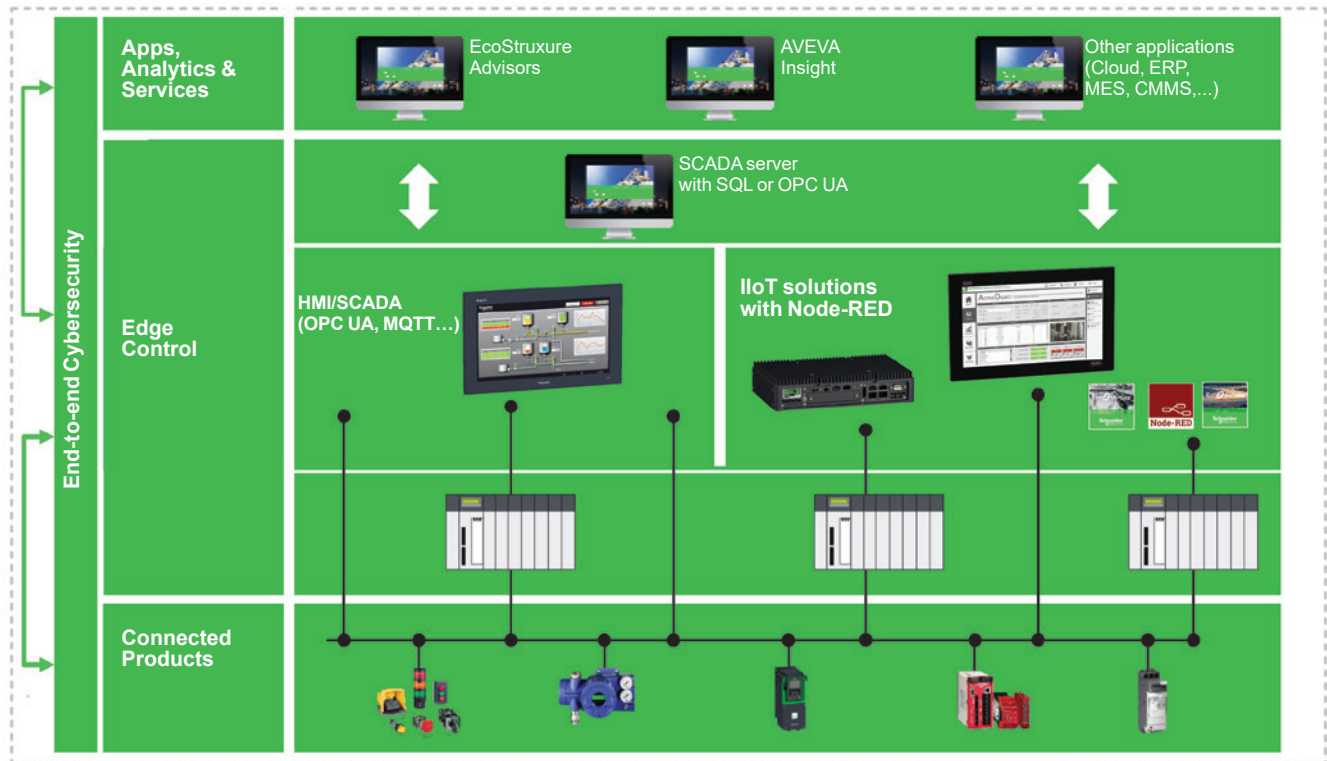
Harmony iPC

Delivering the best Digital eXperience at the edge of EcoStruxure

Harmony industrial PCs, Edge Box, and Displays, running at the Edge Control level of EcoStruxure, improve your productivity and performance with data management functionality and flexibility. Optimized box and display modularity offers a wide choice and ease of screen replacement.

They deliver the next stage of your digital transformation and experience by leveraging asset performance with end-to-end cybersecurity for more efficient operation and maintenance of capital assets.

EcoStruxure Architecture



Smart design and engineering

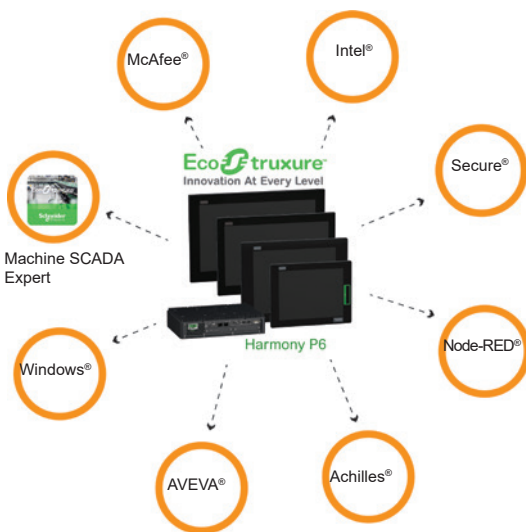


Harmony P6 shortens implementation time for automation engineers and is more economical throughout the life cycle with optimized design and ease of maintenance.

The online Harmony P6 Product Selector with enlarged line-up offers many possibilities and when linked with EcoStruxure Plant Builder eases the design of complete automation architectures and solutions. Fast deliveries from the regional Flex center speed up commissioning of exact fit applications.

Harmony P6 industrial PCs and Edge Box are available with preferred software associations that are tested and validated with the optimum hardware configuration. Ultimately, they can be delivered as pre-installed bundles with activation licenses. This offer is versatile and open to applications running Windows software at the edge like HMI, SCADA, IIoT Edge, engineering and maintenance tools, thin clients, etc.

There are numerous software applications that can run on Harmony P6 industrial PCs and Edge Box with Windows or Linux operating systems. For examples of recommended associations and delivery models, see [page 1/4](#).



+ Simplify your machine interfaces with intuitive Harmony iPCs



Cybersecurity

Harmony P6 industrial PCs and Edge Box are ready with end-to-end cybersecurity systems to help protect data and assets. They are validated according to the ISA/IEC-62443 international cybersecurity standard for industrial automation and control:

- Designed according to standard guidelines for security analysis, threat model and tests, user documentation, etc.
- Compliant with Achilles certification and McAfee Whitelisting is available as an option
- Hardware encryption of operating system, storage, and passwords can be activated with Windows BitLocker running the TPM (available default) on the mother board
- Secured boot and Secured operating system settings (passwords, patches, etc.)

Harmony P6 industrial PCs and Edge Box are also validated with EcoStruxure Secure Connect Advisor to create end-to-end cybersecured infrastructure for remote connection to automation sites in the field.

Asset performance

Harmony P6 industrial PCs and Edge Box deliver a new Digital eXperience at the Edge. They leverage asset performance with predictive maintenance, IIoT Edge to Cloud connection, Smart Factory, and Digitization, meeting the increasing demands of data management, analytics, and dashboards at the edge.

There are two main IIoT architectures that can run on Harmony P6:

- HMI and SCADA software visualization and connections with drivers available on software like OPC UA and MQTT
- IIoT solutions with Node-RED running Schneider nodes or more advanced IIoT software making the data wiring of the connected products to the apps, analytics, and services at the IT and cloud levels



Workforce empowerment

With associated software, Harmony P6 provides optimum visualization and control enhancing the operator experience. The offer leverages operator responsiveness with high-performance quad-core Intel CPUs to maximize business opportunities.

The stylish wide displays provide high visibility during operation and feature:

- Glass-top capacitive multi-touch panel with narrow frame and thin design
- Innovative configurable and noise-resistive touch drivers with three mode settings: default standard mode, glove mode with higher touch sensitivity, and water detection mode canceling the abnormal touch input

The modularity of Harmony P6 industrial PCs and Edge Box creates exact fit Box PCs, Panel PCs, and monitors, allowing the configuration to be adapted for each use, while keeping the same operator environment. This consistency of operator workstations at the edge ensures optimum ergonomics throughout the application.



Investment continuity

Harmony P6 industrial PCs and Edge Box provide investment continuity along their life cycle. They are as robust as an industrial HMI panel in terms of asset reliability and optimization.

They are designed to ensure reduced failure rate, easy maintenance and replacement, advanced certification, and redundant storage, with configurable and noise-resistive wide touch screens, supporting a long life cycle.

Harmony P6 industrial PCs and Edge Box bring a new customer experience to help ensure business continuity with easy selection and migration from legacy products, expanded services support, and regional Flex centers delivering supply chain efficiencies for both new machines and spare parts, and faster repairs.

1



Harmony Edge Box PCs



Harmony HMIDM Modular Display



Harmony HMIDAD Display Adapter



Harmony HMIP6 Modular Boxes

Harmony Edge Box family

Harmony HMIBSC/HMIBMI/HMIBMO can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

Harmony HMIBSC Core

- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port, 1x HDMI
- Qualcomm ARM Cortex-A53 quad-core fanless processor
- 1x full-size mini PCIe slot with optional interface, 1x M.2 slot for extension, 1x SD card slot
- Node-RED

Harmony HMIBMI Basic

- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model

Harmony HMIBMO Optimized

- 2 Gigabit i210 Ethernet, 1x RS-232/422/485, 4x USBs, 2x display ports
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model

Harmony HMIDM Modular Displays are the companion of Harmony Edge Box. They can be mounted directly on the Box PC or remotely via cables. This modularity not only allows multiple variations with reduced inventories, it also facilitates maintenance. The Box PC or the Display can be easily replaced without changing the complete Panel PC unit.

Harmony HMIDM Modular Display

- 4:3 12" and 15" single-touch resistive with front USB
- 16:9 12"/15"/19"/22" multi-touch projected capacitive technology, 7H hardness, anti-scratch
- IP66, NEMA 4X indoor front panel

With the Harmony HMIDAD Display Adapter, the Harmony HMIDM Modular Display can be used as a:

- Local display (over a maximum distance of 5 m/16.4 ft)
- Remote display (up to 4 daisy chain displays with the same screen definition, and over a maximum distance of 100 m/328 ft for the first display to 400 m/1,312 ft for the fourth display)



Harmony P6 industrial PC family

Harmony P6 Box PC modularity facilitates fast deliveries, multiple choices, and easier mounting. They are available in a 4 Box PC format running on Windows 10 operating system. All the 4 Boxes can be mounted on a modular display to make a Panel PC.

Harmony HMIP6 Modular Box PC

- 2x IEEE 1588, 1x RS-232C non-isolated, USB Type A (2x USB 2.0 and 2x USB 3.0), USB Type C (1x USB 3.0), 1x display port
- Intel Core™ i7-8665UE, Intel Core™ i5-8365UE, Intel Celeron® 4305UE, and Intel Core™ i3-8145UE processors with up to 32 GB RAM
- 1x PCI + 1x PCIe, 2x PCIe or 2x PCI expansion slots, 1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD) storage slots

+ Harmony P6 → Make the most of data to drive profitability, efficiency, and productivity



Harmony P6 Modular Display



Harmony HMIDID iDisplay

Harmony P6 industrial PC family (continued)

Harmony DM6 15" and 19" Wide Modular Displays are multi-touch capacitive screens enabling navigation like on a smartphone or tablet. The 12" and 15" 4:3 Modular Displays have resistive technology for heavy gloves and to facilitate mounting in legacy systems, but also benefit from innovative multi-touch screens.

Harmony HMIDM6 Modular Display

- 4:3 12" and 15" multi-touch resistive with front USB
- 16:9 15"/19" multi-touch projected capacitive technology
- Wide Modular Display supports Standard mode, Glove mode, and Water detection mode
- IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13

Harmony iDisplay

Harmony HMIDID iDisplays are robust monitors with an excellent screen size/dimensions ratio and can be used in conjunction with Edge Box, industrial PCs or any third-party PCs. They have the same cut-out dimensions as Harmony Panel PCs and Harmony HMI operator panels, which makes it easy to upgrade installations.

Harmony HMIDID iDisplay

- 12" and 15" size color TFT LCDs
- 1x USB on front panel, 1x DVI-D video, 1x USB
- IP67/66 and NEMA 4X front screen
- Industrial certifications (hazardous location and marine)

Harmony associated software

Numerous software applications can run on Harmony P6 industrial PCs and Edge Box with Windows 10 or Linux operating systems for digital plants and machines. The table below shows some examples of recommended associations and delivery models.

For more information on supported software, refer to the following catalogs:
 EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#))
 EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#))
 EcoStruxure Augmented Operator Advisor ([DIA5ED2190301EN](#))

Applications for digital plants and machines		Edge Box Core (ARM)	Edge Box (Atom)	P6 Standard (i3)	P6 Advanced (Celeron, i5, i7)	Software association
Workforce Empowerment	EcoStruxure Machine SCADA Expert (RT)	-	***	**	*	Configured pre-installed* and Repetitive Kitting
	Plants SCADA Expert (AVEVA standalone RT)	-	-	***	***	User install and Repetitive kitting
	Thin Clients for SCADA, MES, etc.	-	***			Windows RDS
	Augmented Operator Server	-	***	**	**	TVDA and Repetitive kitting
Asset Performance	IIoT wiring at the Edge	***	**	*	*	Node-RED in OS image
	IIoT Starter Pack	***	**	*	*	Services and projects (On demand support for dedicated projects. Please contact your Customer Care Center)
	EcoStruxure Plant Data Expert (1)	-	**	**	**	
	Condition Manager (1)	-	**	**	**	
	Pumping Advisor	***	**	*	*	
Cyber security	Secured remote connections	***	**	*	*	Starter Kit, configured, repetitive Kitting
	Third-party applications	***	**	***	***	User install and repetitive Kitting

* Recommended (1) Available in 2021

+ Enhances the user experience and improves productivity

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPSO S-Panel and
HMIPEP Enclosed Panel PCs

Type of Harmony iPC

Harmony HMIPSO S-Panel PC
HMIPSO Optimized



Fanless	★★★★★
Mounting type	Panel PC
Display	W10" multi-touch projected capacitive screen
Touch screen	W10": HD WSVGA, 1280 × 800 pixels
Definition	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch
Front protection	Intel® Atom E3827 dual-core (1.75 GHz)
CPU	Processor
Expansion slots	1x optional full-size mini PCIe slot with optional interface slot (1)
Storage	CFAST card ≥ 32 GB, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF (1), or HDD hard disk ≥ 500 GB Enterprise 24/7 (1)
RAM	4 GB (not user-expandable)
Hot-swap RAID HDD and battery backup	–
Operating system	None, or Windows 8.1 Industry (64-bit Multi-language) (2) (4), or Windows 10 IoT Enterprise (64-bit Multi-language)
Supply voltage	24 V ~ (± 20%), AC power supply with external AC/DC power adapter HMIYPSOMAC1
Standards and certifications	CE, cULus (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
Software	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), EcoStruxure Secure Connect Advisor (5)
References	HMIPSO●552D1●01
Pages	2/2
Configured-To-Order	See configured Harmony S-Panel PC on page 2/13

(1) With HMIYPADPSOSTO1 expansion kit for HMIPSO allowing 1 HDD/SSD slot and 1 mini PCIe slot.
(2) Windows 8.1 requires user activation.
(3) To be installed and activated by unlimited license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).

Harmony HMIPEP Enclosed Panel PC
HMIPEP Performance



Fanless	★★★★★
Mounting type	Enclosed PC
Display	W19" multi-touch projected capacitive screen
Touch screen	HD WFXGA, 1366 × 768 pixels
Definition	IP66 on all 6 faces, NEMA 4X indoor, and 7H hardness anti-scratch
Front protection	Intel Core™ i3-4010U dual-core 4 th generation (1.7 GHz)
CPU	Processor
Expansion slots	1x full-size mini PCIe slot
Storage	SSD flash disk ≥ 128 GB with 1.5 million hours MTBF
RAM	8 GB (not user-expandable)
Hot-swap RAID HDD and battery backup	–
Operating system	None, or Windows 8.1 Industry (64-bit Multi-language) (2) (4), or Windows 10 IoT Enterprise (64-bit Multi-language)
Supply voltage	24 V ~ (± 20%), AC power supply with external AC/DC power adapter HMIYPSMAC1
Standards and certifications	CE, cULus (UL IT 60950, CSA IT 60950), RCM, EEcoStruxure Secure Connect Advisor, CCC, FCC (part 15 EMC Class A)
Software	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), EcoStruxure Secure Connect Advisor (5)
References	HMIPEP●952D1●01
Pages	2/4 and 2/6
Configured-To-Order	See configured Harmony S-Panel PC on page 2/13

(4) With Configured-To-Order Harmony S-Panel PC.
(5) To be installed and activated with subscription.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box/Modular Box PC

Type of Harmony Edge Box and iPC

Harmony HMIBSC Core Box



Fanless	★★★★★
Mounting	Box PC Panel PC
CPU (1)	Processor Expansion slots, interfaces Storage RAM Battery backup
Operating system (1)	Linux Yocto
Conformal Coating	Only for HMIBSCEA53D1L0A
Supply voltage	12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1
Standards and certifications	CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
Software, IIoT and Cybersecurity	Secure password boot, Node-RED pre-installed, TPM for Cybersecurity (5)
References	HMIBSCEA53D1L0
Pages	3/6 and 3/7
Configured-To-Order	See configured Harmony Modular Box PC on page 4/22

(1) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.
 (2) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.
 (3) To be installed and activated by unlimited license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
 (4) M.2 SSD 1.5 Millions H. MTBF, 3 years manufacturer warranty.
 (5) Cybersecurity TPM optional module HMIYBINLTPM201 for hardware encryption with Linux.

Harmony HMIBM Modular Box

HMIBMI Basic IIoT			HMIBMO Optimized	
★★★★★			★★★★★	
HMIBM Box wall/book/DIN rail/Flat			HMIBM Box wall/book/ DIN rail/ Flat	
HMIBM Box + associated HMIDM Display (9)			HMIBM Box + associated HMIDM Display (9)	
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz			Intel Atom Apollo Lake E3930 dual-core 1.8 GHz	
1x mini PCIe full slot with optional interface			1x mini PCIe full slot without optional interface	1x mini PCIe full slot with optional interface
64 GB eMMc (soldered)	128 GB eMMc (soldered)	128 GB eMMc (soldered)	64 GB M.2 SSD (4) or None	250 GB M.2 SSD (4) or None
4 GB (not user-expandable)			4 GB (not user-expandable)	4 GB or 8 GB (not user-expandable)
Optional			Optional	
None or Windows 10 IoT Enterprise LTSC (64-bit)	Windows 10 IoT Enterprise LTSC (64-bit)	None or Configured-To-Order offer	None or Windows 10 IoT Enterprise LTSC (64-bit)	None or Windows 10 IoT Enterprise LTSC (64-bit)
No	No	Yes	No	Only for HMIBMO0A5DDF10A
12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1			12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1	
CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)			CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus Hazardous locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx Hazardous Locations 3GD Zone 2/22, Marine DNV (without HDD)	
EcoStruxure Operator Terminal Expert (3), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED pre-installed/to be installed (7) or None	EcoStruxure Operator Terminal Expert (3), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None	None or Configured-To-Order offer	EcoStruxure Operator Terminal Expert (3), EcoStruxure Machine SCADA Expert Run Time (11), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None	EcoStruxure Operator Terminal Expert (3), EcoStruxure Machine SCADA Expert Run Time (11), EcoStruxure Secure Connect Advisor (10), McAfee whitelisting (6), TPM (8), Secure password boot UEFI, Node-RED to be installed (7) or None
HMIBMIEA5DD1 ●01	HMIBMIEA5DD110L	HMIBMIEA5DD100A	HMIBMOMA5DD1 ●01	HMIBMOMA5DDF10 ●
4/10			4/10	
See configured Harmony Modular Box PC on page 4/22				

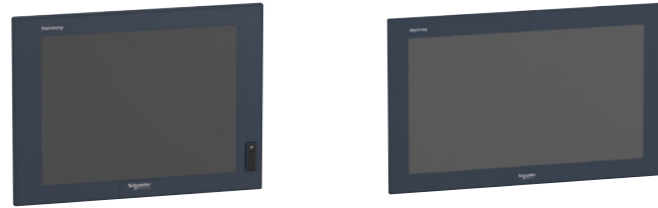
(6) McAfee whitelisting to be installed and requires license sticker HMIYMACWLIOT1.
 (7) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected).
 (8) Cybersecurity TPM optional module HMIYMINATPM201 for hardware encryption with Windows bit-locker.
 (9) For more information, refer to [page 1/10](#).
 (10) To be installed and activated with subscription.
 (11) With Configured-To-Order Harmony Modular Box PC.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display

Modular displays for Panel PC mounting

Harmony HMIDM Modular Display



Display	Touch screen	4:3 12" single-touch resistive	4:3 15" single-touch resistive	W12" multi-touch capacitive	W15" multi-touch capacitive
	Definition	XGA, 1024 x 768 pixels		WHD/WXGA, 1280 x 800 pixels	WHD/FWXGA, 1366 x 768 pixels
	Front protection	IP66, NEMA 4X indoor, and 7H hardness anti-scratch			
	Front USB port	1x USB 2.0 port		-	
Supply voltage		-			
Standards and certifications		CE, Marine DNV, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), CE ATEX and IECEx HazLoc 3GD Zone (15" only), FCC (part 15 EMC Class A)			
Marine certifications		-			
Compatibility		All HMIBM Modular Boxes			
Mounting	Panel PC	HMIBM Box + Associated HMIDM Display			
	Panel monitor	HMIDAD Adapter + Associated HMIDM Display			
References		HMIDM6421	HMIDM7421	HMIDM6521	HMIDM7521
Pages		4/17			

Harmony HMIDM Modular Display

Harmony HMIDAD Display Adapter (2)




