

1600 RAID-Enabled Industrial PCs

DS-1600RD(A)



The most susceptible component of any Industrial PC is the hard drive. Some sources suggest shock mounting the hard drive; unfortunately, shock mounting may cause the hard drive to become more vibration-sensitive at certain frequencies. The most common method to overcome a susceptibility to vibration is through the use of solid-state storage media or the use of redundant hard drives.

FEATURES

- 4U height
- Passive backplane with 3 ISA & 6 PCI slots available
- Intel® Socket 478 Pentium 4 2.4 GHz, 512 KB cache, 533 MHz system bus
- 4X AGP Video controller with 8 MB base, uses system RAM to 64 MB
- USB 2.0 Compliant ports (rear access)
- Parallel Port, one RS-232 port and one selectable RS-232/422/485 port
- Audio (In, Out, Mic)
- Dual 10/100 BaseT Ethernet ports
- 40 GB or 80 GB dual drive RAID 1 configurations
- 300 Watt AC power supply
- Front accessible 1.44 MB floppy drive
- 256 MB DDE RAM
- Preloaded Windows 2000 operating system
- 2-year warranty

Many of Xycom Automation's Heavy-Duty Industrial PCs offer solid-state media in the form of CompactFlash™ or solid-state hard drives. While many storage sizes are available, the cost of solid-state drives increases considerably as the required size increases.

A second approach is to use RAID. (RAID stands for Redundant Array of Independent Disks.) In essence, RAID is two or more hard drives hooked up to the same controller, either SCSI or IDE. The RAID controller can "stripe" or "mirror" data.

Striping (RAID 0) is used to read and write to many disks at once to increase hard drive performance, while mirroring (RAID 1) allows the same data to be available on two or more drives.

In a RAID 1 system, there is a primary and a secondary hard drive. The RAID controller writes to both drives, but only reads from the primary drive. If

the RAID controller detects any problems with the primary drive, it switches over to the secondary drive (which has an exact copy of all data on the primary drive) and informs the operator of the switch-over. If the RAID controller should detect any problems with the secondary drive, it stops writing to it and informs the operator of the problem. In either case, the operator can schedule a time to replace the failed drive.

There are two methods to implement a RAID solution - via software or dedicated hardware. Xycom has chosen a hardware solution because software solutions are more limited, and require a Windows® 2000 or 2003 Server.

A PCI IDE RAID controller card is utilized in Xycom's hardware RAID solution. One PCI expansion slot is necessary for the controller card, so a user needs to verify the available ex-

pansion in their Industrial PC for the application. The products listed in this datasheet are set up for RAID 1, and include two IDE hard drives.

RAID 1 with two hard drives was chosen as the optimal solution for creating a more robust, fault-tolerant system in the Xycom 1507, 3700 Series, and 1600 Series of Heavy-Duty Industrial PCs. [For more information on the 3700 Series RAID-Enabled IPC, see datasheet ds-RAID37(A).]

These RAID-Enabled Industrial PCs are configured at time of manufacture, and the parts and assemblies required to create them cannot be ordered as upgrades to already installed units. Xycom has chosen to support Windows® 2000 and Windows® XP for these RAID-enabled assemblies for optimal and reliable performance.

XYCOM
a PRO-FACE America Company

HARDWARE CONFIGURATIONS

Model	1612, 1613, 1614
Processors	Pentium® 4 2.4 GHz (533 MHz system bus)
Preloaded OS	Windows® 2000, Windows® XP
Ethernet	10/100 BaseT ports
Expansion	3 ISA and 6 PCI slots available (see below for details)



Model	Available ISA Expansion Slots			Available PCI Expansion Slots			Total Available Slots
	Full-length	3/4-length	1/2 length	Full-length	3/4-length	1/2 length	
1612	3	0	0	1	2	3	9
1613	3	0	0	1	5	0	9
1614	3	0	0	4	2	0	9

1600 SERIES PRODUCT SPECIFICATIONS AND RATINGS

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock ^a	2g peak acceleration, 11 msec duration	7.5g peak acceleration, 11 msec duration
Vibration 5-2000 Hz	0.006 peak to peak displacement .5g acceleration	.081" peak to peak displacement 2g maximum acceleration

^a Mounted by the flange only (not rail mounted).

Cooling fan capacity^c

82 CFM with dust filters

^c Does not include power supply fans

Electrical

Power Supply	300 W AC	2 x 300 W AC Redundant
Rated input	100-240 V AC, autoranging, 50-60 Hz, 4/2A (maximum), 150 W nominal ^d	100-240 V AC, autoranging, 50-60 Hz, 4/2A (maximum), 150 W nominal ^d

^d Nominal Power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

Unit Weight

48.2 lbs (23 kg)

Regulatory Compliance

CE

- EN 55022, Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- EN 60950

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals



UL

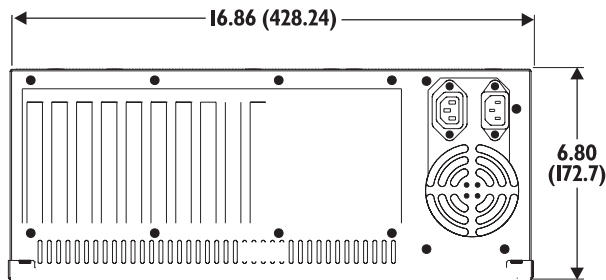
- UL 508 Listed

cUL

- CSA-C22.2, #142 Listed^e

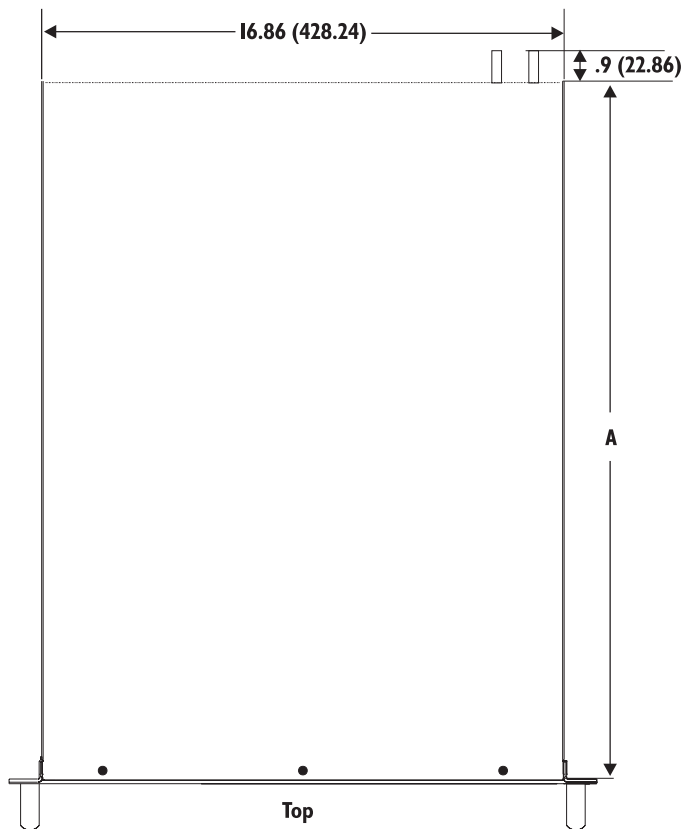
^e Not available with DVD-R/W option.

PRODUCT DIMENSIONS AND MOUNTING (CONTINUED)

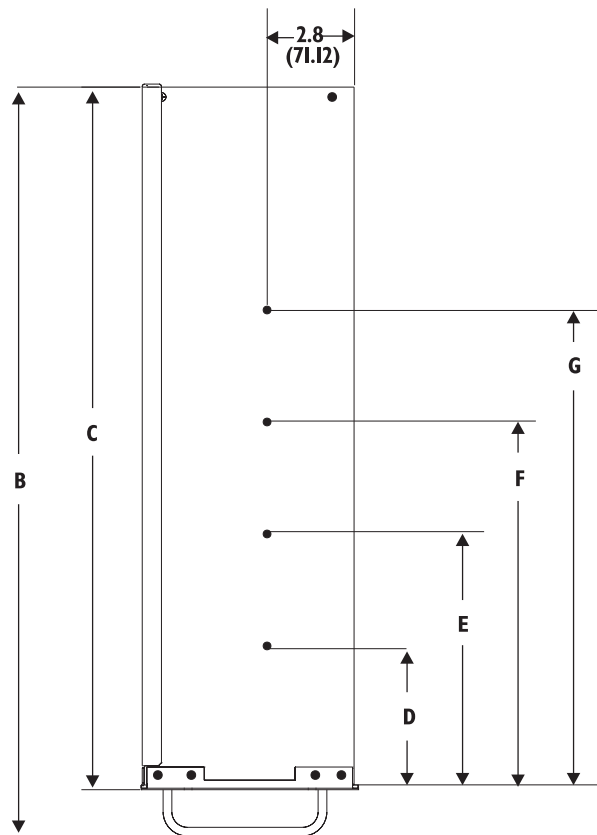


Rear

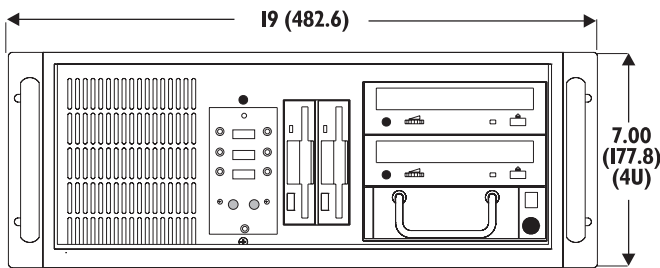
	A	B	C	D	E	F	G
1612	17.75 (450.85)	19.25 (488.95)	17.875 (454.025)	3.75 (95.25)	7.37 (187.198)	10.99 (279.146)	14.61 (371.094)
1613	19.75 (501.65)	21.25 (539.75)	19.875 (504.825)	4.50 (114.30)	8.12 (206.25)	11.74 (298.20)	15.36 (390.14)
1614	22.75 (577.85)	24.25 (615.95)	22.875 (581.03)	4.50 (114.30)	8.12 (206.25)	11.74 (298.20)	15.36 (390.14)



