

Heavy Industrial Fanless Panel PC Series

Your Industrial Control Solutions Source

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• PC2319B

Maple Systems, Inc. | 808 134th St. SW, Suite 120, Everett, WA 98204 | 425.745.3229

Table of Contents

COPYRIGHT NOTICE	3
WARRANTY	-
TECHNICAL SUPPORT	3
UNPACKING THE UNIT	3
FCC NOTICE	
SAFETY PRECAUTIONS	
OVERVIEW OF PC2300B SERIES	
SPECIFICATIONS AND DIMENSIONS	
PC2315B SPECIFICATION	
PC2315B DIMENSIONAL DRAWING	
PC2317B SPECIFICATION	
PC2317B DIMENSIONAL DRAWING	
PC2319B SPECIFICATION	
PC2319B DIMENSIONAL DRAWING	
PANEL MOUNTING	
VESA MOUNTING	
TOUCH SCREEN CALIBRATION	
I/O PORTS	
SERIAL COM PORTS	
DIGITAL I/O PORT	-
LAN PORTS	
POWER INPUT (9-36V DC)	
AUDIO PORTS	
USB 3.0 PORTS	
DVI-I PORT	
DRIVER INSTALLATION	
WINDOWS OPERATING SYSTEM REINSTALLATION	-
BIOS CONFIGURATION OPTIONS	
INTRODUCTION	-
ENTERING SETUP	
SETTING COM FUNCTION	
WINDOWS 10 IoT ENTERPRISE 2019 LTSC	
WONDERWARE / INDUSOFT WEBSTUDIO on an PC2300B	.21

COPYRIGHT NOTICE

This manual is a publication of Maple Systems, Inc., and is provided for use by its customers only. The contents of the manual are copyrighted by Maple Systems, Inc.; reproduction in whole or in part, for use other than in support of Maple Systems equipment, is prohibited without the specific written permission of Maple Systems.

WARRANTY

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

TECHNICAL SUPPORT

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

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

UNPACKING THE UNIT

Carefully unpack the PC2300B. 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

PC2300B Series Heavy Industrial Panel PC

3-Position Power connector (DC Power Input)

Mounting Clamp Kit

PC2300B Support DVD

Windows Recovery DVD (Non-Embedded Operating System only)

CE NOTICE

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any change or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate such equipment.

SAFETY PRECAUTIONS

Please observe the following precautions when installing the PC2300B Series panel PC. Failure to comply with these restrictions could result in loss of life, serious personal injury, or equipment damage.

$\underline{\wedge}$	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 to the unit make sure the voltage of the power source is within the input voltage rating of the unit.
$\underline{\mathbb{A}}$	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 equipment generates, uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.
	 Warning: If any of the following situations arise, get the equipment checked by qualified service personnel. The power cable or connector 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.
$\underline{\mathbb{A}}$	Warning: Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20°C (-4°F) or above 80°C (176°F). It may damage the equipment.

OVERVIEW OF PC2300B SERIES

The PC2300B Series are fanless heavy industrial LCD touchscreen panel PCs available in 15", 17", and 19" screen sizes. The PC2300B are powered by Intel 7th Generation Core Processors, with up to 16GB of RAM.



