

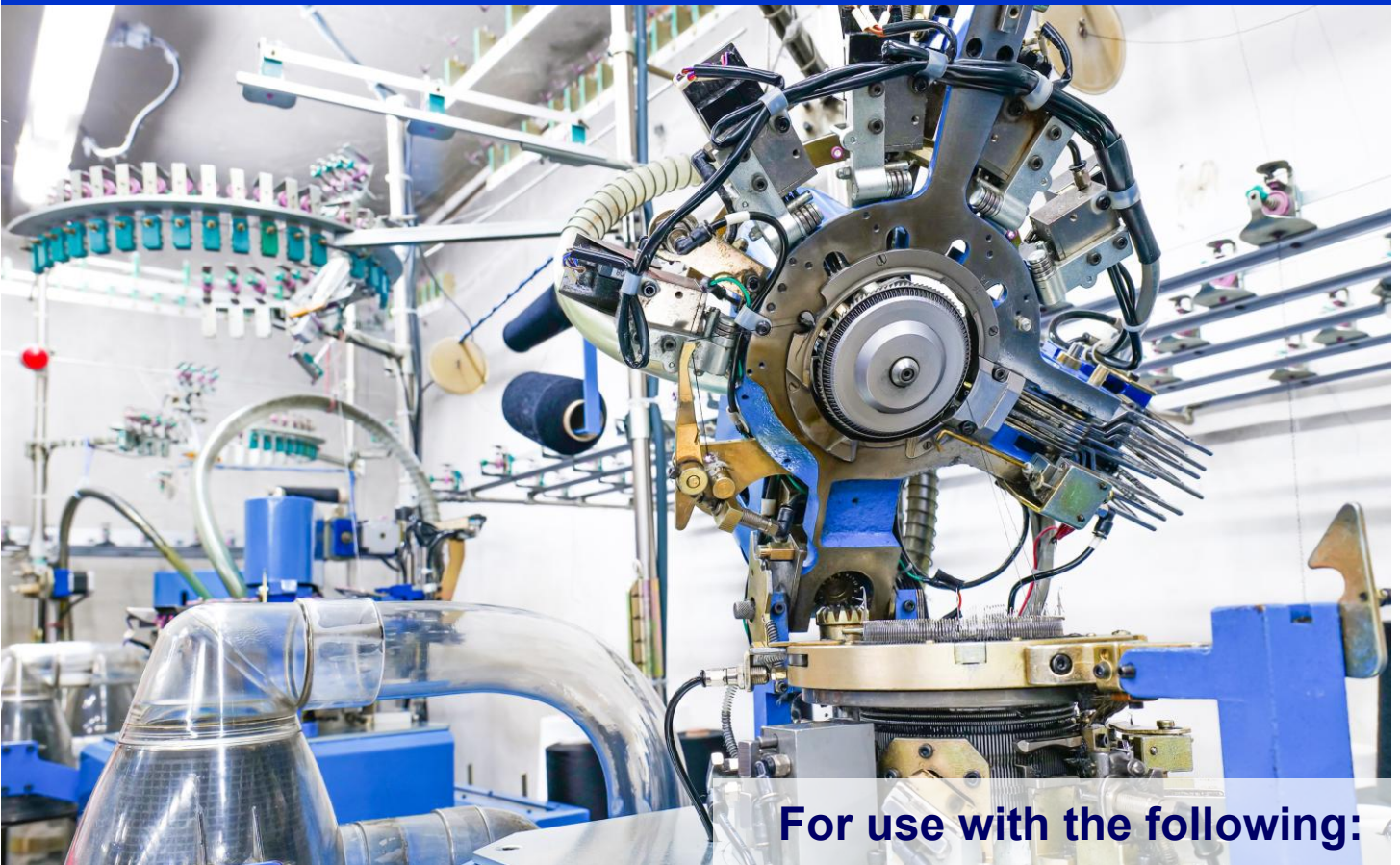


Operations Manual

OMI6000CP Series Industrial Panel PC

Your Industrial Control Solutions Source

www.maplesystems.com



For use with the following:

- OMI6800CP Series
- OMI6900CP Series

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WARRANTY

Warranty Statements are included with each unit at the time of purchase and are available at www.maplesystems.com.