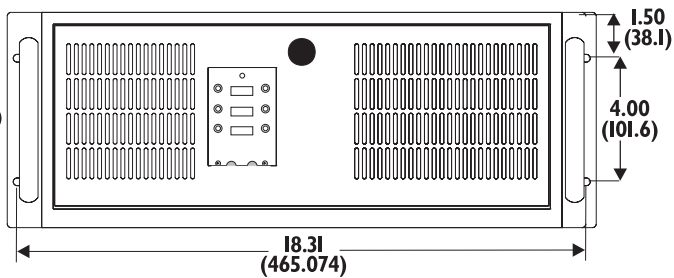
Top



Side



Front



Front with door closed

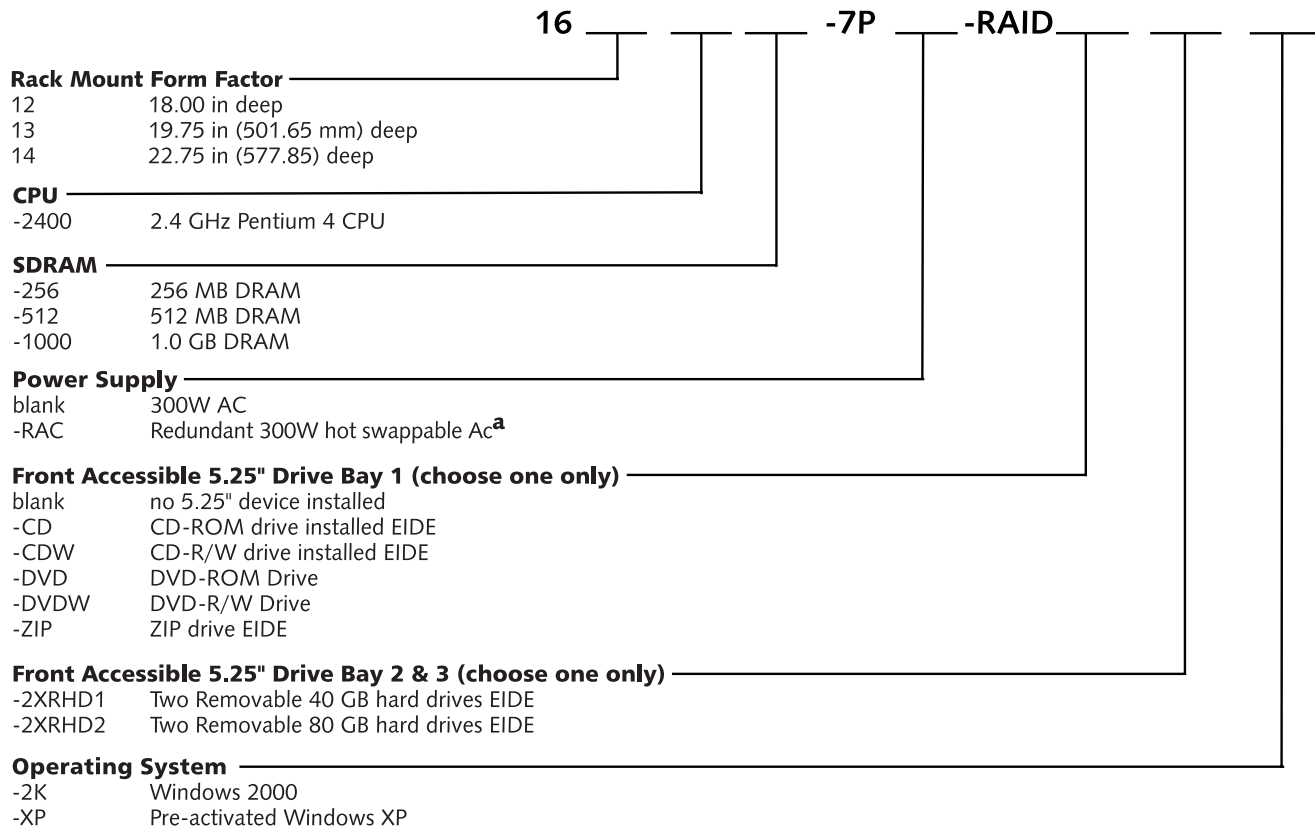
All dimensions are in inches (mm).

ORDERING INFORMATION

To create an order number, follow the conventions defined by the example order numbers and product configurations.

Example Order Number

Order Number	Description
1612-2400-256-7P-RAID-2XRHD1-2K	A 1612, 1613, or 1614 series industrial rack mount PC with PCI hardware RAID (level 1)
1613-2400-256-7P-RAID-2XRHD1-2K	2.4 GHz Intel Socket 478 Pentium 4, 512 KB cache, 533 MHz system bus processor,
1614-2400-256-7P-RAID-2XRHD1-2K	256 MB DDR SDRAM Internal 20 GB hard drive, preloaded with Windows 2000 and 4X AGP video controller



^aOnly available on 1613 & 1614

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

The I 600 Industrial PC carries a two-year warranty on parts and labor. Extended warranties are available.

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Saline, MI 48176-1292
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734-944-0482



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1507 Heavy-Duty Industrial PC without Integrated Display

DS-140413(D)



Xycom Automation's newest generation of industrial PCs is designed and tested for the tough environments required for plant floor use. Our standard PC configurations meet the strict specifications required for use in hazardous locations and Europe's CE mark. Based on CPU boards designed specifically for industrial automation, these systems provide the capabilities required by demanding applications. With an installed base of over 200,000 systems, our industrial PC products are successfully applied in manufacturing and process environments world-wide.

Superior Video Performance

The on-board AGP graphics controller defaults to 4 MB system RAM which allows full color resolution up to 1280 x 1024 resolution. In addition, the 1507 will automatically share up to 32 MB system RAM to allow full 32-bit color depth and fast 3D rendering and graphics performance.

Higher Performance

With up to 1.26GHz Pentium III processors available, the 1507 can drive the most demanding applications. The 1507 ships standard with a 1 GHz Socket 370 Pentium III with 256K cache running at 133 MHz bus.

- Optional 1.26GHz with 512K cache, both running at 133 MHz bus is an available option.

Fits Your Needs

- The 1507 can be configured many different ways. With four available expansion slots – three full-length (1 PCI, 1 ISA, and 1 either ISA or PCI), and one ½-length PCI, many cost effective, industry standard options are easily integrated. The optional removable dual hard drive, solid state drive, or externally accessible CompactFlash provide the storage solution you require. Additionally the CD-ROM can be upgraded to a CD-R/W/DVD-Read, DVD, or DVD-R/W, so that even more storage and/or

FEATURES

- AGP graphics with base 4 MB system RAM
 - ♦ Automatically shares up to 32 MB with system RAM
- Intel® Pentium® III options up to 1.26GHz
- Up to 512 MB DRAM (256 MB standard)
- 10/100 BaseT Ethernet port
- Parallel, RS-232 and RS-232 or RS485, PS/2 keyboard and mouse ports
- USB ports (1.1 compliant)
- Four available expansion slots:
 - ♦ Three full-length (1 PCI, 1 ISA, and 1 either ISA or PCI)
 - ♦ One ½-length PCI
- DOC 2000 socket
- Floppy drive and CD-ROM drive (with CD-R/W/DVD-Read or DVD-R/W upgrade options)
- Easily removable 40 GB hard drive
- Secondary IDE Drive options (choice of one):
 - ♦ Easily removable 2.5" dual hard drives
 - ♦ Externally accessible CompactFlash™ options up to 512MB
- UL Listed for hazardous locations: Class I Division 2, Groups A, B, C, D (not available with CDW or DVD drive options); Temp. Code T4A
- Pre-loaded with MS-DOS®, Windows® NT, Windows® 2000 (with multi-language support for 2000 only), or Windows® XP.
- 100-240 V AC power supply
- 24 V DC power supply option
- 2-year warranty

- backup options are available.

Meets High Standards

- To survive on the plant floor, the 1507 meets FCC, UL, cUL, and European CE mark requirements for industrial automation equipment. Xycom Automation leads the industry in reliability, service, and support with an optional five year warranty available.



SERVICEABILITY

With the cover removed expansion cards are easily installed in the 1507 without cumbersome cables to contend with.



MOUNTING OPTIONS



Vertical Mounting



Horizontal Mounting

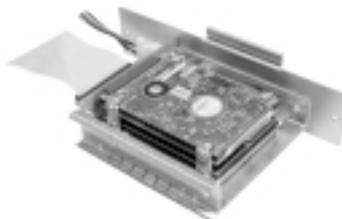
EASILY REPLACEABLE HARD DRIVE



The 1507 has incorporated an easy access hard drive mount. Simply unscrew 2 captive screws and extract the hard drive. Remove the metal bracket and retention spring, attach it to the new hard drive and install your replacement.

SECONDARY DRIVE OPTIONS

The 1507 has several options for the secondary IDE port on the CPU. The hard drive can be replaced with a dual hard drive unit. If solid state storage media is desired, then an externally accessible Type I or Type II CompactFlash™ option is available. Internal Solid State Drives are also available.



Dual 2.5" Hard Drives

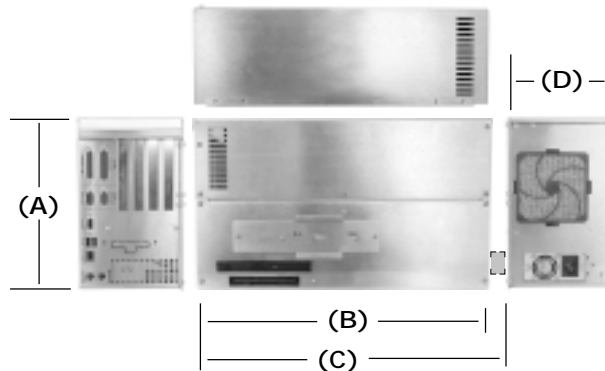


Externally Accessible CompactFlash™

PRODUCT MOUNTING AND DIMENSIONS

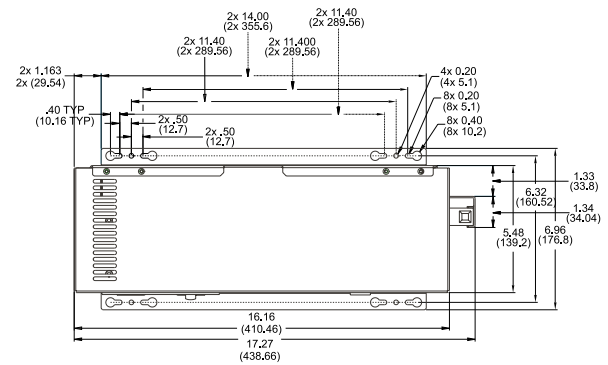
1507 Unit Dimensions

Model	1507
Processors	Intel® Celeron, Pentium® III
Preloaded OS	MS-DOS®, Windows NT®, Windows® 2000, XP
Expansion	One ISA, two PCI, one shared (ISA or PCI)

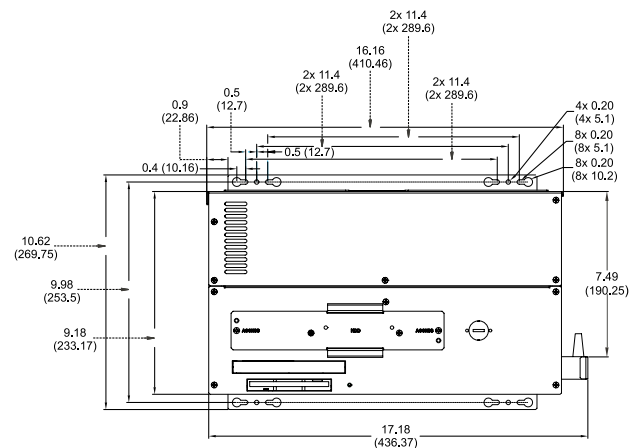


Model	1507
Height (A)	9.18" (233.17 mm)
Width (B)	16.16" (410.46 mm)
Width (C)	17.18" (436.37 mm)
Depth (D)	5.48" (139.2 mm)
Weight	18 lbs (8.2 kg)

Vertical Mounting



Horizontal Mounting



PRODUCT SPECIFICATIONS AND RATINGS

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock ^a	15g peak acceleration, 11 msec duration	30g peak acceleration, 11 msec duration
Vibration	.006" peak to peak displacement	.015" peak to peak displacement
5-2000 Hz ^a	1.0g maximum acceleration	2.5g maximum acceleration
Altitude ^b	Sea level to 10,000 ft.	Sea level to 40,000 ft.