Front view of PC2300B Series



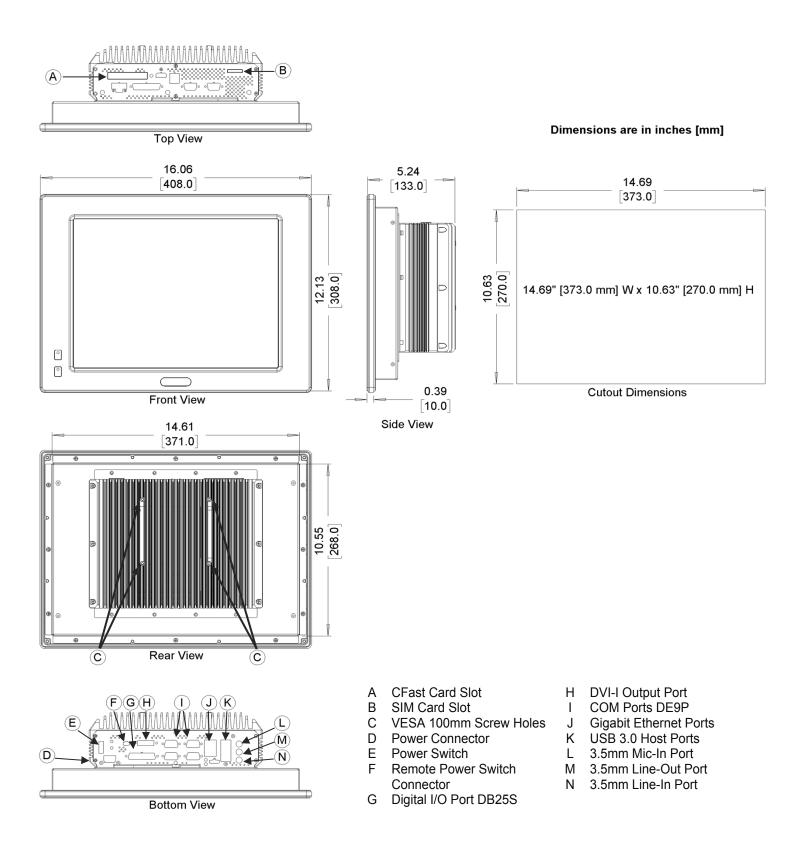
PC2300B Bottom I/O view

SPECIFICATIONS AND DIMENSIONS

PC2315B SPECIFICATION

		Intel® Dual Core™: i3-7101TE @ 3.4GHz	
	CPU	Intel® Quad Core™: i5-7500T @ 2.7GHz	
System		i7-7700T @ 2.9GHz	
	System Chipset	Intel Q170 Chipset	
	System Memory Options	2 x DDR4 260-pin SO-DIMM Non-ECC RAM (4, 8, 16, 32 GB)	
	USB	4 x USB 3.0 type A	
	Serial	2 x RS-232/422/485 DE-9P, COM1/COM2 (default RS-232) 2 x RS-232 DE-9P, COM3/COM4	
	Audio	1 x 3.5 mm Line-in 1 x 3.5 mm Line-out 1 x 3.5 mm Mic-in	
I/O Ports	Digital I/O	1x DB25S, 8 in/8 out	
	LAN	2 x GbE RJ-45	
	Display Interface	1 x DVI-I port (max. 1920 x 1080 pixels)	
	Power	3-pin connector header, DC power input	
	Power Switch	Momentary Toggle	
	Remote Power Switch	2-pin connector header	
	Solid State Drive Options*	1 x 2.5" SATA III, MLC (64, 128, 256, 512 GB SSD)	
Storage	SD Card Slot	N/A	
Ŭ	CFast Card Slot	Yes	
	Internal Expansion	Optional Wi-Fi kit (Wi-Fi card and antenna)	
Expansion	Expansion Slot	N/A	
	Туре	5-Wire Resistive Touch	
Touch Screen	Interface	USB	
	Display Type	15" TFT XGA LCD	
	Size (W x H)	12.0 x 9.0 inches [304.8 x 228.6 mm]	
	Resolution (pixels)	1024 x 768	
	Max. Colors	16.7M	
Display	Luminance (cd/m ²)	400	
	Viewing Angle (H°/V°)	160/160	
	Contrast Ratio	600:1	
	Backlight Lifetime (Hours)	50,000	
	Input Voltage	9~36 VDC	
Electrical	Input Current	Typ. 2.5A @ 24VDC; Max 6A @ 24VDC	
	Input Power	Typ. 60 W; Max. 144 W	
	Dimensions (W x H x D)	16.06 x 12.13 x 5.24 inches [408 x 308 x 133mm]	
	Net Weight	Approx. 16.53 lbs. [7.5kg]	
Mechanical	Panel Cutout Dimensions (W x H)	14.69 x 10.63 inches [373 x 270 mm]	
meenamear	Mounting	Panel mounting, VESA 100 x 100	
	Construction	Black Steel Chassis, Aluminum Heatsink	
	Operating Temperature	32~113°F [0~45°C]	
	Storage Temperature	-4~176°F [-20~80°C]	
Environmental	Relative Humidity	20 to 90% @ 40°C, non-condensing	
	Rating	IP65 front panel / NEMA4	
	Certifications	CE / FCC Class A / RoHS	
Operating System	Microsoft Windows [©] Options	Microsoft Windows [©] 10 IoT Enterprise Embedded 2019 LTSC 64-bit (EPKEA)	
	Microsoft Windows® 10 IoT Enterprise 2019 LTSC 64-bit (PKEA) * Additional SSD options available; contact Maple Systems for details		
Notes	Notes		
	Specifications subject to change with	but notice.	

