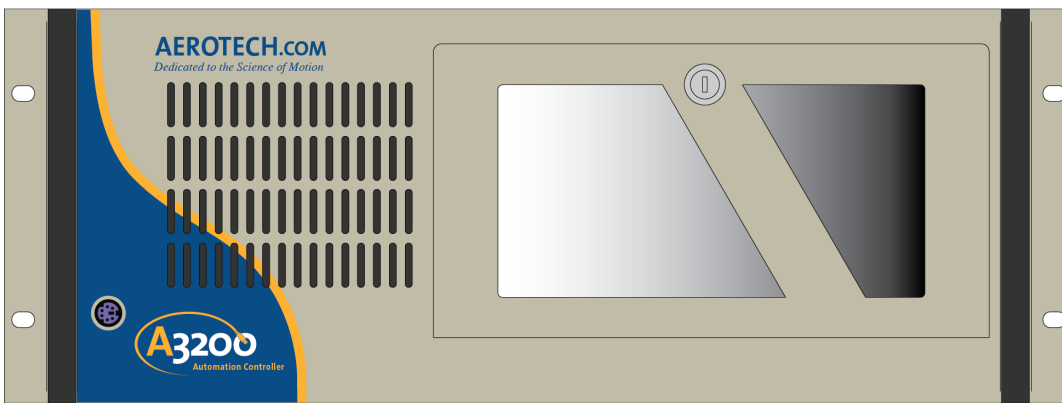# AEROTECH

A3200 Automation Controller Hardware Manual

Revision: 1.03.00

4U Rack Mount

1U Rack Mount

Panel Mount

Global Technical Support

Go to www.aerotech.com/global-technical-support for information and support about your Aerotech, Inc. products. The website supplies software, product manuals, Help files, training schedules, and PC-to-PC remote technical support. If necessary, you can complete Product Return (RMA) forms and get information about repairs and spare or replacement parts. To get help immediately, contact a service office or your sales representative. Include your customer order number in your email or have it available before you call.

United States (World Headquarters)	
Email: Support@aerotech.com Phone: +1-412-967-6440 Fax: +1-412-967-6870	101 Zeta Drive Pittsburgh, PA 15238-2811 www.aerotech.com
United Kingdom	**Japan**
Email: Support@aerotech.com Phone: +44 (0)1256 855055 Fax: +44 (0)1256 855649	Email: Support@aerotech.com Phone: +81 (0)50 5830 6814 Fax: +81 (0)43 306 3773
Germany	**China**
Email: Support@aerotech.com Phone: +49 (0)911 967 9370 Fax: +49 (0)911 967 93720	Email: Support@aerotech.com Phone: +86 (21) 5508 6731
France	**Taiwan**
Email: Support@aerotech.com Phone: +33 2 37 21 87 65	Email: Support@aerotech.com Phone: +886 (0)2 8751 6690

Aerotech Worldwide

United States ▪ France ▪ Germany ▪ United Kingdom
China ▪ Japan ▪ Taiwan

EU Declaration of Conformity

Manufacturer   Aerotech, Inc.
Address   101 Zeta Drive
                  Pittsburgh, PA 15238-2811
                  USA
Product   A3200 Automation Controller
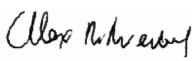*Model/Types*   A3200-PC-1U RACK, A3200-PC-4U RACK, A3200-PPC

This is to certify that the aforementioned product is in accordance with the applicable requirements of the following Directive(s):

2014/35/EU	Low Voltage Directive
2014/30/EU	EMC Directive
2011/65/EU	RoHS 2 Directive

and has been designed to be in conformity with the applicable requirements of the following Standard(s) when installed and used in accordance with the manufacturer's supplied installation instructions.

Panel Mount (PPC)	-1U Rack	-4U Rack
EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011 /A2:2013 EN 55022-2010 EN 61000-3-2:2006 /A1:2009 /A2:2009 EN 61000-3-3:2008 EN 61000-4-2:2009 EN 61000-4-4:2012 EN 61000-4-5:2006 EN 61000-4-3:2006 /A1:2008 /A2:2010 EN 61000-4-6:2009 EN 61000-4-11:2004	EN 55022-2010 EN 55024:2010 EN 61000-3-2:2006 EN 61000-3-3:2008 IEC 60950-1:2005 EN 60950-1:2006 /A11:2009 UL 60950-1 CSA/CAN-C22.2 /NO. 60950-1-07 FCC PART 15 AS/NZS CISPR 22/24 VCCI V-3	EN 55022-2010 +AC:2011,Class A EN61000-3-2:2006 +A1:2009+A2:2009 EN 61000-3-3:2013 EN 55024:2010 IEC 61000-4-2:2008 IEC 61000-4-3:2008 IEC 61000-4-4:2012 IEC 61000-4-5:2005 IEC 61000-4-6:2013 IEC 61000-4-8:2009 IEC 61000-4-11:2004