^a These values are with solid state hard drives and not rotating media drives.

^b Consistent with internal component specifications.

Electrical

Power Supply	200 Watt AC
AC Power	100-240 V AC, switchable, 50/60 Hz, 5.0 Amp (maximum), 95 W nominal ^c
DC Power	+19 - +30 V DC, 4.4A +/- 10%, 100 W nominal ^c
Available Expansion Power	+3.3 V@10A +5V@12A +12V@4.9A -12V@0.5A -5V@0.2A

Note: Combined 3.3V & 5.0V power shall not exceed 66 Watts

^c Nominal Power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

Compliance



Regulatory Compliance:



- EN 55022: Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- IEC 60950-1

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals:

- UL 508 Listed
- UL 1604 Listed ^{d,e}
- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^{d,e}

^d Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T4A

^e CDW & DVD Drives are not supported for hazardous locations.

ORDERING INFORMATION

To create an order number, follow the conventions defined by the example order numbers and product configurations.

Example Order Number

Order Number	Description
1507-1000-256-CDF-2K	1507 Industrial "Node" PC, Socket 370 Intel® Pentium III 1 GHz CPU (256K Cache, 133 MHz bus), 256 MB DRAM, 40 GB minimum Hard Drive, Rear Access CD-ROM and Floppy, Windows 2000, On-board 10/100 BaseT Ethernet and USB, three full-length expansion slots (1 PCI, 1 ISA, and 1 ISA or PCI) and one 1/2-length PCI expansion slot.

1507 -

CPU

- 1000 Pentium III 1.0 Ghz, 256k Cache, 133 MHz Bus
- 1260 Pentium III 1.26 GHz, 512k Cache, 133 MHz Bus

DRAM

- 256 256 MB DRAM
- 512 512 MB DRAM

Power Supply

- blank AC power supply
- 24V 24V DC power supply

Internal Hard Drive

- Blank Internal 3.5" 40 GB minimum EIDE hard drive
- 80G 80 GB internal EIDE hard drive
- ND No internal hard drive^a
- DHD Dual 2.5" 10 GB minimum hard drives
- 4GSS 4 GB solid state hard drive^b

Rotating Media Devices

- F Rear Access Floppy only
- CDF Rear Access Floppy and CD-ROM
- CDW/DVDF Rear Access Floppy, CD-R/W, with DVD read-only^{c f g}
- DVDWF Rear Access Floppy and Read/Write DVD-ROM Drive^{c f g}

Externally Accessible IDE^d

- blank Nothing Installed
- CF Externally Accessible Type I/II CompactFlash site
- 128CF Externally Accessible Type I/II CompactFlash site w/128 MB
- 256CF Externally Accessible Type I/II CompactFlash site w/256 MB
- 512CF Externally Accessible Type I/II CompactFlash site w/512 MB

Operating System

- DOS MS-DOS
- NT Windows NT^{e g}
- 2K Windows 2000 (multi-language)^e
- XP Pre-Activated Windows XP^e

^a 128CF, 256CF, or 512CF (with DOS) option must be chosen when selecting the -ND option. ^b Not recommended when applications are storing data. ^c When ordering -CDWF, -DVDF, -DVDWF options with MS-DOS, drivers will not be loaded and devices will not function properly (requires Windows). ^d Externally accessible options are not available when choosing -DHD option. ^e Windows operating systems are only available when Internal Hard Drive or -DHD options are chosen. ^f Hazardous locations approvals do not apply when configured with a DVD or DVD-R/W drive option. ^g CDW, DVD, and DVDW options not available with Windows NT.

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

Warranty Information

The 1507 series carries a two-year parts & labor warranty.

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Customer Support Hotline:
734-944-0482



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3712KPM Industrial PCs

12.1" LCD Flat Panel Display

DS-371200(G)



Xycom Automation's newest generation of Industrial PCs is designed and tested for the tough environments required for plant floor use. Our standard PC configurations meet the strict specifications required for use in Hazardous Locations and Europe's CE mark. Based on CPU boards designed specifically for industrial automation, these systems provide the capabilities required by demanding applications. With an installed base of over 200,000 systems, our Industrial PC products are successfully applied in manufacturing and process environments world-wide.

FEATURES

- 12.1" SVGA TFT color flat panel
- Choice of operator input options:
 - Reprogrammable keypad with integrated mouse, or
 - Combination of keypad, mouse & touchscreen
- Intel® Pentium® III options up to 1.26 GHz
- Up to 512 MB DRAM (256 MB standard)
- 10/100 Base T Ethernet port
- Parallel, RS-232 and RS-232 or RS485, PS/2 keyboard and mouse ports
- USB ports (1.1 compliant)
 - 2 rear-access
 - 1 front-access
- VGA port (supports simultaneous display with additional monitor)
- Four available expansion slots:
 - Three full-length (1 PCI, 1 ISA, and 1 either ISA or PCI)
 - One ½-length PCI
- DiskOnChip 2000 socket
- AGP graphics controller with 4 MB base memory
- Floppy drive and CD-ROM drive (with CD-R/W/ DVD-Read or DVD-R/W upgrade options)
- Easily removable 40 GB hard drive
- Secondary IDE Drive options (choice of one):
 - Dual hard drives
 - Externally accessible CompactFlash™ options up to 512MB
- NEMA 4/4x/12 and IP65 front panels
- UL listed for hazardous locations: Class I Division 2, Groups A, B, C, D; Class II Division 2, Groups F and G (CDW and DVD drive options not approved for hazardous locations); Temp. Code T4A
- Pre-loaded with MS-DOS®, Windows® NT, Windows® 2000 (with multi-language support), or Windows® XP
- 100-240 V AC power supply (24VDC optional)
- 2-year warranty included

Easy-to-Read Display

The 3712KPM units utilize a bright TFT 12.1" LCD flat panel display. Complex operations and screens can be displayed with clarity. SVGA (800 x 600) resolution is recommended. However, the 3712KPM units will display XGA (1024 x 768) resolution with some clarity degradation. The AGP graphics defaults to 4MB video RAM and will automatically share RAM (up to 32 MB) with the system to allow full 32-bit color depth.

Higher Performance

With up to 1.26 GHz Pentium® III processors available, the 3712KPM units can drive the most demanding applications. The 3712KPM units ship standard with a Pentium III 1 GHz with 256K cache running at 133 MHz bus. A 1.26 GHz Pentium® III with 512K cache running at 133 MHz bus is an available option.

Cutout Compatibility

- The 3712KPM is directly cutout-compatible with many Xycom Automation legacy units. It offers a hardware upgrade path for many units, including the 2050, 8450, 9450, 9475, 9485, 9486, 9486 and the 9487 without the need to alter your current enclosure and/or machine. For a more complete list, or to verify compatibility, contact Xycom Customer Care.

Fits Your Needs

- The 3712KPM can be configured many different ways. With four available expansion slots (three full-length ISA/PCI, one ½-length PCI), many cost-effective, industry standard options are easily integrated. The optional dual hard drive, solid-state drive, or externally accessible CompactFlash™ provide the storage solution you require. Additionally, the CD-ROM can be upgraded to

- CD-R/W/DVD-Read, or DVD-R/W, so that even more storage and/or backup options are available.

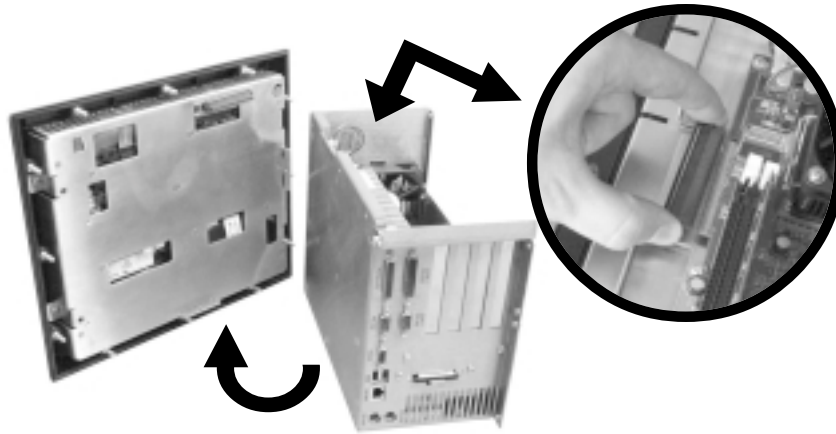
Meets High Standards

- To survive on the plant floor, the 3712KPM units meet NEMA 4/4x/12, IP65, FCC, UL, CSA, and European CE mark requirements for industrial automation equipment. Xycom Automation leads the industry in reliability, service, and support with an optional five year warranty available.



SERVICEABILITY

The 3712KPM CPU section easily removes from the front panel and display unit, without having to detach the front panel from the NEMA enclosure. One electrical connection is used to attach the entire front panel to the rear CPU section. The rear CPU section can be replaced with another very quickly. With the cover removed, expansion cards are easily installed without cumbersome cables to contend with.



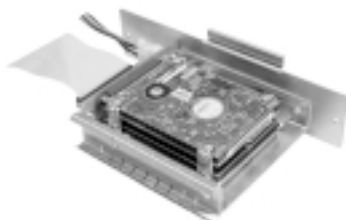
EASILY REPLACEABLE HARD DRIVE



The 3712KPM units have incorporated an easy to access hard drive mount. Simply remove 2 screws and extract the hard drive. Remove the metal bracket and retention spring, attach it to the new hard drive and install your replacement.

SECONDARY DRIVE OPTIONS

The 3712KPM units have several options for the secondary IDE port on the CPU. The hard drive can be replaced with a dual hard drive unit. If solid state storage media is desired, then an externally accessible Type I or Type II CompactFlash™ option is available. Internal Solid State drives are also available.