PC2315B DIMENSIONAL DRAWING

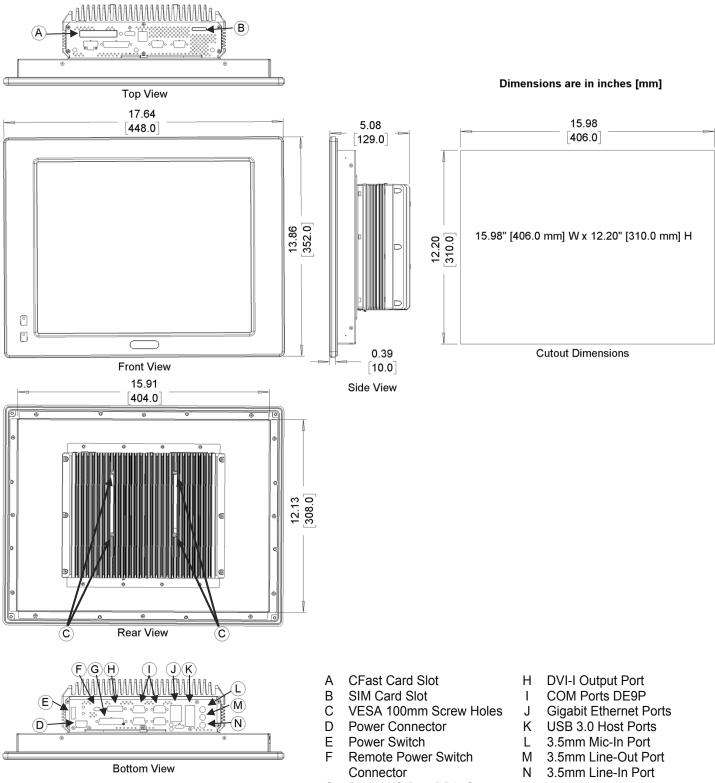


PC2317B SPECIFICATION

		Intol® Dual Coro III : i3 7101TE @ 3 4CH-	
	CPU	Intel® Dual Core™ : i3-7101TE @ 3.4GHz Intel® Quad Core™ : i5-7500T @ 2.7GHz	
Sustan	CFU	intel® Quad Core *** : 15-75001 @ 2.7GHz i7-7700T @ 2.9GHz	
System	System Chipset	Intel Q170 Chipset	
	System Memory Options	2 x DDR4 260-pin SO-DIMM Non-ECC RAM (4, 8, 16, 32 GB)	
	USB	4 x USB 3.0 type A	
	038	2 x RS-232/422/485 DE-9P, COM1/COM2 (default RS-232)	
	Serial	2 x RS-232 DE-9P, COM3/COM4	
		1 x 3.5 mm Line-in	
	Audio	1 x 3.5 mm Line-out	
	, addo	1 x 3.5 mm Mic-in	
I/O Ports	Digital I/O	1x DB25S, 8 in/8 out	
	LAN	2 x GbE RJ-45	
	Display Interface	1 x DVI-I port (max. 1920 x 1080 pixels)	
	Power	3-pin connector header, DC power input	
	Power Switch	Momentary Toggle	
	Remote Power Switch	2-pin connector header	
	Solid State Drive Options*	1 x 2.5" SATA III, MLC (64, 128, 256, 512 GB SSD)	
Storage	SD Card Slot	N/A	
	CFast Card Slot	Yes	
E	Internal Expansion	Optional Wi-Fi kit (Wi-Fi card and antenna)	
Expansion	Expansion Slot	N/A	
	Туре	5-Wire Resistive Touch	
Touch Screen	Interface	USB	
-	Display Type	17" TFT SXGA LCD	
	Size (W x H)	13.50 x 10.75 inches [343 x 273 mm]	
	Resolution (pixels)	1280 x 1024	
	Max, Colors	16.7M	
Display	Luminance (cd/m ²)	400	
	Viewing Angle (H°/V°)	160/160	
	Contrast Ratio	600:1	
	Backlight Lifetime (Hours)	50,000	
	Input Voltage	9~36 VDC	
Electrical	Input Current	Typ. 2.5A @ 24VDC; Max 6A @ 24VDC	
Lieethean	Input Power	Typ. 60 W; Max. 144 W	
	Dimensions (W x H x D)	17.64 x 13.86 x 5.08 inches [448 x 352 x 129mm]	
	Net Weight	Approx. 17.42 lbs. [7.9kg]	
Mechanical	Panel Cutout Dimensions (W x H)	15.98 x 12.20 inches [406 x 310 mm]	
Wechanicar			
	Mounting	Panel mounting, VESA 100 x 100	
	Construction	Black Steel Chassis, Aluminum Heatsink	
	Operating Temperature	32~113°F [0~45°C]	
Environmental	Storage Temperature	-4~176°F [-20~80°C]	
Environmental	Relative Humidity	20 to 90% @ 40°C, non-condensing	
	Rating	IP65 front panel / NEMA4	
	Certifications	CE / FCC Class A / RoHS	
Operating System	Microsoft Windows [©] Options	dows [©] Options Microsoft Windows [©] 10 IoT Enterprise Embedded 2019 LTSC 64-bit (EPKEA) Microsoft Windows [©] 10 IoT Enterprise 2019 LTSC 64-bit (PKEA)	
	* Additional SSD ontions available: co		
	* Additional SSD options available; contact Maple Systems for details.		
Notes			
	Specifications subject to change witho	but notice.	