Authorized Representative: Simon Smith, European Director
Address: Aerotech Ltd
                                The Old Brick Kiln, Ramsdell, Tadley
                                Hampshire RG26 5PR
                                UK

Name   / Alex Weibel
Position   Engineer Verifying Compliance
Location   Pittsburgh, PA
Date   1/15/2019

C E

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Chapter 1: A3200 Automation Controller

The A3200 Automation Controller provides a rugged, compact panel-mount computer, or rack-mount configuration (1U or 4U), designed for industrial environments. The A3200 Automation Controller offers easy front and top connections to simplify installation with panel-mount devices, while the compact enclosure offers a convenient space-saving package. A variety of optional peripherals can enhance operation including FireWire® ports, USB and serial ports, dual Ethernet and solid state storage.
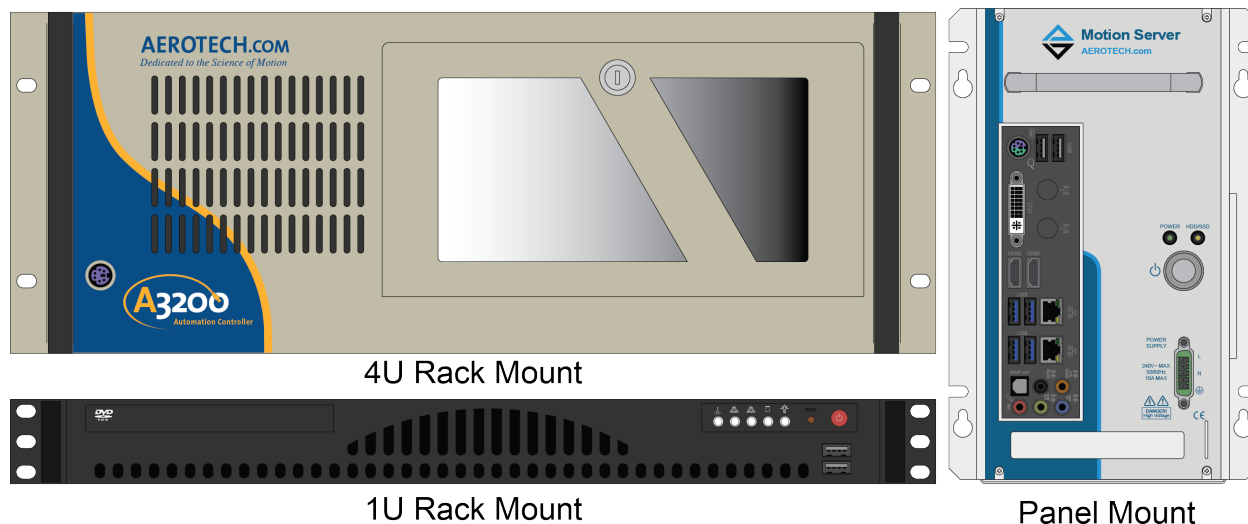

4U Rack Mount

1U Rack Mount

Panel Mount

Figure 1-1:   A3200 Automation Controller Configuration Options

1.1. Order Information

N O T E : PC specifications subject to change without notice. Please contact factory for most up to date information. Reference your third-party motherboard to determine your current specifications.

Table 1-1:   Ordering Options

Controller	
-PPC-i7	A3200 panel-mounted machine controller
-1U RACK	A3200 1U rack-mount machine controller
-1U RACK SSD	A3200 1U rack-mount machine controller with solid state drive
-4U RACK	A3200 4U rack-mount machine controller
Operating System (Required)	
-Win 7 64	Windows 7 64-bit SP1 operating system
-Win 8.x 64	Windows 8.1 (minimum) 64-bit operating system
-Win 10 64	Windows 10 64-bit operating system
Drive Interface (Required)	
-FIREWIRE-PCI	IEEE-1394 Interface PCI Card
-FIREWIRE-PCIE	IEEE-1394 Interface PCIe Card
-HYPERWIRE	HyperWire Interface PCIe Card
I/O Expansion (Optional)	
-ETHERNET	I/O Real-time compatible Ethernet card
-HILSCHER	Dual port Ethernet card
-I/O 1	Dual port real-time Ethernet for EtherCat and PROFINET
NOTE: These options are not available for panel-mounted models	
Keyboard and Mouse (Optional)	
-KB/MOUSE	Keyboard with mouse
-KB/TOUCHPAD	Keyboard with touchpad
Monitor (Optional)	
-LED-17	17" LED monitor
Remote Server (Optional)	
-REMOTE SERVER	Configure A3200 as remote server
Line Cord (Required for 1U and 4U Models)	
-US115VAC	US 115 VAC line cord
-US230VAC	US 230 VAC line cord
-ENGLAND	UK compatible line cord
-GERMANY	German compatible line cord
-ISRAEL	Israel compatible line cord
-INDIA	India compatible line cord
-AUSTRALIA	Australia compatible line cord