Dual 2.5" Hard Drives



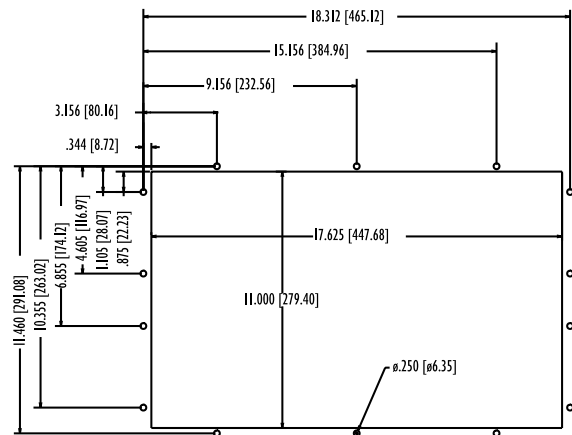
Externally Accessible CompactFlash™

PRODUCT CONFIGURATIONS

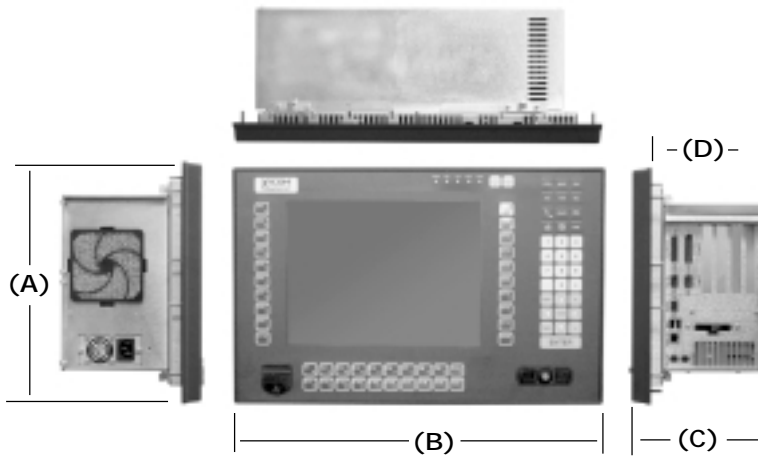
3712KPM(T) Configuration

Display	12.1" LCD color display, 800 x 600 (SVGA), 300 nits
Operator Input	Reprogrammable 74-position keypad and industrial mouse (Touchscreen optional)
Processors	Intel® Pentium® III
Preloaded OS	MS-DOS®, Windows NT®, Windows® 2000, Windows® XP
Expansion	One ISA; one full-length and one ½-length PCI; one shared (ISA or PCI)

PRODUCT MOUNTING



PRODUCT DIMENSIONS



3712KPM(T) Unit Dimensions

Model	3712KPM(T)
Height (A)	12.2" (310 mm)
Width (B)	19.00" (482.6 mm)
Depth (C)	7.64" (194.0 mm)
Mounting Depth (D)	6.64" (168.6 mm)
Weight	29 lbs (16.8 kg)

PRODUCT SPECIFICATIONS AND RATINGS

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock^a	15g peak acceleration, 11 msec duration	30g peak acceleration, 11 msec duration
Vibration	.006" peak to peak displacement	.015" peak to peak displacement
5-2000 Hz^a	1.0g maximum acceleration	2.5g maximum acceleration
Altitude^b	Sea level to 10,000 ft.	Sea level to 40,000 ft.

^a These values are with solid state hard drives, and not rotating media drives.

^b Consistent with internal component specifications.

Electrical

AC Power Supply	200 watt AC
AC Power	100 - 240V AC, 50-60 Hz, 5.0 Amps (maximum) 95 W nominal power [†]
Power Available for Expansion	+3.3V@10A max ^a +5V@6A max ^a -5@.2A max ^b -12@.5A max ^b +12@4.9A max

^a +5V and +3.3V combined cannot exceed 36 watts.

^b -5V and -12V combined cannot exceed 8 watts.

DC Power Supply	300 watt DC
DC Power	19 - 36VDC 20.0 Amps (maximum) 100 W nominal power [†]
Power Available for Expansion	+3.3V@9A max +5V@7A max -5@0.54A max ^a -12@0.7A max ^a +12@8A max

^a -5V and -12V combined cannot exceed 20 amps.

[†] Nominal Power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

PRODUCT SPECIFICATIONS AND RATINGS (CONTINUED)

Compliance

Regulatory Compliance

- CE**
- EN 55022: Class A
 - EN 61000-6-2
 - IEC 60950-1
 - EN 61000-3-2, Class A
 - EN 61000-3-3
- FCC**
- 47 CFR, Part 15, Class A

Safety Agency Approvals

- UL**
- UL 508 Listed
 - UL 1604 Listed ^{a,b}
- cUL**
- CSA-C22.2, #142 Listed
 - CSA-C22.2, #213 Listed ^{a,b}

Front Panel

- NEMA 4/4X/12, IP65



All agency approvals are pending for DC voltages

^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T4A

^b CDW & DVD Drives are not supported for hazardous locations.

ORDERING INFORMATION

To create an order number, follow the conventions defined by the example order numbers and product configurations.

Example Order Number

Order Number	Description
3712KPM-1000-256-CDF-2K	3712KPM with keypad & mouse front panel, Intel® Pentium III 1 GHz CPU, 256 MB DRAM, 40 GB minimum Hard Drive, Rear Access CD-ROM and Floppy, Windows 2000.
3712 -	
Operator Input	
KPM	12.1" TFT with keypad and mouse
KPMT	12.1" TFT with keypad, mouse and touchscreen
CPU	
1000	Pentium III 1.0 GHz, 256k Cache, 133 MHz Bus
1260	Pentium III 1.26 GHz, 512k Cache, 133 MHz Bus
DRAM	
-256	256 MB DRAM
-512	512 MB DRAM
Power Supply	
blank	AC power supply
-24V	24V DC power supply
Internal Hard Drive	
Blank	Internal 3.5" 40 GB minimum EIDE hard drive
-80G	80 GB internal EIDE hard drive
-ND	No internal hard drive ^a
-DHD	Dual 2.5" 20 GB minimum hard drives
-4GSS	4 GB solid state hard drive ^b
Rotating Media Devices	
-CDF	Rear Access Floppy and CD-ROM
-CDWDVDF	Rear Access Floppy and Read/Write CD-ROM ^{c f g}
-F	Rear Access Floppy only
-DVDWF	Rear Access Floppy and Read/Write DVD-ROM Drive ^{c f g}
Externally Accessible IDE^d	
blank	Nothing Installed
-CF	Externally Accessible Type I/II CompactFlash site
-128CF	Externally Accessible Type I/II CompactFlash site w/128 MB
-256CF	Externally Accessible Type I/II CompactFlash site w/256 MB
-512CF	Externally Accessible Type I/II CompactFlash site w/512 MB
Operating System	
-DOS	MS-DOS
-NT	Windows NT ^{e g}
-2K	Windows 2000 (multi-language) ^e
-XP	Pre-Activated Windows XP ^e

Warranty Information

The 3712 series carries a two-year parts & labor warranty.

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

^a 128CF, 256CF, or 512CF (with DOS) option must be chosen when selecting the -ND option ^bNot recommended when applications are storing data ^cWhen ordering -CDWF, -DVDF, -DVDWF options with MS-DOS, drivers will not be loaded and devices will not function properly (requires Windows). ^dExternally accessible options are not available when choosing -DHD option. ^eWindows operating systems are only available when Internal Hard Drive or -DHD options are chosen. ^fHazardous locations approvals do not apply when configured with a DVD or DVD-R/W drive option. ^gCDW, DVD, and DVDW options not available with Windows NT.

Xycom Automation
734-429-4971
Fax: 734-429-1010
<http://www.xycom.com>

Customer Support Hotline:
734-944-0482



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3715 Industrial PCs

15.0" LCD Flat Panel Display

DS-371500(E)



Xycom Automation's newest generation of Industrial PCs is designed and tested for the tough environments required for plant floor use. Our standard PC configurations meet the strict specifications required for use in Hazardous Locations and Europe's CE mark. Based on CPU boards designed specifically for industrial automation, these systems provide the capabilities required by demanding applications. With an installed base of over 200,000 systems, our industrial PC products are successfully applied in manufacturing and process environments world-wide.

Easy-to-Read Display

The 3715 units utilize a bright TFT 15.0" LCD flat panel display. Complex operations and screens can be displayed with clarity. XGA (1024 x 768) resolution is recommended. However, the 3715 units will display SXGA (1280 x 1024) resolution with some clarity degradation. The AGP graphics defaults to 4MB video RAM and will automatically share RAM (up to 32 MB) with the system to allow full 32-bit color depth.

Higher Performance

With up to 1.26 GHz Pentium III processors available, the 3715 units can drive the most demanding applications. The 3715 units ship standard with a Pentium III 1 GHz CPU with 256K cache

- running at 133 MHz bus. A Pentium III 1.26GHz with 512K cache running at 133 MHz bus is an available option.

Fits Your Needs

- The 3715 units can be configured many different ways. With four available expansion slots (three full-length ISA/PCI, one ½-length PCI), many cost effective, industry standard options are easily integrated. The optional dual hard drive, solid-state drive, or externally accessible Compact Flash provide the storage solution you require. Additionally, the CD-ROM can be upgraded to CD-R/W/DVD-Read or DVD-R/W, so that even more storage and/or backup options are available.

FEATURES

- 15.0" XGA TFT color flat panel
- Choice of operator input options:
 - Analog resistive touchscreen only, or
 - Reprogrammable keypad with integrated mouse, or
 - Combination of keypad, mouse & touchscreen
- Intel® Pentium® III options up to 1.26 GHz
- Up to 512 MB DRAM (256 MB standard)
- 10/100 BaseT Ethernet port
- Parallel, RS-232 and RS-232 or RS485, PS/2 keyboard and mouse ports
- USB ports (1.1 compliant)
 - 2 rear-access on all models
 - 1 front-access on KPM(T) models
- VGA port (supports simultaneous display with additional monitor)
- Four available expansion slots:
 - Three full-length (1 PCI, 1 ISA, and 1 either ISA or PCI)
 - One ½-length PCI
- DiskOnChip 2000 socket
- Floppy drive and CD-ROM drive (with CD-R/W/ DVD-Read or DVD-R/W upgrade options)
- Easily-removable 40 GB hard drive
- AGP graphics controller with 4 MB base memory
- Secondary IDE Drive options (choice of one):
 - Dual hard drives
 - Externally accessible CompactFlash™ options up to 512MB
- UL 508 Listed
- NEMA 4/4x/12 and IP65 front panels
- UL listed for hazardous locations: Class I Division 2, Groups A, B, C, D; Class II Division 2, Groups F and G (CDW & DVD drive options not approved for hazardous locations); Temp. Code T4A
- Pre-loaded with MS-DOS®, Windows® NT, Windows® 2000 (with multi-language support), or Windows® XP
- 100-240 V AC power supply (24VDC optional)
- 2-year warranty included

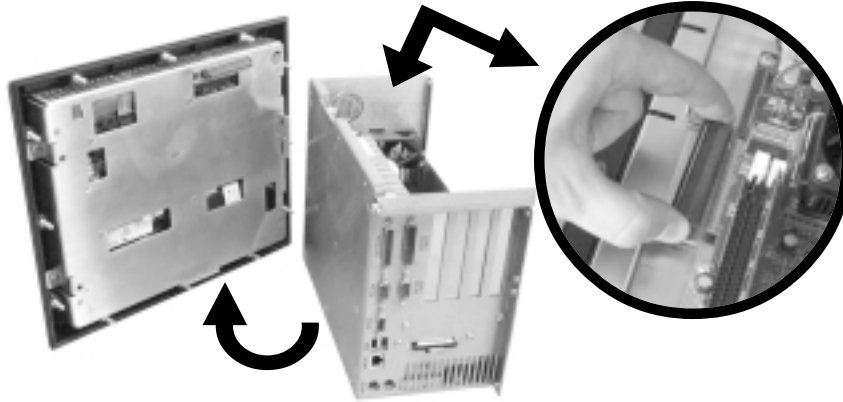
Meets High Standards

- To survive on the plant floor, the 3715 units meet NEMA 4/4x/12, IP65, FCC, UL, cUL, and European CE mark requirements for industrial automation equipment. Xycom Automation leads the industry in reliability, service, and support with an optional five year warranty available.