PC2300B Operations Manual

PC2317B DIMENSIONAL DRAWING

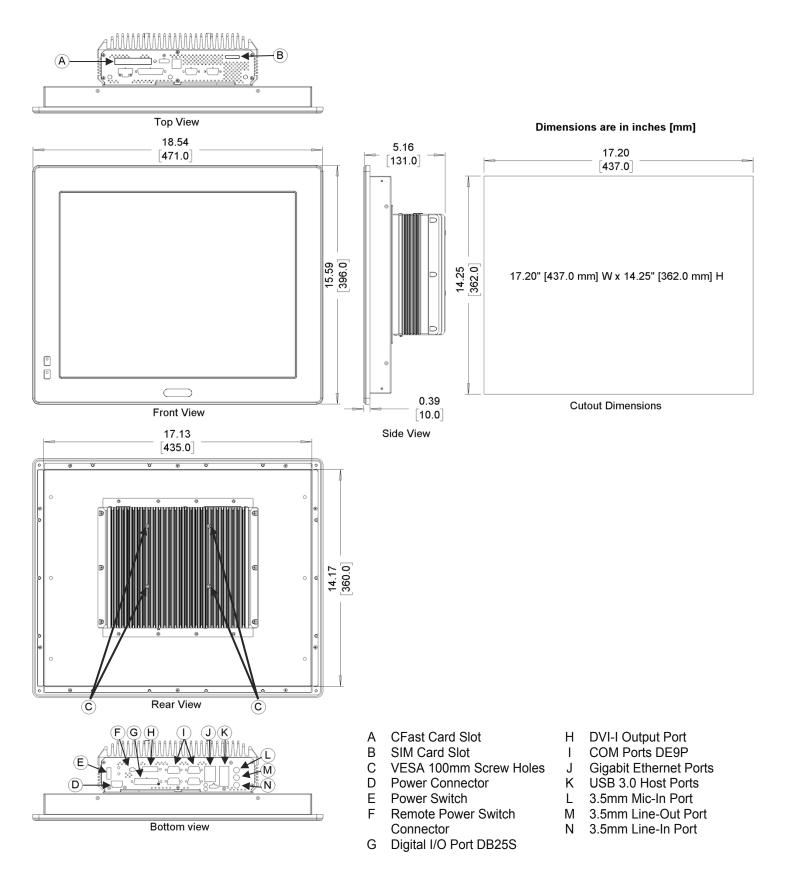


G Digital I/O Port DB25S

PC2319B SPECIFICATION

		Intel® Dual Core™: i3-7101TE @ 3.4GHz		
	СРИ	Intel® Quad Core™: i5-7500T @ 2.7GHz		
System		i7-7700T @ 2.9GHz		
Oystem	System Chipset	Intel Q170 Chipset		
	System Memory Options	2 x DDR4 260-pin SO-DIMM Non-ECC RAM (4, 8, 16, 32 GB)		
	USB	4 x USB 3.0 type A		
		2 x RS-232/422/485 DE-9P, COM1/COM2 (default RS-232)		
	Serial	2 x RS-232 DE-9P, COM3/COM4		
		1 x 3.5 mm Line-in		
	Audio	1 x 3.5 mm Line-out		
I/O Ports		1 x 3.5 mm Mic-in		
I/O FOILS	Digital I/O	1x DB25S, 8 in/8 out		
	LAN	2 x GbE RJ-45		
	Display Interface	1 x DVI-I port (max. 1920 x 1080 pixels)		
	Power	3-pin connector header, DC power input		
	Power Switch	Momentary Toggle		
	Remote Power Switch	2-pin connector header		
01	Solid State Drive Options*	1 x 2.5" SATA III, MLC (64, 128, 256, 512 GB SSD) (Supports RAID 0/1)		
Storage	SD Card Slot	N/A		
	CFast Card Slot	Yes		
Expansion	Internal Expansion	Optional Wi-Fi kit (Wi-Fi card and antenna)		
•	Expansion Slot			
Touch Screen Type 5-Wire Resistive Touch				
	Interface	USB		
	Display Type	19" TFT SXGA LCD		
	Size (W x H)	15.0 x 12.0 inches [381.0 x 304.9 mm]		
	Resolution (pixels)	1280 x 1024		
Display	Max. Colors	16.7M		
Diopidy	Luminance (cd/m ²)	400		
	Viewing Angle (H°/V°)	160/160		
	Contrast Ratio	600:1		
	Backlight Lifetime (Hours)	50,000		
	Input Voltage	9~36 VDC		
Electrical	Input Current	Typ. 1.71A @ 24VDC; Max 6.25A @ 24VDC		
	Input Power	Typ. 41 W; Max. 150 W		
	Dimensions (W x H x D)	18.54 x 15.59 x 5.16 inches [471 x 396 x 131mm]		