W19" multi-touch capacitive	W22" multi-touch capacitive	HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: <input type="checkbox"/> Local display (maximum distance of 5 m/16.4 ft) <input type="checkbox"/> Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for first display to 400 m/1312 ft for fourth display)
WHD FWXGA, 1366 x 768 pixels	Full HD, 1920 x 1080 pixels	
IP66, NEMA 4X indoor, and 7H hardness anti-scratch		
-		
-		1x USB 2.0 (Type B), 1 display port
-		
CE, Marine DNV, CCC, EAC, RCM, cULus (UL IT 60950, CSA IT 60950), FCC (part 15 EMC Class A)		CE, cULus HazLoc, ATEX, CCC
-		-
All HMIBM Modular Boxes		All Harmony HMI Displays
HMIBM Box + Associated HMIDM Display		-
HMIDAD Adapter + Associated HMIDM Display		Harmony HMIDM Display mounted on front
HMIDM9521	HMIDMA521	HMIDADP11
4/17		4/21



Harmony iPC



Industrial PC, Edge Box, and Display

Harmony HMIP6 Modular Box and HMIDM6 Modular Display



Type of box	
Box	
Panel PC, Modular Display	
Type of cooling	
Fanless/Fan with HDD	
Mounting	
Box	
Panel PC, Modular Display	
CPU	
Processor	
Number of cores/threads	
Expansion slots	
Storage slots	
Memory capacity	
RAID HDD with Intel Rapid storage	
Cybersecurity encryption	
TPM 2.0 module (pre-installed)	
Operating system	
Windows® 10 IoT Enterprise 2019 LTSC (64-bit)	
Video controller type	
Intel® UHD Graphics 620 (integrated in CPU)	
Supply voltage	
12...24 V ~ or 100...240 V ~	
Standards and certifications	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2), DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Associated Software and Cybersecurity	
EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting	
References	
Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.	
Pages	
5/4	



Harmony HMIP6 Advanced Modular Box	
	
Fanless/Fan with HDD	
Wall/Book/Flat	
Yes	
Intel Core™ i7-8665UE, up to 4.4 GHz	Intel Core i5-8365UE, up to 4.1 GHz
4/8	
1x PCI + 1x PCIe, 2x PCIe or 2x PCI	
1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD)	
8 to 32 GB DDR4 RAM (not user-expandable)	
Yes	
TPM 2.0 module (pre-installed)	
Windows® 10 IoT Enterprise 2019 LTSC (64-bit)	
Intel® UHD Graphics 620 (integrated in CPU)	
12...24 V ~ or 100...240 V ~	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2), DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting	
Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.	
5/4	

Type of display	
Model	
4:3 12" touch screen	
4:3 15" touch screen	
	
	
Display	
Touch screen (TFT color)	
Definition	
Degree of protection (1)	
Surface design	
Touch mode configuration	
Front USB port	
Supply voltage	
From Box PC	
Standards and certifications (mounted on front panel of Box PC)	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2), DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Mounting	
Panel PC (with Box PC)	
Compatibility	
All Standard and Advanced Modular Boxes	
References	
HMIDM6600TM	
HMIDM6700TM	
Pages	
5/9	

Harmony HMIDM6 Modular Display	
4:3 12" touch screen	
4:3 15" touch screen	
	
	
4:3 12", resistive analog multi-touch (2 points)	
4:3 15", resistive analog multi-touch (2 points)	
XGA, 1024 × 768 pixels, 16 million colors	
IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13	
Plastic overlay	
Not applicable, because of resistive analog touch panel	
1x USB 2.0 (Type A) with front USB cover	
From Box PC	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2), DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC	
All Standard and Advanced Modular Boxes	
HMIDM6600TM	
HMIDM6700TM	
5/9	

(1) On the front panel when properly installed in an enclosure and not using the front panel USB port.

Harmony HMIP6 Advanced Modular Box		Harmony HMIP6 Standard Modular Box	
			
Fanless/Fan with HDD		Fanless/Fan with HDD	
Wall/Book/Flat		Wall/Book/Flat	
No		No	
Intel Celeron® 4305UE, up to 2.0 GHz	Intel Core i3-8145UE, up to 3.9 GHz		
2/2		2/4	
1x PCI + 1x PCIe, 2x PCIe or 2x PCI		-	
1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD)		1x M.2 SSD SATA, 1x 2.5-inch SATA (HDD/SSD)	
4 to 16 GB DDR4 RAM (not user-expandable)		8 to 32 GB DDR4 RAM (not user-expandable)	
Yes		-	
TPM 2.0 module (pre-installed)		TPM 2.0 module (pre-installed)	
Windows® 10 IoT Enterprise 2019 LTSC (64-bit)		Windows® 10 IoT Enterprise 2019 LTSC (64-bit)	
Intel UHD Graphics 610 (integrated in CPU)	Intel UHD Graphics 620 (integrated in CPU)		
12...24 V ~ or 100...240 V ~		12...24 V ~ or 100...240 V ~	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting		EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting	
Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.		Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.	
5/4		5/4	

Harmony HMIDM6 Modular Display		Harmony HMIDM6 Modular Display	
W15" touch screen		W19" touch screen	
			
W15", projected capacitive multi-touch (2 points) with optimized noise filter		W19", projected capacitive multi-touch (2 points) with optimized noise filter	
FWXGA, 1366 × 768 pixels, 16 million colors		FHD, 1920 × 1080 pixels, 16 million colors	
IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13		IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13	
Glass-top		Glass-top	
Yes (Standard mode, Glove mode, Water detection mode)		Yes (Standard mode, Glove mode, Water detection mode)	
-		-	
From Box PC		From Box PC	
All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC		On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC	
All Standard and Advanced Modular Boxes		All Standard and Advanced Modular Boxes	
HMIDM6700WC		HMIDM6800WC	
5/9		5/9	

(2) Available in H2 2021.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay

Modular displays for Panel PC mounting

Harmony HMIDID iDisplay - Remote monitors with DVI port



Display	Touch screen	12" color multi-touch resistive
	Definition	XGA, 1024 × 768 pixels
	Front protection	IP65
	Front USB port	1x USB 2.0 port
Supply voltage		12...24 V ---
Standards and certifications		CE, cULus, EAC, RCM, KC, ATEX/IECEX
Marine certifications		BV, CCS, DNV, GL, LR, RINA, ABS
Compatibility		All PCs with video port
Mounting	Panel PC	–
	Panel monitor	Yes
References		HMIDID64DTD1
Pages		6/5

(1) For more information, please refer to Harmony Display Adapter on page 4/18.

Harmony HMIDID iDisplay

Alternate Display option with Harmony HMIDAD Display Adapter (2)



Display	15" color multi-touch resistive	HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as:
	XGA, 1024 × 768 pixels	<input type="checkbox"/> Local display (maximum distance of 5 m/16.40 ft)
	IP65	<input type="checkbox"/> Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for first display to 400 m/1312 ft for fourth display)
	1x USB 2.0 port	1x USB 2.0 (Type B), 1x display port
Supply voltage	12...24 V ---	12...24 V ---
Standards and certifications	CE, cULus, EAC, RCM, KC, ATEX/IECEX	CE, cULus HazLoc, ATEX, CCC
Marine certifications	BV, CCS, DNV, GL, LR, RINA, ABS	–
Compatibility	All PCs with video port	All Harmony HMI Displays
Mounting	–	–
	Yes	Harmony HMIDM Display mounted on front
References	HMIDID73DTD1	HMIDADP11
Pages	6/5	4/21

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPSO S-Panel and
HMIPEP Enclosed Panel PCs

Harmony HMIPSO S-Panel and HMIPEP Enclosed Panel PCs

- [Selection guide](#) *page 2/2*
- **HMIPSO Optimized**
 - [Presentation](#) *page 2/6*
 - [Description](#) *page 2/7*
 - [References](#) *page 2/7*
- **HMIPEP Performance**
 - [Presentation](#) *page 2/8*
 - [Description](#) *page 2/7*
 - [References](#) *page 2/9*
- **References**
 - [Separate components](#)
 - [Drives](#) *page 2/10*
 - [Interfaces](#) *page 2/10*
 - [Accessories](#) *page 2/12*
 - [Configured-To-Order: Harmony HMIPSO/HMIPEP Panel PCs](#) *page 2/13*



Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPSO S-Panel PC
HMIPSO Optimized

Type of Harmony iPC **Harmony HMIPSO Optimized S-Panel PC**



Fanless		★★★★★	
Mounting type		Panel PC	
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen	
	Size	W 10.1"	
	Resolution	HD WSVGA, 1280 × 800 pixels, 267,000 colors	
	Degree of protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch	
	View angle	Vertical 160°, horizontal 160°	
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F	
	Operate with water on screen	Yes	
CPU	Processor	Intel® Atom E3827 dual-core (1.75 GHz, low power)	
	Storage	Main drive	SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF) (1)
		Slots	<input type="checkbox"/> 1x CFast card slot <input type="checkbox"/> 1x 2.5" SATA HDD/SSD storage slot, user-accessible (1)
	Expansion kit (1)	Default	
	RAM	4 GB DDR3 (not user-expandable)	
	Integrated ports		<input type="checkbox"/> 2x RJ45 Ethernet 10/100/1,000 Mbps <input type="checkbox"/> 1x USB 3.0 (Type A), 1x USB 2.0 (Type A) <input type="checkbox"/> 1x RS-232, 1x RS-232C/422/485
		Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s
Operating system		Windows 10 IIoT Enterprise (64-bit Multi-language)	
Power supply	Supply voltage	24 V \pm (± 20%). AC power supply with external AC/DC power adapter HMIYPSOMAC1.	
	Current consumption	1.9 A typical	
Dimensions	Overall (W × H × D)	283.1 × 202.3 × 61.3 mm (11.15 × 7.96 × 2.41 in.)	
	Mounting cut-out (W × H) with snap hook (3)	274.6 × 193.8 mm (10.81 × 7.63 in.)	
Temperature	During operation (1)	0...55 °C/32...131 °F	
	During storage	-30...70 °C/-22...158 °F	
Vibration resistance	During operation	2 g from 5...500 Hz with SSD/CFast and 1 g from 5...500 Hz with HDD	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSAIT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software		EcoStruxure Operator Terminal Expert (2) EcoStruxure Machine SCADA Expert (4), EcoStruxure Secure Connect Advisor (5)	
References		HMIPSOS552D1801	
Pages		2/7	
Configured-To-Order		See configured Harmony Optimized S-Panel PC on page 2/13	

(1) HMIYPADPSOSTO1 expansion kit for HMIPSO allowing 1 SATA HDD/SSD slot and 1 mini PCIe slot with its optional interface slot. Mini PCIe is limited to 0...45 °C/32...113 °F operating temperature.
 (2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
 (3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

Harmony HMIPSO Optimized S-Panel PC



Fanless		★★★★★	
Mounting type		Panel PC	
Screen	Type	LED LCD 5-point multi-touch projected capacitive technology screen	
	Size	W 10.1"	
	Resolution	HD WSVGA, 1280 × 800 pixels, 267,000 colors	
	Degree of protection	IP66 front panel, NEMA 4X indoor, and 7H hardness anti-scratch	
	View angle	Vertical 160°, horizontal 160°	
	Backlight	Life span > 50,000 hrs @ 25 °C/77 °F	
	Operate with water on screen	Yes	
CPU	Processor	Intel® Atom E3827 dual-core (1.75 GHz, low power)	
	Storage	Main drive	HDD hard disk ≥ 500 GB Enterprise 24/7 (1) --
		Slots	<input type="checkbox"/> 1x CFast card slot <input type="checkbox"/> 1x 2.5" SATA HDD/SSD storage slot, user-accessible (1)
	Expansion kit (1)	Default	Optional
	RAM	4 GB DDR3 (not user-expandable)	
	Integrated ports		<input type="checkbox"/> 2x RJ45 Ethernet 10/100/1,000 Mbps <input type="checkbox"/> 1x USB 3.0 (Type A), 1x USB 2.0 (Type A) <input type="checkbox"/> 1x RS-232, 1x RS-232C/422/485
		Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s
Operating system		Windows 10 IIoT Enterprise (64-bit Multi-language) None or configured-to-order offer	
Power supply	Supply voltage	24 V \pm (± 20%). AC power supply with external AC/DC power adapter HMIYPSOMAC1.	
	Current consumption	1.9 A typical	
Dimensions	Overall (W × H × D)	283.1 × 202.3 × 61.3 mm (11.15 × 7.96 × 2.41 in.)	
	Mounting cut-out (W × H) with snap hook (3)	274.6 × 193.8 mm (10.81 × 7.63 in.)	
Temperature	During operation (1)	0...45 °C/32...113 °F 0...55 °C/32...131 °F	
	During storage	-30...70 °C/-22...158 °F	
Vibration resistance	During operation	2 g from 5...500 Hz with SSD/CFast and 1 g from 5...500 Hz with HDD	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSAIT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software		EcoStruxure Operator Terminal Expert (2) -- EcoStruxure Machine SCADA Expert (4), EcoStruxure Secure Connect Advisor (5)	
References		HMIPSOH552D1801 HMIPSO0552D1001	
Pages		2/7	
Configured-To-Order		See configured Harmony Optimized S-Panel PC on page 2/13	

(4) EcoStruxure Machine SCADA Expert Run Time with Configured-To-Order Harmony S-Panel PCs.
 (5) To be installed and activated with subscription.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIPEP Enclosed Panel PC
HMIPEP Performance

Type of Harmony iPC

Harmony HMIPEP Performance Enclosed Panel PC



Fanless		
Mounting type		
Screen	Type	
	Size	
	Resolution	
	Degree of protection	
	View angle	
	Backlight	
	Operate with water on screen	
CPU	Processor	
	Expansion slot	
	Storage	Main drive
		Slots
	RAM	
	Integrated ports	
Watchdog timer		
Operating system		
Power supply	Supply voltage	
	Power consumption	
Dimensions	Overall (W × H × D)	
Temperature	During operation	
	During storage	
Vibration resistance	During operation	
Standards and certifications		
Software		
References		
Pages		
Configured-To-Order		

★★★★★
Enclosed PC
LED LCD 5-point multi-touch projected capacitive technology screen
W 18.5"
HD WFGA, 1366 × 768 pixels, 16.7 million colors
IP66 all over with VESA 100 mounting, NEMA 4X indoor, and 7H hardness anti-scratch front panels
Vertical 160°, horizontal 170°
Life span > 50,000 hrs @ 25 °C/77 °F
Yes
Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)
1 full-size mini PCIe slot without external interface slot (1)
SSD flash disk ≥ 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF)
<input type="checkbox"/> 1x 2.5" SATA HDD/SSD storage slot, user-accessible
8 GB DDR3 (not user-expandable)
<input type="checkbox"/> 2x Ethernet 10/100/1,000 Mbps M12 A-coding 8-pin female connector
<input type="checkbox"/> 1x USB 2.0 with M12 8-pin female connector
<input type="checkbox"/> 1x RS-232 with M12 8-pin male connector
Timer with 255 levels/intervals, programmable, 1...255 s
Windows 10 IoT Enterprise (64-bit Multi-language)
24 V --- (± 20%). AC power supply with external AC/DC power adapter HMIYPSMAC1.
35 W typical, 60 W max.
419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)
0...55 °C/32...131 °F
-20...60 °C/-4...140 °F
2 g from 5...500 Hz with SSD and CFast
CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
EcoStruxure Operator Terminal Expert (2)
EcoStruxure Machine SCADA Expert (3), EcoStruxure Secure Connect Advisor (4)
HMIPEPS952D1801
2/9
See configured Harmony Enclosed Performance S-Panel PC on page 2/13

(1) See accessories (page 2/10) for additional ports through Mini PCIe and optional interface.
 (2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).

Harmony HMIPEP Performance Enclosed Panel PC



★★★★★
Enclosed PC
LED LCD 5-point multi-touch projected capacitive technology screen
W 18.5"
HD WFGA 1366 × 768 pixels, 16.7 million colors
IP66 all over with VESA 100 mounting, NEMA 4X indoor, and 7H hardness anti-scratch front panels
Vertical 160°, horizontal 170°
Life span > 50,000 hrs @ 25 °C/77 °F
Yes
Intel Core i3-4010U dual-core 4 th generation (1.7 GHz)
1 full-size mini PCIe slot without external interface slot (1)
-
<input type="checkbox"/> 1x 2.5" SATA HDD/SSD storage slot, user-accessible
8 GB DDR3 (not user-expandable)
<input type="checkbox"/> 2x Ethernet 10/100/1,000 Mbps M12 A-coding 8-pin female connector
<input type="checkbox"/> 1x USB 2.0 with M12 8-pin female connector
<input type="checkbox"/> 1x RS-232 with M12 8-pin male connector
Timer with 255 levels/intervals, programmable, 1...255 s
None or configured-to-order offer
24 V --- (± 20%). AC power supply with external AC/DC power adapter HMIYPSMAC1.
35 W typical, 60 W max.
419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in.)
0...55 °C/32...131 °F
-20...60 °C/-4...140 °F
2 g from 5...500 Hz with SSD and CFast
CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
-
EcoStruxure Machine SCADA Expert (3), EcoStruxure Secure Connect Advisor (4)
HMIPEP0952D1001
2/9
See configured Harmony Enclosed Performance S-Panel PC on page 2/13

(3) With Configured-To-Order Harmony iPC.
 (4) To be installed and activated with subscription.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPSO S-Panel PC

HMIPSO Optimized

2



Harmony HMIPSO Optimized S-Panel PC

Presentation

Harmony HMIPSO Optimized S-Panel PCs are the entry level Panel PCs in the Harmony iPC range. These simple-in-design PCs with Intel™ Atom dual-core CPU cater for the performance requirements of most automation applications in the field.

Harmony Optimized S-Panel PCs offer improved application and operator efficiency with:

- 10" wide TFT multi-touch screens, LED backlight, IP66 protection, and 7H hardness anti-scratch front
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F (or up to +45 °C/113 °F for models with HDD or mini PCIe)
- Integration of software applications such as HMI EcoStruxure Operator Terminal Expert software and third-party Windows software
- Expansions with optional interfaces based on mini PCIe (Com, USB, HD audio, Video, networks, wireless, etc.)
- Available with Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer

Harmony HMIPSO Optimized

The Harmony HMIPSO S-Panel PCs offer comprises 4 references, each equipped with:

- Fanless Intel® Atom E3827 dual-core processor(1.75 GHz)
- 4 GB DDR3 RAM, default mounted
- Connection ports: 1x USB 3.0, 1x USB 2.0, 2x COM (RS-232/422/485), 2 Gigabit Ethernet
- Expansion kit (depending on model): 1x optional/default kit allowing 1x SATA HDD/SSD slot and 1x mini PCIe slot with its optional interface slot
- Power supply: 24 V ~~, AC power supply with external AC/DC power adapter **HMIYPSOMAC1**

The operating systems and storage devices for 10" touch screens are as follows:

- **HMIPSOS552D1801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
 - Expansion kit: **HMIYPADPSOSTO1**
- **HMIPSOH552D1801**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 500 GB HDD (Enterprise 24/7)
 - Expansion kit: **HMIYPADPSOSTO1**
- **HMIPSO0552D1001**
 - Operating system: None
 - Default storage device: None

Ready-to-run Software for Harmony HMIPSO

Harmony HMIPSO S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWCZLSPAZZ** (Digital) or **HMIRTWCZLSPMZZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIPSO are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:

EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#))

EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#))

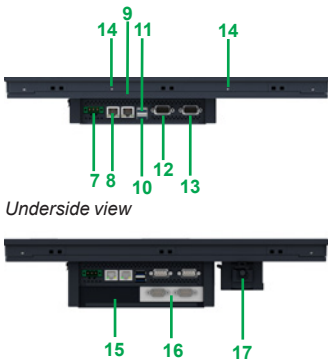
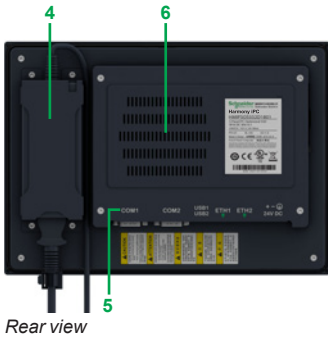
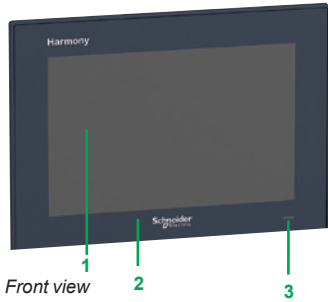
EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#))

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPSO S-Panel PC

HMIPSO Optimized



Underside view with expansion kit



HMIPSO552D1801



HMIPSO552D1801

Description

Harmony HMIPSO Optimized

Front view

- 1 10" LCD multi-touch LED screen, HD WSVGA, 1280 × 800 pixels, and 267,000 colors for **HMIPSO●552D1●01**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/160° (horizontally)
- 2 Harmony and Schneider Electric removable stickers
- 3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)

- 4 Optional AC power supply
- 5 S-Panel PC interface
- 6 Cover for mini PCIe card and HDD/SSD drive

Underside view

- 7 DC power connector
- 8 1x Eth1 (10/100/1,000 Mbps)
- 9 1x Eth2 (10/100/1,000 Mbps)
- 10 1x USB2 (USB 2.0)
- 11 1x USB1 (USB 3.0)
- 12 1x COM2 RS-232/422/485 port
- 13 1x COM1 RS-232 port
- 14 Snap hook (2)
- 15 Expansion kit
- 16 Optional interface
- 17 Optional AC power supply

Harmony HMIPSO Optimized (Intel Atom E3827 dual-core processor, 1.75 GHz)

Supply voltage	Operating system (3)	Software	Storage	DDR3 RAM (6)	Reference	Weight kg/lb
24 V \square (7)	Windows 10 IoT Enterprise (64-bit Multi-language)	EcoStruxure Operator Terminal Expert Run Time Demo (4), EcoStruxure Secure Connect Advisor (5), IIoT monitor with Node-RED	SSD flash disk \geq 128 GB with 1.5 million hours MTBF (mounted in expansion kit)	4 GB	HMIPSO552D1801	2.50 /5.51
			HDD hard disk \geq 500 GB (mounted in expansion kit)	4 GB	HMIPSOH552D1801	2.50 /5.51
				4 GB	HMIPSO0552D1001	2.50 /5.51

- (1) Cooling method is by passive heat sink.
- (2) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.
- (3) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPSO (see [page 2/13](#)).
- (4) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).
- (5) To be installed and activated with subscription.
- (6) 4 GB DDR3 RAM is not user-expandable.
- (7) AC power supply with external AC/DC power adapter HMIYPSMAC1.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIPEP Enclosed Panel PC

HMIPEP Performance

2



Harmony HMIPEP Performance Enclosed Panel PC 19"

Presentation

Harmony HMIPEP Enclosed Performance S-Panel PCs are fully enclosed PCs with IP66 protection on all sides. These 19" wide PCs can be directly mounted on a machine or automation system without any additional enclosure. The HD display and multi-touch features enhance the user experience.