SERVICEABILITY

The 3715 CPU section easily removes from the front panel and display unit without having to detach the front panel from the NEMA enclosure. One electrical connection is used to attach the entire front panel to the rear CPU section. The rear CPU section can be replaced with another very quickly. With the cover removed expansion cards are easily installed without cumbersome cables to contend with.



EASILY REPLACEABLE HARD DRIVE



The 3715 units have incorporated an easy access hard drive mount. Simply remove 2 screws and extract the hard drive. Remove the metal bracket and retention spring, attach it to the new hard drive and install your replacement.

SECONDARY DRIVE OPTIONS

The 3715 units have several options for the secondary IDE port on the CPU. The hard drive can be replaced with a dual hard drive unit. If solid state storage media is desired then an externally accessible Type I or Type II CompactFlash™ option is available. Internal Solid State drives also available.



Dual 2.5" Hard Drives



Externally Accessible CompactFlash™

PRODUCT CONFIGURATIONS

3715T Configuration

Display	15.0" LCD color display, 1024 x 768 (XGA), 300 nits
Operator Input	Analog resistive touchscreen
Processors	Intel® Pentium® III
Preloaded OS	MS-DOS®, Windows NT®, Windows® 2000, Windows® XP
Expansion	One ISA, two PCI, one shared (ISA or PCI)



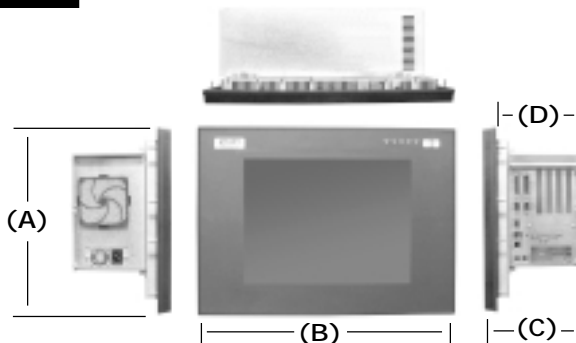
3715KPM(T) Configuration

Display	15.0" LCD color display, 1024 x 768 (XGA), 300 nits
Operator Input	Analog resistive touchscreen Reprogrammable 74-position keypad and industrial mouse (Touchscreen optional)
Processors	Intel® Pentium® III
Preloaded OS	MS-DOS®, Windows NT®, Windows® 2000, Windows® XP
Expansion	One ISA, two PCI, one shared (ISA or PCI)



PRODUCT DIMENSIONS

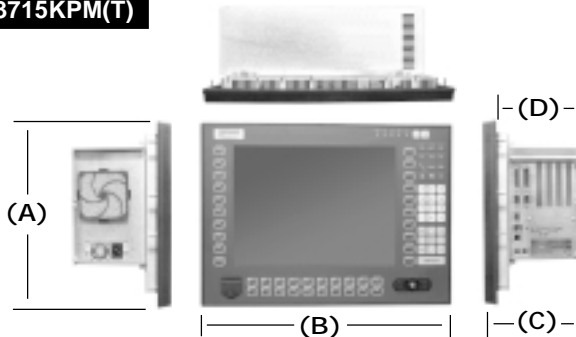
3715T



3715T Unit Dimensions

Model	3715T
Height (A)	13.97" (354.8 mm)
Width (B)	19.00" (482.6 mm)
Depth (C)	7.64" (194.0 mm)
Mounting Depth (D)	6.64" (168.6 mm)
Weight	37 lbs (16.8 kg)

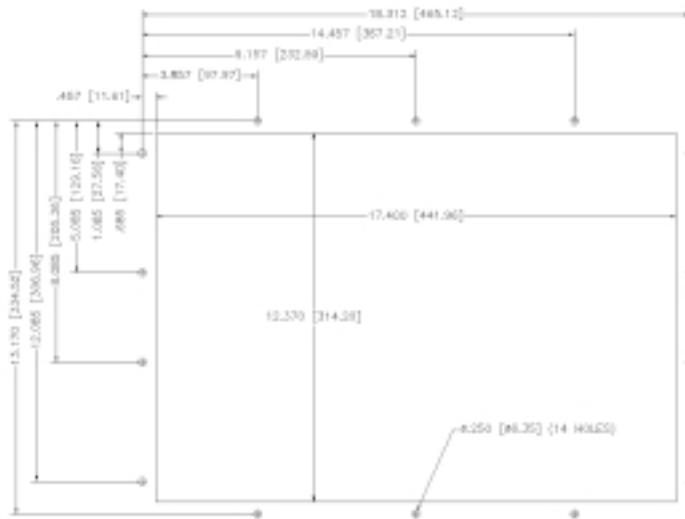
3715KPM(T)



3715KPM(T) Unit Dimensions

Model	3715KPM(T)
Height (A)	13.97" (354.8 mm)
Width (B)	19.00" (482.6 mm)
Depth (C)	7.64" (194.0 mm)
Mounting Depth (D)	6.64" (168.6 mm)
Weight	37 lbs (16.8 kg)

3715T and 3715KPM(T) PRODUCT MOUNTING



PRODUCT SPECIFICATIONS AND RATINGS

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock ^a	15g peak acceleration, 11 msec duration	30g peak acceleration, 11 msec duration
Vibration 5-2000 Hz ^a	.006" peak to peak displacement 1.0g maximum acceleration	.015" peak to peak displacement 2.5g maximum acceleration
Altitude ^b	Sea level to 10,000 ft.	Sea level to 40,000 ft.

^aThese values are with solid state hard drives and not rotating media drives.

^bConsistent with internal component specifications.

Electrical

AC Power Supply	200 watt AC
AC Power	100 - 132/200 -240V AC, 50-60 Hz (autoranging), 4.0 Amp (maximum) 100 W nominal power†
Power Available for Expansion	+3.3V@10A max ^a +5V@6A max ^a -5@.2A max ^b -12@.5A max ^b +12@4.9A max

^a +5V and +3.3V combined cannot exceed 36 watts.

^b -5V and -12V combined cannot exceed 8 watts.

DC Power Supply	300 watt DC
DC Power	19 - 36VDC 20.0 Amps (maximum) 105 W nominal power [†]
Power Available for Expansion	+3.3V@9A max +5V@7A max -5@0.54A max ^a -12@0.7A max ^a +12@8A max

^a -5V and -12V combined cannot exceed 20 amps.

† Nominal Power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

Compliance

Regulatory Compliance

CE

- EN 55022: Class A
- EN 61000-6-2
- IEC 60950-1
- EN 61000-3-2, Class A
- EN 61000-3-3

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals

UL

- UL 508 Listed
- UL 1604 Listed ^{a,b}

CUL

- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^{a,b}

Front Panel

- NEMA 4/4X/12, IP65



^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T4A

^b CDW & DVD Drives are not supported for hazardous locations.

4600 Series RAID-Enabled Industrial PCs

DS-460000_RAID(C)



FEATURES

- 12.1" SVGA or 15.0" XGA TFT color flat panels/ or No Display options
- Choice of operator inputs:
 - Reprogrammable keypad with integrated mouse (KPM);
 - Touchscreen only (T);
 - Combination of all 3 (KPMT);
 - Or / No optional input (1546)
- Intel® Celeron® M 1.3 GHz, 512K cache, 400 MHz system bus (optional Pentium M 2.0 GHz, 2M cache, 533 MHz system bus)
- 512 MB DRAM (up to 2 GB optional)
- Dual 80 GB minimum Serial ATA hard drives, RAID (level 1)
- 4X AGP graphics with 32 MB video memory (shared with system memory)
- Four available expansion slots:
 - One (8.0" max.) PCI expansion slot;
 - Two (9.0" max.) PCI expansion slots;
 - One (9.0" max.) ISA or PCI expansion slot
- 10/100 and 10/100/1000 BaseT Ethernet ports
- 4 USB 2.0 compliant ports (one additional 1.1 compliant port on front of KPM units)
- Three Serial Ports:
 - 2 RS-232;
 - 1 Selectable RS-232/422/485
- Rear accessible Type I/II CompactFlash™ socket
- CD-ROM (optional CD-R/W with DVD-read-only, DVD-R/W, and floppy)
- UL, cUL, CE approvals
- UL listed for hazardous locations: Class I Division 2, Groups A, B, C, D; Class II Division 2, Groups F and G
- Windows® XP or Windows 2000 operating systems
- 100-240 VAC power supply
- 2-year warranty included

The most susceptible component of any Industrial PC is the hard drive. Some sources suggest shock mounting the hard drive; unfortunately, shock mounting may cause the hard drive to become more vibration-sensitive at certain frequencies. The most common method to overcome a susceptibility to vibration is through the use of solid-state storage media or the use of redundant hard drives.

Many of Pro-face America's Xycom brand Heavy-Duty Industrial PCs offer solid-state media in the form of CompactFlash or solid state hard drives. While many storage sizes are available, the cost increases drastically as the required size increases.

Another approach is to use RAID-enabled PC. RAID stands for Redundant Array of Independent Disks. In essence, RAID is two or more hard disks attached to the same controller, either SCSI or IDE. The RAID controller can "stripe" or "mirror" data.

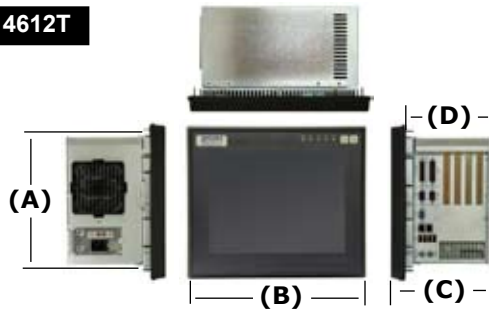
Striping (RAID 0) is used to read and write to many disks at once to increase hard drive performance, while Mirror-

ing (RAID 1) allows the same data to be available on two drives. Other RAID levels (2 and higher) are also available. These higher levels increase the number of disks being utilized.

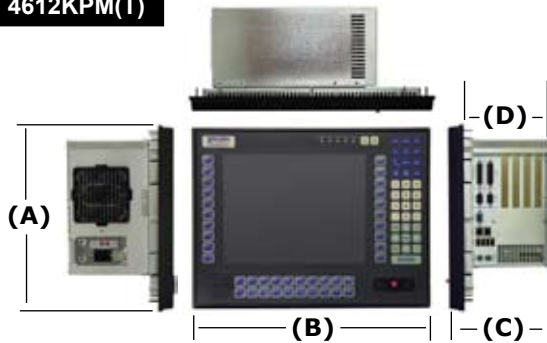
In a RAID 1 system there is a primary and a secondary hard drive. The RAID controller writes to both drives but only reads from the primary drive. If the RAID controller detects any problem with the primary drive it switches over to the secondary drive (which has an exact copy of all data on the primary drive) and utilizes it as the primary drive. The PC will continue to run allowing time to change the faulty hard drive without interruption in machine operation. Once the drive has been replaced the RAID controller automatically begins creating a mirror

copy of the good drive. This process runs in the background while the machine operation is maintained. Once this new drive is operational it is recommended that the other drive be scheduled for replacement.