	Net Weight	Approx. 19.62 lbs. [8.9kg]		
Mechanical	Panel Cutout Dimensions (W x H)	17.20 x 14.25 inches [437 x 362 mm]		
	Mounting	Panel mounting, VESA 100 x 100		
	Construction	Black Steel Chassis, Aluminum Heatsink		
	Operating Temperature	32~113°F [0~45°C]		
	Storage Temperature	-4~176°F [-20~80°C]		
Environmental	Relative Humidity	20 to 90% @ 40°C, non-condensing		
	Rating	IP65 front panel / NEMA4		
	Certifications	CE / FCC Class A / RoHS		
Operating System Microsoft Windows Options Microsoft Windows© 10 IoT Enterprise Embedded 2019 LT		Microsoft Windows© 10 IoT Enterprise Embedded 2019 LTSC 64-bit (EPKEA)		
Operating System	Microsoft Windows Options	Microsoft Windows© 10 IoT Enterprise 2019 LTSC 64-bit (PKEA)		
	* Additional SSD options available; cor	tact Maple Systems for details		
Notes				
	Specifications subject to change without	It notice		
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PC2319B DIMENSIONAL DRAWING



PANEL MOUNTING

Follow the steps below to panel mount the PC2300B:

- 1. Cut out a section of the panel that corresponds to the cutout dimensions shown on the corresponding dimensional drawing
- 2. Place the PC2300B through the panel cutout so that the gasket surrounding the PC screen is flush against the panel surface.
- 3. Use the countersunk screws to mount the mounting bracket assembly to the side of the PC.



4. Insert the mounting clips into the slots provided on the mounting brackets. There are two slots per bracket, designed to accommodate thicker panels. Use the slots closest to the front of the panel if possible.