TECHNICAL SUPPORT

This manual is designed to provide the necessary information for trouble-free installation and operation of your new OMI6000CP Series PC. However, if you need assistance, please contact Maple Systems:

- Phone: 425-745-3229
- Email: support@maplesystems.com
- Web: <http://www.maplesystems.com>

UNPACKING THE UNIT

Carefully unpack the OMI6000CP. Check all material in the container against the packing list. Maple Systems will not accept responsibility for shortages against the packing list unless notified within 30 days. The equipment and accessories were inspected and tested by Maple Systems before shipment.









Examine the equipment carefully; if any shipping damage is evident, notify the carrier immediately. Maple Systems is not responsible for claim negotiations with the carrier.

Save the shipping container and packing material in case the equipment needs to be stored, returned to Maple Systems, or transported for any reason.

Packing List
OMI6000CP Series Industrial Panel PC
DC Power Connector (3 pin terminal block)
DC Power adapter with cord
Panel Mounting Clamp Kit
2 x Dipole Antenna (if Wi-Fi option purchased)
Warranty Statement Insert

SAFETY PRECAUTIONS

Please observe the following precautions when installing the OMI6000CP Series Industrial Panel PCs. Failure to comply with these restrictions could result in loss of life, serious personal injury, or equipment damage.

	Warning: Disconnect this equipment from any power before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
	Warning: Keep this equipment away from humidity.
	Warning: Before applying power the unit make sure the voltage of the power source is within the input voltage rating of the unit.
	Warning: Position the power cord so that people cannot step on it. Do not place anything over the power cord.
	Warning: Never open the equipment and do not operate equipment with its back cover removed- there are dangerous high voltages present inside. For safety reasons, the equipment should be opened only by a qualified service technician.
	Warning: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation
	Warning: If any of the following situations arise, get the equipment checked by qualified service personnel. <ul style="list-style-type: none"> • The power cord or plug is damaged. • Liquid has penetrated into the equipment. • The equipment has been exposed to moisture. • The equipment does not work well, or you cannot get it to work according to this operations manual. • The equipment has been dropped and damaged. • The equipment has obvious signs of breakage.
	Warning: Do not leave this equipment in an uncontrolled environment where the storage temperature is below -30°C (-22°F) or above 70°C (158°F). It may damage the equipment.

OVERVIEW OF OMI6000CP SERIES

The OMI6000CP series features two model types: Standard and Enhanced. Standard models (OMI6800CP) are available in 7.0", 8.0", 10.1", 12.1", 15.0", 15.6", 17.0", 18.5", 19.0", 21.5" and 23.8" screen sizes. The OMI6800CP is powered by the Intel® Elkhart Lake™ Celeron™ J6412 2.0 GHz quad-core processor. Additionally, the OMI6800CP Series features a DisplayPort 1.4 connector, allowing for connection of an additional display or monitor to your unit.

The Enhanced model series OMI6900CP is available in 10.1", 12.1", 15.0", 15.6", 17.0", 18.5", 19.0", 21.5" and 23.8" screen sizes. These models are powered by the Intel® 12th Gen Core™ i5-1235U Alder Lake Processor. Intel's Alder Lake CPUs are hybrid processors that combine high-performance cores (P-cores) with high-efficiency cores (E-cores) on a single chip. This architecture allows for better multitasking and energy efficiency by assigning tasks to the appropriate type of core based on workload demands.

Both Series are fanless and feature DDR4 RAM, with options ranging from 8GB to 32GB. They are also rated for use in Extended Temperature environments ranging from -4~140°F [-20~60°C] (21.5" and 23.8" screen sizes are rated for 32~122°F [-0~50°C] temperatures). Additionally, all OMI6000CP Series PCs can be optionally configured with a Wi-Fi kit, allowing connection to IEEE802.11ax networks, with additional Bluetooth connectivity supported.

The OMI6000CP series feature Projected Capacitive Touch Screens, which allow for a more natural, intuitive user touch experience compared to traditional analog-resistive touch screen terminals. Benefits of projected capacitive touchscreens include multi-touch response (pinch and zoom functionality) and personal tablet-like operation. Finally, projected capacitive touchscreens do not require calibration.



Representative Front View of OMI6000CP Series

**OMI6800CP Series Rear View
(15.6" model shown)**



**OMI6900CP Series Rear View
(15.6" model shown)**



SPECIFICATIONS

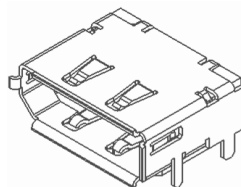
The following section contains various Specifications for the OMI6000CP Series Industrial Panel PCs.

