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Motion Control Solutions

AMC6 CNC - User Manual

AMDOC-000549 Rev 02

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AMC6 CNC - User Manual

Some Important Links

Related Manuals and Brochures   *Related Documentation*

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Chapter Summaries

1	Introduction	Overview of this Document and Target Audience
2	Product Overview	How to Identify Product and Interpret the Product label
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1 Introduction

1.1 Using this Manual

> **NOTE:**
>
> The information within this document is intended for trained specialists in the control and automation industry. It is important that the information must be followed carefully when installing or using this product.

This manual is a guide to describe the installation and operation of AMC6 CNC. It has been written specifically to meet the needs of ANCA's OEM clients, tradespeople, technicians and daily operators. It is important that the information must be followed carefully when installing or operating this CNC. This device may only be used within the operating boundaries described in the *5.1 Technical Specifications* section of this document. It is the operators' responsibility for this device to ensure that all relevant national and local safety standards, regulations and laws are followed when installing and operating this device.

The details given in the manual are organised in the following way:

- CNC Product Overview
- Product Specifications
- Installations and Operation
- Troubleshooting
- Support and Service Information

1.2 Related Documents

D-000108_ANCA Motion CNC PMK Usage - Approved Usage List OEM Customers.pdf

1.3 Terms and Abbreviations

Abbreviation	Description
AMC6	ANCA Motion Controller 6
ANCA	Australian Numerical Control and Automation
ASSY	Assembly
BIOS	Basic Input Output Subsystem
CNC	Computer Numerical Control
DC	Direct Current
EMC	Electromagnetic Compatibility
E-Stop	Emergency Stop
EtherCAT	Ethernet for Control Automation Technology
Ethernet	Network Protocol
GB	Giga-Byte
GHz	Giga-Hertz
HDMI	High-Definition Multimedia Interface
LED	Light Emitting Diode
LVD	Low Voltage Directive
MB	Mega-Byte
PMK	Platform Maintenance Kit
SSD	Solid State Disk
USB	Universal Serial Bus
VGA	Video Graphics Array
Serial COM Port	Standard Serial COM Port
NC	No Connection

1.4 Copyright

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2 Product Overview

2.1 Catalogue Number Overview

2.1.1 Catalogue Number Interpretation

Example:

AMC6 CNCs are marked with an identification label. The catalogue number is explained as below:
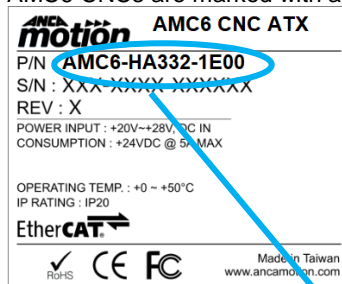
Figure 1 - Product Label

AMC6-HA332-1E00

Product
C: CNC

Family
6: Series 6

CPU
H: Core i5 Gen 9, 2.2GHz

PMK
A: PMK 10

Storage
3: 64GB

RAM
3: 8GB

Power Interface
2: 24V$_{DC}$ IN, ATX Mode
3: 24V$_{DC}$ IN, AT Mode

Peripherals
1: Serial Port x 2

Field Bus
E: EtherCAT

Feature Set – Level 3
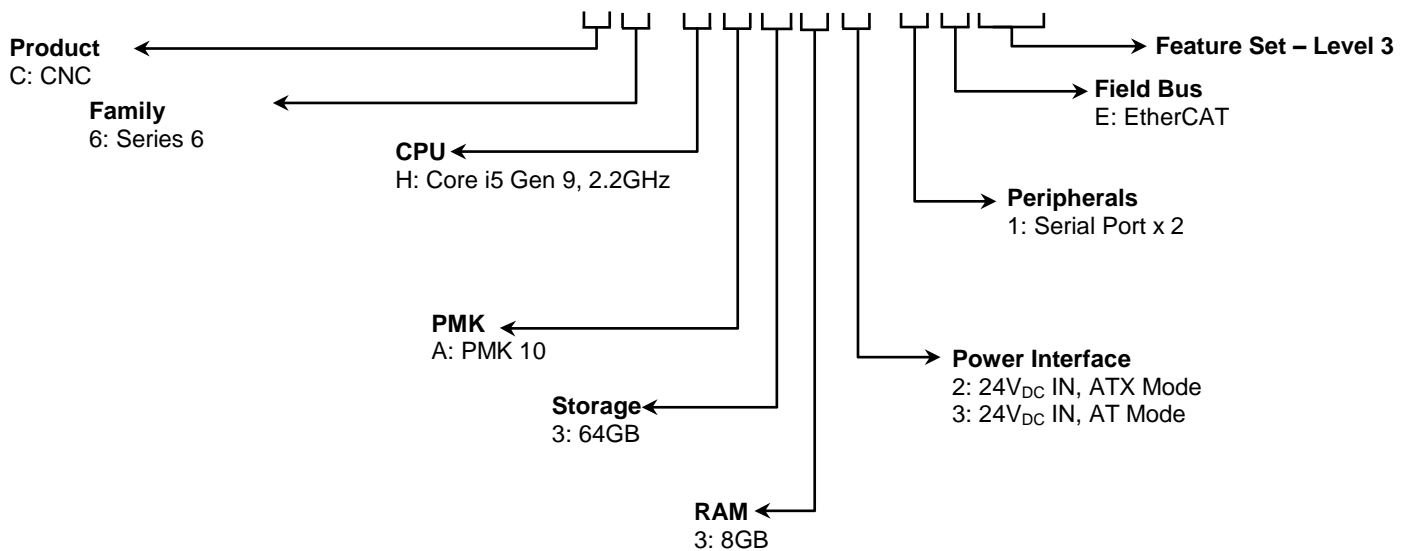
2.1.2 Ordering Number and CNC Part Number Mapping

