Pro-face

4600 Series RAID-Enabled

Industrial PCs

DS-460000_RAID(D)

12 and 15-inch Color LCD Touch Monitor

4612/ 4615/ 1546

| AC100/240V |
| SVGA |
| XGA |

12-inch   15-inch

Pro-face® XYCOM™

Models: 4612T-1300 RAID/ 4615T-1300 RAID/ 1546- 1300 RAID

Windows® 2000   Windows® XP

cULus   CE

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
- DVD-R/W, and floppy drives
- 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
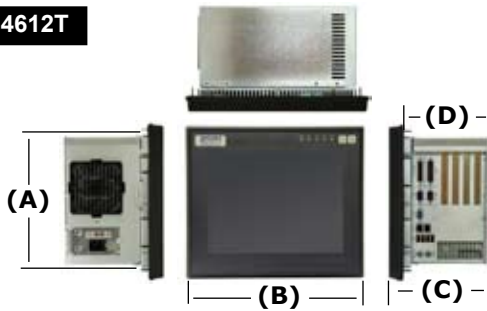
4612 Unit Dimensions

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)
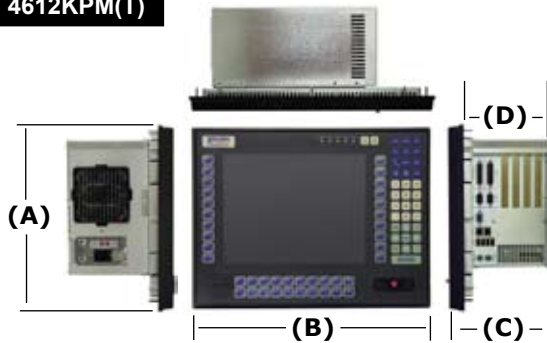
4612 Configurations

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
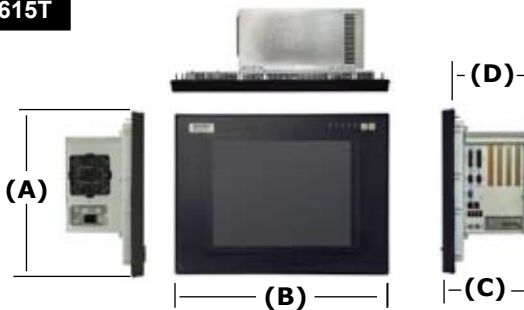
4615 Unit Dimensions

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)
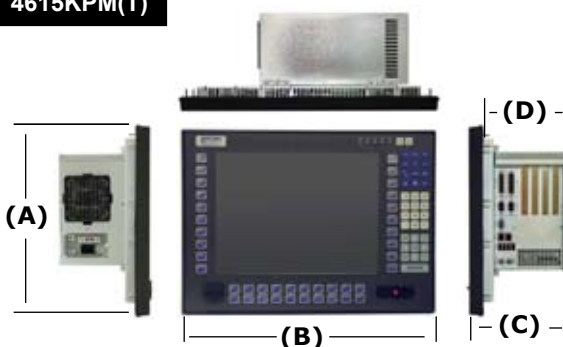
4615 Unit Configuration

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
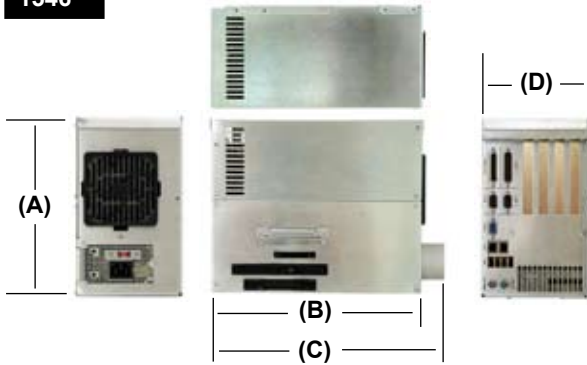
1546 Unit Dimensions

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
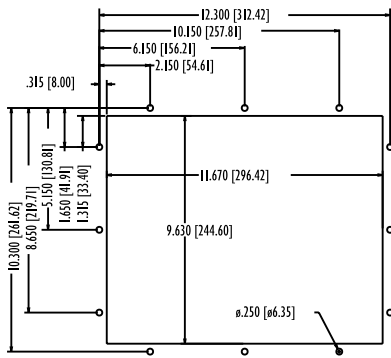- UL 1604 Listed [a]

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
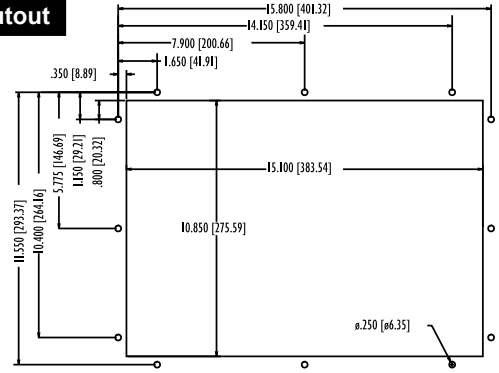
Product certification documentation available at: www.xycom.com/certifications
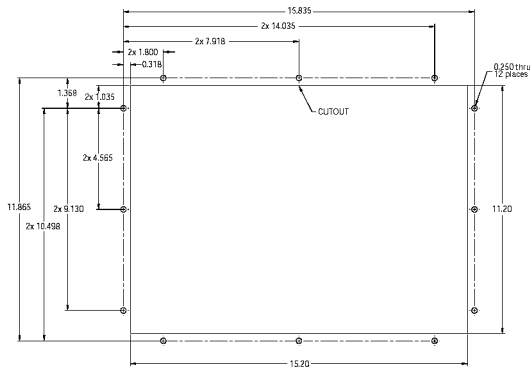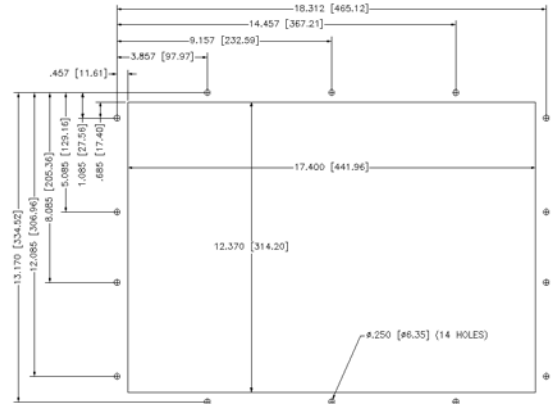
4612T Cutout