I/O PORTS – OMI6800CP SERIES

DISPLAYPORT 1.4:

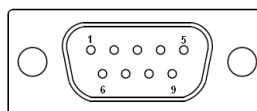
Ultra-High Definition 4K resolution output

Maximum resolution of 4096 x 2160 pixels @60 Hz



COM1, COM2:

Connector Type: DE9P serial ports.



OMI6800CP models with screen sizes of 7.0" and 8.0" have a single, configurable COM1 port.

Pin #	COM1*			COM2
	(RS-232 Default)	(RS422)	(RS485)	(RS232)
1	DCD	422_TX-	485-	DCD
2	RXD	422_TX+	485+	RXD
3	TXD	422_RX+	NC	TXD
4	DTR	422_RX-	NC	DTR
5	GND	GND	GND	GND
6	DSR	NC	NC	DSR
7	RTS	NC	NC	RTS
8	CTS	NC	NC	CTS
9	RI	NC	NC	RI
* Refer to "Setting COM Port Function" section to set the communication mode.				

LINE OUT:

Connector Type: 3.5mm audio jack.

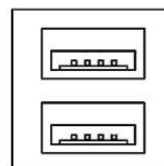


Line out

Line out HD Audio port can be connected to headphones.

USB:

OMI6800CP models have 2 ea. USB 3.2 type A ports.
OMI6800CP models with 10.1" or larger screens have an additional 2 ea. USB 2.0 Host Ports



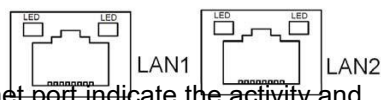
Note: USB 3.2 allows data transfers up to 5000 Mb/s, full-speed, and low-speed signaling. The total USB current limit per stack is 2.0A.

LAN1 AND LAN2:

LAN1: Standard 2.5 GbE (GbE) RJ-45 port

LAN2: Standard 1 GbE (Gigabit) RJ-45 port

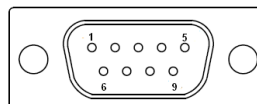
LINK LED (green) and ACTIVE LED (green or orange) located at the left-hand and right-hand side of the Ethernet port indicate the activity and transmission state of the network.



I/O PORTS – OMI6900CP SERIES

COM1, COM2 AND COM3:

Connector Type: DE9P serial ports.



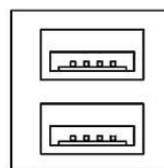
Pin #	COM1, COM2*			COM3
	(RS-232 Default)	(RS422)	(RS485)	(RS232)
1	DCD	422_TX-	485-	DCD
2	RXD	422_TX+	485+	RXD
3	TXD	422_RX+	NC	TXD
4	DTR	422_RX-	NC	DTR
5	GND	GND	GND	GND
6	DSR	NC	NC	DSR
7	RTS	NC	NC	RTS
8	CTS	NC	NC	CTS
9	RI	NC	NC	RI

* Refer to “Setting COM Port Function” section to set the communication mode.

USB:

OMI6900CP models have 2 ea. USB 3.2 type A ports and 2 ea. USB 2.0 Host Ports.

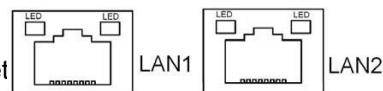
Note: USB 3.2 allows data transfers up to 5000 Mb/s, full-speed, and low-speed signaling. The total USB current limit per stack is 2.0A.



LAN1 AND LAN2:

Standard 10/100/1000M (Gigabit) RJ-45 Ethernet ports

LINK LED (green) and ACTIVE LED (green or orange) located at the left-hand and right-hand side of the Ethernet transmission state of the network.



AUTOMATIC BOOTUP UPON APPLICATION OF POWER

By default, your OMI6000CP Series unit is configured to boot up automatically upon application of power, with no configuration changes necessary. In the event that DC power is lost, the unit will automatically boot up again once DC power is restored..



Warning: Maple Systems does not recommend shutting down the OMI6000CP Series by cutting DC power to the unit.

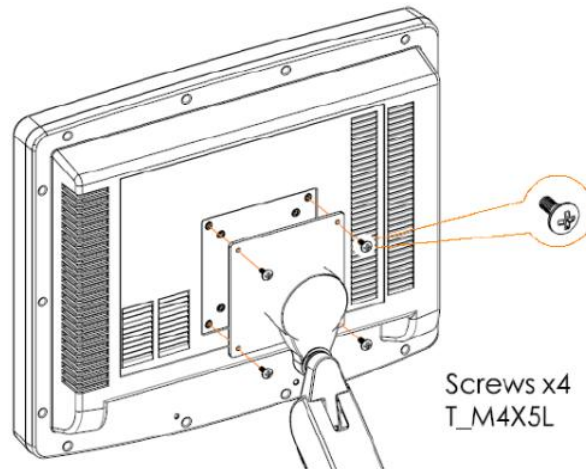
Always perform a Windows Shut Down procedure when you wish to turn the unit off.