The CNC included in the ordering package has an internal part number that was programmed in the BIOS which will be displayed on the software interface. To identify the CNC from the software interface, please use this table below:

Description	Customer Order Code	CNC Part Number
AMC6 CNC ATX	AMC6-HA332-1E00	946-0-03-1200
AMC6 CNC AT	AMC6-HA333-1E00	946-1-03-1200

Table 1 – CNC Part Number Mapping Table

2.2 Variant Identification

The AMC6 CNC is industrial PCs which has been designed for control systems applications. The chassis of the CNC has been designed for the CNC to be installed in protected environments.
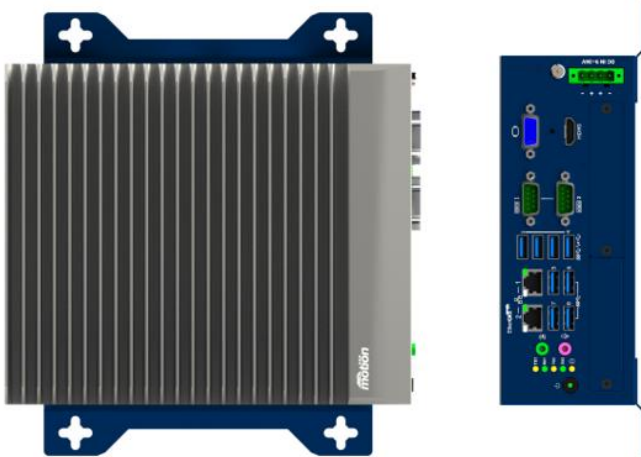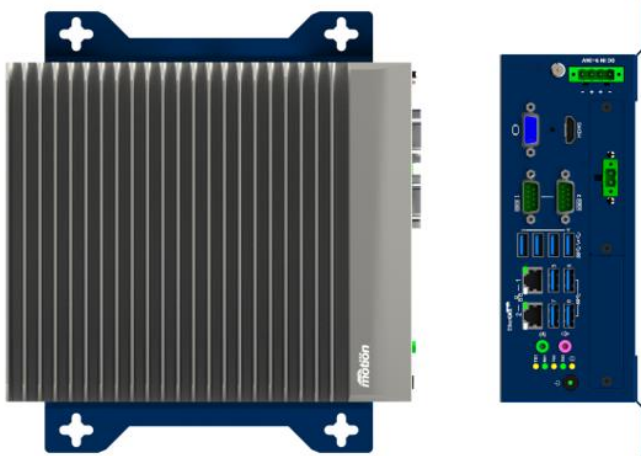
Variant	
AT	
ATX	

Table 2 - CNC Variant

The AMC6 CNC consists of:

- ✓ Industrial PC with an Intel 9th Gen Core i5 processor
- ✓ 8 GB system memory
- ✓ AT/ATX power mode
- ✓ 64 GB solid state disk
- ✓ 1 x EtherCAT and 1 x Ethernet port
- ✓ 4 x USB2.0 and 4 x USB3.0
- ✓ 1 x VGA connection via 15 pin female D-SUB connector
- ✓ 1 x HDMI port
- ✓ Audio output
- ✓ 2 x Serial COM port

All external system devices can connect to the CNC via USB communications or an EtherCAT data link for real time communications. All system functions and programs are loaded and run on the controller.