Figure 1-2:   Panel Mount PC Connector View (typical)

Table 1-2:   Power Supply Mating Connector Part Number for the -PPC

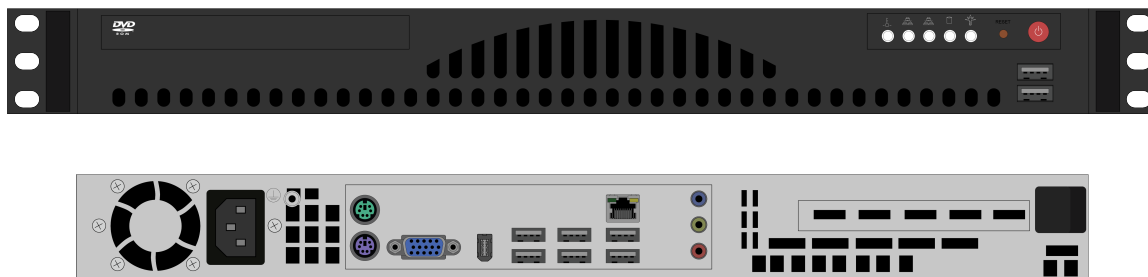| Description	Aerotech P/N	Phoenix P/N	Tightening Torque (Nm)	Wire Size: AWG [mm^2]
5-Pin Terminal Block	ECK02221	1841912	0.22 - 0.25	28-16 [0.14 - 1.5]

Figure 1-3:   1U PC Connector View (Typical)

Figure 1-4:   4U PC Connector View (Typical)

1.2. Dimensions

N O T E : Aerotech continually improves its product offerings; listed options may be superseded at any time. All drawings and illustrations are for reference only and were complete and accurate as of this manual's release. Refer to www.aerotech.com for the most up-to-date information.
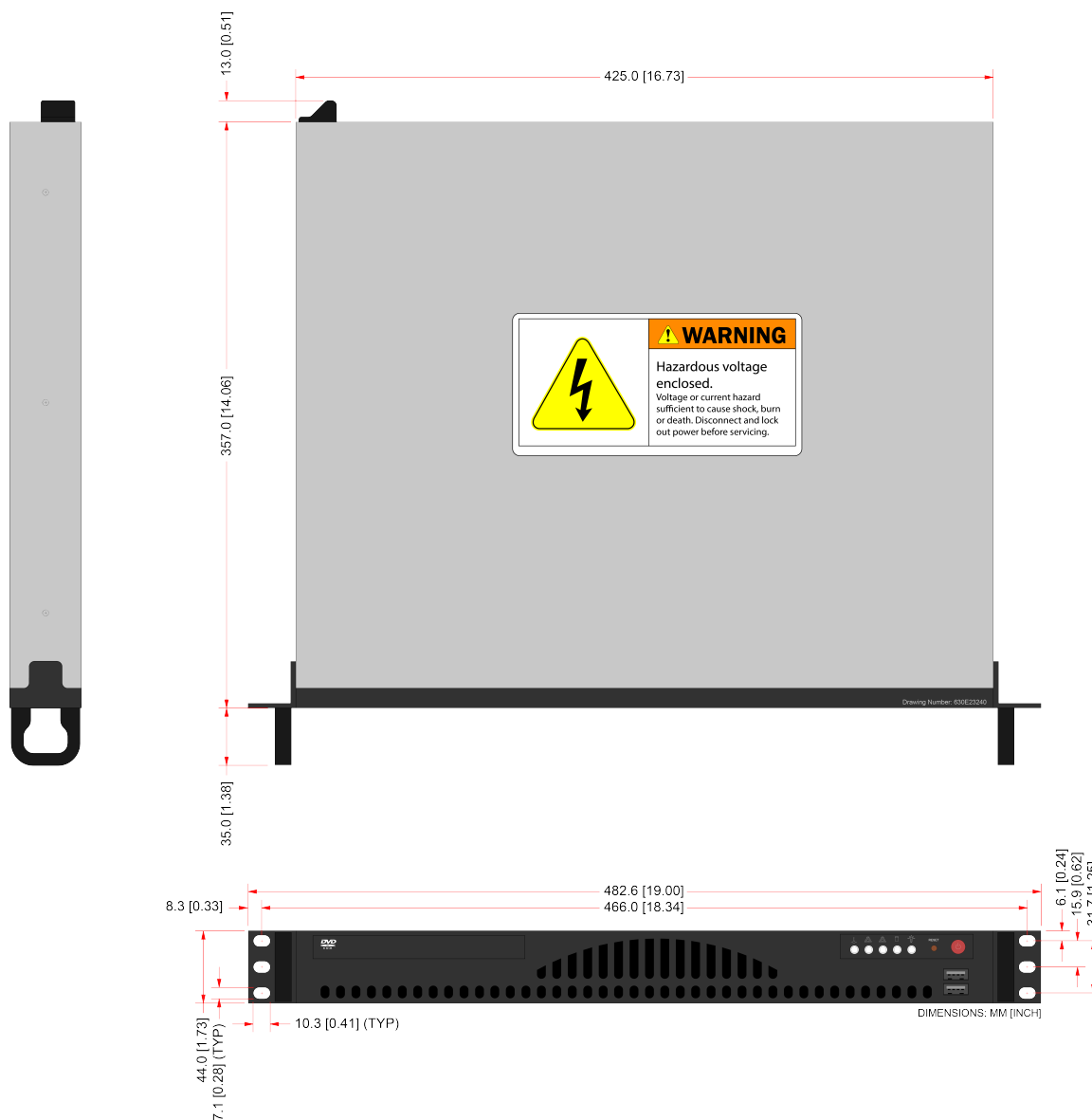