Cutting DC power to the OMI6000CP Series can corrupt the Windows Operating System, or other software or hardware components of your OMI. Damage caused by improper application or removal of power may not be covered under the Warranty.

VESA MOUNTING

The OMI6000CP Series offer VESA mounting as an option. VESA 75 x 75mm or VESA 100 x 100mm threaded inserts, depending on your display size, are located on the rear of the unit. Use the M4 threaded mounting screws included with the VESA mounting hardware to mount the unit as illustrated in the figure below.

Use VESA mounting hardware suitable for your intended application; Maple Systems is not responsible for damage to unit, mounting surface, or to other components, caused by improper mounting.

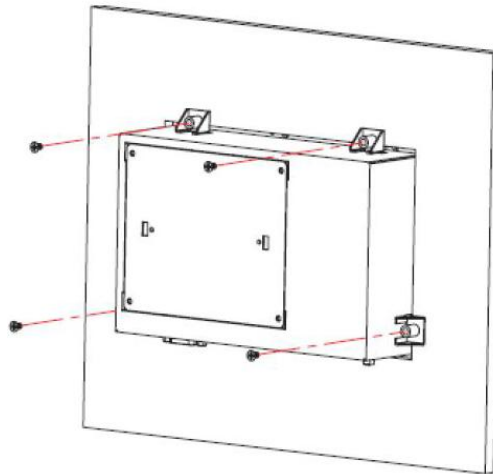


PANEL MOUNTING

In addition to VESA mounting, your unit can be mounted in a panel using the mounting holes located on the sides and top of the unit. Use the included clamps to fasten your unit to a panel, cut out to the proper dimensions on the datasheet corresponding to your display size.

Tighten the panel bolts with a torque force between **7 ~ 8.5 inch/lbs.** to ensure an adequate seal. Torque values outside this range may negate NEMA or IP rating, or cause damage to the unit or panel.

Maple Systems is not responsible for damage to unit, mounting surface, or to other components caused by improper mounting.




Note: The image above is a representative image of the panel mounting process; your specific model may differ in appearance, but mounting is functionally similar.

BIOS CONFIGURATION OPTIONS

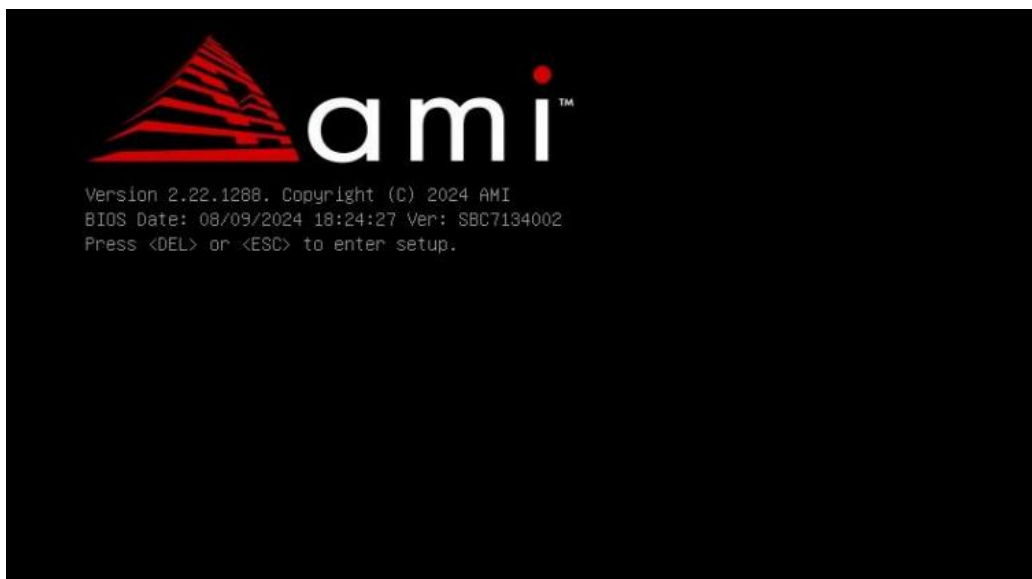
INTRODUCTION

The BIOS (Basic Input/Output System) installed in the ROM of your OMI6000CP Series supports Intel® processors. The BIOS provides critical low-level support for standard devices such as disk drives and serial ports. The BIOS also provides a Setup utility program that allows the user to specify system configuration and setting options.