Harmony Enclosed Performance S-Panel PCs offer increased application and operator efficiency with:

- 19" wide HD TFT multi-touch screens, LED backlight, and 7H hardness anti-scratch front
- Ready to be VESA mounted with IP65 protection on all sides and M12 connections
- Slim enclosed panels with 65 mm/2.56 in. depth
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F
- Available with Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer

Harmony HMIPEP Performance

The Harmony HMIPEP Enclosed Performance PCs offer comprises 2 references, each equipped with:

- Fanless Intel® i3-4010U dual-core processor (1.7 GHz)
- 8 GB DDR3 RAM, default mounted
- 5x M12 Connection ports: 1x USB 2.0, 1x COM (RS-232), 2x Gigabit Ethernet, 1x 24 V $\overline{\text{---}}$ power supply
- Expansion slot: 1x full-size mini PCIe slot without external interface slot

The operating systems and storage devices for 19" touch screens are as follows:

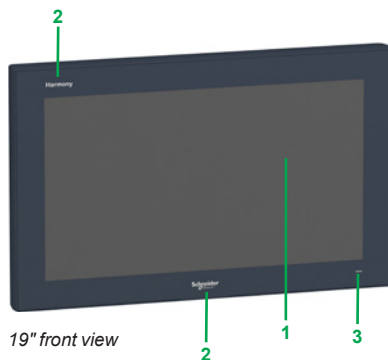
- **HMIPEPS952D1801:**
 - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
 - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- **HMIPEP0952D1001:**
 - Operating system: None
 - Default storage device: None

Ready-to-run Software for Harmony HMIPEP

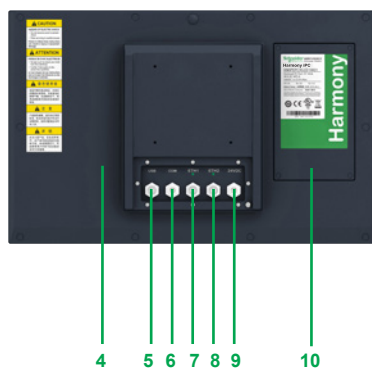
Harmony HMIPEP S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secured remote access, Harmony HMIPEP are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:
EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#))
EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#))
EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#))



19" front view



19" rear view



HMIPEPS952D1801



HMIPEPS952D1801

Description

Harmony HMIPEP Performance

Front view

- 1 19" LCD multi-touch LED screen, HD WFXGA 1366 × 768 pixels, 16 million colors for **HMIPEP●952D1●01**:
 - Brightness: 300 cd/m² (adjustable)
 - Type of touch panel: 5-point projected capacitive technology multi-touch
 - Typical viewing angle: 160° (vertically)/170° (horizontally)
- 2 Harmony and Schneider Electric removable stickers
- 3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)

- 4 Cover
- 5 1x USB 2.0 with M12 8-pin female connector
- 6 1x RS-232 with M12 8-pin male connector
- 7 1x Eth1 (10/100/1000 Mbps) base-T with M12 8-pin female connector
- 8 1x Eth2 (10/100/1000 Mbps) base-T with M12 8-pin female connector
- 9 1x 24 V $\overline{\text{DC}}$ power supply with M12 5-pin male connector
- 10 Back cover to access HDD/SSD slot

Harmony HMIPEP Performance

(Intel i3-4010U dual-core processor, 1.7 GHz)

Supply voltage	Expansion slot	Storage	Software	Reference	Weight kg/lb
Windows 10 IoT Enterprise (64-bit Multi-language), 8 GB DDR3 RAM (3)					
24 V $\overline{\text{DC}}$	1x mini PCIe slot	SSD flash disk \geq 128 GB with 1.5 million hours MTBF	EcoStruxure Operator Terminal Expert Run Time Demo (2), EcoStruxure Secure Connect Advisor (4)	HMIPEPS952D1801	8.00/ 17.64
No operating system, 8 GB DDR3 RAM (4)					
24 V $\overline{\text{DC}}$	1x mini PCIe slot		EcoStruxure Machine SCADA Expert (5)	HMIPEP0952D1001	8.00/ 17.64

(1) Cooling method is by passive heat sink.

(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTCZLSPAZZ (Digital) or HMIRTCZLSPMZZ (Paper).

(3) 8 GB DDR3 RAM is not user-expandable.

(4) To be installed and activated with subscription.

(5) With Configured-To-Order Harmony Modular Box PC.

2



HMIYCFA32S



HMIYSSDS240S1



HMIYMINNVRAM1



HMIYMINSL24851

Separate components					
Description	Details	Compatible with		Reference	Weight kg/lb
		Optimized HMIPSO	Enclosed Performance HMIPEP		
Drives					
Blank CFAST card	32 GB MLC	Yes	–	HMIYCFA32S	–
Blank SSD with mounting screws	128 GB MLC (5-year warranty and 1.5 million hours MTBF)	All models (1)		HMIYSSDS080S1	–
	256 GB MLC (5-year warranty and 2 million hours MTBF)	All models (1)		HMIYSSDS240S1	–
Blank HDD	Spare 1 TB HDD, blank	All models (1)		HMIYHDD01T21	–
	Spare 500 GB HDD, blank	All models (1)		HMIYHDD50021	–
Interfaces					
NVRAM interface	Mini PCIe with non-volatile RAM, without external connectors	Yes (1)	–	HMIYMINNVRAM1	–
HDMI to DVI interface	HDMI to DVI interface	–	–	HMIYADHDMIDVIS1	–
2 RS-422/485 isolated interface	Mini PCIe with 2x RS-422/485, isolated external interface with connectors	Yes (1)	–	HMIYMINSL24851	–
4 RS-422/485 interface	Mini PCIe with 4x RS-422/485, external interface with connectors	Yes (1)	–	HMIYMINSL44851	–
2 RS-232 isolated interface	Mini PCIe with 2x RS-232, isolated external interface with connectors	Yes (1)	–	HMIYMINSL22321	–
4 RS-232 interface	Mini PCIe with 4x RS-232, external interface with connectors	Yes (1)	–	HMIYMINSL42321	–
1 Profibus DP Master NVRAM interface	Mini PCIe with 1x Profibus DP Master, non-volatile RAM, external interface with connectors	Yes (1)	–	HMIYMINPRO1	–
2 CANopen/CAN bus interface	Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus	Yes (1)	–	HMIYMINCAN1	–

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.



Separate components (continued)					
Description	Details	Compatible with		Reference	Weight kg/lb
		Optimized	Enclosed Performance		
		HMIPSO	HMIPEP		
Interfaces (continued)					
RJ45 Ethernet interface	Interface Mini PCIe, 1x RJ45 Ethernet (3)	Yes (1)	–	HMIYMIN1ETH1	–
16DI/8DO interface	Mini PCIe with 16DI/8DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal	Yes (1)	–	HMIYMINIO1	–
2 USB 3.0 interface	Mini PCIe with 2x USB 3.0, external interface with connectors	Yes (1)	–	HMIYMINUSB1	–
3G cellular interface	Mini PCIe with GPRS, SIM card holder and external antenna	Yes (1)	–	HMIYMINGPRS1	–
WiFi interface access point and 2x antennas	Kit with mini PCIe WiFi access point (with Windows 10) + bluetooth and 2x antennas	Yes (1)	–	HMIYMINWIFI2	–
Remote wireless LAN antenna cable	5 m/16.4 ft cable to mount a WiFi antenna remotely from Harmony iPC	Yes (1)	–	HMIYCABWIFIAN51	–
4G cellular interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	Yes	–	HMIYMIN4GUS1	–
4G cellular interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	Yes	–	HMIYMIN4GEU1	–
Mini PCIe interface DVI-I for iPC	Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)	Yes	–	HMIYMINDVII1	–
Mini PCIe interface 2VGA + DVI-D	Mini PCIe Graphic video card Full HD 1920 x 1080, with 2x VGA connectors on a single external interface and 1x DVI-D connector in a second external interface	Yes	–	HMIYMINVGADVID1	–
Mini PCIe interface audio for iPC	Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors	Yes	–	HMIYMINAUD21	–
Mini PCIe interface to Display Adapter	Interface transmitter (2)	Yes	–	HMIYMINDP1	–

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.
 (2) For more information, see long distance multi-display adapter on [page 4/21](#).
 (3) Available in Q4 2020.



HMIYP552PS11



HMIYPSMAC1



HMIYEM1211

Separate components (continued)					
Description	Details	Compatible with		Reference	Weight kg/lb
		Optimized HMIPSO	Enclosed Performance HMIPEP		
Accessories					
USB key blank for iPC recovery	Spare USB memory key blank (1)	All models		HMIYUSBBK111	–
Maintenance kit for HMIPSO PCs	Includes: ■ Screws and dampers for HDD/SSD ■ Screws and clamps for panel mounting ■ Power connector and sticker ■ CFast card pull-out ■ Rubbers for W10" mounting ■ Bracket, screws, and dampers for mini PCIe	Yes	–	HMIYPMKTPSO1	–
Removable protective sheet	Set of 5 protective sheets for W10"	Yes	–	HMIYP552PS11	–
	Set of 5 protective sheets for W19	–	Yes	HMIYP952PS11	–
AC/DC power adapter 110/220 V ~ to 24 V ☰	AC/DC power adapter, provided with US and European power cord	–	–	HMIYPSMAC1	–
AC/DC power adapter 110/220 V ~ to 24 V ☰	External AC power adapter which can be mounted on the rear side of HMIPSO, provided with US and European power cord	Yes	–	HMIYPSOMAC1	–
M12 connectors	Set of 5 M12 connectors for Enclosed Panel PC	–	Yes	HMIYEM1211	–
M12 cables	Set of 5 cables with M12 connectors on one side to Enclosed Panel PC, and DC/USB/COM/2x LAN connectors on the other side	–	Yes	HMIYCABM1211	–
Expansion kit	Optional expansion kit offering 1 slot for storage drive HDD/SSD and 1 mini PCIe slot with 1 optional interface plate	Yes	–	HMIYPADPSOSTO1	–
VESA mounting kit	VESA mounting kit for HMIPSO W10"	Yes	–	HMIYPVESAPSO551	–
Software (2)					
EcoStruxure Operator Terminal Expert Run Time license	Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license	All models that support EcoStruxure Operator Terminal Expert HMI software		HMIRTWCZLSPAZZ (Digital) HMIRTWCZLSPMZZ (Paper)	–
EcoStruxure Secure Connect Advisor	For HMI secure remote access	All models that support EcoStruxure Secure Connect Advisor		VJOCNT (3)	–

(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.

(2) EcoStruxure Machine SCADA Expert available with Configured-to-Order (see page 2/13).

(3) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#).

Configured-To-Order Harmony HMIPSO/HMIPEP Panel PCs

"Configured-To-Order" industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help user configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator <https://www.hmisource.com/wwipcc> is also available to help user easily build the configuration (password = Magelis).

Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony S-Panel PC and a configuration code that will be the part number of the Harmony iPC.

Ordering procedure for a configured Harmony Panel PC

If user have built your Harmony iPC configuration with the Web configurator:

- 1 Please forward the e-mail received from the Web configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description, and part number code.
- 2 If required, specify the Schneider Electric commercial reference root part number GCR_HMIPCCP2.

If user cannot access the Harmony iPC Web configurator:

- 3 Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.
- 4 Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.
- 5 Confirm your order.

Configured-To-Order options for Harmony HMIPSO/HMIPEP Panel PCs

Option	Description
Panel PC	S-Panel PC Optimized DC 4 GB RAM W10" - WXGA
	Enclosed Panel PC Performance DC 8 GB RAM W19" - FWXGA
Fanless ULV CPU	Performance Core i3-4010U dual-core
	Optimized Atom-E3827 dual-core
Power supply	DC (1)
Windows operating system	None
	Win 8.1 Industry (64-bit Multi-language)
	Windows 10 IoT Enterprise (64-bit Multi-language)
Main storage device for operating system	None
	CFast 32 GB
	HDD 500 GB/1 TB
	SSD 128 GB/256 GB
Optional interfaces (pre-mounted)	None
	NVRAM
	2x RS-422/485 Isolated/4x RS-422/485
	2x RS-232 Isolated/4x RS-232
	16x DI/8x DO
	Audio
	Video (DVI and VGA ports)
	Cellular 3G/4G
	Wireless LAN + 2x antennas
	2x CANopen/CAN bus
	1x Ethernet RJ45
	Profibus DP Master with NVRAM
Software bundle	None
	EcoStruxure Operator Terminal Expert Run Time unlimited license
	EcoStruxure Machine SCADA Expert 1,500 tags Run Time license
	EcoStruxure Machine SCADA Expert 4,000 tags Run Time license
	EcoStruxure Machine SCADA Expert 64,000 tags Run Time license

(1) AC power supply with external AC/DC power adapter HMIYSPMAC1.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIBSC Edge Box Core

Harmony HMIBSC Edge Box Core

- Selection guide* page 3/2
- **Presentation**..... page 3/4
- **Description**..... page 3/5
- **References**
 - HMIBSC Edge Box Core..... page 3/6
 - Drives page 3/6
 - Separate Components
 - Accessories..... page 3/6
 - Interfaces page 3/7

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core

Type of Harmony Edge Box

Harmony HMIBSC Edge Box Core



Fanless		★★★★★	
Mounting	Box	Wall / book / DIN rail / Flat	
	Panel PC	No	
CPU	Processor	Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz	
	Expansion slots	1x full-size slot with optional interface (1), 1x M.2 slot (not for storage) (2)	
	Storage	Main drive	eMMC 8 GB (soldered and not user-expandable)
		Slots	SD 3.0 (supports standard SD 32 mm x 24 mm , SDHC, SDXC)
	RAM/MRAM	1 GB DDR3 (not user-expandable)	
Hot-swap RAID HDD and battery backup		-	
Cybersecurity encryption		TPM module (pre-installed)	
Operating system		Linux Yocto	
Conformal coating		No	
Supply voltage		12-24 V $\overline{\sim}$ or 100...240 V \sim with power adapter HMIYPSOMAC1	
Power consumption		16 W	
Interface	Ethernet	2x RJ45 Ethernet 10/100/1,000 Mbps	
	Serial ports	1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated	
	USB	2x USB 2.0	
	Embedded I/O	8x GPIO (Digital General Purpose I/O)	
	Video interface	1x HDMI (for configuration only)	
	WLAN embedded	Wi-Fi WCN3620 802.11 b/g/n 2.4 GHz (4), WCN3620 Bluetooth 4.1 (4)	
	Antenna connectors	1x for WLAN antenna, 1x for GPRS antenna	
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s	
	Reset button and buzzer		Yes
	Overall dimensions (W x H x D)		157 x 150 x 46 mm/6.18 x 5.91 x 1.81 in. (with no expandable slots)
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...50 °C/32...122 °F (5)	
	During storage	Conforming to IEC 61000-4/ EN 55011: -40...85 °C/-40...185 °F	
Vibration resistance	During operation	Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software, IIoT and Cybersecurity		Secure password boot and Node-RED	
References		HMIBSCEA53D1L0T	
Pages		3/6	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/22	

(1) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.
 (2) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.
 (3) Cybersecurity TPM optional module HMIYBINLTPM201 for hardware encryption with Linux.
 (4) Radio Frequency Certifications:
 - RED for Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK
 - FCC RF for USA
 - IC for Canada
 - SRRC for China (pending)
 - RCM for Australia, New Zealand
 - Anatel for Brazil (pending)
 - TEC for India (pending)
 (5) Except with optional interface installed: limited to 45 °C/113 °F.

Harmony HMIBSC Edge Box Core



Fanless		★★★★★	
Mounting	Box	Wall / book / DIN rail / Flat	
	Panel PC	No	
CPU	Processor	Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz	
	Expansion slots	1x full-size slot with optional interface (2)	
	Storage	Main drive	eMMC 8 GB (soldered and not user-expandable)
		Slots	eMMC 64 GB (soldered and not user-expandable)
	RAM/MRAM	SD 3.0 (supports standard SD 32 mm x 24 mm , SDHC, SDXC)	
Hot-swap RAID HDD and battery backup		2 GB DDR3 (not user-expandable)	
Cybersecurity encryption		Connector for TPM module (3)	
Operating system		Linux Yocto	
Conformal coating		No	
Supply voltage		12-24 V $\overline{\sim}$ or 100...240 V \sim with power adapter HMIYPSOMAC1	
Power consumption		16 W	
Interface	Ethernet	2x RJ45 Ethernet 10/100/1,000 Mbps	
	Serial ports	1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated	
	USB	2x USB 2.0	
	Embedded I/O	8x GPIO (Digital General Purpose I/O)	
	Video interface	1x HDMI (for configuration only)	
	WLAN embedded	Wi-Fi WCN3620 802.11 b/g/n 2.4 GHz (4), WCN3620 Bluetooth 4.1 (4)	
	Antenna connectors	1x for WLAN antenna, 1x for GPRS antenna	
	Watchdog timer	Timer with 255 levels/intervals, programmable, 1...255 s	
	Reset button and buzzer		Yes
	Overall dimensions (W x H x D)		157 x 150 x 46 mm/6.18 x 5.91 x 1.81 in. (with no expandable slots)
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...50 °C/32...122 °F (5)	
	During storage	Conforming to IEC 61000-4/ EN 55011: -40...85 °C/-40...185 °F	
Vibration resistance	During operation	Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
Software, IIoT and Cybersecurity		Secure password boot and Node-RED	
References		HMIBSCEA53D1L01 HMIBSCEA53D1L0A	
Pages		3/6	
Configured-To-Order		See configured Harmony Modular Box PC on page 4/22	



Harmony HMIBSC

Presentation

Harmony HMIBSC connects OT (Operational Technology) in the field to IT (Information Technology) for an Industrial Internet of Things. With built-in Node-RED, WiFi, and Bluetooth, and a Linux operating system running on a quad-core Qualcomm ARM CPU, it is well adjusted to wire the Internet of Things.

eMMC storage is available by default and can be expanded with an SD card. The two standard Ethernet ports allow OT and IT communications to be separated if necessary. The secure password boot and TPM encryption module afford a high level of cybersecurity by design. The commissioning is made easier and safer with its own HDMI port that connects to an optional screen.

The embedded GPIO and optional cards for analog I/O allow dedicated sensors to be connected to Harmony HMIBSC. The optional cellular 4G card of the Harmony iPC range is supported on Harmony HMIBSC for remote connection to IT systems. All these options can be user mounted or Configured-To-Order (see [page 4/22](#)).

Overview of the offer

Harmony HMIBSC Edge Box Core

The Harmony HMIBSC offer comprises 3 product references, each equipped with:

- Fanless Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz
- Default WLAN: 1x WiFi, 1x Bluetooth
- Connection ports: 2x USB 2.0, 1x COM (RS-232/422/485), 2x Gigabit Ethernet, 1x Display port, 1x HDMI
- Expansion slots: 1x full-size mini PCIe slot with optional interface (2), 1x M.2 slot for extension (not for storage) (3), 1x SD card slot
- Power supply: 12-24 V $\overline{\text{---}}$, AC with optional external adapter HMIYPSOMAC1

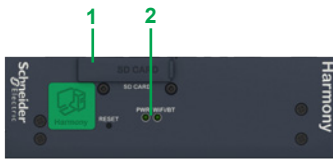
The operating systems, storage devices, and expansion slots are as follows:

- **HMIBSCEA53D1L0T**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 1 GB DDR3 (1)
 - Default storage device: 8 GB eMMC
 - Software: Node-RED
 - Default TPM module for encryption
- **HMIBSCEA53D1L01**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 1 GB DDR3 (1)
 - Default storage device: 8 GB eMMC
 - Software: Node-RED
 - Connector for optional TPM module
- **HMIBSCEA53D1L0A**
 - Operating system: Linux Yocto with secure password boot
 - RAM: 2 GB DDR3 (1)
 - Default storage device: 64 GB eMMC
 - Software: Node-RED
 - Conformal coating
 - Connector for optional TPM module

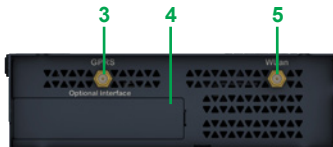
(1) Memory is not user-expandable.