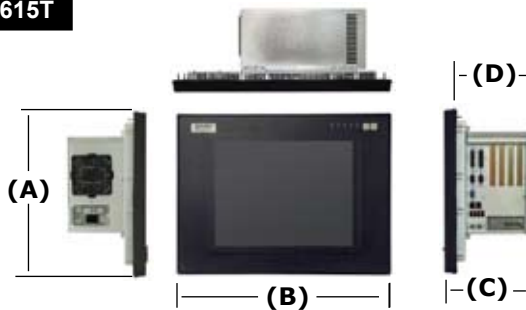
The 1546 and 4600 series products can be factory configured with a RAID 1 implementation. These RAID-enabled configurations come standard with two easily removable Serial ATA hard drives and a built in RAID controller. This creates a more robust, fault tolerant system to help maintain your machine operation and production. When utilized correctly a RAID-enabled industrial PC can greatly improve the overall reliability of an application.

4612T**4612 Unit Dimensions**

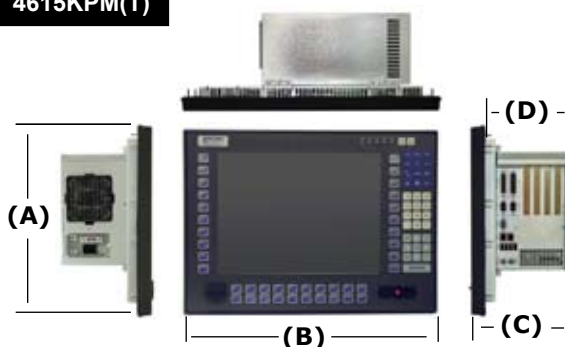
Model	4612T	4612KPM(T)
Height (A)	11.00" (279.4 mm)	12.45" (316.2 mm)
Width (B)	13.00" (330.2 mm)	16.70" (424.2 mm)
Depth (C)	7.4" (187.0 mm)	7.4" (187.0 mm)
Mounting Depth (D)	6.32" (160.5 mm)	6.36" (161.5 mm)
Weight	22 lbs (10 kg)	24 lbs (10.9 kg)

4612KPM(T)**4612 Configurations**

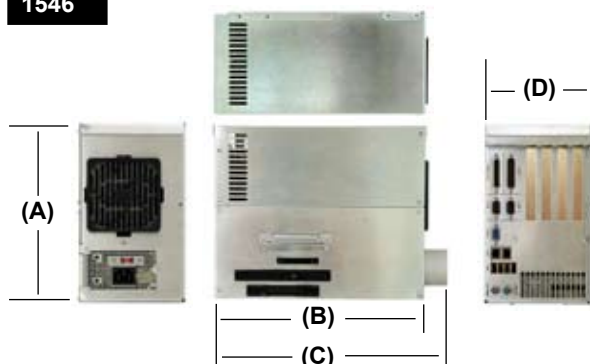
Display	12.1" LCD color display, 800 x 600 (SVGA), 300 nits
Operator Input	Analog resistive touchscreen (4612T) Reprogrammable 74-position keypad and industrial mouse (Touchscreen optional) (4612KPM(T))
Processors	Intel® Celeron® M 1.3 GHz or optional Pentium M
Preloaded OS	Windows® XP or Windows® 2000 (multi-language)
Expansion	One (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA

4615T**4615 Unit Dimensions**

Model	4615T	4615KPM(T)
Height (A)	12.62" (320.5 mm)	13.97" (354.8 mm)
Width (B)	16.59" (421.4 mm)	19.00" (482.6 mm)
Depth (C)	7.59" (192.8 mm)	7.64" (194.0 mm)
Mounting Depth (D)	6.59" (167.4 mm)	6.60" (167.6 mm)
Weight	25 lbs (11.34 kg)	27 lbs (12.4 kg)

4615KPM(T)**4615 Unit Configuration**

Display	15.0" LCD color display, 1024 x 768 (XGA), 300 nits
Operator Input	Analog resistive touchscreen (4615T) Reprogrammable 74-position keypad and industrial mouse (4615KPM(T))
Processors	Intel® Celeron® M 1.3 GHz or optional Pentium M
Preloaded OS	Windows® XP or Windows® 2000 (multi-language)
Expansion	One (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA

1546

1546 Unit Dimensions

Model	1546
Height (A)	9.24" (234.7 mm)
Width (B)	11.47" (291.3 mm)
Width (C)	12.74" (324.9 mm)
Depth (D)	5.75" (146.1 mm)
Weight	13 lbs (7.2 kg)

1546 Configurations

Model	1546
Processors	Intel® Celeron® M 1.3 GHz or optional Pentium M
Preloaded OS	Windows® XP or Windows® 2000 (multi-language)
Expansion	One (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, non-condensing	20% to 80% RH, non-condensing
Shock ^a	15g peak acceleration, 11 msec duration	30g peak acceleration, 11 msec duration
Vibration 5-2000 Hz ^a	.006" peak to peak displacement 1.0g maximum acceleration	.015" peak to peak displacement 2.5g maximum acceleration

^a These values are with solid state hard drives, and not rotating media drives.

Electrical

Models	4612KPM / 4615KPM(T) / 1546
Power Supply	250 Watt AC
AC Power	100 - 240 VAC, 50-60 Hz (auto-ranging), 5.0 Amps (maximum) 4612 - 78 Watt nominal power [†] 4615 - 88 Watt nominal power [†] 1546 - 74 Watt nominal power [†]
Power Available for Expansion	+3.3V@4.0A max +5V@4.0A max -5@160mA max -12@03.0A max +12@240mA max

[†] Nominal power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

4600 Series Compliance

Regulatory Compliance

CE

- EN 55022: Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- IEC 60950-1

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals

UL

- UL 508 Listed
- UL 1604 Listed ^a

CUL

- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^a

^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G;
Temp. Code: T6

Front Panel

- NEMA 4/4X/12, IP65



1546 Series Compliance

Regulatory Compliance:

CE

- EN 55022: Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- IEC 60950-1

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals

UL

- UL 508 Listed
- UL 1604 Listed ^a

CUL

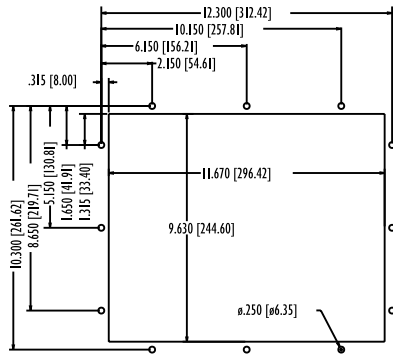
- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^a

^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G;
Temp. Code: T6

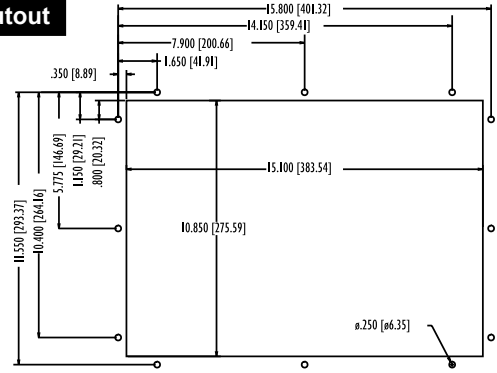


Product certification documentation available at: www.xycom.com/certifications

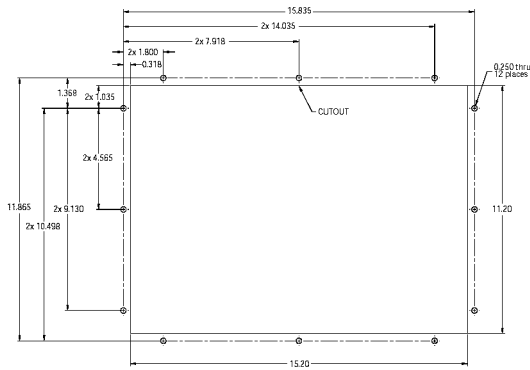
4612T Cutout



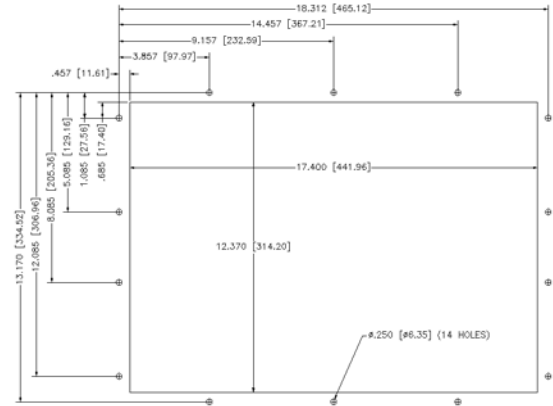
4612KPM(T) Cutout



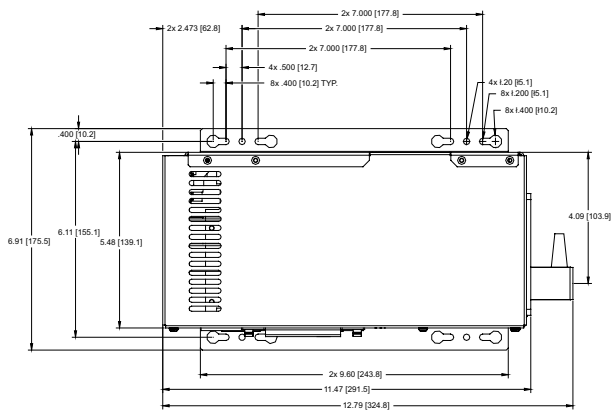
4615T Cutout



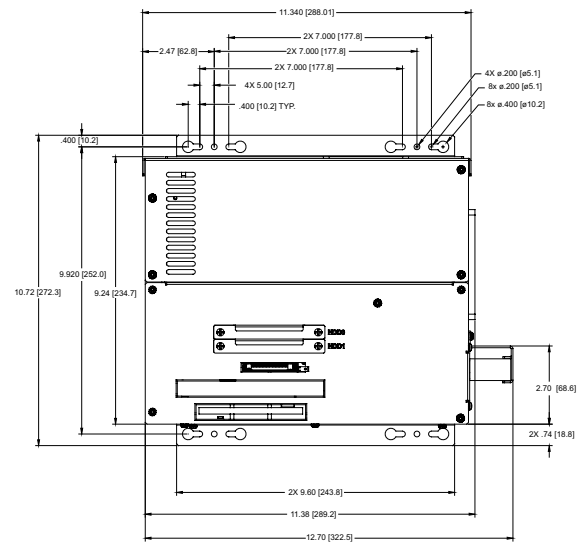
4615KPM(T) Cutout



1546 Shelf Mounting



1546 Wall Mounting



To create an order number, follow the conventions defined by the example order numbers and product configurations.