	<p>Warning: <i>Changing settings or configurations within the BIOS of your OMI6000CP can adversely impact the operation of your unit if incorrectly performed.</i></p> <p><i>Maple Systems provides the below instructions solely for the operations specified, and is not responsible for improper unit operation caused by changing settings or entries other than those explicitly listed below.</i></p>
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ENTERING SETUP

When the system is powered on, the BIOS will enter the Power-On Self Test (POST) routines and the following message will appear on the screen:



Example of initial POST screen. Your POST screen may appear different.

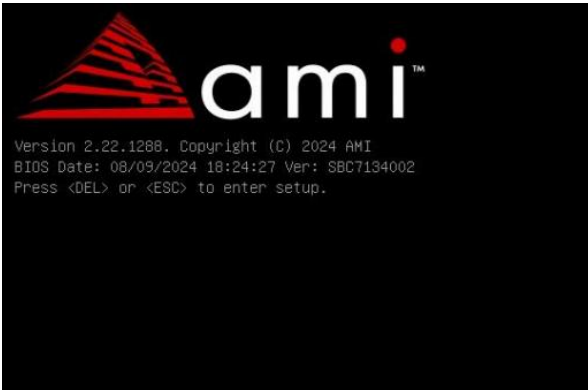
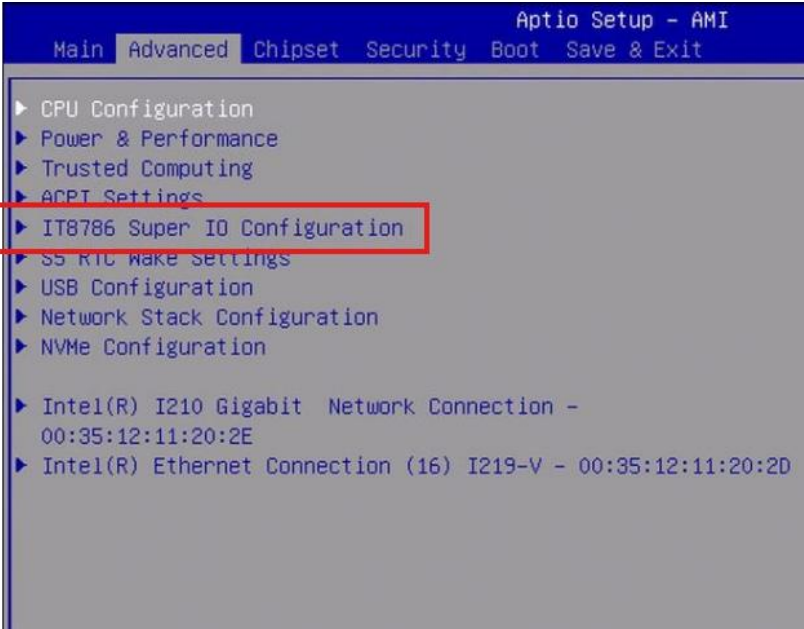
Press the <Delete> key immediately during the POST portion of your PC's bootup sequence to enter the BIOS. The Main Menu containing the system summary information will appear.

SETTING COM PORT FUNCTION

The OMI6000CP Series Serial Ports are configured by default as RS232, but COM1 (and COM2, OMI6900CP) can be configured for RS422 (4-wire) or RS485 (2-wire) operation if so desired. Port configuration is managed through the BIOS; see the below table for instructions on changing COM port mode.

Note: For the OMI6800CP, COM1 is the only port that can be configured for RS422 or RS485 operation; COM2 (on 10.1" and larger screen size units) is exclusively configured for RS232 operation. COM1 and COM2 are configurable for the OMI6900CP, while COM3 is exclusively RS232.