(2) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.

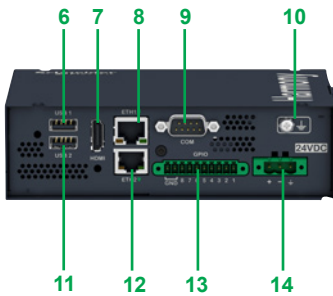
(3) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.



Front view of Harmony Simple IIoT Core



Top view of Harmony Simple IIoT Core



Underside view of Harmony Simple IIoT Core

Description

Harmony HMIBSC

Front view

- 1 SD card slot (1)
- 2 LEDs and reset button

Top view

- 3 SMA connector for the GPRS/4G external antenna
- 4 Optional interface
- 5 SMA connector for the WLAN external antenna

Underside view

- 6 USB1 (USB 2.0)
- 7 HDMI port
- 8 ETH1 (10/100/1000 Mbps) IEEE1588
- 9 COM port RS-232/422/485 (non-isolated) (2)
- 10 Ground connection pin
- 11 USB2 (USB 2.0)
- 12 ETH2 (10/100/1000 Mbps) IEEE1588
- 13 GPIO
- 14 DC power connector

(1) The default OS can be restored with the SD card.
(2) RS-232 (default setting) and RS-422/485 (software setting).

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core



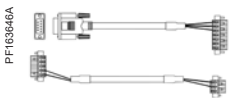
HMIBSCEA53D1L0T



HMIYMMAC1



HMIYMUPSKT1



HMIYCABUPS31

Harmony HMIBSC Edge Box Core

Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz/24 V $\overline{\text{DC}}$ supply voltage (1)

Mini PCIe slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
With 2 expansion slots						
1x mini PCIe, full-size	Linux Yocto	Node-RED	8 GB eMMC	1 GB	HMIBSCEA53D1L0T (3)	1.00/2.20
					HMIBSCEA53D1L01	1.00/2.20
			64 GB eMMC	2 GB	HMIBSCEA53D1L0A (4)	1.00/2.20

Drives

Description	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
SD card industrial grade 16 GB for HMIBSC	All models	HMIYSD016C1	-
SD card industrial grade 64 GB for HMIBSC	All models	HMIYSD064C1	-

Separate Components

Accessories

Description	Details	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
Maintenance kit for HMIBSC	Includes: screws, USB holder, power connector, rubber	All models	HMIYBMTBSC1	-
TPM 2.0 cybersecurity module for HMIBSC	TPM cybersecurity module for HMIBSC IloT Core Box Linux	All models	HMIYBINLTPM201	-
1x WiFi/Bluetooth antenna for Harmony iPC		All models	HMIYCABWIFIAN511	-
AC power supply (60 W)	AC power adapter (60 W)	All models	HMIYPSOMAC1	-
AC power supply (100 W)	Modular AC power adapter (100 W)	All models	HMIYMMAC1	-
UPS battery	UPS battery for HMIBSC (no cables)	All models	HMIYMUPSKT1	-
UPS cable	UPS cables for HMIBSC (3 m/9.84 ft)	All models	HMIYCABUPS31	-

(1) AC with additional power supply module.

(2) Memory is not user-expandable.

(3) With default TPM module.

(4) With conformal coating.



Separate Components (continued)

Interfaces				
Description	Details	Compatible with Harmony HMIBSC	Reference	Weight kg/lb
Mini PCIe 8x analog input interface 0-10 V	Mini PCIe with 8x analog inputs 0-10 V	All models	HMIYMIN8AI1	–
M.2 2x analog input interface 0-10 V/4-20 mA	M.2 with 2x analog inputs 0-10 V or 4-20 mA selected by switch.	All models	HMIYBIN2AIM21	–
Cellular 4G interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GUS1	–
Cellular 4G interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	All models	HMIYMIN4GEU1	–
Accessories				
Cable for 4G card in HMIBSC 5 m/16.40 ft	Remote cable for 4G card in IloT Box Core HMIBSC (5 m/16.40 ft)	All models	HMIYCAB4GAN51	–

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box/Modular Box PC and HMIDM Modular Display

Harmony HMIBM Edge Box/Modular Box PC

Selection guide page 4/2

■ **HMIBMI Basic**

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■ **HMIBMO Optimized**

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■ **References**

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Harmony HMIDM Modular Display

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■ **Presentation**

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■ **References**

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Harmony HMIDAD Display Adapter

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Harmony iPC

Industrial PC, Edge Box, and Display
Harmony Edge Box and Modular Box PC
HMIBMI Basic

Type of Harmony Edge Box and iPC

Harmony HMIBMI Edge Box Modular
Harmony HMIBMI Basic Modular Box PC



Fanless	
Mounting	Box PC Panel PC
CPU	Processor Mini PCIe expansion slots Storage Main drive RAM Battery backup
Cybersecurity encryption	
Operating system	
Conformal coating	
Supply voltage	
Power consumption	
Interface	Ethernet Serial ports USB Video Interface Resolution Antenna connectors Watchdog timer
Reset button and buzzer	
Overall dimensions (W x H x D)	
Temperature	During operation During storage
Vibration resistance	During operation
Standards and certifications	
Software, IloT and Cybersecurity	
References	
Pages	
Configured-To-Order	

★★★★★	
HMIBM Box wall/book/ DIN rail/ Flat HMIBM Box + associated HMIDM Display	
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz 1x full-size slot with optional interface	
64 GB eMMC (soldered and not user-expandable)	64 GB eMMC (soldered and not user-expandable)
4 GB DDR3 (not user-expandable) Optional	
TPM 2.0 module (pre-installed)	Connector for TPM 2.0 module (5)
Windows 10 IoT Enterprise LTSC(64-bit)	Windows 10 IoT Enterprise LTSC(64-bit)
No	
12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1	
20 W	
2x RJ45 Ethernet 10/100/1,000 Mbps 1x RS-232/422/485 non isolated 1x USB 2.0, 1x USB 3.0 1x display port Up to 3200 x 2000 at 60 Hz 2x for WLAN antenna, 1 for GPRS antenna Timer with 255 levels/intervals, programmable, 1...255 s	
Yes	
187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.	
Conforming to EN/IEC 60068-2-30: 0...50 °C /32...122 °F (6) Conforming to IEC 61000-4/ EN 55011:-20...60 °C /-4...140 °F	
Conforming to IEC 60664-1: 2 g from 5...500 Hz	
CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)	
EcoStruxure Operator Terminal Expert Run Time Demo (1), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI Node-RED pre-installed Node-RED (4)	
HMIBMIEA5DD1E01	HMIBMIEA5DD1101
4/10	
See configured Harmony Modular Box PC on page 4/22	

Harmony HMIBMI Basic Modular Box PC




★★★★★		
HMIBM Box wall/book/ DIN rail/ Flat HMIBM Box + associated HMIDM Display		
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz 1x full-size slot with optional interface		
128 GB eMMC (soldered and not user-expandable)	64 GB eMMC (soldered and not user-expandable)	128 GB eMMC (soldered and not user-expandable)
4 GB DDR3 (not user-expandable) Optional		
Connector for TPM 2.0 module (5)		
Windows 10 IoT Enterprise LTSC (64-bit)	No	No
No		
12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1		
20 W		
2x RJ45 Ethernet 10/100/1,000 Mbps 1x RS-232/422/485 non isolated 1x USB 2.0, 1x USB 3.0 1x display port Up to 3200 x 2000 at 60 Hz 2x for WLAN antenna, 1x for GPRS antenna Timer with 255 levels/intervals, programmable, 1...255 s		
Yes		
187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.		
Conforming to EN/IEC 60068-2-30: 0...50 °C /32...122 °F (6) Conforming to IEC 61000-4/ EN 55011:-20...60 °C /-4...140 °F		
Conforming to IEC 60664-1: 2 g from 5...500 Hz		
CE, cULus ITE (UL IT 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)		
EcoStruxure Operator Terminal Expert Run Time Demo (1), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI, Node-RED (4)		
HMIBMIEA5DD110L	HMIBMIEA5DD1001	HMIBMIEA5DD100A
4/10		
See configured Harmony Modular Box PC on page 4/22		



(1) To be installed and activated by unlimited license HMIRWCZLSPAZZ (Digital) or HMIRWCZLSPMZZ (Paper).
 (2) McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied.
 (3) To be installed and activated with subscription.
 (4) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IloT Box" option to be selected).
 (5) For Cybersecurity TPM, optional module HMIYMINATPM201 for hardware encryption with Windows bit-locker.
 (6) Except with optional interface installed: limited to 45 °C/113 °F.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony Edge Box and Modular Box PC
HMIBMO Optimized

Type of Harmony Edge Box and iPC	Harmony HMIBMO Edge Box Modular	Harmony HMIBMO Optimized Modular Box PC (regular)
		
Fanless	★★★★★	
Mounting	HMIBM Box wall/book/ DIN rail/ Flat HMIBM Box + associated HMIDM Display	
CPU	Intel Atom Apollo Lake E3930 dual-core 1.8 GHz 1x full-size slot without optional interface	
Storage	M.2 SSD 64 GB (2) M.2	
RAM	4 GB DDR3 (not user-expandable) Optional	
Cybersecurity encryption	TPM 2.0 module (pre-installed)	Connector for TPM 2.0 module
Operating system	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0	Windows 10 IoT Enterprise LTSC (64-bit)
Conformal coating	No	
Supply voltage	12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMC1	
Power consumption	25 W	
Interface	Ethernet: 2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588" Serial ports: 1x RS-232/422/485 non isolated USB: 2x USB 2.0, 2x USB 3.0 Video: 2x display ports Interface Resolution: Up to 3200 x 2000 at 60 Hz Antenna connectors: 2x for WLAN antenna, 1x for GPRS antenna Watchdog timer: Timer with 255 levels/intervals, programmable, 1...255 s	
Reset button and buzzer	Yes	
Overall dimensions (W x H x D)	187 x 150 x 38 mm/7.36 x 5.91 x 1.50 in.	
Temperature	During operation: Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (8) During storage: Conforming to IEC 61000-4/ EN 55011:-30...70 °C/-22...158 °F	
Vibration resistance	During operation: Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications	CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC, Marine DNV (without HDD)	
Software, IIoT and Cybersecurity	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), Secure password boot UEFI Node-RED pre-installed Node-RED (7)	
References	HMIBMOMA5DD1E01	HMIBMOMA5DD1101
Pages	4/10	
Configured-To-Order	See configured Harmony Modular Box PC on page 4/22	

(1) M.2 SSD 1,5 Millions H. MTBF, 3 Years manufacturer warranty.
 (2) Requires HMIYBADHDDMO1 adapter.
 (3) To be installed and activated by unlimited license HMIRTCWZLSPAZZ (Digital) or HMIRTCWZLSPMZZ (Paper).
 (4) With Configured-To-Order Harmony Modular Box PC.
 (5) McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied.
 (6) To be installed and activated with subscription.
 (7) Node-RED to be installed or through USB key Windows 10 Recovery process ("Windows 10 with Node-RED for IIoT Box" option to be selected).
 (8) Except with optional interface or HDD installed: limited to 45 °C/113 °F.

Harmony HMIBMO Optimized Modular Box PC (regular)	Harmony HMIBMO Optimized Modular Box PC (expandable)		
			
	★★★★★		
	HMIBM Box wall/book/ DIN rail/ Flat HMIBM Box + associated HMIDM Display		
	Intel Atom Apollo Lake E3930 dual-core 1.8 GHz 1x full-size slot without optional interface 1x full-size slot with optional interface		
	No	M.2 SSD 250 GB (2)	No
	M.2	M.2, 1x HDD/SSD slot (3) with optional interface slot	
	4 GB DDR3 (not user-expandable)	8 GB DDR3 (not user-expandable)	
	Optional		
	Connector for TPM 2.0 module		
	No	Windows 10 IoT Enterprise LTSC (64-bit)	No
	No	Yes	
	12-24 V $\overline{\text{---}}$ or 100...240 V \sim with power adapter HMIYPSOMAC1		
	25 W		
	2x RJ45 Ethernet 10/100/1,000 Mbps "i210 IEEE1588" 1x RS-232/422/485 non isolated 2x USB 2.0, 2x USB 3.0 2x display ports Up to 3200 x 2000 at 60 Hz 2x for WLAN antenna, 1x for GPRS antenna Timer with 255 levels/intervals, programmable, 1...255 s		
	Yes		
	187 x 150 x 38 mm/7.36 x 5.91 x 1.50 in.	187 x 150 x 54 mm/7.36 x 5.91 x 2.13 in.	
	Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (8) Conforming to IEC 61000-4/ EN 55011:-30...70 °C/-22...158 °F		
	Conforming to IEC 60664-1: 2 g from 5...500 Hz		
	CE, cULus industrial control (UL 61010-2-201, CSA 22.2 No. 142), cULus HazLoc (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HazLoc 3GD Zone 2/22, EAC, Marine DNV (without HDD)		
	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (4), McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), Secure password boot UEFI, Node-RED (7)		
	HMIBMO0A5DD1001	HMIBMOMA5DDF10L	HMIBMO0A5DDF101
	HMIBMO0A5DDF10A		
	4/10		
	See configured Harmony Modular Box PC on page 4/22		

See configured Harmony Modular Box PC on [page 4/22](#)

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box and Modular Box PC

HMIBMI Basic



HMIBMI Basic Box PC

Presentation

Harmony HMIBM support advanced automation applications requiring Windows operating systems, with powerful CPUs, expansion capabilities, high-availability options (RAID HDD, UPS), and advanced certifications. Their modularity means that HMIBM Box PCs can be converted to Panel PCs by combining them with HMIDM Displays. They can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

In addition to the referenced offer, the flexibility offered by the modular design allows Cofigured-To-Order Harmony Box PC versions (see [page 4/22](#)).

Overview of the offer

Harmony HMIBMI Basic

The Harmony HMIBMI Basic offer comprises 5 product references, each equipped with:

- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- 4 GB DDR3 RAM (1)
- Connection ports: 1x USB 3.0, 1x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit Ethernet, and 1x Display port
- Expansion slots: 1x full-size mini PCIe slot with optional interface
- Power supply: 12-24 V ~~, AC with optional external adapter HMIYPSOMAC1

The operating systems, storage devices, and expansion slots are as follows:

- **HMIBMIEA5DD1E01 Edge Box**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - TPM encryption module, default mounted
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (default)
- **HMIBMIEA5DD1101**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- **HMIBMIEA5DD110L**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
 - Default storage device: 128 GB eMMC (soldered, not user-expandable)
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- **HMIBMIEA5DD1001**
 - Operating system: None
 - Default storage device: 64 GB eMMC (soldered, not user-expandable)
 - Node-RED (2)
- **HMIBMIEA5DD100A**
 - Operating system: None
 - Default storage device: 128 GB eMMC (soldered, not user-expandable)
 - Node-RED (2)
 - Conformal coating: Yes

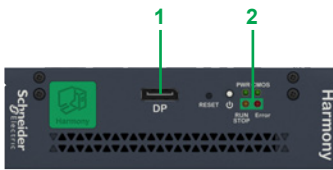
(1) Memory is not user-expandable.

(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.

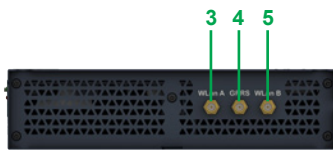
Description

Harmony iPC

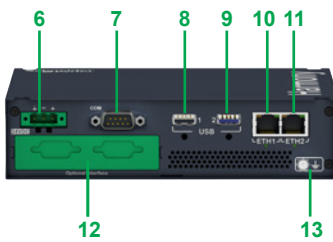
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBMI Basic



Front view of Basic Box PC



Top view of Basic Box PC



Underside view of Basic Box PC

Description

Harmony HMIBMI Basic

Front view

- 1 Display port
- 2 LEDs and power/reset button

Top view

- 3 SMA connector for the WLAN A external antenna
- 4 SMA connector for the cellular 4G external antenna
- 5 SMA connector for the WLAN B external antenna

Underside view, 1 expansion slot

- 6 DC power connector
- 7 COM port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 8 USB1 (USB 2.0)
- 9 USB2 (USB 3.0)
- 10 Eth1 (10/100/1000 Mbps) IEEE 1588
- 11 Eth2 (10/100/1000 Mbps) IEEE 1588
- 12 Optional interface
- 13 Ground connection pin

4

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box and Modular Box PC

HMIBMO Optimized



HMIBMO Optimized Box PC, regular version



HMIBMO Optimized Box PC, expandable version

4

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBMO Optimized

The Harmony HMIBMO Optimized Box PC offer comprises 6 references, each equipped with:

- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- Connection ports: 2x USB 3.0, 2x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit i210 Ethernet, and 2x Display port
- Expansion slots: 1x full-size mini PCIe slot
- Power supply: 12-24 V $\overline{\text{DC}}$, AC with additional power supply module HMIYPSOMAC1
- Expandable models have 1x optional interface for external connection to mini PCIe cards mounted in the internal slot and 1x HDD/SSD 2.5" slot (3)

The operating systems, storage devices, and expansion slots are as follows:

- **HMIBMOMA5DD1E01 Edge Box**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
 - RAM: 4 GB DDR3 (1)
 - Default storage device: 64 GB M.2 SSD
 - TPM encryption module, default mounted
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (default)
 - 1x mini PCIe without optional interface (for wireless cards only)
- **HMIBMOMA5DD1101**
 - Operating system : Windows 10 IoT Enterprise LTSC (64-bit)
 - RAM: 4 GB DDR3 (1)
 - Default storage device: 64 GB M.2 SSD
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
 - 1x mini PCIe without optional interface (for wireless cards only)
- **HMIBMO0A5DD1001**
 - Operating system: None
 - RAM: 4 GB DDR3 (1)
 - Default storage device: None
 - Software: None
 - 1x mini PCIe without optional interface (for wireless cards only)
- **HMIBMOMA5DDF10L**
 - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
 - RAM: 4 GB DDR3 (1)
 - Default storage device: 250 GB M.2 SSD
 - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
 - Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)
- **HMIBMO0A5DDF101**
 - Operating system: None
 - RAM: 4 GB DDR3 (1)
 - Default storage device: None
 - Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)
- **HMIBMO0A5DDF10A**
 - Operating system: None
 - RAM: 8 GB DDR3 (1)
 - Default storage device: None
 - Conformal coating
 - Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

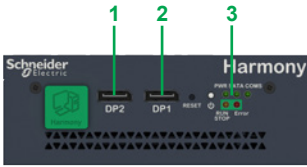
(1) Memory is not user-expandable.

(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.

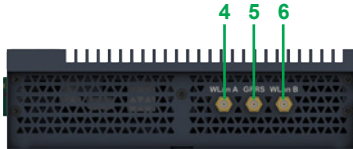
(3) 2.5" HDD/SSD requires HMIYBADHDBMO1 adapter to be mounted.

Harmony iPC

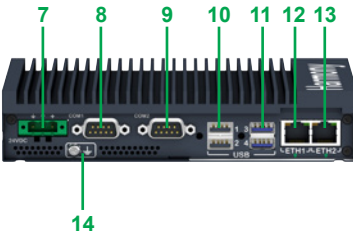
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBMO Optimized



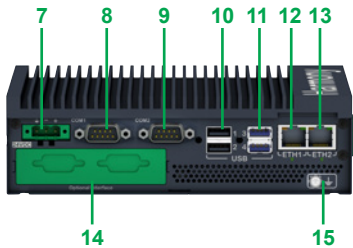
Front view of Optimized Box PC



Top view of Optimized Box PC



Underside view of Optimized Box PC, regular version



Underside view of Optimized Box PC, expandable version

Description

Harmony HMIBMO Optimized

Front view

- 1 Display Port 2
- 2 Display Port 1
- 3 LEDs and power/reset button

Top view

- 4 SMA connector for the WLAN A external antenna
- 5 SMA connector for the cellular 4G external antenna
- 6 SMA connector for the WLAN B external antenna

Underside view "regular version" (1)

- 7 DC power connector
- 8 COM1 port RS-232 (non-isolated)
- 9 COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 10 USB1 and USB2 (USB 2.0)
- 11 USB3 and USB4 (USB 3.0)
- 12 Eth1 (10/100/1000 Mbps) IEEE1588
- 13 Eth2 (10/100/1000 Mbps) IEEE1588
- 14 Ground connection pin

Underside view "expandable version" (2)

- 7 DC power connector
- 8 COM1 port RS-232 (non-isolated)
- 9 COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)
- 10 USB1 and USB2 (USB 2.0)
- 11 USB3 and USB4 (USB 3.0)
- 12 Eth1 (10/100/1000 Mbps) IEEE1588
- 13 Eth2 (10/100/1000 Mbps) IEEE1588
- 14 Optional interface
- 15 Ground connection pin

(1) Regular version: HMIBMOMA5DD1101, HMIBMOMA5DD1E01, HMIBMO0ADD1001

(2) Expandable version: HMIBMOMA5DDF10L, HMIBMO0A5DDF101, HMIBMO0A5DDF10A



Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Edge Box and Modular Box PC

HMIBMI Basic and HMIBMO Optimized

Ready-to-run Software, IIoT and Cybersecurity

Harmony HMIBM are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with **HMIRTWZLSPAZZ** (Digital) or **HMIRTWZLSPMZZ** (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIBM are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:

EcoStruxure Operator Terminal Expert ([DIA5ED2140703EN](#))

EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#))

EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#))

The mother board of latest Harmony Modular Box PC are equipped with a pin header to install Cybersecurity TPM optional module **HMIYMINATPM201** for hardware encryption with Windows bit-locker.