5. Tighten the mounting clips in an even pattern until the PC is firmly held in place. The screws should be tight enough to slightly deform the gasket. Do not overtighten. Recommended torque: 5.1 in/lbs.

VESA MOUNTING

Select any compatible VESA mounting system and install according to the manufacturer's instructions. The selected mounting system should be capable of supporting the net weight of the PC2300B as listed in the specifications above.

Mounting points on the rear of the unit are compatible with the Video Electronics Standards Association (VESA) Mounting Interface Standard (MIS) Part D. The mounting holes are arranged in a 100mm square pattern with M4 threads.



TOUCH SCREEN CALIBRATION

The PC2300B is shipped with a factory touchscreen calibration and should work out of the box. A calibration tool is preloaded in the event that there is a problem with the factory calibration or the touchscreen needs recalibration. If the calibration of the touchscreen is inaccurate to the point where the touchscreen is not usable, a USB mouse can be used to access the calibration tool as described below.

Use the following steps to calibrate the touchscreen:

1. Launch the eGalaxTouch utility by clicking on the desktop icon or through the start menu:

All programs > eGalaxTouch > Configure Utility

- 2. Select the tools tab and press the 4 Points Calibration button.
- 3. Follow the instructions in the calibration window to complete the touchscreen calibration.

I/O PORTS

SERIAL COM PORTS

Connector Type: 4ea DE9P Serial Ports.

0	$ \left(\begin{array}{cccccccccccccccccccccccccccccccccccc$	0
		J

Pin	COM1, COM2*			COM3, COM4
#	(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 the Setting COM Function section below to set the communication mode.			

DIGITAL I/O PORT

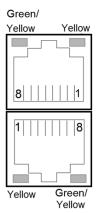
Connector Type: 1ea DB25S, digital I/O port

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U		

PIN	ASSIGNMENT	PIN	ASSIGNMENT
1	DIN1	14	DOUT1
2	DIN2	15	DOUT2
3	DIN3	16	DOUT3
4	DIN4	17	DOUT4
5	DIN5	18	DOUT5
6	DIN6	19	DOUT6
7	DIN7	20	DOUT7
8	DIN8	21	DOUT8
9	NC	22	NC
10	NC	23	NC
11	NC	24	NC
12	NC	25	NC
13	NC	-	-

LAN PORTS

Connector Type: 2ea Gigabit RJ45

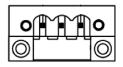


LAN LED Indicator:

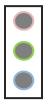
Left side LED		Right side LED	
Green Color On:	10/100 LAN Speed Indicator	Yellow Color Blinking:	LAN Message Active
Yellow Color On:	Giga LAN Speed Indicator	Off:	No LAN Message
Off:	No LAN switch/hub connected		

POWER INPUT (9-36V DC)

Connector Type: 3-Pin Terminal Block



AUDIO PORTS Connector Type: Tri-Stacked 3.5mm audio jack



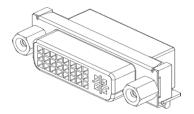
MIC IN (Pink) LINE OUT (Green) LINE IN (Blue)

USB 3.0 PORTS

Connector Type: 4 ea USB 3.0 type A ports



DVI-I PORT Connector Type: 1ea Digital Visual Interface – Integrated Connector



DRIVER INSTALLATION

Your PC2300B 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. Use the Support DVD that came with your PC to install all non-Windows Operating System Drivers. If you no longer have your Support DVD, visit the Support Center of the Maple Systems website for driver download.

Equipment required:

- PC2300B Support DVD
- USB External DVD drive

Instructions:

- 1. Plug in the USB external DVD drive into one of the USB ports.
- 2. Load the support DVD into the external drive.
- 3. Access the support DVD and open the folder corresponding to the driver you want to install.
- 4. Double-click the application (setup.exe) file to begin driver installation.
- 5. Follow the instructional prompts on the screen.
- 6. We recommend that you restart your computer when prompted, and after completion of all driver installations.

WINDOWS OPERATING SYSTEM REINSTALLATION

In the unlikely event of a system failure requiring reinstallation of the Windows Operating System, use the OS Recovery DVD (enclosed with Non-Embedded Operating Systems only) to reinstall Windows as it arrived to you from Maple Systems. You will need to re-activate Windows using the Product Key located on the rear panel of your PC, adjacent to the product label.