BIOS COM1 Configuration

<ol style="list-style-type: none"> 1. Enter the BIOS Setup Utility by pressing [Delete] key during POST. <p>The Main menu containing the system summary information will appear.</p>	 <p>The image shows the AMI BIOS splash screen. It features the AMI logo (a stylized triangle) and the text 'ami'. Below the logo, it says 'Version 2.22.1268. Copyright (C) 2024 AMI', 'BIOS Date: 08/09/2024 18:24:27 Ver: SBC7134002', and 'Press or <ESC> to enter setup.'</p>
<ol style="list-style-type: none"> 2. Set COM communication mode as follows: <ul style="list-style-type: none"> • Advanced Tab • IT8786 Super IO Configuration <ul style="list-style-type: none"> • Serial Port 1/2 Configuration <ul style="list-style-type: none"> ○ RS-232 mode ○ RS-485 mode ○ RS-422 mode <p>➤ Save and Exit to restart</p> 	 <p>The image shows the BIOS 'Advanced' tab. The menu items are: CPU Configuration, Power & Performance, Trusted Computing, ACPI Settings, IT8786 Super IO Configuration (highlighted with a red box), SS RTC Wake Settings, USB Configuration, Network Stack Configuration, NVMe Configuration, Intel(R) I210 Gigabit Network Connection - 00:35:12:11:20:2E, and Intel(R) Ethernet Connection (16) I219-V - 00:35:12:11:20:2D.</p>

OPERATING SYSTEM OPTIONS

The OMI6000CP Series Industrial PC can be purchased with the following operating systems pre-installed:

- Windows IoT Enterprise (Windows 10 LTSC or Windows 11 GAC)
- Windows IoT Enterprise Embedded (Windows 10 LTSC or Windows 11 GAC)
- Windows 11 Professional
- Linux® Ubuntu® Desktop LTS

WINDOWS 10 IoT ENTERPRISE LTSC / WINDOWS 11 IoT ENTERPRISE GAC

Windows IoT Enterprise LTSC is a full Professional version of Windows 10 / Windows 11 available on all Industrial PC models. This powerful operating system delivers enterprise manageability and security to IoT solutions. Additionally, all of the features and functionality that customers expect to find on their desktop PC are available in this version. The Long Term Servicing Channel (LTSC – Windows 10) or General Availability Channel (GAC – Windows 11) version ensures long term stability that critical production systems require by updating only necessary operating system components, with significantly fewer update interruptions.

Included Apps with all Windows OS options:

- Microsoft Edge Web Browser
- LibreOffice Suite (Compatible with the following document types:)
 - MS Word
 - MS Excel
 - MS PowerPoint
 - Adobe PDF
- Media Player

WINDOWS 11 PROFESSIONAL

Windows 11 Professional is a full professional versions of Windows. All the features and functionalities that customers expect to find on their desktop PC are available in this version. This powerful operating system has lifetime security updates for the duration of Microsoft's support timeline of the OS. These versions are operationally identical to the Consumer operating System versions of Windows, and as such they feature regular feature and functionality updates on a more frequent schedule than Enterprise editions of the same OS.

LINUX® UBUNTU® DESKTOP

Linux® Ubuntu® Desktop includes the intuitive Gnome desktop environment and is great for display panels, kiosk applications, or for those that prefer the ease of use of a desktop interface.

TECHNICAL RESOURCES AND TROUBLESHOOTING

TECHNICAL SUPPORT

Maple Systems provides free technical support for its products. Many technical resources (Datasheets, Certifications, Installation Guides, Drivers, Technical Notes and Operation Manuals) are available on the Maple Systems website (<http://www.maplesystems.com>).

Technical Support Representatives are also available by phone at (425) 745-3229, or by e-mailing support@maplesystems.com.

DRIVER INSTALLATION (WINDOWS® OS ONLY)

Your Industrial PC comes with all necessary drivers pre-installed. As such, driver installation is not normally needed. However, there may be times when a driver requires re-installation. If a driver re-installation is required, please visit the Support Center of the Maple Systems website for driver download instructions.

WINDOWS® OPERATING SYSTEM UPDATES OR REINSTALLATION

In the event that you wish to update your Windows Operating System (Non-Embedded Operating Systems only), simply connect the Industrial PC to the Internet and run the Windows Update utility.

In the unlikely event of a system failure requiring reinstallation of the Windows Operating System, you can reinstall Windows as it arrived to you from Maple Systems. For OS recovery installation media, please contact your Maple Systems Sales Engineer.

After OS reinstallation, you will need to re-activate Windows using the Product Key located on the rear panel of your PC, adjacent to the product label.

Embedded Operating Systems do not allow for OS reinstallation; in the extremely unlikely event the Windows OS needs to be reinstalled, contact your Maple Systems Sales Engineer for instructions on obtaining an Return Material Authorization (RMA) form.

Your Industrial Control Solutions Source

www.maplesystems.com



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