For IIoT connections to Cloud applications, Harmony HMIBM can run Node-RED. To activate McAfee whitelisting, the license sticker **HMIYMACWLIOT1** is required to be applied.

Harmony HMIBMI Basic

Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V $\overline{\text{DC}}$ supply voltage (1)

Expansion slot	Operating system	Software	Storage disk	DDR3 RAM (2)	Reference	Weight kg/lb
1x mini PCIe, full-size with optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1101	1.20/2.64
	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1E01 (8)	1.20/2.64
	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	128 GB eMMC (soldered)	4 GB	HMIBMIEA5DD110L	1.20/2.64
	No		64 GB eMMC (soldered)	4 GB	HMIBMIEA5DD1001	1.20/2.64
	No		128 GB eMMC (soldered)	4 GB	HMIBMIEA5DD100A (7)	1.20/2.64

Harmony HMIBMO Optimized

Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V $\overline{\text{DC}}$ supply voltage (1)

Regular version (without optional interface)

1x mini PCIe, full-size without optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	M.2 SSD 64 GB	4 GB	HMIBMOMA5DD1101	1.25/2.75
	Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (default)	M.2 SSD 64 GB	4 GB	HMIBMOMA5DD1E01 (8)	1.25/2.75
	No		No	4 GB	HMIBMO0A5DD1001	1.25/2.75

Expandable version (with Optional interface and HDD/SSD 2.5" slot (6))

1x mini PCIe, full-size with optional interface	Windows 10 IoT Enterprise LTSC (64-bit)	EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)	M.2 SSD 250 GB	4 GB	HMIBMOMA5DDF10L	1.30/2.86
	No		No	4 GB	HMIBMO0A5DDF101	1.30/2.86
	No		No	8 GB	HMIBMO0A5DDF10A (7)	1.30/2.86

(1) AC with additional power supply module HMIYPSOMAC1 (or HMIYMMAC1 for HMIBMO in hazardous locations).

(2) Memory is not user-expandable.

(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTWZLSPAZZ (Digital) or HMIRTWZLSPMZZ (Paper).

(4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.

(5) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.

(6) 2.5" HDD, SSD requires HMIYBADHDBMO1 adapter to be mounted.

(7) With conformal coating.

(8) Edge Box with TPM 2.0 default module.

4



HMIBMIEA5DD110L



HMIBMOMA5DD1E01



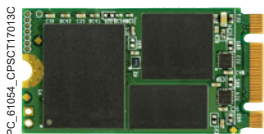
HMIBMO0A5DDF101

Separate components				
Description	Details	Compatible with	Reference	Weight kg/lb
Drives				
Blank SSD with mounting screws	128 GB MLC (5-year warranty and 1.5 million hours MTBF)	HMIBMO (expandable)	HMIYSSDS080S1	–
	256 GB MLC (5-year warranty and 2 million hours MTBF)		HMIYSSDS240S1	–
M.2 SSD	64 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2064M1	–
	128 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2128M1	–
	250 GB MLC (3-years warranty and 1.5 million hours MTBF)	HMIBMO	HMIYM2256M1	–
Blank HDD	Spare 1 TB HDD, blank	HMIBMO (expandable)	HMIYHDD01T21	–
	Spare 500 GB HDD, blank	HMIBMO (expandable)	HMIYHDD50021	–
Carrier for HDD/SSD	Carrier to mount an HDD/SSD 2.5" in a storage slot of Harmony HMIBMO expandable model	HMIBMO (expandable)	HMIYBADHDBMO1	–
Accessories				
Maintenance kit for HMIBM Box PCs + HMIDM Modular Displays	Includes: <ul style="list-style-type: none"> ■ Screws and dampers for HDD/SSD ■ Screws and clamps for panel mounting ■ Modular Box cover screws ■ Screws for mounting Box to Display ■ Power connector and sticker ■ CFast card pull-out ■ Rubbers for display mounting ■ Filter for fan kit ■ Bracket, screws, and dampers for mini PCIe 	HMIBMI and HMIBMO	HMIYBMKTBM1	–
USB key blank for iPC recovery	Spare USB memory key blank (1)	HMIBMI and HMIBMO	HMIYUSBK111	–
AC power supply (60 W)	AC power adapter (60 W)	HMIBMI and HMIBMO	HMIYPSOMAC1	–
AC power supply for HMIBM	Modular AC power adapter (100 W) (2)	HMIBMI and HMIBMO	HMIYMMAC1	–
UPS battery	UPS battery for HMIBM (no cables)	HMIBMI and HMIBMO	HMIYMUPSKT1	–
UPS cable	UPS cables for HMIBM (3 m/9.84 ft)	HMIBMI and HMIBMO	HMIYCABUPS31	–
VESA mounting kit	VESA mounting kit for HMIBM Box PC + HMIDM6 4:3 12" and W12" Display	HMIBMI and HMIBMO	HMIYPVESA6X21	–
	VESA mounting kit for HMIBM Box PC + HMIDM7/9/A 4:3 15", W15", W19" and W22" Display	HMIBMI and HMIBMO	HMIYPVESA21	–
DP to DVI adapter	DP to DVI-D adapter	HMIBMI and HMIBMO	HMIYADDPDV11	–
DP to DVI cable	DP to DVI-D cable 3 m/9.84 ft	HMIBMI and HMIBMO	HMIYCABDPDVI31	–
Display adaptation plate	Display adaptation plate from legacy Panel PC 19" display HMIPU●●●● to Modular Display 15" HMIDM7421	HMIBMI and HMIBMO with HMIDM7421	HMIYAD1915D1	–
DIN rail adapter		HMIBMI and HMIBMO	HMIYADBMODIN11	–

(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.
 (2) Certified for IECEx Zone 22 (Dust) only. HMIYPSOMAC1 is not certified for IECEx Zone 2 (Gas).
 (3) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see page 4/22).
 (4) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#).



HMIYSSDS240S1



HMIYM2256M1



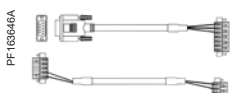
HMIYM2256M1



HMIYMMAC1



HMIYMUPSKT1



HMIYCABUPS31

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

Separate components

Separate components (continued)				
Description	Details	Compatible with	Reference	Weight kg/lb
Software and Secure remote access (1)				
EcoStruxure Operator Terminal Expert Run Time license	Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license.	HMIBMI and HMIBMO with EcoStruxure Operator Terminal Expert	HMIRTCWZLSPAZZ (Digital) HMIRTCWZLSPMZZ (Paper)	–
EcoStruxure Secure Connect Advisor	For HMI secure remote access	HMIBMI and HMIBMO that support EcoStruxure Secure Connect Advisor	VJOCNT (2)	–
Interfaces				
RJ45 Ethernet interface	Interface Mini PCIe, 1x RJ45 Ethernet (3)	HMIBMI and HMIBMO with optional interfaces	HMIYMIN1ETH1	–
2x RS-422/485 isolated interface	Mini PCIe with 2x RS-422/485, isolated external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINSL24851	–
4x RS-422/485 interface	Mini PCIe with 4x RS-422/485, external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINSL44851	–
2x RS-232 isolated interface	Mini PCIe with 2x RS-232, isolated external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINSL22321	–
4x RS-232 interface	Mini PCIe with 4x RS-232, external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINSL42321	–
1x Profibus DP Master NVRAM interface	Mini PCIe with 1x Profibus DP Master, non-volatile RAM, external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINPRO1	–
2x CANopen/CAN bus interface	Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus	HMIBMI and HMIBMO with optional interfaces	HMIYMINCAN1	–
16x DI/8 DO interface	Mini PCIe with 16x DI/8 DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal	HMIBMI and HMIBMO with optional interfaces	HMIYMINIO1	–
2x USB 3.0 interface	Mini PCIe with USB 3.0, external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINUSB1	–
Audio interface	Module with Audio (line in, line out and mic), external interface with connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINAUD1	–



HMIYMINSL24851



HMIYMINCAN1



+



+



HMIYMINIO1

(1) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see [page 4/22](#)).
 (2) For more information, please refer to EcoStruxure Secure Connect Advisor catalog [DIA5ED2190101EN](#).
 (3) Available in Q4 2020.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box PC

Separate components

Separate components (continued)				
Description	Details	Compatible with	Reference	Weight kg/lb
Interfaces (continued)				
Wireless LAN interface + 2x antennas kit	Kit with mini PCIe WiFi (access point with Windows 10) + Bluetooth and 2x antennas	HMIBMI and HMIBMO	HMIYMINWIFI2	—
Remote wireless LAN antenna cable	5 m/16.4 ft cable to mount a WiFi antenna remotely from Harmony iPC	HMIBMI and HMIBMO	HMIYCABWIFIAN51	—
Cybersecurity TPM for iPC	Trusted Platform Module for cyber secured hardware encryption on HMIBM with related connector on mother board, to be activated with Windows bit-locker	HMIBMI and HMIBMO	HMIYMINATPM201	—
McAfee whitelisting	License sticker and a USB stick with software application for Cybersecurity whitelisting on Windows 10	HMIBMI and HMIBMO	HMIYYMACWLIOT1	—
Cellular 3G interface	Mini PCIe with GPRS, SIM card holder, and external antenna	HMIBMI and HMIBMO	HMIYMINGPRS1	—
Cellular 4G interface for North America	Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna	HMIBMI and HMIBMO	HMIYMIN4GUS1	—
Cellular 4G interface for Europe and Asia	Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna	HMIBMI and HMIBMO	HMIYMIN4GEU1	—
Mini PCIe interface to Display Adapter	Mini PCIe Interface transmitter with RJ45 port, graphic video card	HMIBMI and HMIBMO with optional interfaces (1)	HMIYMINDP1	—
Mini PCIe interface DVI-I for iPC	Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)	HMIBMI and HMIBMO with optional interfaces (1)	HMIYMINDVII1	—
Mini PCIe interface 2VGA + DVI-D	Mini PCIe Graphic video card Full HD 1920 x 1080, with 2xVGA connectors on a single external interface and 1x DVI-D connector in a second external interface	HMIBMI and HMIBMO with optional interfaces (1)	HMIYMINVGADVID1	—
Mini PCIe interface Audio for iPC	Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors	HMIBMI and HMIBMO with optional interfaces	HMIYMINAUD21	—

(1) Limited to a single Mini PCIe graphic video card per unit.

IPC_61054_CPSC17017



HMIYMIN4GUS1

IPC_61054_CPSC17011



HMIYMINATPM201

IPC_61054_CPSC17020



HMIYYMACWLIOT1

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display

Type of Display	Harmony HMIDM Modular Display			
Model	4:3 12" touch screen	4:3 15" touch screen	W12" touch screen	W15" touch screen



Screen	Type	LED LCD single-touch resistive screen		LED LCD 5-point multi-touch projected capacitive technology screen	
	Size	4:3 12.1"	4:3 15"	W12.1"	W15.6"
	Resolution	XGA, 1024 × 768 pixels, 16.7 million colors		WHD WXGA, 1280 × 800, 16.7 million colors	WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
	Degree of protection	IP66, NEMA 4X indoor front panel, and 7H hardness anti-scratch			
	Brightness	≥ 300 cd/m ² , step less adjustment			
	View angle	Vertical 115°, horizontal 140°		Vertical 140°, horizontal 150°	
	Backlight service life	50,000 hours			
	Operate with water on screen	Yes for all models			
	Interface	On the front panel	1x USB 2.0 (Type A) and Reset button		–
On the back panel		–		–	
Supply voltage	From Box PC or mounted Display Adapter				
Standards and certifications (mounted on front Panel of Box PC HMIBM or Display Adapter HMIDAD)	Marine	Yes	Yes	Yes	Yes
	IECEX ATEX (2)	No	Yes	No	Yes
Power consumption	With Universal Modular Box PC	38.6 W typical, 52.87 W max.	39.9 W typical, 48.04 W max.	37.4 W typical, 53.65 W max.	40.9 W typical, 49.5 W max.
	With Performance Modular Box PC	43.6 W typical, 57.87 W max.	44.9 W typical, 53.04 W max.	42.6 W typical, 58.65 W max.	46.1 W typical, 54.5 W max.
	With Display Adapter	17.87 W max.	13.04 W max.	18.65 W max.	14.5 W max.
		On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC			
Mounting	Panel PC (with Box PC HMIBM)	On front enclosure or VESA 100 × 100 on the rear of Display Adapter			
	Panel Monitor (with Display Adapter HMIDAD)				
Dimensions	Overall dimensions (W × H × D)	319.1 × 245.1 × 66.3 mm / 12.56 × 9.65 × 2.61 in.	390.7 × 290 × 28 mm / 15.38 × 11.42 × 1.10 in.	329.2 × 231.3 × 66.3 mm / 12.96 × 9.11 × 2.61 in.	419.7 × 269 × 28 mm / 16.52 × 10.59 × 1.10 in.
	Cut-out (W × H)	301.5 × 227.5 mm / 11.87 × 8.96 in.	383.5 × 282.5 mm / 15.10 × 11.12 in.	310 × 221 mm / 12.20 × 8.70 in.	412.4 × 261.7 mm / 16.24 × 10.30 in.
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1)			
	During storage	Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F			
References		HMIDM6421	HMIDM7421	HMIDM6521	HMIDM7521
Pages		4/17			

(1) Except Box PC with 2x mini PCIe + display: limited to 45 °C/113 °F.
(2) CE Atex and IECEx HazLoc 3GD Zone 2/22.

Harmony HMIDM Modular Display		Harmony HMIDAD Display Adapter
W19" touch screen	W22" touch screen	



Screen	LED LCD 5-point multi-touch projected capacitive technology screen		HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as: <input type="checkbox"/> Local display (maximum distance of 5 m/16.4 ft) <input type="checkbox"/> Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1st display to 400 m/1312 ft for 4th display)	
	W18.5"	W21.5"		
	WHD FWXGA, 1366 × 768 pixels, 16.7 million colors			Full HD, 1920 × 1080 pixels, 16.7 million colors
	IP66, NEMA 4X indoor front panel, and 7H hardness anti-scratch			
	≥ 300 cd/m ² , stepless adjustment			
	Vertical 140°, horizontal 150°			Vertical 150°, horizontal 150°
	50,000 hours			
	–			
	–			
From Box PC or mounted Display Adapter		24 V $\overline{\text{---}}$ or 100...240 V \sim with external power adapter		
Yes	No			
No	Yes			
CE, EAC, RCM, cULus (UL IT 60950, CSA IT 60950), FCC (part 15 EMC Class A)			CE, cULus CSA 22-2 No 142, cULus HazLoc Class I Division 2 (ANSI/ISA 12-12-01, CSA 22-2 No 213), ATEX, IECEx, FCC (part 15 EMC Class A), CCC	
43.1 W typical, 58.28 W max.		45.2 W typical, 59.85 W max.	According to Harmony HMIDM Modular Display mounted on front	
48.1 W typical, 63.28 W max.		50.7 W typical, 64.85 W max.		
23.28 W max.		24.85 W max.		
On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC			–	
On front enclosure or VESA 100 × 100 on the rear of Display Adapter			On the back of Modular Display HMIDM	
488 × 309 × 28 mm/19.22 × 12.17 × 1.10 in.		558.4 × 349.8 × 28 mm/21.98 × 13.77 × 1.10 in.	254 × 207 × 37 mm/10 × 8.15 × 1.46 in.	
479.3 × 300.3 mm/18.87 × 11.82 in.		550.3 × 341.8 mm/21.66 × 13.45 in.	According to Harmony HMIDM Modular Display mounted on front	
Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1)			0...55 °C/32...131 °F	
Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F			-30...70 °C/-22...158 °F	
HMIDM9521		HMIDMA521	HMIDADP11	
4/17		4/21		

(1) Except Box PC with 2x mini PCIe + display: limited to 45 °C/113 °F.
(2) CE Atex and IECEx HazLoc 3GD Zone 2/22.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIDM Modular Display



Harmony HMIDM 22" Modular Display

Presentation

Harmony HMIDM Modular Displays are monitors designed to be easily integrated with:

- Harmony HMIBM Modular Box PCs (1) to make a Panel PC
- Harmony HMIDAD Display Adapter (2) to make a Panel monitor, to be remotely mounted from the PC with Display Port and USB cable (up to 5 m/16.4 ft) or with RJ45 cable (up to 4 Display and 400 m/1312 ft)

In addition to multiple choices, the modularity feature reduces maintenance as the Display can be independently replaced without changing the complete Panel PC or Panel Monitor.

HMIDM Modular Displays are available in:

- 4:3 12" and 15" single-touch resistive screens for easy substitution of legacy Panel PCs, operation with heavy gloves, and front USB connection port
- 16:9 W12", W15", W19" and W22" multi-touch capacitive screens for smartphone or tablet-like navigation on EcoStruxure Operator Terminal Expert software and for displaying SCADA screens in wide format

Harmony HMIDM 4:3 12"/15" and 16:9 12"/15" screens are certified for cULus Industrial Control and Hazardous Locations. The Harmony HMIDM displays are also Marine DNV and IECEx ATEX (IECEx ATEX only for 4:3/16:9 15" models) certified. When mounted with Harmony HMIBM Modular Box PCs or HMIDAD Display Adapter with similar certifications, these displays can be used for advanced automation applications.

Overview of the offer

Harmony HMIDM Modular Display

The Harmony HMIDM Modular Display offer comprises 6 references, each equipped with:

- **HMIDM6421**
 - Resolution: XGA, 1024 × 768 pixels, 16.7 million colors
 - Size and type: 4:3 12.1", single-touch resistive screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM7421**
 - Resolution: XGA, 1024 × 768 pixels, 16.7 million colors
 - Size and type: 4:3 15", single-touch resistive screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM6521**
 - Resolution: WHD WXGA, 1280 X 800 pixels, 16.7 million colors
 - Size and type: W12.1", multi-touch projected capacitive technology screen
 - View angle: Vertical 115°, horizontal 140°
- **HMIDM7521**
 - Resolution: WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
 - Size and type: W15.6", multi-touch projected capacitive technology screen
 - View angle: Vertical 140°, horizontal 150°
- **HMIDM9521**
 - Resolution: WHD FWXGA, 1366 × 768 pixels, 16.7 million colors
 - Size and type: W18.5", multi-touch projected capacitive technology screen
 - View angle: Vertical 140°, horizontal 150°
- **HMIDMA521**
 - Resolution: Full HD, 1920 × 1080 pixels, 16.7 million colors
 - Size and type: W21.5", multi-touch projected capacitive technology screen
 - View angle: Vertical 150°, horizontal 150°

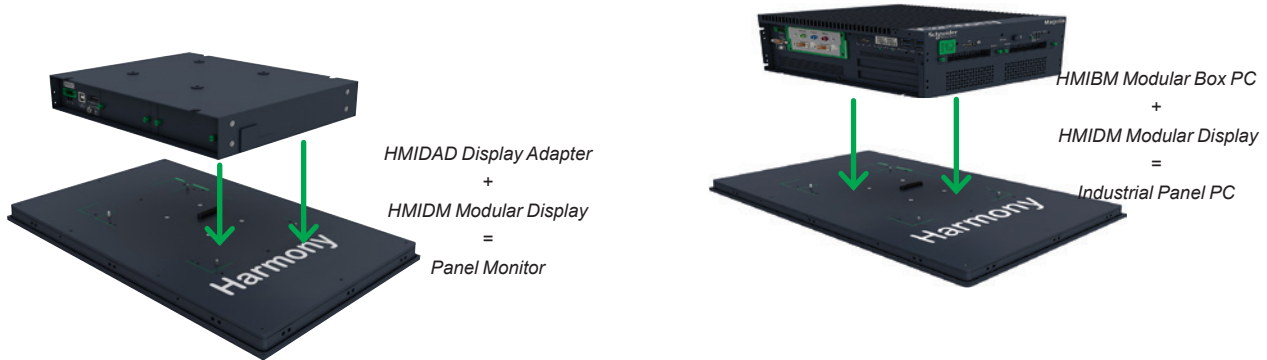
(1) For more information, see [pages 4/8 to 4/11](#).

(2) For more information, see [page 4/18](#).

Presentation (continued)

Architecture

Harmony HMIDM Displays are compatible and easily mountable with all HMIBM Modular Box PCs and HMIDAD Display Adapter.



References

Harmony HMIDM Modular Displays

PF143853A



HMIDM9521

Description	Screen	Interface	Reference	Weight kg/lb
4:3 12" TFT LED LCD display	12", XGA (1024 × 768 pixels)	Single-touch resistive	HMIDM6421	2.30/ 5.07
4:3 15" TFT LED LCD display	15", XGA (1024 × 768 pixels)		HMIDM7421	4.20/ 9.20
16:9 12" TFT LED LCD display	12", WHD/FWXGA (1280 × 800 pixels)	Multi-touch capacitive	HMIDM6521	2.25/ 4.96
16:9 15" TFT LED LCD display	15.6", WHD/FWXGA (1366 × 768 pixels)		HMIDM7521	4.30/ 9.50
16:9 19" TFT LED LCD display	18.5", WHD/FWXGA (1366 × 768 pixels)		HMIDM9521	5.20/ 11.50
16:9 22" TFT LED LCD display	21.5", Full HD/FWXGA (1920 × 1080 pixels)		HMIDMA521	6.60/ 14.50

Separate components

PF110398B

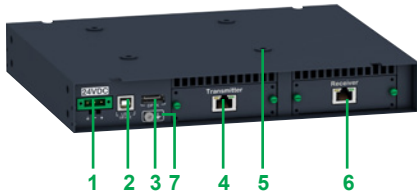


HMIYP752PS11

Description	Details	Compatible with HMIDM Display	Reference	Weight kg/lb
Removable protective sheet	Set of 5 protective sheets for 4:3 12"	HMIDM6421	MPCYK20SPSKIT	–
	Set of 5 protective sheets for 4:3 15"	HMIDM7421	MPCYK50SPSKIT	–
	Set of 5 protective sheets for HMIDM W12"	HMIDM6521	HMIYP652PS11	–
	Set of 5 protective sheets for W15"	HMIDM7521	HMIYP752PS11	–
	Set of 5 protective sheets for W19"	HMIDM9521	HMIYP952PS11	–
	Set of 5 protective sheets for W22"	HMIDMA521	HMIYPA52PS11	–



Harmony HMIDAD Display Adapter



4

Presentation

The Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third-party PC.