In the event that you wish to update your Windows Operating System (Non-Embedded Operating Systems only), simply connect the PC2300B to the Internet and run the Windows Update utility.

Embedded Operating Systems do not come with an OS Recovery DVD. In the extremely unlikely event the Windows OS needs to be reinstalled, contact your Maple Systems Sales Engineer for instructions.

BIOS CONFIGURATION OPTIONS

INTRODUCTION

The BIOS (Basic Input/Output System) installed in the ROM of your Panel PC 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.



Warning: Changing settings or configurations within the BIOS of your Panel PC can adversely impact the operation of your Panel PC if incorrectly performed.

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.

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:



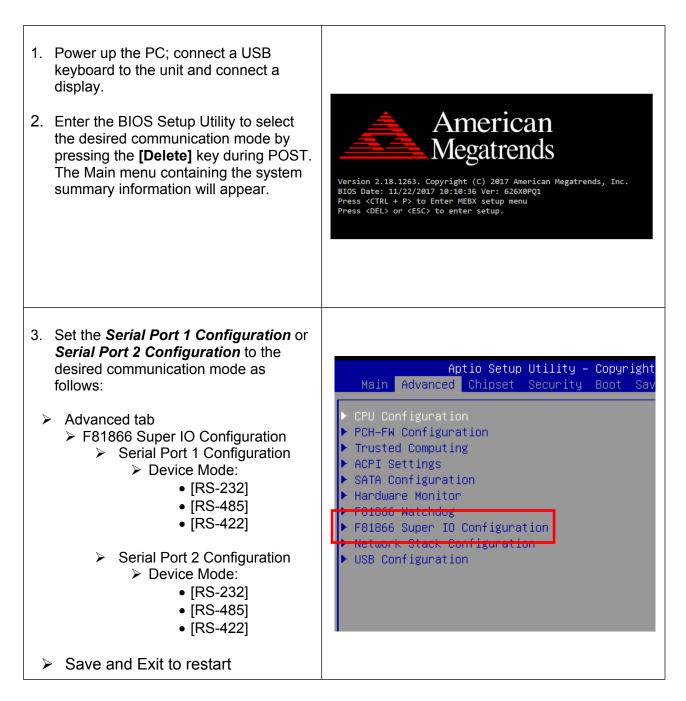
Example of initial POST screen. Your PC's POST screen may appear different.

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 FUNCTION

The PC2300B COM1 and COM2 Serial Ports are configured by default as RS232, but can be configured for RS422 (4-wire) and RS485 (2-wire) operation if so desired. Port configuration is managed through the BIOS; see the below table for instructions on changing COM1 or COM2 port mode.

Note: COM1 and COM2 are the only ports that can be configured for RS422 or RS485 operation; COM3 and COM4 are exclusively configured for RS232 operation.



WINDOWS 10 IOT ENTERPRISE 2019 LTSC

Windows 10 IoT Enterprise LTSC is a full Professional version of Windows 10, available on all PC2300B 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) version ensures long term stability that critical production systems require by updating only necessary operating system components, with significantly fewer update interruptions.

Included Apps:

- MS Edge Internet Browser
- MS Word Viewer
- Adobe PDF Reader
- MS PowerPoint Viewer
- MS Excel Viewer
- Media Player

WONDERWARE / INDUSOFT WEBSTUDIO on an PC2300B

All of the PC2300B series Panel PCs are compatible with Wonderware / Indusoft Web Studio. The choice of operating system will determine the target platform and runtime license required as shown in the chart below:

Operating System	Runtime License*	Target Platform
Windows 10 IoT Entrprise	for EmbeddedViewfor Windows	Windows
	Embedded	

* There are multiple options for each operating system indicated by "..." in the chart above. Refer to the *Indusoft Web Studio price list* for details.

For Windows 10 IoT Enterprise LTSC, install the Embedded View runtime by copying CEServer.exe from your C:\Program Files (x86)\InduSoft Web Studio v8.1\Redist\WinEmbedded\Bin to the PC system files.

Your Industrial Control Solutions Source

www.maplesystems.com



1010-1089 Rev 00

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