Example Order Number

Order Number	Description
4612T-1300-512-RAID-CD-XP	RAID-enabled 4612T with 12.1" TFT LCD, Touchscreen front panel, Intel® Celeron® M 1.3 GHz, (512K Cache, 400 MHz bus), 512 MB DRAM, Two Serial ATA 80 GB minimum Hard Drives, Rear Access Type I/II CompactFlash socket and CD-ROM, Windows XP, On-board 10/100 and 10/100/1000 BaseT Ethernet and USB, one (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA available expansion slots.
<div> <div>4612 -</div> <div>- RAID</div> </div> <div> <div> Display and Operator Input T 12" w/ Touchscreen only KPM 12" w/ Keypad & Mouse KPMT 12" w/ Keypad, Mouse, & Touchscreen </div> <div> CPU 1300 Celeron M 1.3 GHz, 512K Cache, 400 MHz bus 2000 Pentium M 2.0 GHz, 2M Cache, 533 MHz bus </div> <div> DRAM -512 512 MB DRAM -1000 1 GB DRAM -2000 2 GB DRAM </div> <div> Rotating Media Drives -CD Rear Access CD-ROM Blank No Rear Access CD-ROM -CDW Rear Access CD-R/W & DVD-Read only -DVDW Rear Access DVD-R/W Drive </div> <div> Floppy Blank No Floppy Installed ^a -F Rear Access Floppy Installed </div> <div> Externally Accessible Compact Flash Blank Nothing Installed -4GCF 4 GB CompactFlash Installed </div> <div> Operating System -XP Pre-Activated Windows XP Professional -2K Windows 2000 (multi-language) </div> </div>	

^a When ordering a unit with no floppy operating system recovery will not be possible without adding an external USB floppy drive.

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

Warranty Information
The 4612 series carries a two-year parts & labor warranty.

Example Order Number

Order Number	Description
4615T-1300-512-RAID-CD-XP	RAID-enabled 4615T with 15.0" TFT LCD, Touchscreen front panel, Intel® Celeron® M 1.3 GHz, (512K Cache, 400 MHz bus), 512 MB DRAM, Two Serial ATA 80 GB minimum Hard Drives, Rear Access Type I/II CompactFlash socket and CD-ROM, Windows XP, On-board 10/100 and 10/100/1000 BaseT Ethernet and USB, one (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA available expansion slots.
4615KPM-1300-512-RAID-CD-XP	
<div>4615 - - RAID</div>	
<div>Display and Operator Input</div> <div>T15" w/ Touchscreen only</div> <div>KPM15" w/ Keypad & Mouse</div> <div>KPMT15" w/ Keypad, Mouse, & Touchscreen</div>	
<div>CPU</div> <div>1300Celeron M 1.3 GHz, 512K Cache, 400 MHz bus</div> <div>2000Pentium M 2.0 GHz, 2M Cache, 533 MHz bus</div>	
<div>DRAM</div> <div>-512512 MB DRAM</div> <div>-10001 GB DRAM</div> <div>-20002 GB DRAM</div>	
<div>Rotating Media Drives</div> <div>-CDRear Access CD-ROM</div> <div>BlankNo Rear Access CD-ROM</div> <div>-CDWRear Access CD-R/W & DVD-Read only</div> <div>-DVDWRear Access DVD-R/W Drive</div>	
<div>Floppy</div> <div>BlankNo Floppy Installed ^a</div> <div>-FRear Access Floppy Installed</div>	
<div>Externally Accessible Compact Flash</div> <div>BlankNothing Installed</div> <div>-4GCF4 GB CompactFlash Installed</div>	
<div>Operating System</div> <div>-XPPre-Activated Windows XP Professional</div> <div>-2KWindows 2000 (multi-language)</div>	

^a When ordering a unit with no floppy operating system recovery will not be possible without adding an external USB floppy drive.

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

Warranty Information
The 4615 series carries a two-year parts & labor warranty.

Example Order Number

Order Number	Description
1546-1300-512-RAID-CD-XP	1546 Industrial "Node" PC, Intel® Celeron® M 1.3 GHz CPU (512K Cache, 400 MHz bus), 512 MB DRAM, Dual 80 GB minimum Serial ATA Hard Drive, RAID-enabled, Rear Access Type I/II CompactFlash socket and CD-ROM, Windows XP, On-board 10/100 and 10/100/1000 BaseT Ethernet and USB, one (8.0" max.) PCI, two (9.0" max.) PCI, and one (9.0" max.) PCI or ISA available expansion slots.

1546 - - RAID

CPU

1300 Celeron M 1.3 GHz, 512K Cache, 400 MHz bus
2000 Pentium M 2.0 GHz, 2M Cache, 533 MHz bus

DRAM

-512 512 MB DRAM
-1000 1 GB DRAM
-2000 2 GB DRAM

Rotating Media Drives

-CD Rear Access CD-ROM
Blank No Rear Access CD-ROM
-CDW Rear Access CD-R/W & DVD-Read only
-DVDW Rear Access DVD-R/W Drive

Floppy

Blank No Floppy Installed ^a
-F Rear Access Floppy Installed

Externally Accessible Compact Flash

Blank Nothing Installed
-4GCF 4 GB CompactFlash Installed

Operating System

-XP Pre-Activated Windows XP Professional
-2K Windows 2000 (multi-language)

^a When ordering a unit with no floppy operating system recovery will not be possible without adding an external USB floppy drive.

Important Notice for XP configurations: Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of this computer, or may be completed by Internet or telephone (toll charges may apply).

Pro-face America
Phone: 734.429.4971
Fax: 734.429.1010
www.profaceamerica.com

Warranty Information
The 1546 series carries a two-year parts & labor warranty.

Customer Service Hotline: 734.944.0482

For more informa-

ACCESS

www.profaceamerica.

Pro-face

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4700 Series RAID-Enabled Industrial PCs

DS-470000_RAID(A)



The most susceptible component of any Industrial PC is the hard drive. Some sources suggest shock mounting the hard drive; unfortunately, shock mounting may cause the hard drive to become more vibration-sensitive at certain frequencies. The most common method to overcome a susceptibility to vibration is through the use of solid-state storage media or the use of redundant hard drives.

Many of Xycom Automation's Heavy-Duty Industrial PCs offer solid-state media in the form of CompactFlash or solid state hard drives. While many storage sizes are available, the cost increases drastically as the required size increases.

Another approach is to use RAID-enabled PC. RAID stands for Redundant Array of Independent Disks. In essence, RAID is two or more hard disks attached to the same controller, either SCSI or IDE. The RAID controller can "stripe" or "mirror" data.

Striping (RAID 0) is used to read and write to many disks at once to increase hard drive performance, while Mirroring (RAID 1) allows the same data to be available on two drives. Other RAID levels (2 and higher) are also available. These higher levels increase the number of disks being utilized.

In a RAID 1 system there is a primary and a secondary hard drive.

- The RAID controller writes to both drives but only reads from the primary drive. If the RAID controller detects any problem with the primary drive it switches over to the secondary drive (which has an exact copy of all data on the primary drive) and utilizes it as the primary drive. The PC will continue to run allowing time to change the faulty hard drive without interruption in machine operation.
- Once the drive has been replaced the RAID controller automatically begins creating a mirror copy of the good drive. This process runs in the background while the machine operation is maintained. Once this new drive is operational it is recommended that the other drive be scheduled for replacement.
- The 1547 and 4715 products can be factory configured with a RAID 1 implementation. These RAID-enabled configurations come standard with two easily removable Serial ATA hard drives and a built in RAID controller.

FEATURES

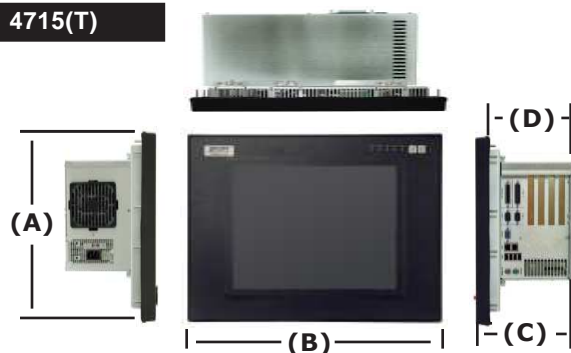
- 15.0" XGA TFT color flat panel / or No Display options
- Choice of operator inputs:
 - ♦ Reprogrammable keypad with integrated mouse (KPM);
 - ♦ Touchscreen only (T);
 - ♦ Combination of all 3 (KPMT);
 - ♦ Or / No optional input (1547)
- Intel® Celeron® M 1.3 GHz, 512 cache, 400 MHz system bus (optional Pentium® M 2.0 GHz, 2M cache, 533 MHz system bus)
- Up to 2 GB DRAM (512 MB standard)
- Dual 40 GB minimum Serial ATA hard drive (optional dual hard drives)
- RAID-Enabled (Level 1)
- 4X AGP graphics with 32 MB video memory (shared with system memory)
- Four full length expansion slots:
 - ♦ Three PCI expansion slot;
 - ♦ One PCI or ISA expansion slot
- 10/100, and 10/100/1000 BaseT Ethernet
- 4 USB 2.0 compliant ports (1.1 compatible port on front of KPM units)
- Three Serial, one Parallel, and one Video port
- Rear accessible Type I/II CompactFlash™ socket
- CD-ROM (optional CD-R/W with DVD-read-only, DVD-R/W, and floppy)
- NEMA 4/4x/12 front panel
- UL, cUL, CE approvals
- UL listed for hazardous locations: Class I Division 2, Groups A, B, C, D; Class II Division 2, Groups F and G
- Windows® XP or Windows 2000 operating systems
- 100-240 VAC power supply (optional 24 VDC)
- 2-year warranty included

This creates a more robust, fault tolerant system to help maintain your machine operation and production. When utilized correctly a RAID-enabled industrial PC can greatly improve the overall reliability of an application.