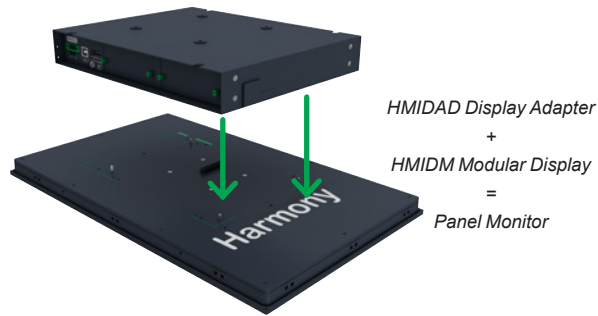
Description

Rear view

- 1 DC power supply connection
- 2 USB port type B (USB 2.0 for touch screen OUT) (1)
- 3 Display port (IN) (1)
- 4 Transmitter module (HMIYDATR11) with RJ45 port (2)
- 5 Mounting holes for the VESA
- 6 Receiver module (HMIYDARE11) with RJ45 port (2)
- 7 USB locker

Architecture

The Display Adapter is mounted on the rear side of the display as shown below:



(1) Not operational with Receiver module mounted.
(2) Optional modules.

Harmony iPC

Industrial PC, Edge Box, and Display

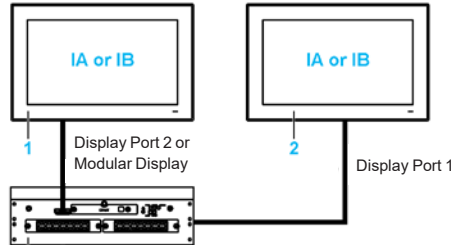
Harmony HMIDM Modular Display

Harmony HMIDAD Display Adapter

Configuration

Local display

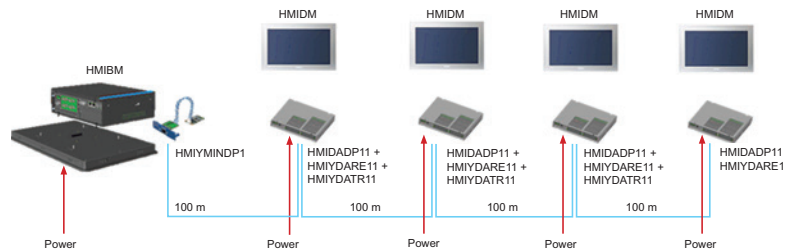
The PC is connected to Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video with a maximum distance of 5 m/16.4 ft.



Remote display

The Harmony iPC with mini PCIe interface can support up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft between each display) when connected to Display adapters that are equipped with transmitter and receiver modules in a daisy chain configuration.

In this configuration, each remote display includes an HMIDM Modular Display + a HMIDADP11 Display Adapter + a HMIYDARE11 Receiver module + a HMIYDATR11 Transmitter module (not required for the last display in the chain).



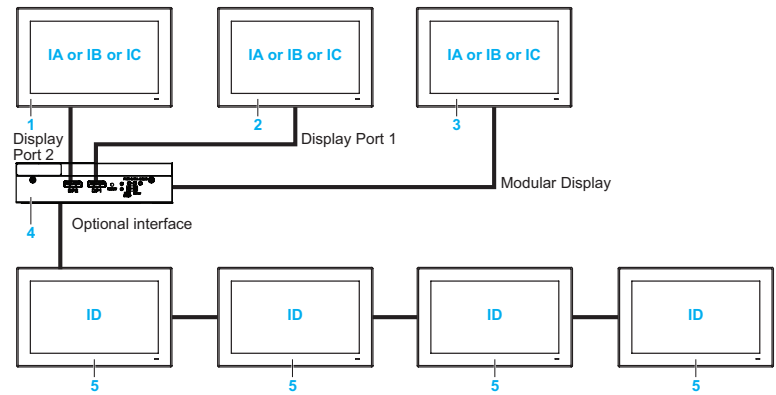
For long distance remote displays:

- Limited to one HMIYMINDP1 mini PCIe per HMIBM Box iPC.
- To set up mini PCIe to Display Adapter Interface (HMIYMINDP1), a display or a third-party panel on host PC is required to install the driver. Once remote display set-ups are ready, the display on host PC can be removed if not used.
- The remote display cable does not support normal LAN HUB or switch as signal type is different.
- CAT6 cable is recommended. CAT5e cable may be used for shorter distances, according to environment conditions and with the maximum screen resolution of 1920 x 1080 pixels.
- The display touch panels can be disabled. When activated, the touch panel on the remote displays can be used only one at a time (waiting time 100 ms).
- The Display Adapter with display does not support brightness control. The brightness is fixed at 100%.
- With remote display (100 m/328 ft) cable, the touch-beep sound cannot be heard from the touch panel side as the buzzer is on the Box iPC side.
- When the host PC is off, or when one of the displays in the daisy chain is off or disconnected, the next displays in the chain get a NO SIGNAL message on their screens.

Harmony iPC

Industrial PC, Edge Box, and Display
 Harmony HMIDM Modular Display
 Harmony HMIDAD Display Adapter

Example of displays connected to Harmony HMIBMO



IA, IB, IC, ID Images (with Windows setting)

1, 2, 3 Local displays and Display Adapters

4 Harmony HMIBMO Optimized Modular Box with HMIYMINDP1x mini PCIe transmitter interface with RJ45 port

5 Harmony HMIDM Modular Display + HMIDADP11 Display Adapters + HMIYDARE11 Receiver module + HMIYDATR11 Transmitter module (not required for the last display in the chain), making a daisy chain of up to 4 remote displays with the same screen definition (set by the receiver module or in the Windows settings)

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIDM Modular Display

Harmony HMIDAD Display Adapter



PF513848
HMIDADP11



IPC_61054_CPSCCT17015
HMIYCABDP51



IPC_61054_CPSCCT17016
HMIYCABUSB51



IPC_61054_CPSCCT17010
HMIYMINDP1



IPC_61054_CPSCCT17009A
HMIYDARE11



IPC_61054_CPSCCT17007A
HMIYDATR11

Harmony HMIDAD Display Adapter

Description	Characteristics	Supply voltage	Compatible with	Reference	Weight kg/lb
Display Adapter	USB port (OUT) + Display Port (IN) for cable up to 5 m/16.4 ft	24 V $\overline{\text{---}}$ (1)	Harmony iPC and third-party PCs	HMIDADP11	1.8/ 3.96

Accessories

Description	Characteristics	Compatible with	Reference	Weight kg/lb
DVI to DP cable	3 m/9.84 ft	From PC with DVI port to HMIDAD Display Adapter	HMIYCABDPDVI31	–
DP to DP cable	Display Port to Display Port, 5 m/16.4 ft cable for digital video signal	From HMIBM Modular Box PC to HMIDAD Display Adapter	HMIYCABDP51	–
USB cable	USB to USB, 5 m/16.4 ft cable for touch screen signal	From HMIDAD Display Adapter to HMIBM Modular Box PC	HMIYCABUSB51	–
Transmitter interface for Harmony HMIBM Box PC	Mini PCIe to Display Adapter interface with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)	For HMIBM Box PC with optional interface to connect to first HMIYDARE11 receiver in the chain mounted in HMIDADP11 Display Adapter (2)	HMIYMINDP1	–
Receiver for Display Adapter	Receiver module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)	For HMIDADP11 Display Adapter to connect to next HMIYDATR11 transmitter in the chain	HMIYDARE11	–
Transmitter for Display Adapter	Transmitter module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch).	For HMIDADP11 Display Adapter to connect to next HMIYDARE11 receiver in the chain (not required for the last display in the chain)	HMIYDATR11	–
AC power supply	External AC power adapter, 60 W	For HMIDADP11 Display Adapter	HMIYPSOMAC1	–
Modular AC power supply	Modular AC power adapter, 100 W for hazardous locations	For HMIDADP11 Display Adapter	HMIYMMAC1	–

(1) For AC power supply, additional power supply module HMIYPSOMAC1 or HMIYMMAC1 is required. For AC in hazardous locations, AC power supply module HMIYMMAC1 product version PV02 is required.
 (2) HMIYMINDP1 cannot be used with HMIYMINDVII1/HMIYMINVGADVID1. Remove the existing driver to install HMIYMINDP1/HMIYMINDVII1/HMIYMINVGADVID1 in Modular Box PC HMIBM.

Harmony iPC

Industrial PC, Edge Box, and Display

Configured-To-Order Harmony HMIBM Modular Box PC and Harmony HMIDM Modular Display

Configured-To-Order Harmony HMIBM Modular Box PC and HMIDM Modular Display

"Configured-To-Order" industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help you configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator <https://www.hmisource.com/wwjpc> is also available to help you easily build the configuration by yourself (password = Magelis). Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony Modular Box PC/Display and a configuration code that will be the part number of the Harmony iPC.

Ordering procedure for a configured Harmony HMIBM Modular Box PC and HMIDM Modular Display

If you have built your Harmony iPC configuration with the Web Configurator:

- 1 Please forward the e-mail received from the Web Configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description and part number code.
- 2 If required, specify the Schneider Electric commercial reference root part number GCR_HMIPCCP2.

If you cannot access the Harmony iPC Web Configurator:

- 3 Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.
- 4 Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.
- 5 Confirm your order.

Configured-To-Order options for Harmony HMIBM Modular Box PC and HMIDM Modular Display

Option	Description
Box PC or Display Adapter	Harmony HMIBM Box PC (Basic, Optimized)
	Harmony HMIBSC Core Box
	Harmony HMIDAD Display Adapter
Modular Displays (pre-mounted)	None
	Harmony HMIDM Modular Display 4:3 12"/4:3 15"- XGA
	Harmony HMIDM Modular Display W12"/W15"- FWXGA
	Harmony HMIDM Modular Display W22" - FHD
CPU	None (Display Adapter)
	Intel Atom Apollo Lake E3930
Power supply	DC
	AC
Windows operating system	None
	Windows 10 IoT Enterprise (64-bit Multi-language)
	Linux Yocto
Main storage device for operating system	None
	eMMC soldered
	M.2 64 GB/128 GB/250 GB
Optional interfaces (pre-mounted)	None
	NVRAM
	2x RS-422/485 isolated/4x RS-422/485
	2x RS-232 isolated/4x RS-232
	16x DI/8x DO
	Video (DVI and VGA ports)
	Audio
	Cellular 3G/4G
	Transmitter to Display adapter
	Analog inputs
	Wireless LAN + 2x antennas
	2x CANopen CAN bus
	Profibus DP Master with NVRAM
	Cyber security TPM module
	1x Ethernet RJ45
Software bundle	None
	EcoStruxure Operator Terminal Expert Run Time unlimited license
	EcoStruxure Machine SCADA Expert 1500 tags Run Time license
	EcoStruxure Machine SCADA Expert 4000 tags Run Time license
	EcoStruxure Machine SCADA Expert 64000 tags Run Time license
	Vijeo Designer Runtime unlimited license

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC and
HMIDM Modular Display
Substitution product table

Legacy Harmony iPC		Replaced by Harmony iPC	
Description	References	Description	References
Harmony S-Box PC Universal HMIBS		Harmony HMIBM Modular Box PC	
Harmony Optimized S-Box PC, 1 slot, 24 V ~	HMIBSO0ND1001	Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~ (1)	HMIBMIEA5DD1001
Harmony Optimized S-Box PC, CFAST card, 1 slot, 24 V ~	HMIBSOCND1E01	Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~ (1)	HMIBMIMA5DD1101
Harmony Universal S-Box PC, CFAST card, 1 slot, 24 V ~	HMIBSUCND1W01	Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~ (1)	HMIBMOMA5DD1101
Harmony Universal S-Box PC, SSD, 1 slot, 24 V ~	HMIBSUSND1W01	Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~ (1)	HMIBMOMA5DD1101
Harmony Universal S-Box PC, No OS, 1 slot, 24 V ~	HMIBSU0ND1001	Harmony Modular Box PC, No OS, 1 slot, 24 V ~ (1)	HMIBM00A5DD1001
Harmony Simple Optimized Panel PC HMIPSO			
Harmony Simple Optimized Panel PC, W 15", 24 V ~	HMIPSO●752D1●	Harmony Basic Box PC + Harmony Modular display W 15", 24 V ~	HMIBMI + HMIDM7521

(1) AC with power adapter HMIYPSOMAC1.

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIP6

Harmony HMIP6 Modular Box PC

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■ **Presentation**

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 - Harmony HMIP6 Modular Box PC page 5/4

■ **Description**..... page 5/4

■ **Ready-to-run software for Harmony HMIP6** page 5/5

Harmony HMIDM6 Modular Display

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■ **Presentation**

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- Architecture page 5/8

■ **Description**.....page 5/8

■ **References**page 5/9

Online Product Selector

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■ **Description**.....page 5/10

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- Example Harmony P6 product code page 5/11

■ **References**

- Configured-To-Order options for Harmony P6 Modular Box PC and DM6 Modular Display..... page 5/12
- Substitution table page 5/12
- Accessories for Harmony P6 Modular Box and DM6 Modular Display page 5/13



Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIP6 Modular Box

Type of box		Harmony HMIP6 Advanced Modular Box	
			
Type of cooling		Fanless/Fan with HDD	
Mounting	Box Panel PC, Modular Display	Wall/Book/Flat Yes	
CPU	Processor Number of cores/threads Expansion slots Storage slots Memory capacity RAID HDD with Intel Rapid storage	Intel Core™ i7-8665UE, up to 4.4 GHz 4/8 1x PCI + 1x PCIe, 2x PCIe or 2x PCI 1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD) 8 to 32 GB DDR4 RAM (not user-expandable) Yes	Intel Core i5-8365UE, up to 4.1 GHz 4/8 1x PCI + 1x PCIe, 2x PCIe or 2x PCI 1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD) 8 to 32 GB DDR4 RAM (not user-expandable) Yes
Cybersecurity hardware encryption		TPM 2.0 module (pre-installed)	
Operating system		Windows® 10 IoT Enterprise 2019 LTSC (64-bit)	
Video controller type		Intel® UHD Graphics 620 (integrated in CPU)	
Supply voltage		12...24 V ⎓ or 100...240 V ~	
Power consumption		121 W for DC model/140 VA for AC model	
Interface	Ethernet Serial ports USB Display ports Watchdog timer	2x IEEE1588, RJ45 Ethernet, 10/100/1,000 Mbps, Wake-on-LAN (WOL) 1x RS-232C non-isolated USB Type A: 2x USB 2.0 and 2x USB 3.0, USB Type C: 1x USB 3.0 1x DP 1.2 (dual-mode DP++) System reset output, 1 sec or 1 minute with 255 level Yes	
Reset button and buzzer		Yes	
Overall dimensions (W x H x D)		290 x 195 x 65 mm/11.42 x 7.68 x 2.56 in. (with no expandable slots)	
Temperature	During operation During storage	Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1) Conforming to IEC 60068-2-2/ 60068-2-14: -30...70 °C/-22...158 °F	
Vibration resistance	During operation	Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Associated Software		EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED	
Cybersecurity		EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting	
References		Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.	
Pages		5/4	

(1) With HDD and fan: limited to 45 °C/113 °F.
(2) Available in H2 2021.

Harmony HMIP6 Advanced Modular Box		Harmony HMIP6 Standard Modular Box	
 			
Type of cooling		Fanless/Fan with HDD	
Mounting		Wall/Book/Flat No	
CPU		Intel Celeron® 4305UE, up to 2.0 GHz 2/2 1x PCI + 1x PCIe, 2x PCIe or 2x PCI 1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD) 4 to 16 GB DDR4 RAM (not user-expandable) Yes	Intel Core i3-8145UE, up to 3.9 GHz 2/4 - 1x M.2 SSD SATA, 1x 2.5-inch SATA (HDD/SSD) 8 to 32 GB DDR4 RAM (not user-expandable) -
Cybersecurity hardware encryption		TPM 2.0 module (pre-installed)	
Operating system		Windows® 10 IoT Enterprise 2019 LTSC (64-bit)	
Video controller type		Intel UHD Graphics 610 (integrated in CPU)	Intel UHD Graphics 620 (integrated in CPU)
Supply voltage		12...24 V ⎓ or 100...240 V ~	
Power consumption		121 W for DC model/140 VA for AC model	87 W for DC model/99 VA for AC model
Interface		2x IEEE1588, RJ45 Ethernet 10/100/1,000 Mbps, Wake-on-LAN (WOL) 1x RS-232C (non-isolated) USB Type A: 2x USB 2.0 and USB 3.0, USB Type C: 1x USB 3.0 1x DP 1.2 (dual-mode DP++) System reset output, 1 sec or 1 minute with 255 level Yes	
Reset button and buzzer		Yes	
Overall dimensions (W x H x D)		290 x 195 x 65 mm/11.42 x 7.68 x 2.56 in. (with no expandable slots)	250 x 165 x 53 mm/9.84 x 6.5 x 2.09 in.
Temperature		Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (1) Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Vibration resistance		Conforming to IEC 60664-1: 2 g from 5...500 Hz	
Standards and certifications		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Associated Software		EcoStruxure Machine SCADA Expert, EcoStruxure Augmented Operator Advisor, Node-RED	
Cybersecurity		EcoStruxure Secure Connect Advisor, Secure password boot, McAfee Whitelisting	
References		Available as configure-to-order only and can be ordered using the Product Selector. For more information, see page. 5/10.	
Pages		5/4	



Harmony HMIP6 Modular Boxes PCs

Presentation

Harmony HMIP6 connects OT (Operational Technology) in the field to IT (Information Technology) for the Industrial Internet of Things. With Node-RED, WiFi, Bluetooth, and Windows operating system running on a Intel Core/Celeron CPU, it is well equipped to wire the Internet of Things.

This range features interface modularity with slot-in design for HDD/SSD, optional interfaces, and optional PCI/PCIe slots for Advanced Box only. The two standard Ethernet ports allow OT and IT communications to be separated if necessary. The secure password boot and TPM encryption module afford a high level of cybersecurity by design.

Overview of the offer

Harmony HMIP6 Modular Box PC

The Harmony HMIP6 offer comprises Advanced and Standard boxes, each equipped with:

■ Advanced Modular Box PC

- Intel Core/Celeron processor and UHD Graphics accelerator
- Operating system: Windows® 10 IoT Enterprise 2019 LTSC (64-bit)
- Connection ports: USB Type A (2x USB 2.0 and 2x USB 3.0), USB Type C (1x USB 3.0), 1x COM RS-232C, 2x RJ45 Ethernet, 1x Display port
- Expansion slots: 1x PCI + 1x PCIe, 2x PCIe or 2x PCI
- Storage: 1x M.2 SSD SATA, 2x 2.5-inch SATA (HDD/SSD)
- Power supply: 12...24 V $\overline{\text{---}}$, 100...240 V \sim
- Default TPM module for encryption

■ Standard Modular Box PC

- Intel Core processor and UHD Graphics accelerator
- Operating system: Windows 10 IoT Enterprise 2019 LTSC (64-bit)
- Connection ports: USB Type A (2x USB 2.0 and 2x USB 3.0), USB Type C (1x USB3.0), 1x COM RS-232C, 2x RJ45 Ethernet, 1x Display port
- Storage: 1x M.2 SSD SATA, 1x 2.5-inch SATA (HDD/SSD)
- Power supply: 12...24 V $\overline{\text{---}}$, 100...240 V \sim
- Default TPM module for encryption

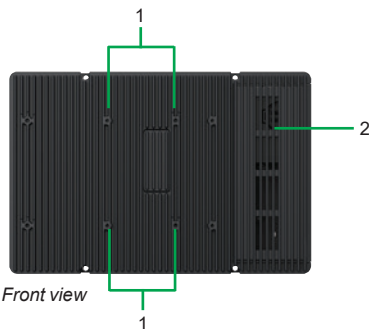
The HMIP6 Modular Boxes are ordered using the Product Configurator. For more information on the configured-to-order options, see [page 5/10](#).

Description

Harmony HMIP6 Advanced/Standard Modular Box PCs

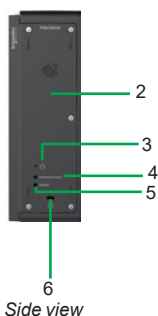
Front view

- 1 Mounting holes for VESA 100 x 100
- 2 Maintenance hatch

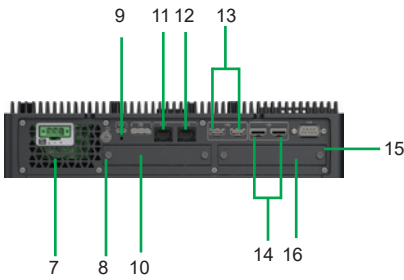


Side view

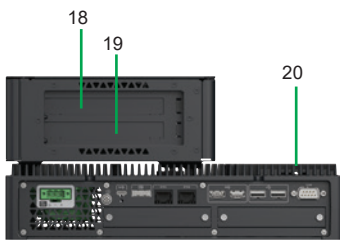
- 3 Power supply button
- 4 Storage access LED
- 5 Power LED
- 6 Security lock slot (1)



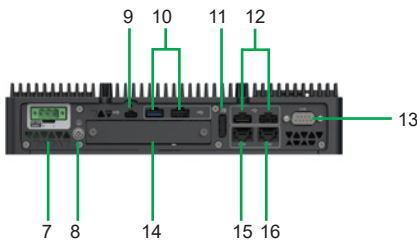
(1) Only Kensington lock supported.