Figure 1-5:   1U Dimensions

445.8 [17.55]
425.0 [16.73]

13.0 [0.51]

637.0 [25.08]

357.0 [14.06]

⚠ WARNING

Hazardous voltage enclosed.
Voltage or current hazard sufficient to cause shock, burn or death. Disconnect and lock out power before servicing.

Drawing Number: 630E23240

35.0 [1.38]

440.0 [17.32]

6.1 [0.24]
15.9 [0.62]
31.7 [1.25]

482.6 [19.00]
466.0 [18.34]

8.3 [0.33]

DVD

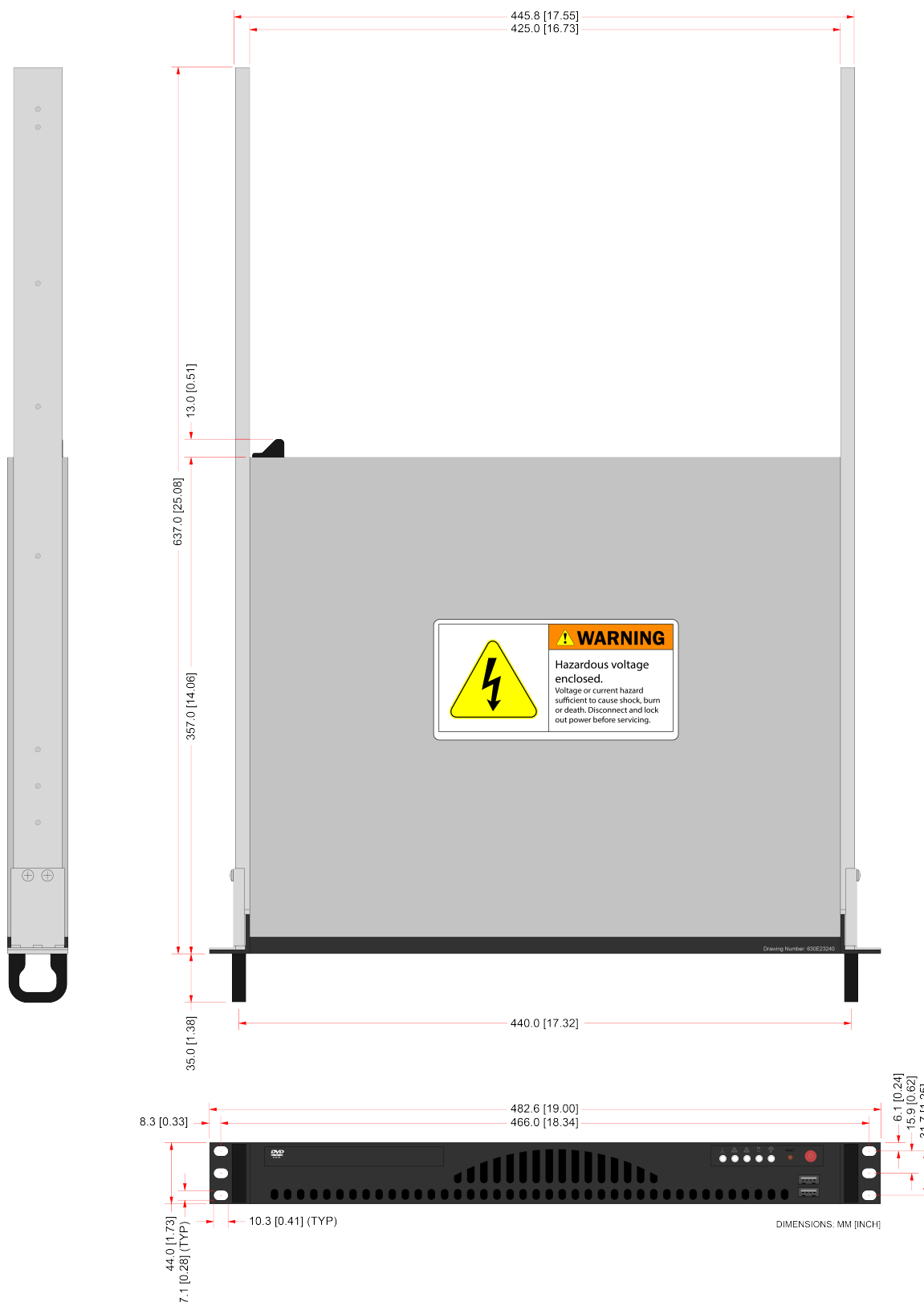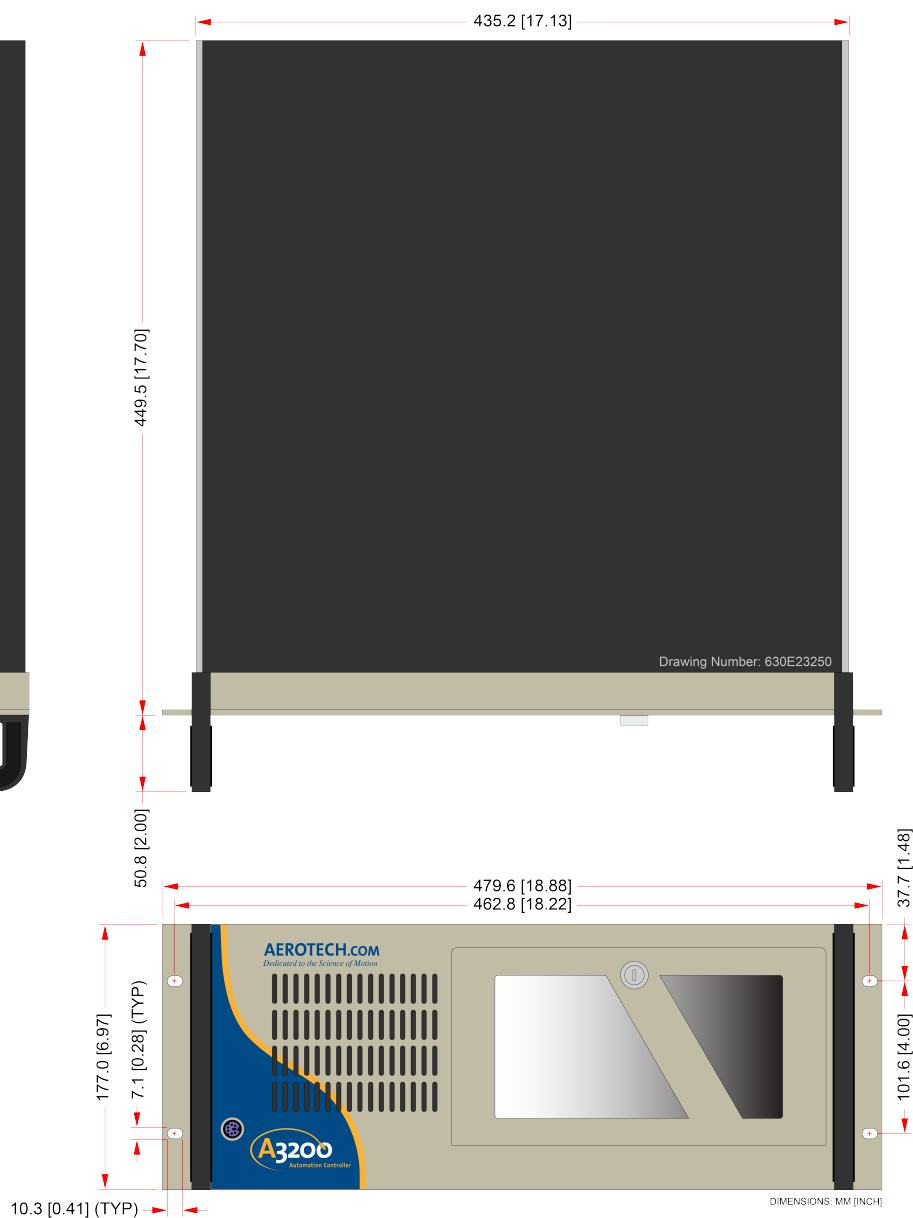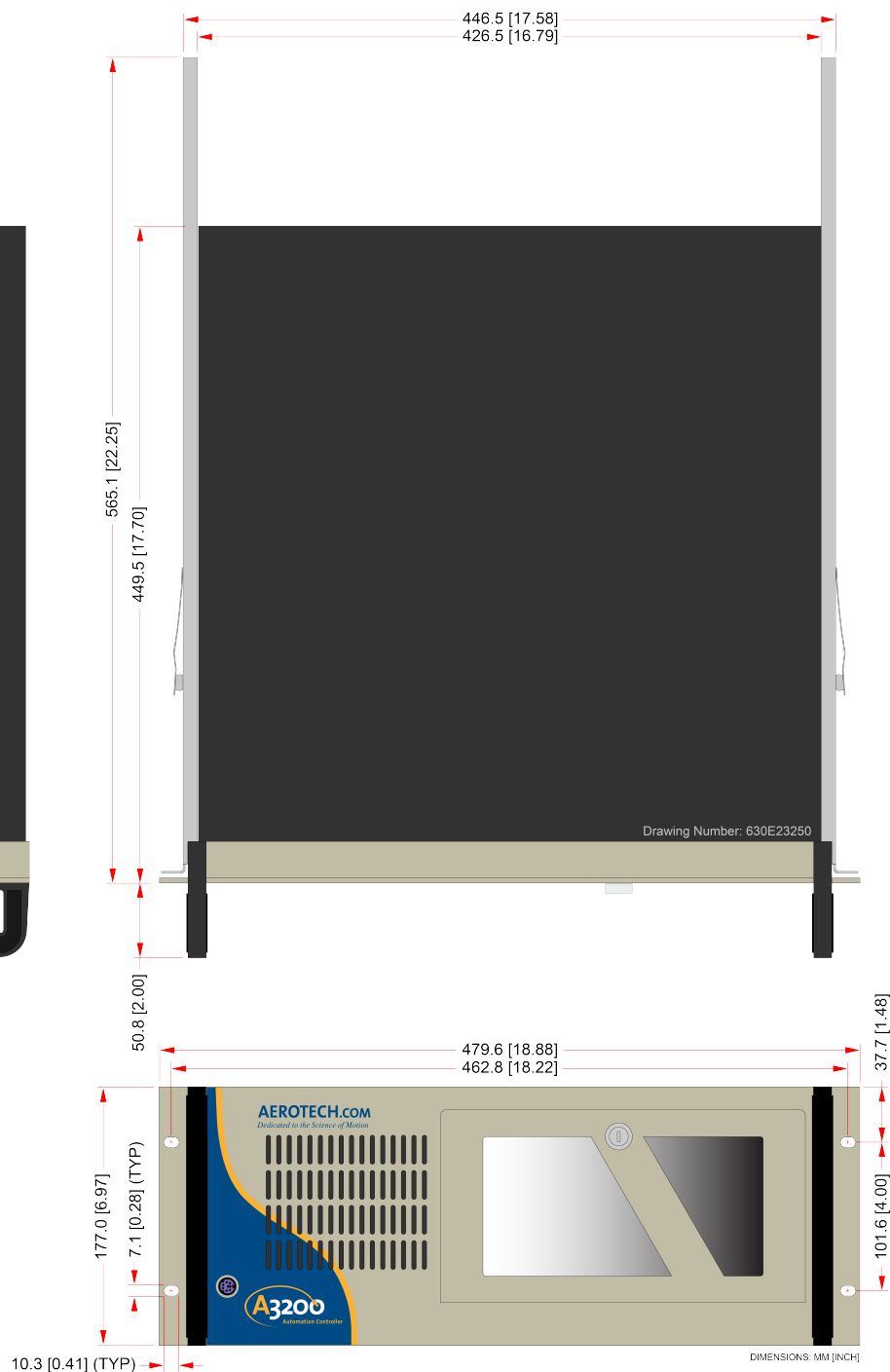44.0 [1.73]