12.300 [312.42]
10.150 [257.81]
6.150 [156.21]
2.150 [54.61]
.315 [8.00]
11.670 [296.42]
9.630 [244.60]
10.300 [261.62]
8.650 [219.71]
5.150 [130.81]
1.650 [41.91]
1.315 [33.40]
ø.250 [ø6.35]

4612KPM(T) Cutout

15.800 [401.32]
14.150 [359.41]
7.900 [200.66]
1.650 [41.91]
.350 [8.89]
15.100 [383.54]
10.850 [275.59]
11.550 [293.37]
10.400 [264.16]
5.775 [146.69]
1.150 [29.21]
.800 [20.32]
ø.250 [ø6.35]

4615T Cutout

15.835
2x 14.035
2x 7.918
2x 1.800
0.318
1.368
2x 1.035
2x 4.565
2x 9.130
11.865
2x 10.498
0.250 thru 12 places
CUTOUT
11.20
15.20

4615KPM(T) Cutout

18.312 [465.12]
14.457 [367.21]
9.157 [232.59]
3.857 [97.97]
.457 [11.61]
17.400 [441.96]
12.370 [314.20]
13.170 [334.52]
12.085 [306.96]
8.085 [205.36]
5.085 [129.16]
1.085 [27.56]
.685 [17.40]
ø.250 [ø6.35] (14 HOLES)

1546 Shelf Mounting

2x 2.473 [62.8]
2x 7.000 [177.8]
2x 7.000 [177.8]
2x 7.000 [177.8]
4x .500 [12.7]
8x .400 [10.2] TYP.
.400 [10.2]
4x 1.20 [5.1]
8x 1.200 [5.1]
8x 1.400 [10.2]
4.09 [103.9]
6.91 [175.5]
6.11 [155.1]
5.48 [139.1]
2x 9.60 [243.8]
11.47 [291.5]
12.79 [324.8]

1546 Wall Mounting

11.340 [288.01]
2X 7.000 [177.8]
2.47 [62.8]
2X 7.000 [177.8]
2X 7.000 [177.8]
4X 5.00 [12.7]
.400 [10.2] TYP.
.400 [10.2]
4X ø.200 [ø5.1]
8x ø.200 [ø5.1]
8x ø.400 [ø10.2]
9.920 [252.0]
10.72 [272.3]
9.24 [234.7]
2.70 [68.6]
2X .74 [18.8]
2X 9.60 [243.8]
11.38 [289.2]
12.70 [322.5]

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-DVDW-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 DVD R/W, 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.

4612 - __ __ __ **- RAID** __ __ __ __

Display and Operator Input
T   12" w/ Touchscreen only
KPM   12" w/ Keypad & Mouse
KPMT 12" w/ Keypad, Mouse, & Touchscreen

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
Blank   No Rear Access Media Drive
-DVDW Rear Access Read/Write DVD-ROM 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).

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

Example Order Number

Order Number	Description
4615T-1300-512-RAID-DVDW-XP 4615KPM-1300-512-RAID-DVDW-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 DVD R/W, 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.

4615 - __ __ __ - RAID __ __ __ __

Display and Operator Input
T   15" w/ Touchscreen only
KPM   15" w/ Keypad & Mouse
KPMT   15" w/ Keypad, Mouse, & Touchscreen

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
Blank   No Rear Access Media Drive
-DVDW   Rear Access Read/Write DVD-ROM 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.

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

Example Order Number

Order Number	Description
1546-1300-512-RAID-DVDW-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 DVD R/W, 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
Blank   No Rear Access Media Drive
-DVDW   Rear Access Read/Write DVD-ROM 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

California Proposition 65 Warning—Lead and Lead Compounds
Advertencia de la Proposición 65 de California—Plomo y compuestos de plomo
Avertissement concernant la Proposition 65 de Californie—Plomb et composés de plomb

WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to: www.P65Warnings.ca.gov.

ADVERTENCIA: Este producto puede exponerle a químicos incluyendo plomo y compuestos de plomo, que es (son) conocido(s) por el Estado de California como causante(s) de cáncer y defectos de nacimiento u otros daños reproductivos. Para mayor información, visite : www.P65Warnings.ca.gov.

AVERTISSEMENT: Ce produit peut vous exposer à des agents chimiques, y compris plomb et composés de plomb, identifiés par l'État de Californie comme pouvant causer le cancer et des malformations congénitales ou autres troubles de l'appareil reproducteur. Pour de plus amples informations, prière de consulter: www.P65Warnings.ca.gov.

Schneider Electric