Underside view of Advanced Modular Box



Underside view of Advanced Modular Box with expansion slot and fan



Underside view of Standard Modular Box

Description

Harmony HMIP6 Advanced/Standard Modular Box PC

Underside view of Advanced Modular Box PC

- 7 DC/AC power connector
- 8 PE terminal
- 9 USB 3.0 (Type C)
- 10 Display port
- 11 Ethernet 1 (10/100/1000 Mbps) IEEE1588
- 12 Ethernet 2 (10/100/1000 Mbps) IEEE1588
- 13 USB 3.0 (Type A)(1)
- 14 USB 2.0 (Type A)(1)
- 15 COM port RS-232C (non-isolated)
- 16 Optional interface slot 1
- 17 Optional interface slot 2
- 18 PCI/PCIe card slot 1
- 19 PCI/PCIe card slot 2
- 20 Fan

Underside view of Standard Modular Box PC

- 7 DC/AC power connector
- 8 PE terminal
- 9 USB 3.0 (Type C)
- 10 USB 3.0 (Type A)(1)
- 11 Display port
- 12 USB 2.0 (Type A)(1)
- 13 COM port RS-232C (non-isolated)
- 14 Optional interface slot
- 15 Ethernet 1 (10/100/1000 Mbps) IEEE1588
- 16 Ethernet 2 (10/100/1000 Mbps) IEEE1588

Ready-to-run software for Harmony HMIP6

Harmony HMIP6 PCs are supported by Schneider Electric HMI software. Harmony HMIP6 running EcoStruxure Machine SCADA Expert (2) can be selected from the on-line configurator and delivered as a best-in-class bundle to improve your business.

For secure remote access, Harmony HMIP6 are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:

EcoStruxure Machine SCADA Expert ([DIA5ED2171201EN](#))

EcoStruxure Secure Connect Advisor ([DIA5ED2190101EN](#))

EcoStruxure Augmented Operator Advisor ([DIA5ED2190301EN](#))

(1) USB storage devices that support USB 3.0 are recommended. Use USB 3.0 port to connect these storage devices.

(2) Pre-installed version available in 2021.

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDM6 Modular Display

Type of display	Harmony HMIDM6 Modular Display	
Model	4:3 12" touch screen	4:3 15" touch screen



Display	Type	TFT color LCD flat screen	
	Size	4:3 12.1"	4:3 15.0"
	Resolution	XGA, 1024 × 768 pixels, 16 million colors	
	Degree of protection (1)	IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13	
	Surface design	Plastic overlay	
	Touch operation	Resistive analog multi-touch (2 points)	
	Touch mode configuration	Not applicable, because of resistive analog touch panel	
	Backlight service life	50,000 hours and more	
Interface	On the front panel	1x USB 2.0 (Type A) with front USB cover	
Supply voltage		From Box PC	
Standards and certifications (mounted on front panel of Box PC)		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Power consumption	With Advanced Modular Box	AC model: 156 VA Max. DC model: 136 W Max.	AC model: 161 VA Max. DC model: 141 W Max.
	With Standard Modular Box	AC model: 77 VA Max DC model: 68 W Max.	AC model: 82 VA Max DC model: 72 W Max.
Mounting	Panel PC (with Box PC)	On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC	
Dimensions	Overall dimensions (W × H × D)	315 × 241 × 30 mm/ 12.56 × 9.65 × 2.61 in.	397 × 296 × 30 mm/ 15.38 × 11.42 × 1.10 in.
	Cut-out (W × H)	301.5 × 227.5 mm/11.87 × 8.96 in.	383.5 × 282.5 mm/15.1 × 11.12 in.
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...60 °C/32...150 °F (1)	
	During storage	Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Compatible with boxes		All Standard and Advanced Modular Boxes	
References		HMIDM6600TM	HMIDM6700TM
Pages		5/9	

(1) On the front panel when properly installed in an enclosure and not using the front panel USB port.
(2) Available in H2 2021.

Harmony HMIDM6 Modular Display	
W15" touch screen	W19" touch screen



Display	Type	TFT color LCD flat screen	
	Size	W15.6"	W18.5"
	Resolution	FWXGA, 1366 × 768 pixels, 16 million colors	FHD, 1920 × 1080 pixels, 16 million colors
	Degree of protection (1)	IP66F, IP67F, Type 1, Type 4X (NEMA indoor use only), Type 13	
	Surface design	Glass-top	
	Touch operation	Projective capacitive multi-touch (2 points) with optimized noise filter	
	Touch mode configuration	Yes (Standard mode, Glove mode, Water detection mode)	
	Backlight service life	50,000 hours and more	
Interface		-	
Supply voltage		From Box PC	
Standards and certifications (mounted on front panel of Box PC)		All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL 121201 (2), and CSA C22.2 No. 213 (2) DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (2), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (2)	
Power consumption	With Advanced Modular Box	AC model: 159 VA Max. DC model: 139 W Max.	AC model: 170 VA Max. DC model: 150 W Max.
	With Standard Modular Box	AC model: 80 VA Max. DC model: 70 W Max.	AC model: 92 VA Max. DC model: 82 W Max.
Mounting		On front enclosure or VESA 100 × 100 with mounting kit HMIYPVESA●●●●●1 on the rear of Box PC	
Dimensions	Overall dimensions (W × H × D)	408 × 264 × 30 mm/19.22 × 12.17 × 1.10 in.	463.6 × 293.6 × 32 mm/19.22 × 12.17 × 1.10 in.
	Cut-out (W × H)	394 × 250 mm/15.51 × 9.84 in.	449.5 × 279.5 mm/17.7 × 11.0 in.
Temperature	During operation	Conforming to EN/IEC 60068-2-30: 0...50 °C/32...122 °F (1)	
	During storage	Conforming to IEC 61000-4/ EN 55011: -30...70 °C/-22...158 °F	
Compatible with boxes		All Standard and Advanced Modular Boxes	
References		HMIDM6700WC	HMIDM6800WC
Pages		5/9	

(1) On the front panel when properly installed in an enclosure and not using the front panel USB port.
(2) Available in H2 2021.



Harmony HMIP6 Modular Displays

Presentation

Harmony HMIDM6 Modular Displays are monitors designed to be easily integrated with HMIP6 Advanced and Standard Modular Box PCs. In addition to multiple choices, the modularity feature reduces maintenance as the display can be independently replaced without changing the complete model.

The Harmony HMIP6 screens are certified for:

- All models: CE, RCM, UL 61010-2-201, CSA C22.2 No. 61010-2-201, UL121201 (2), and CSA C22.2 No. 213 (2)
- DC models: IECEx/ATEX for use in Zone 2 gas/Zone 22 dust (1), DetNorske Veritas - Germanischer Lloyd (DNV-GL) (1)

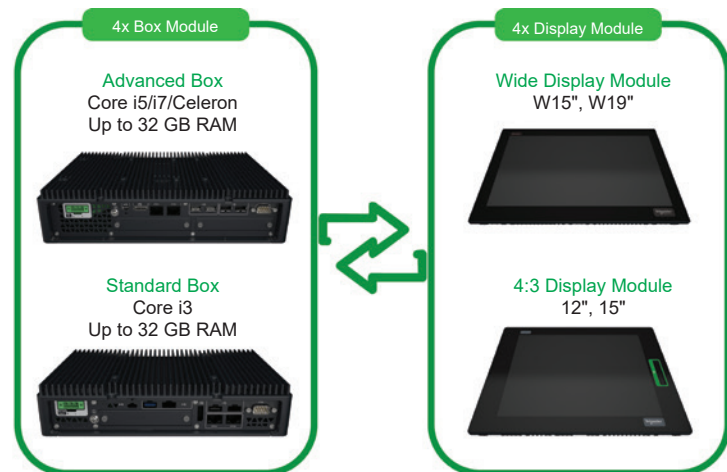
Overview of the offer

Harmony HMIDM6 Modular Displays are available in both 4:3 displays and wide displays each equipped with:

- **4:3 Modular Display**
 - HMIDM6600TM: 12.1" XGA color LCD multi-touch (2 points) analog resistive screen, 1x USB 2.0 (Type A), and front USB cover
 - HMIDM6700TM: 15.0" XGA color LCD multi-touch (2 points) analog resistive screen, 1x USB 2.0 (Type A), and front USB cover
- **Wide Modular Display**
 - HMIDM6700WC: 15.6" W FWXGA color LCD multi-touch (2 points) projected capacitive screen
 - HMIDM6800WC: 18.5" W FHD color LCD multi-touch (2 points) projected capacitive screen

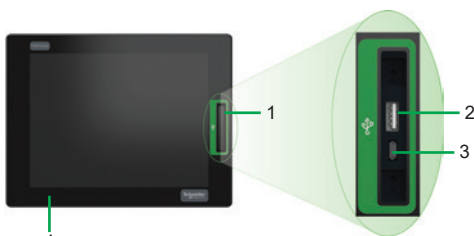
Architecture

Harmony HMIDM6 Modular Displays are compatible and easily mountable with all HMIP6 Modular Boxes. This modularity provides a wide choice, fast delivery, and ease of screen replacement.



Description

- 1 Front USB cover
- 2 USB 2.0 (Type A) (2)
- 3 USB 2.0 Micro-B (3)
- 4 Multi-color status LED (green and orange) indicating the mode



4:3 modular display



Wide modular display

(1) Available in H2 2021.
(2) By default, the front USB is disabled.
(3) This interface is unusable.

P8_CP20089



HMIDM6700TM

P8_CP20081



HMIDM6800WC

References				
Harmony HMIDM6 Modular Displays				
Description	Screen	Interface	Reference	Weight kg/lb
12" TFT LCD display flat screen	4:3 12.1", XGA (1024 x 768 pixels)	Multi-touch (2 points) analog resistive	HMIDM6600TM	2.70/5.95
15" TFT LCD display flat screen	4:3 15.0", XGA (1024 x 768 pixels)		HMIDM6700TM	4.20/9.25
W15" TFT LCD display flat screen	15.6" W, FWGA (1366 x 768 pixels)	Multi-touch (2 points) projected capacitive	HMIDM6700WC	4.30/9.47
W19" TFT LCD display flat screen	18.5" W, FHD (1920 x 1080)		HMIDM6800WC	5.60/12.3

Presentation

The Harmony P6 Product Selector is an online software tool embedded in the Schneider Electric website to help configure the right product and accessories from the extensive line-up and associated software. With this online selector, Harmony P6 offers a smooth journey of reduced design time and multiple possibilities. This tool simplifies and expedites the ordering process via email to our Customer Care Center. The final output of the configurator is an alphanumeric product code representing the configured Harmony P6 to obtain the price and place your order.

The Product Selector offers the following benefits:

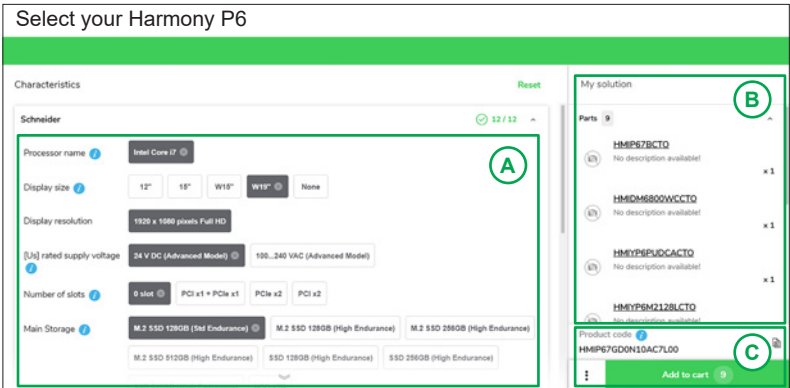
- Easy access: No login, direct access on Schneider Electric website
- Reliable: Compatibilities between core product and accessories are constantly tested
- Reordering, remote help, and servicing of the same product is simplified with the configurator product code

Description

Online Product Selector

The following steps explain how to build and generate the HMIP6 configured product code in the online Product Selector:

- 1 Navigate to the Harmony P6 range page on www.se.com/hmiipc.
- 2 Click on Product Selector and choose the CPUs, displays, power supplies, storages, memories, optional interfaces, extension slots, operating system, and associated software based on your requirement.
- 3 An alphanumeric product code representing the complete component selection list is automatically generated. This will be your configured product code for all future communications.



A Configuration area B Components list C Configured Product code

If you have built your Harmony P6 configuration with the Product Selector:

- 4 Click on Add to cart to add the configured product to the My Products page.
- 5 Navigate to My Products cart page and download the Configuration XML file and Product List PDF.
- 6 Please email the downloaded files to our Customer Care Center and specify the Schneider Electric commercial reference part number GCR_HMIP6.

If you cannot access the Harmony P6 Product Selector:

- 7 Please contact our Customer Care Center and state the Schneider Electric commercial reference part number GCR_HMIP6.
- 8 Configure your Harmony P6 and get the quote with the support of our Customer Care Center.
- 9 Confirm your order.

Note: All selections are preferably to be made in the Product Selector. If you have difficulties accessing or using the Product Selector, contact the Schneider Electric Customer Care Centre or your Schneider Electric sales representative for more information about HMIP6 ordering.

Description (continued)

Example Harmony P6 product code

The Schneider Electric commercial reference number for Harmony P6 is GCR_HMIP6. Here is an example of the configurator product code which is generated by selecting the following options in the Product selector tool :

Configured product code **HMIP67GD0N10AE7L00**

- Processor: Core i7
- Display: W19"
- Power supply: 24VDC
- Slots: 0 slot
- Main storage: M.2 SSD 128GB (Std Endurance)
- Secondary storage: None
- FAN: None
- Memory capacity: 16GB
- Option: Ethernet
- Operating system: Win10 (Core i7)
- Software package: Machine SCADA Expert RT 64K

Harmony iPC

Industrial PC, Edge Box, and Display

Configured-To-Order options, substitution table

Configured-To-Order options for Harmony HMIP6 Modular Box PC and Modular Display

Option	Description
Processor type	Intel Core™ i7-8665UE, up to 4.4 GHz for Advanced Modular Box
	Intel Core™ i5-8365UE, up to 4.1 GHz for Advanced Modular Box
	Intel Celeron® 4305UE, up to 2.0 GHz for Advanced Modular Box
	Intel Core™ i3-8145UE, up to 3.9 GHz for Standard Modular Box
Modular Displays	None
	Harmony HMIP6 Modular Display 4:3 12"/4:3 15"- XGA
	Harmony HMIP6 Modular Display W15"- FWXGA
	Harmony HMIP6 Modular Display W19" - FHD
Memory capacity	8 GB
	16 GB
	32 GB
Power supply	DC, 12...24 V ⎓
	AC, 100...240 V ~
Windows operating system	None
	Windows® 10 IoT Enterprise 2019 LTSC (64-bit)
Main storage device for operating system	None
	1x M.2 SSD SATA (128 GB/256 GB/512 GB)
	2x 2.5-inch HDD (1 TB) or SSD (128 GB/256 GB/512 GB) for Advanced Modular Box
	1x 2.5-inch HDD (1 TB) or SSD (128 GB/256 GB/512 GB) for Standard Modular Box
Optional interfaces	None
	2x RS-422/485 isolated
	2x RS-232 isolated
	4x RS-232C isolated
	WiFi/Bluetooth
PCI slot configuration	None
	1x PCI + 1x PCIe
	2x PCIe
	2x PCI
Software bundle	None
	EcoStruxure Machine SCADA Expert 1,500 tags Run Time license
	EcoStruxure Machine SCADA Expert 4,000 tags Run Time license
	EcoStruxure Machine SCADA Expert 32,000 tags Run Time license
	EcoStruxure Machine SCADA Expert 64,000 tags Run Time license

5

Current Harmony iPC

Replaced by Harmony iPC

Description	References	Description	References	Compatibility
Harmony iPC Modular Display		Harmony DM6 Modular Display		Panel cut-out
19" W (FWXGA)	HMIDM9521	19" W (Full HD)	HMIDM6800WC	Yes with adapter (HMIZPAT8W1)
15" W (FWXGA)	HMIDM7521	15" W (FWXGA)	HMIDM6700WC	Yes with adapter (HMIZPAT7W1)
15.0" (XGA)	HMIDM7421	15.0" (XGA)	HMIDM6700TM	Yes
12.1" (XGA)	HMIDM6421	12.1" (XGA)	HMIDM6600TM	Yes
		Panel cut-out	Identical	
			Different	

Harmony iPC

Industrial PC, Edge Box, and Display

Substitution table

Current Harmony iPC		Replaced by Harmony iPC	
Description	References	Description	References
Harmony iPC Modular Box PC		Harmony HMIP6 Modular Box PC	
Core i7, 8 GB RAM	HMIBMP0I74D2001	Core i7, 8 GB RAM	HMIP67BD0N008NNN00
Core i7, 16 GB RAM	HMIBMP0I74D200A	Core i7, 16 GB RAM	HMIP67BD0N000ANN00
Core i7, 8 GB RAM	HMIBMP0I74D4001	Core i7, 8 GB RAM	HMIP67BDMN008NNN00
Core i7, 16 GB RAM	HMIBMP0I74D400A	Core i7, 16 GB RAM	HMIP67BDMN000ANN00
Core i7, 16 GB RAM	HMIBMP0I74DE00A	Core i7, 16 GB RAM	HMIP67BDEN008NNN00
Core i7, 8 GB RAM, 500 GB HDD, Windows 10	HMIBMPHI74D2801	Core i7, 8 GB RAM, 512 GB M.2, Windows 10	HMIP67BD0N408N7N00
Core i7, 8 GB RAM, 500 GB HDD, Windows 10	HMIBMPHI74D4801	Core i7, 8 GB RAM, 512 GB M.2, Windows 10	HMIP67BDMN408N7N00
Core i7, 8 GB RAM, 128 GB SSD, Windows 10	HMIBMPSI74D2801	Core i7, 8 GB RAM, 128 GB M.2, Windows 10	HMIP67BD0N108N7N00
Core i7, 8 GB RAM, 128 GB SSD, Windows 10	HMIBMPSI74D4801	Core i7, 8 GB RAM, 128 GB M.2, Windows 10	HMIP67BD0N108N7N00
Core i7, 16 GB RAM	HMIBMP0I74DI00A	Core i7, 16 GB RAM	HMIP67BDPN000ANN00
Celeron, 4 GB RAM	HMIBMU0I29D2001	Celeron, 4 GB RAM	HMIP6CBD0N004NNN00
Celeron, 8 GB RAM	HMIBMU0I29D200A	Celeron, 8 GB RAM	HMIP6CBD0N008NNN00
Celeron, 4 GB RAM	HMIBMU0I29D4001	Celeron, 4 GB RAM	HMIP6CBDMN004NNN00
Celeron, 8 GB RAM	HMIBMU0I29D400A	Celeron, 8 GB RAM	HMIP6CBDMN008NNN00
Celeron, 8 GB RAM	HMIBMU0I29DE00A	Celeron, 8 GB RAM	HMIP6CBDEN008NNN00
Celeron, 8 GB RAM	HMIBMU0I29DI00A	Celeron, 8 GB RAM	HMIP6CBDPN008NNN00
Celeron, 4 GB RAM, 32 GB CFast, WES 7 64 bit	HMIBMUCI29D2W01	Celeron, 4 GB RAM, 128 GB M.2, Windows 10	HMIP6CBD0N104NCN00
Celeron, 4 GB RAM, 32 GB CFast, WES 7 64 bit	HMIBMUCI29D4W01	Celeron, 4 GB RAM, 128 GB M.2, Windows 10	HMIP6CBDMN104NCN00
Celeron, 4 GB RAM, 500 GB HDD, Windows 10	HMIBMUHI29D2801	Celeron, 4 GB RAM, 512 GB M.2, Windows 10	HMIP6CBD0N404NCN00
Celeron, 4 GB RAM, 500 GB HDD, Windows 10	HMIBMUHI29D4801	Celeron, 4 GB RAM, 512 GB M.2, Windows 10	HMIP6CBDMN404NCN00
Celeron, 4 GB RAM, 128 GB SSD, Windows 10	HMIBMUSI29D2801	Celeron, 4 GB RAM, 128 GB M.2, Windows 10	HMIP6CBD0N104NCN00
Celeron, 4 GB RAM, 128 GB SSD, Windows 10	HMIBMUSI29D4801	Celeron, 4 GB RAM, 128 GB M.2, Windows 10	HMIP6CBDMN104NCN00
Harmony iPC Panel PC		Harmony HMIP6 Panel PC	
Core i3, 8 GB RAM, 15" W display	HMIPSP0752D1001	Core i3, 8 GB RAM, 15" W display	HMIP63F10N008NNN00
Core i3, 8 GB RAM, 19" W display	HMIPSP0952D1001	Core i3, 8 GB RAM, 19" W display	HMIP63G10N808NNN00
Core i3, 8 GB RAM, 32 GB CFast, WES 7 64-bit, 15" W display	HMIPSPC752D1W01	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 15" W display	HMIP63F10N108N3N00
Core i3, 8 GB RAM, 32 GB CFast, WES 7 64-bit, 19" W display	HMIPSPC952D1W01	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 19" W display	HMIP63G10N108N3N00
Core i3, 8 GB RAM, 500 GB HDD, Windows 7, 15" W display	HMIPSPH752D1701	Core i3, 8 GB RAM, 512 GB M.2, Windows 10, 15" W display	HMIP63F10N408N3N00
Core i3, 8 GB RAM, 500 GB HDD, Windows 10, 15" W display	HMIPSPH752D1801	Core i3, 8 GB RAM, 512 GB M.2, Windows 10, 15" W display	HMIP63F10N408N3N00
Core i3, 8 GB RAM, 500 GB HDD, Windows 7, 19" W display	HMIPSPH952D1701	Core i3, 8 GB RAM, 512 GB M.2, Windows 10, 19" W display	HMIP63G10N408N3N00
Core i3, 8 GB RAM, 500 GB HDD, Windows 10, 19" W display	HMIPSPH952D1801	Core i3, 8 GB RAM, 512 GB M.2, Windows 10, 19" W display	HMIP63G10N408N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 7, 15" W display	HMIPSPS752D1701	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 15" W display	HMIP63F10N108N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 7, 15" W display	HMIPSPS752D170L	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 15" W display	HMIP63F10N108N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 10, 15" W display	HMIPSPS752D1801	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 15" W display	HMIP63F10N108N3N00
Core i3, 8 GB RAM, 256 GB SSD, Windows 10, 15" W display	HMIPSPS752D180L	Core i3, 8 GB RAM, 256 GB M.2, Windows 10, 15" W display	HMIP63F10N308N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 7, 19" W display	HMIPSPS952D1701	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 19" W display	HMIP63G10N108N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 7, 19" W display	HMIPSPS952D170L	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 19" W display	HMIP63G10N108N3N00
Core i3, 8 GB RAM, 128 GB SSD, Windows 10, 19" W display	HMIPSPS952D1801	Core i3, 8 GB RAM, 128 GB M.2, Windows 10, 19" W display	HMIP63G10N108N3N00
Core i3, 8 GB RAM, 256 GB SSD, Windows 10, 19" W display	HMIPSPS952D180L	Core i3, 8 GB RAM, 256 GB M.2, Windows 10, 19" W display	HMIP63G10N308N3N00