7.1 [0.28] (TYP)

10.3 [0.41] (TYP)

DIMENSIONS: MM [INCH]

Figure 1-6:   1U with Chassis Slide Dimensions

Figure 1-7:   4U Dimensions

Figure 1-8:   4U with Chassis Slide Dimensions
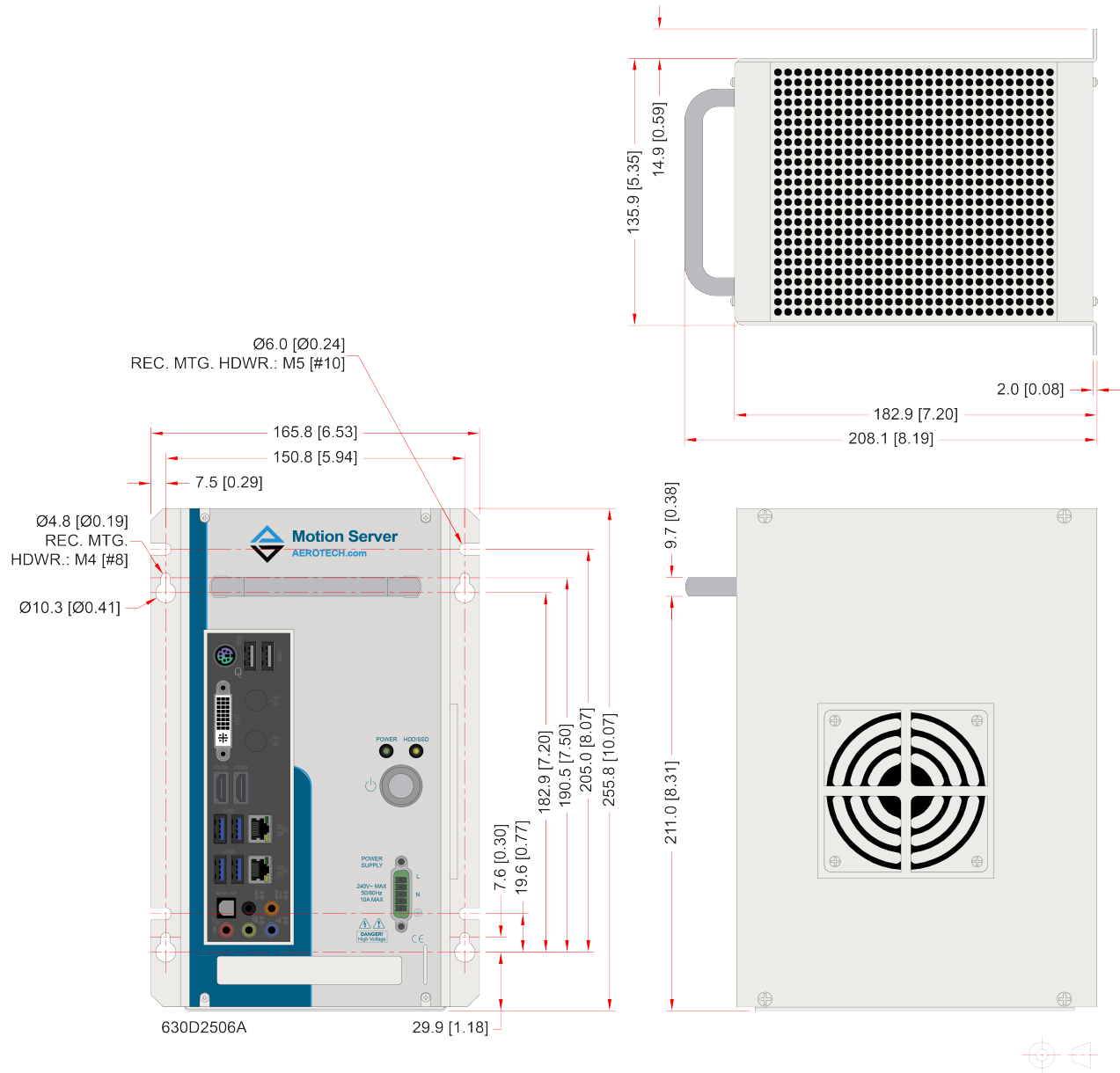
Figure 1-9:   Panel Mount Dimensions

1.3. Specifications

NOTE: PC specifications subject to change without notice. Please contact factory for most up to date information. Reference your third-party motherboard to determine your current specifications.

Table 1-3:   Automation Motion Server Specifications

	-PPC-i7	-1U Rack	-1U Rack SSD	-4U Rack
Processor	Intel i7; 4 Core, 3.4 GHz; 8 MB Cache	Intel i5-4590S processor	Intel i5-4590S processor	Intel i5-4590S processor
RAM	16 GB	8 GB	8 GB	8 GB
Operating System	Windows 7 64-bit SP1 Windows 8.1 (minimum) 64-bit Windows 10 64 bit			
Hard Disk Space	120 GB SSD	320 GB	120 GB SSD	1 TB
USB 3.0 Connections	4	2	2	2
USB 2.0 Connections	N/A	4	4	4
Input Power	85-230 VAC			
Display Connections	DVI-I HDMI DP (Display Port)	VGA HDMI DVI	VGA HDMI DVI	VGA HDMI DVI
PCIe Expansion Slots	N/A	N/A	N/A	1 PCIe x16 1 PCIe x4 1 PCIe x1 4 PCI
DVD Drive	N/A	Yes	Yes	Yes
Drive Interface	FireWire or HyperWire			
LAN	10/100/1000 Mbit (QTY. 2)	GB LAN (QTY. 2)	GB LAN (QTY. 2)	GB LAN (QTY. 2)
Power Supply	300 W	260 W	260 W	400 W

1.4. AC Power Setting

You can change the BIOS setting on the PC so that, in the event of a power failure, you will not need to access the PC to manually turn the PC back on. Use this item to select AC power state when power is re-applied after a power failure.

Table 1-4: **BIOS Settings**

PC Type	BIOS Category	Settings
PPC	AC back	• Always Off • Memory (previous power state) • Always On (our default)
1U PC	AC Power Loss	• Setting "Power Off", need to press the case power button to boot again. • Setting "Power On", the system will power up itself when the power is back - our default • Setting to "Last State", the system will resume its last state before the power loss.
4U PC	Restore AC Power Loss	• Power Off • Power On - our default • Last State

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Appendix A: Warranty and Field Service

Aerotech, Inc. warrants its products to be free from harmful defects caused by faulty materials or poor workmanship for a minimum period of one year from date of shipment from Aerotech. Aerotech's liability is limited to replacing, repairing or issuing credit, at its option, for any products that are returned by the original purchaser during the warranty period. Aerotech makes no warranty that its products are fit for the use or purpose to which they may be put by the buyer, whether or not such use or purpose has been disclosed to Aerotech in specifications or drawings previously or subsequently provided, or whether or not Aerotech's products are specifically designed and/or manufactured for buyer's use or purpose. Aerotech's liability on any claim for loss or damage arising out of the sale, resale, or use of any of its products shall in no event exceed the selling price of the unit.