PRODUCT DIMENSIONS AND CONFIGURATIONS

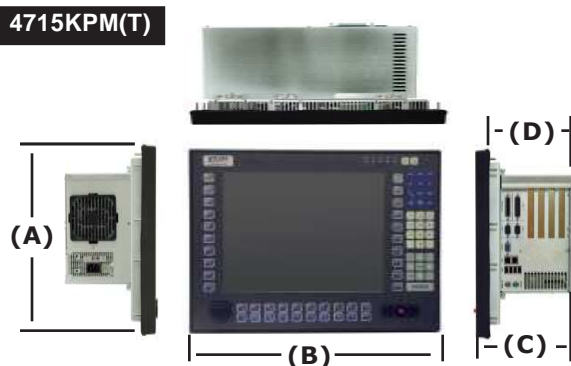
4715(T)



4715 Unit Dimensions

Model	4715T	4715KPM(T)
Height (A)	13.97" (354.8 mm)	13.97" (354.8 mm)
Width (B)	19.00" (482.6 mm)	19.00" (482.6 mm)
Depth (C)	7.64" (194.0 mm)	7.64" (194.0 mm)
Mounting Depth (D)	6.60" (167.6 mm)	6.60" (167.6 mm)
Weight	27 lbs (12.4 kg)	27 lbs (12.4 kg)

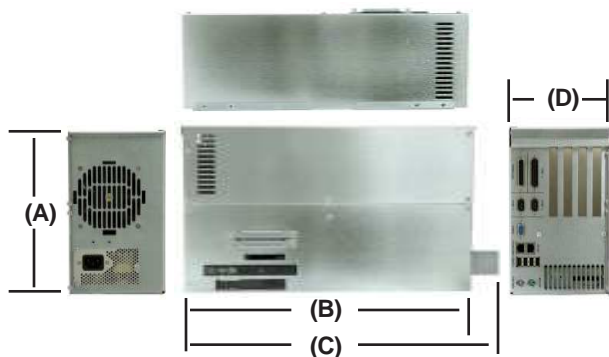
4715KPM(T)



4715 Unit Configuration

Display	15.0" LCD color display, 1024 x 768 (XGA)
Operator Input	Analog resistive touchscreen (4715T) Reprogrammable keypad and industrial mouse (4715KPM(T))
Processors	Intel® Celeron® M 1.3 GHz, 512 cache, 400 MHz system bus (optional Pentium® M 2.0 GHz, 2M cache, 533 MHz system bus)
Preloaded OS	Windows® XP or Windows® 2000 (multi-language)
Expansion	Three PCI full length expansion slots, One PCI or ISA full length expansion slot

1547



1547 Unit Dimensions

Model	1547
Height (A)	9.18" (233.17 mm)
Width (B)	16.16" (410.46 mm)
Width (C)	17.18" (436.37 mm)
Depth (D)	5.48" (139.2 mm)
Weight	18 lbs (8.2 kg)

1547 Unit Configuration

Model	1547
Processors	Intel® Celeron® M 1.31 GHz or optional Pentium M
Preloaded OS	Windows® XP or Windows® 2000 (multi-language)
Expansion	Three full length PCI and One full length PCI or ISA expansion slot

RAID-ENABLED PRODUCT SPECIFICATIONS AND RATINGS

Environmental

	Operating	Nonoperating
Thermal	0°C to 50°C	-20°C to 60°C
Humidity	20% to 80% RH, noncondensing	20% to 80% RH, noncondensing
Shock ^a	15g peak acceleration, 11 msec duration	30g peak acceleration, 11 msec duration
Vibration	.006" peak to peak displacement	.015" peak to peak displacement
5-2000 Hz ^a	1.0g maximum acceleration	2.5g maximum acceleration
Altitude ^b	Sea level to 10,000 ft.	Sea level to 40,000 ft.

^a These values are with solid state hard drives and not rotating media drives.

^b Consistent with internal component specifications.

Electrical

	4715/1547 AC	4715/1547 DC
Power Supply	250 Watt AC 100-240 VAC, 50-60 Hz 4715 - 88 Watt nominal power [†] 1547 - 74 Watt nominal power [†]	24 VDC 19-36 VDC 4715 - 68 Watts nominal power [†] 1547 - 54 Watts nominal power [†]
Available Expansion Power	+3.3V 4.0A maximum +5V 4.0A maximum -5V 160mA maximum +12 3.0A maximum -12 240mA maximum	+3.3V 4.0A maximum +5V 4.0A maximum -5V 160mA maximum +12 3.0A maximum -12 240mA maximum

[†] Nominal power is measured for a base configuration only. Any additional expansion and/or devices will increase the input power required.

4715 Compliance

Regulatory Compliance

CE

- EN 55022: Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- IEC 60950-1

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals

CUL

- UL 508 Listed
- UL 1604 Listed ^a

CUL

- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^a

^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T6

Front Panel

- NEMA 4/4X/12, IP65



1547 Compliance

Regulatory Compliance

CE

- EN 55022: Class A
- EN 61000-6-2
- EN 61000-3-2, Class A
- EN 61000-3-3
- IEC 60950-1

FCC

- 47 CFR, Part 15, Class A

Safety Agency Approvals

CUL

- UL 508 Listed
- UL 1604 Listed ^a

CUL

- CSA-C22.2, #142 Listed
- CSA-C22.2, #213 Listed ^a

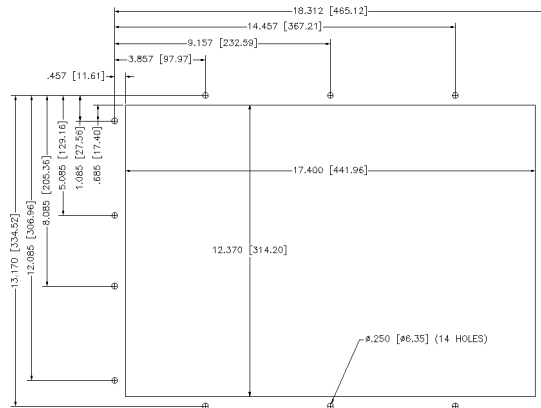
^a Class I Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Temp. Code: T6



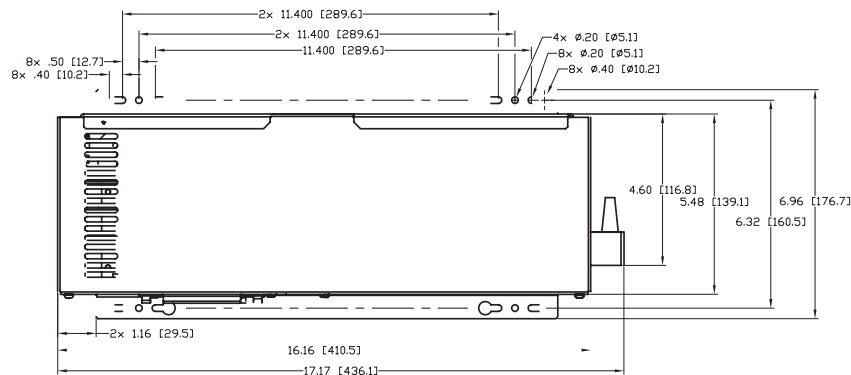
Product certification documentation available at:
www.xycom.com/certifications

RAID-ENABLED PRODUCT MOUNTING

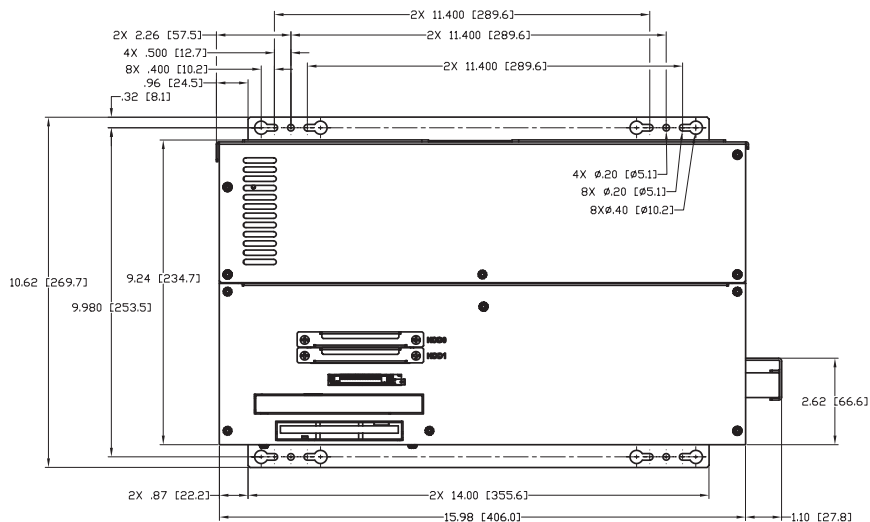
4715T and 4715KPM(T) Cutout



1547 Shelf Mounting



1547 Wall Mounting



ORDERING INFORMATION

To create an order number, follow the conventions defined by the example order numbers and product configurations.

Example Order Number

Order Number	Description
4715T-1300-512-RAID-CD-XP	RAID-enabled 4715T with 15" XGA TFT color flat panel, Intel® Celeron® M 1.3 GHz, 512 cache, 400 MHz system bus, 512 MB, Two Serial ATA 40 GB minimum Hard Drives, Rear Access Type I/II CompactFlash socket and CD-ROM, Windows XP, On-board 10/100 and 10/100/1000 BaseT Ethernet and USB, three PCI, and one PCI or ISA available full-length expansion slots.

	4715	-	-RAID						
Display and Operator Input									
T	15" w/ Touchscreen only								
KPM	15" w/ Keypad & Mouse								
KPMT	15" w/ Keypad, Mouse, & Touch								
CPU									
1300	Celeron M 1.3 GHz, 512K Cache, 400 MHz bus								
2000	Pentium M 2.0 GHz, 2M Cache, 533 MHz bus								
DRAM									
-512	512 MB DRAM								
-1000	1 GB DRAM								
-2000	2 GB DRAM								
Power Supply									
Blank	AC Power Supply								
-24V	24 VDC Power Supply								
Rotating Media Drives									
-CD	Rear Access CD-ROM								
Blank	No Rear Access CD-ROM								
-CDW	Rear Access CD-R/W & DVD-Read only								
-DVDW	Rear Access DVD-R/W Drive								
Floppy									
Blank	No Floppy Installed ^a								
-F	Rear Access Floppy Installed								
Externally Accessible Compact Flash									
Blank	Nothing Installed								
-4GCF	4 GB CompactFlash Installed								
Operating System									
-XP	Pre-Activated Windows XP Professional								
-2K	Windows 2000 (multi-language)								

^a When ordering a unit with no floppy operating system recovery will not be possible without adding an external USB floppy drive.

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Warranty Information

The 4715 series carries a two-year parts & labor warranty.

ORDERING INFORMATION (continued)

Example Order Number

Order Number	Description
1547-1300-512-RAID-CD-XP	1547 Industrial "Node" PC, Intel® Celeron® M 1.3 GHz, 512K cache, 400 MHz system bus, 512MB DRAM, Two Serial ATA 40 GB minimum Hard Drives, RAID-Enabled Rear Access Type I/II CompactFlash socket and CD-ROM, Windows XP, On-board 10/100 and 10/100/ 1000 BaseT Ethernet, and USB, three PCI, and one PCI or ISA available full-length expansion slots.
<div><div>1547 -</div><div>- RAID</div><div>CPU</div><div>1300 Celeron M 1.3 GHz, 512K Cache, 400 MHz bus</div><div>2000 Pentium M 2.0 GHz, 2M Cache, 533 MHz bus</div><div>DRAM</div><div>-512 512 MB DRAM</div><div>-1000 1 GB DRAM</div><div>-2000 2 GB DRAM</div><div>Power Supply</div><div>Blank AC Power Supply</div><div>-24V 24 VDC Power Supply</div><div>Rotating Media Drives</div><div>-CD Rear Access CD-ROM</div><div>Blank No Rear Access CD-ROM</div><div>-CDW Rear Access CD-R/W & DVD-Read only</div><div>-DVDW Rear Access DVD-R/W Drive</div><div>Floppy</div><div>Blank No Floppy Installed ^a</div><div>-F Rear Access Floppy Installed</div><div>Externally Accessible Compact Flash</div><div>Blank Nothing Installed</div><div>-4GCF 4 GB CompactFlash Installed</div><div>Operating System</div><div>-XP Pre-Activated Windows XP Professional</div><div>-2K Windows 2000 (multi-language)</div></div>	

^a When ordering a unit with no floppy operating system recovery will not be possible without adding an external USB floppy drive.

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Warranty Information

The 1547 series carries a two-year parts & labor warranty.

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<http://www.xycom.com>

Customer Support Hotline:
734-944-0482



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