PG_OP20178



HMIYP6MPR23P2

PG_OP20176



HMIYP6M2128

PG_OP20177

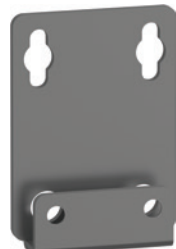


HMIYP6SSD256

PG_OP20175



HMIYP6DM4



HMIYP6ADBMS

Accessories for Harmony HMIP6 Modular Box PC

Interfaces

Description	Details	Compatible with Harmony P6	Reference	Weight kg/lb
2x RS-232C isolated	2x Dedicated interface option RS-232C isolated	Advanced and Standard Modular Boxes	HMIYP6MPR23P2	0.30/0.66
4x RS-232C	4x Dedicated interface option RS-232C		HMIYP6MPR23P4	0.30/0.66
2x RS422/485 isolated	2x Dedicated interface option RS-485(422) isolated		HMIYP6MPR42P2	0.30/0.66
WiFi/Bluetooth with antennas	Dedicated interface option WiFi/Bluetooth with antenna		HMIYP6MPWF	0.30/0.66

Storage

M.2 SSD 128 GB (Standard Endurance)	M.2 SSD 128 GB (Standard Endurance)	Advanced and Standard Modular Boxes	HMIYP6M2128L	0.13/0.28
M.2 SSD 128 GB (High Endurance)	M.2 SSD 128 GB (High Endurance)		HMIYP6M2128	0.13/0.28
M.2 SSD 256 GB (High Endurance)	M.2 SSD 256 GB (High Endurance)		HMIYP6M2256	0.13/0.28
M.2 SSD 512 GB (High Endurance)	M.2 SSD 512 GB (High Endurance)		HMIYP6M2512	0.13/0.28
SSD 128 GB (High Endurance)	2.5" SSD 128 GB (High Endurance)		HMIYP6SSD128	0.20/0.44
SSD 256 GB (High Endurance)	2.5" SSD 256 GB (High Endurance)		HMIYP6SSD256	0.20/0.44
SSD 512 GB (High Endurance)	2.5" SSD 512 GB (High Endurance)		HMIYP6SSD512	0.20/0.44
HDD 1 TB	2.5" HDD 1 TB		HMIYP6HDD1T	0.25/0.55

Memory

DIMM 4 GB	4 GB, 260-pin SO-DIMM, DDR4-2400	Advanced and Standard Modular Boxes	HMIYP6DM4	0.14/0.30
DIMM 8 GB	8 GB, 260-pin SO-DIMM, DDR4-2400		HMIYP6DM8	0.14/0.30
DIMM 16 GB	16 GB, 260-pin SO-DIMM, DDR4-2400		HMIYP6DM16	0.14/0.30

Cables

WiFi/Bluetooth extended antenna cable	WiFi/Bluetooth extended cable 3 m/9.84 ft.	Advanced and Standard Modular Boxes	HMIYP6CBWF3M	0.30/0.66
USB host extension cable	USB host extension cable 1 m/3.28 ft		XBTZGUSB	0.22/0.49

Adapters

Book mount adapter (Advanced Box)	Book mount adapter (Advanced Box)	Advanced Modular Boxes	HMIYP6ADBMA	1.00/2.20
Book mount adapter (Standard Box)	Book mount adapter (Standard Box)	Standard Modular Box	HMIYP6ADBMS	1.00/2.20
Panel cut-out adapter for Modular/S-Panel PC (15" W)	Panel cut-out adapter from Harmony iPC Modular/S-Panel PC (15" W) to HMIDM6700WC	Harmony iPC Modular/S-Panel PC (15" W)	HMIZPAT7W1	0.90/1.98
Panel cut-out adapter for Modular/S-Panel PC (19" W)	Panel cut-out adapter from Harmony iPC Modular/S-Panel PC (19" W) to HMIDM6800WC	Harmony iPC Modular/S-Panel PC (19" W)	HMIZPAT8W1	1.05/2.31
Panel cut-out adapter for Harmony GTU (15" W)	Panel cut-out adapter for HMIDT752	HMIDT752 (15" W)	HMIZHAT7W1	0.90/1.98
Panel cut-out adapter for Harmony GTU (19" W)	Panel cut-out adapter for HMIDT952	HMIDT952 (19" W)	HMIZHAT8W1	1.05/2.31

Accessories for Harmony P6 Modular Displays

Screen sheets for Harmony HMIP6 Modular Display

Description	Details	Compatible with Harmony P6	Reference	Weight kg/lb
Anti-glare sheet for 15" Wide	Anti-glare sheet for 15" Wide (5 sheets/set)	15" W Modular Display	HMIZCAG7W1	—
Anti-glare sheet for 19" Wide	Anti-glare sheet for 19" Wide (5 sheets/set)	19" W Modular Display	HMIZCAG8W1	—
Screen protection sheet for 12"	Screen protection sheet for 12" (5 sheets/set)	12" Modular Display	HMIZG66	—
Screen protection sheet for 15"	Screen protection sheet for 15" (5 sheets/set)	15" Modular Display	MPCYK50SPSKIT	—

Others

M.2 cooling kit for Advanced box	M.2 cooling kit for Advanced box (thermal pad + heat sink)	Advanced Modular Boxes	HMIYP6HSM2A	0.20/0.44
M.2 cooling kit for Standard box	M.2 cooling kit for Standard box (thermal pad + heat sink)	Standard Modular Box	HMIYP6HSM2S	0.20/0.44
McAfee Whitelisting license	License sticker and a USB stick with software application for Cybersecurity Whitelisting	Advanced and Standard Modular Boxes	HMIYP6SLMCA	0.20/0.44
Recovery USB for Windows 10	Recovery USB for Windows 10 for Harmony P6	Advanced and Standard Modular Boxes	HMIYP6RUSW10	0.30/0.66
USB Clamp Type A	USB Clamp Type A for maintenance 5 pieces/set	Advanced and Standard Modular Boxes	HMIZCCLUSA	0.30/0.66
USB Clamp Type C	USB Clamp Type C for maintenance 5 pieces/set	Advanced and Standard Modular Boxes	HMIYP6CLUSC	0.30/ 0.66
Fan kit with filter	Fan kit with replacement filter 5 pieces/set	Advanced Modular Boxes	HMIYP6FAN	1.00/ 2.20

Harmony HIMP6 Modular Displays

12-inch display module	Display module 12.1" XGA resistive film (analog, multi-touch)	Advanced and Standard Modular Boxes	HMIDM6600TM	2.70/5.95
15-inch display module	Display module 15" XGA resistive film (analog, multi-touch)		HMIDM6700TM	4.20/9.25
15-inch wide display module	Display module 15.6" FWXGA (projected capacitive multi-touch)		HMIDM6700WC	4.30/9.47
19-inch wide display module	Display module 18.5" FHD (projected capacitive multi-touch)		HMIDM6800WC	5.60/12.3

Installation gaskets

Installation gasket for 12"	Installation gasket 12" for maintenance (1/set)	12" Modular Display	HMIZD56	—
Installation gasket for 15"	Installation gasket 15" for maintenance (1/set)	15" Modular Display	HMIZD57	—
Installation gasket for 15" Wide	Installation gasket 15" W for maintenance (1/set)	15" W Modular Display	HMIZX57W	—
Installation gasket for 19" Wide	Installation gasket 19" W for maintenance (1/set)	19" W Modular Display	HMIZCWG8W1	—

Others

Installation fastener	Installation fastener for maintenance (4 pieces/set)	All Modular Displays	HMIZCAF1	—
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Connectors

Power connector (DC)	Power connector (DC) for maintenance (5 pieces/set)	Advanced Modular Boxes	HMIZCCNDC1	0.20/0.44
Power connector (AC)	Power connector (AC) for maintenance (5 pieces/set)		HMIZCCNAC1	0.20/0.44



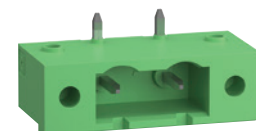
HMIZCAG7W1



HMIYP6FAN



HMIYP6CLUSC



HMIZCCNAC1

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay screens

Harmony HMIDID iDisplay screens

- Selection guide* page 6/2
- **Presentation** page 6/4
- **Architecture** page 6/4
- **References** page 6/5
- **Separate parts** page 6/5
- **Substitution** page 6/5

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay screens
12" and 15" flat screens

Type of display		Harmony HMIDID iDisplay flat screen
Model		12" touch screen
		
Screen	Type	TFT HD LCD color multi-touch resistive screen (2)
	Size	12.1"
	Resolution	XGA, 1024 x 768 pixels, 16 million colors
	Degree of protection	IP66F, IP67F, and UL50E NEMA 4X/13 for the front panel when installed properly in an enclosure
	Brightness	≥ 400 cd/m ² adjustable, 100 level dimming with brightness sensor
	Backlight	50,000 hours
Interface	On the front panel	1x USB 2.0 (Type A)
	Other	<input type="checkbox"/> 1x DVI-D video (DVI-D 24 pin socket) <input type="checkbox"/> 1x USB 2.0 (Type B) from touch screen to PC <input type="checkbox"/> Supplied with 5 m/16.4 ft DVI-D and USB cables
Standards and certifications		CE Europe, RCM Australia, UL 508 and CSA C22.2 No142, Industrial Control Equipment, ANSI/ISA 12.12.01 and CSA C22.2 No213 Class I, Division 2 Hazardous Locations, IECEx/ATEX for use in zones 2/22, EAC (Russia, Belarus, Kazakhstan), KC (Korea Certification)
Marine certifications		BV, CCS, DNV, GL, LR, RINA, ABS
Supply voltage		12...24 V ~
Power consumption		17 W max.
Mounting		Panel on front enclosure or VESA 100 x 100 on the rear of iDisplay
Dimensions	Overall dimensions (W x H x D)	315 x 241 x 67 mm/12.40 x 9.50 x 2.64 in.
	Cut-out (W x H)	301.5 x 227.5 mm/11.87 x 8.96 in.
Temperature	During operation	0...60 °C/32...140 °F, according to EN 61131-2 and UL
	During storage	-20...60 °C/-4...140 °F
Shock resistance		IEC/EN 61131-2 compliant: <input checked="" type="checkbox"/> 147 m/s ² <input checked="" type="checkbox"/> X, Y, Z directions tested 3 times
Vibration resistance		Conforming to JIS B 3501 and IEC 61131-2 standards: <input checked="" type="checkbox"/> 5...9 Hz, 3.5 mm fixed amplitude <input checked="" type="checkbox"/> 9...150 Hz: constant acceleration of 1 g (9.8 m/s ²) <input checked="" type="checkbox"/> X, Y, Z directions tested 10 times (100 minutes)
References		HMIDID64DTD1
Pages		6/5

(1) For more information, please refer to Harmony Display Adapter on page 4/21.
 (2) Touch function on the display is not available with Windows Server operating system.

Harmony HMIDID iDisplay flat screen		Alternate Display option with Harmony HMIDAD Display adapter(1)
15" touch screen		
 		
Screen	Type	TFT HD LCD color multi-touch resistive screen (2)
	Size	15"
	Resolution	XGA, 1024 x 768 pixels, 16 million colors
	Degree of protection	IP66F, IP67F, and UL50E NEMA 4X/13 for the front panel when installed properly in an enclosure
	Brightness	≥ 400 cd/m ² adjustable, 100 level dimming with brightness sensor
	Backlight	50,000 hours
Interface	On the front panel	1x USB 2.0 (Type A)
	Other	<input type="checkbox"/> 1x DVI-D video (DVI-D 24 pin socket) <input type="checkbox"/> 1x USB 2.0 (Type B) from touch screen to PC <input type="checkbox"/> Supplied with 5 m/16.4 ft DVI-D and USB cables
Standards and certifications		CE Europe, RCM Australia, UL 508 and CSA C22.2 No142, Industrial Control Equipment, ANSI/ISA 12.12.01 and CSA C22.2 No213 Class I, Division 2 Hazardous Locations, IECEx/ATEX for use in zones 2/22, EAC (Russia, Belarus, Kazakhstan), KC (Korea Certification)
Marine certifications		BV, CCS, DNV, GL, LR, RINA, ABS
Supply voltage		12...24 V ~
Power consumption		21 W max.
Mounting		Panel on front enclosure or VESA 100 X 100 on the rear of iDisplay
Dimensions	Overall dimensions (W x H x D)	397 x 296 x 67 mm/15.63 x 11.65 x 2.64 in.
	Cut-out (W x H)	383.5 x 282.5 mm/15.10 x 11.12 in.
Temperature	During operation	0...60 °C/32...140 °F, according to EN 61131-2 and UL
	During storage	-20...60 °C/-4...140 °F
Shock resistance		IEC/EN 61131-2 compliant: <input checked="" type="checkbox"/> 147 m/s ² <input checked="" type="checkbox"/> X, Y, Z directions tested 3 times
Vibration resistance		Conforming to JIS B 3501 and IEC 61131-2 standards: <input checked="" type="checkbox"/> 5...9 Hz, 3.5 mm fixed amplitude <input checked="" type="checkbox"/> 9...150 Hz: constant acceleration of 1 g (9.8 m/s ²) <input checked="" type="checkbox"/> X, Y, Z directions tested 10 times (100 minutes)
References		HMIDID73DTD1
Pages		6/5

HMIDM Modular Display with HMIDAD Display Adapter, making remote monitors as:
 Local display (maximum distance of 5 m/16.4 ft)
 Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for first Display to 400 m/1312 ft for fourth Display)

According to Harmony HMIDM Modular Display mounted on front (1)
 1x Display Port video
 1x USB 2.0 (Type B) from touch screen to PC

CE, cULus, cULus CSA 22-2 No 142, cULus HazLoc Class I Division 2 ANSI/ISA 12-12-01, cULus HazLoc Class I Division 2 CSA 22-2 No 213, ATEX and IECEx Hazardous Locations 3GD Zone 2/22, FCC (part 15 EMC Class A), CCC

24 V ~ or 100...240 V ~ with external power adapter

According to Harmony HMIDM Modular Display mounted on the front (1)

Panel on front enclosure or VESA 100 X 100 on the rear of the Display Adapter

According to Harmony HMIDM Modular Display mounted on front (1)

0...55 °C/32...131 °F

-30...70 °C/-22...158 °F

IEC/EN 61131-2 compliant:
 147 m/s²
 X, Y, Z directions tested 3 times

Random vibration 5...500 Hz: 2 G

HMIDADP11

6/5

Harmony iPC

Industrial PC, Edge Box, and Display

Harmony HMIDID iDisplay screens

12" and 15" flat screens



HMIDID73DTD1

Presentation

Harmony HMIDID iDisplay are monitors with industrial flat screens designed for use with PCs. The 4:3 auto-scaler format screens of iDisplay adapt to screen definition. Harmony HMIDID enhances user experience and efficiency by multi-touch support like a smartphone. In addition to panel mounting, Harmony iDisplay also offers VESA 100 x 100 mounting on the rear side of the product.

Two screen sizes are available: 12" and 15" to suit various requirements.

Harmony HMIDID screens are certified for PLC product standards and designed for use in severe industrial environments (up to 60 °C, with LED backlight (50,000-hr life) and waterproof front IP67F). They support excellent screen sizes or dimension ratios for easy installation on any machine or in any equipment.

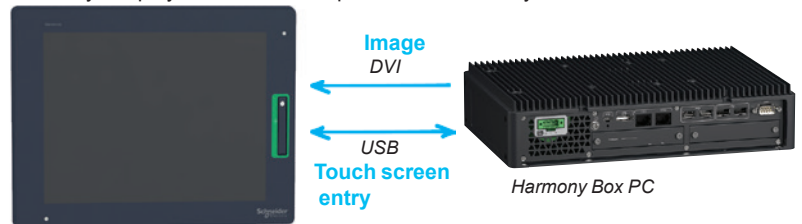
These screens are easily connected to the PC via:

- Standard DVI digital video with auto-scaler
- USB with touch screen drivers (supports up to Windows® 8.1, not available with Windows Server)

Harmony iDisplay screens have the same cut-out dimensions as Harmony HMI Panels, thus making it easy to upgrade installations.

Architecture

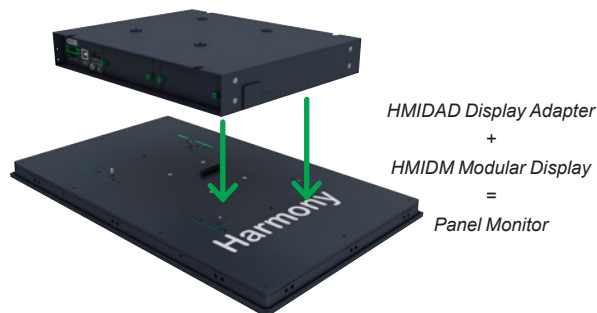
Harmony iDisplay screens are compatible with Harmony Box PCs.



Harmony iDisplay

Alternate Display option with Harmony HMIDAD Display Adapter

As an alternative option for Harmony HMIDID iDisplay screens, the Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third party PC, in the following configurations:



- Local display of up to 1 display (maximum distance of 5 m/16.4 ft). The Harmony iPC or a third party PC, is connected to HMIDADP11 Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video.
- Remote display of up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft between each device). Harmony iPC with mini PCIe interface is connected to Display adapters through RJ45 cables. In this configuration, each remote display includes an HMIDM Modular Display + an HMIDADP11 Display Adapter + an HMIYDARE11 Receiver module + an HMIYDATR11 Transmitter module (not required for the last display in the chain).

For more information on Harmony HMIDAD Display Adapter, see [pages 4/18 to 4/21](#).

Harmony iPC

Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay screens
12" and 15" flat screens



HMIDID64DTD1

References					
Description	Screen	Interface	Supply voltage	Reference	Weight kg/lb
Flat screen for flush mounting, IP66F, IP67F front panel (2)	12", XGA resistive (1024 x 768 pixels)	Multi-touch	12...24 V $\overline{\text{DC}}$	HMIDID64DTD1 (1)	3.9/8.6
	15", XGA resistive (1024 x 768 pixels)	Multi-touch	12...24 V $\overline{\text{DC}}$	HMIDID73DTD1 (1)	5.2/11.5

Separate parts			
Description	Sold in lots of	Reference	Weight kg/lb
Extra-long cable (10 m/32.81 ft) for connection with Harmony Box PC and Harmony Panel PC industrial PCs	–	HMIYCABDVI1011	–
USB clamp Type B (1 port) for Harmony iDisplay	5	HMIYDUSBCA111	–
iDisplay Adaptation plate from 19" to 15"	–	HMIYAD1915D1	–

Substitution			
Legacy Harmony iDisplays		Replaced by Harmony displays	
Description	Reference	Description	Reference
Harmony iDisplay 15"		Harmony iDisplay 15" Multi-touch	
15", XGA	HMIDID7DT0	15" XGA resistive	HMIDID73DTD1
Harmony iDisplay 19"		Harmony displays	
19"	MPCYT90NAN00N	15" iDisplay monitor multi-Touch + Adaptation plate	HMIDID73DTD1 + HMIYAD1915D1
		19" W Modular display + Display Adapter with display port and DC	HMIDM9521 + HMIDADP11

(1) Supplied with 5 m/16.4 ft DVI cable.

(2) Harmony iDisplay offers VESA 100x100 mounting on the rear of the product.

Product reference index

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