THE EXPRESS WARRANTY SET FORTH HEREIN IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE. IN NO EVENT SHALL AEROTECH BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.

Return Products Procedure

Claims for shipment damage (evident or concealed) must be filed with the carrier by the buyer. Aerotech must be notified within thirty (30) days of shipment of incorrect material. No product may be returned, whether in warranty or out of warranty, without first obtaining approval from Aerotech. No credit will be given nor repairs made for products returned without such approval. A "Return Materials Authorization (RMA)" number must accompany any returned product(s). The RMA number may be obtained by calling an Aerotech service center or by submitting the appropriate request available on our website (www.aerotech.com). Products must be returned, prepaid, to an Aerotech service center (no C.O.D. or Collect Freight accepted). The status of any product returned later than thirty (30) days after the issuance of a return authorization number will be subject to review.

Visit https://www.aerotech.com/global-technical-support.aspx for the location of your nearest Aerotech Service center.

Returned Product Warranty Determination

After Aerotech's examination, warranty or out-of-warranty status will be determined. If upon Aerotech's examination a warranted defect exists, then the product(s) will be repaired at no charge and shipped, prepaid, back to the buyer. If the buyer desires an expedited method of return, the product(s) will be shipped collect. Warranty repairs do not extend the original warranty period.

Fixed Fee Repairs - Products having fixed-fee pricing will require a valid purchase order or credit card particulars before any service work can begin.

All Other Repairs - After Aerotech's evaluation, the buyer shall be notified of the repair cost. At such time the buyer must issue a valid purchase order to cover the cost of the repair and freight, or authorize the product(s) to be shipped back as is, at the buyer's expense. Failure to obtain a purchase order number or approval within thirty (30) days of notification will result in the product(s) being returned as is, at the buyer's expense.

Repair work is warranted for ninety (90) days from date of shipment. Replacement components are warranted for one year from date of shipment.

Rush Service

At times, the buyer may desire to expedite a repair. Regardless of warranty or out-of-warranty status, the buyer must issue a valid purchase order to cover the added rush service cost. Rush service is subject to Aerotech's approval.

On-site Warranty Repair

If an Aerotech product cannot be made functional by telephone assistance or by sending and having the customer install replacement parts, and cannot be returned to the Aerotech service center for repair, and if Aerotech determines the problem could be warranty-related, then the following policy applies:

> Aerotech will provide an on-site Field Service Representative in a reasonable amount of time, provided that the customer issues a valid purchase order to Aerotech covering all transportation and subsistence costs. For warranty field repairs, the customer will not be charged for the cost of labor and material. If service is rendered at times other than normal work periods, then special rates apply.

> If during the on-site repair it is determined the problem is not warranty related, then the terms and conditions stated in the following "On-Site Non-Warranty Repair" section apply.

On-site Non-Warranty Repair

If any Aerotech product cannot be made functional by telephone assistance or purchased replacement parts, and cannot be returned to the Aerotech service center for repair, then the following field service policy applies:

> Aerotech will provide an on-site Field Service Representative in a reasonable amount of time, provided that the customer issues a valid purchase order to Aerotech covering all transportation and subsistence costs and the prevailing labor cost, including travel time, necessary to complete the repair.

Service Locations

http://www.aerotech.com/contact-sales.aspx?mapState=showMap

USA, CANADA, MEXICO	CHINA	GERMANY
Aerotech, Inc.	Aerotech China	Aerotech Germany
Global Headquarters	Full-Service Subsidiary	Full-Service Subsidiary
Phone: +1-412-967-6440	Phone: +86 (21) 5508 6731	Phone: +49 (0)911 967 9370
Fax: +1-412-967-6870		Fax: +49 (0)911 967 93720

JAPAN	TAIWAN	UNITED KINGDOM
Aerotech Japan	Aerotech Taiwan	Aerotech United Kingdom
Full-Service Subsidiary	Full-Service Subsidiary	Full-Service Subsidiary
Phone: +81 (0)50 5830 6814	Phone: +886 (0)2 8751 6690	Phone: +44 (0)1256 855055
Fax: +81 (0)43 306 3773		Fax: +44 (0)1256 855649

Have your customer order number ready before calling.

Appendix B: Revision History

Revision	Description
1.03.00	- Updated: EU Declaration of Conformity - Updated: Section 1.1. Order Information - Updated PPC Dimensions: Figure 1-9 - Updated/Added: Section 1.3. Specifications
1.02.00	- New Panel Mount version (removed old panel mount version) - Options and specifications have been updated
1.01.00	- Added Panel Mount version (PCI) - Removed Windows XP options - Added RoHS statement to EU Declaration of Conformity
1.00.00	New Manual

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