NOTE:

1. The AT/ATX power mode behavior is programmed by different BIOS firmeware.

2.3 Ordering Information

2.3.1 Product Ordering Information

Description	Customer Order Code
AMC6 CNC ATX	AMC6-HA332-1E00
AMC6 CNC AT	AMC6-HA333-1E00

Table 3 - Product Ordering

2.3.2 Accessories

This section contains summarised information on accessories available for the AMC6 CNC as below:

Description	Part Number	Manufacturer	Quantity
PLATFORM MAINTENANCE KIT 10	963-X-XX-0054	ANCA Motion	1
KIT CABLE CONNECTION VIDEO HDMI-HDMI 5 METRES (Copper HDMI Cable)	619-0-00-1933	ANCA Motion	1
KIT CABLE CONNECTION VIDEO HDMI-HDMI 10 METRES (Hybrid Fiber Optic/Copper HDMI Cable)	619-0-00-2233	ANCA Motion	1
KIT CABLE CONNECTION VIDEO HDMI-HDMI 15 METRES (Hybrid Fiber Optic/Copper HDMI Cable)	619-0-00-2234	ANCA Motion	1
KIT CABLE CONNECTION VIDEO HDMI-HDMI 20 METRES (Hybrid Fibre Optic/Copper HDMI Cable)	619-0-00-1934	ANCA Motion	1
4W PLUGABLE TERMINAL BLOCK	ICN-3077-2105	ANCA Motion	1
2W PLUGABLE TERMINAL BLOCK	ICN-3077-2108	ANCA Motion	1

Table 4 - Accessories

2.3.3 Packing List

Before you begin installing your card, please make sure that the following items have been shipped:

Description	Quantity
AMC6 CNC	1
PLATFORM MAINTENANCE KIT 10	1
4W PLUGABLE TERMINAL BLOCK	1
2W PLUGABLE TERMINAL BLOCK Note: This is only applicable to AMC6-HA332-1E00.	1
MOUNTING BRACKET	2
MOUNTING M4 SCREW	4

Table 5 – Packing List

NOTE:

1. Plese note that accessories are not included as standard when an AMC6 CNC is ordered.

2. For X-XX numbers please refer to **D-000108_ANCA Motion CNC PMK Usage - Approved Usage List OEM Customers.pdf** document for recommanded version.

2.4 Liability Conditions

It is the responsibility of the CNC product users to meet all relevant national and local safety standards, regulations and laws when installing and operating this product.

> **WARNING:**
>
> Product warranty will be invalidated if the label or license stickers is broken or removed.
>
> All components of this product are selected and tested to be compatible with Core CNC software; the product warranty will be invalidated if any component is changed without prior agreement with ANCA Motion.
>
> The ambient temperature of the CNC assembly must not exceed 50°C. Please refer to Section *3.3 Ventilation Spacing* for detailed ventilation requirement to remove heat generated from the.

2.5 Labels on AMC6 CNC

The images below highlight the various labels on the AMC6 CNC and what they describe.
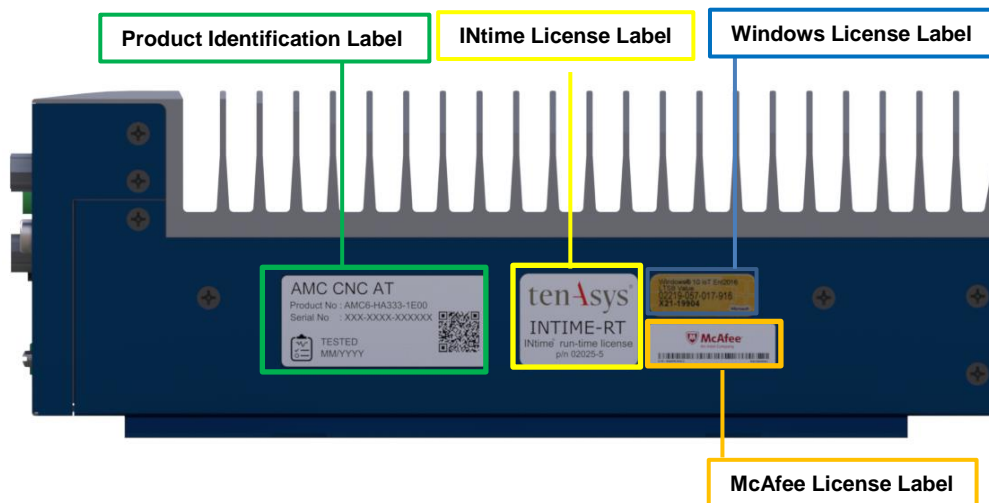
Figure 2 – Label on the Top
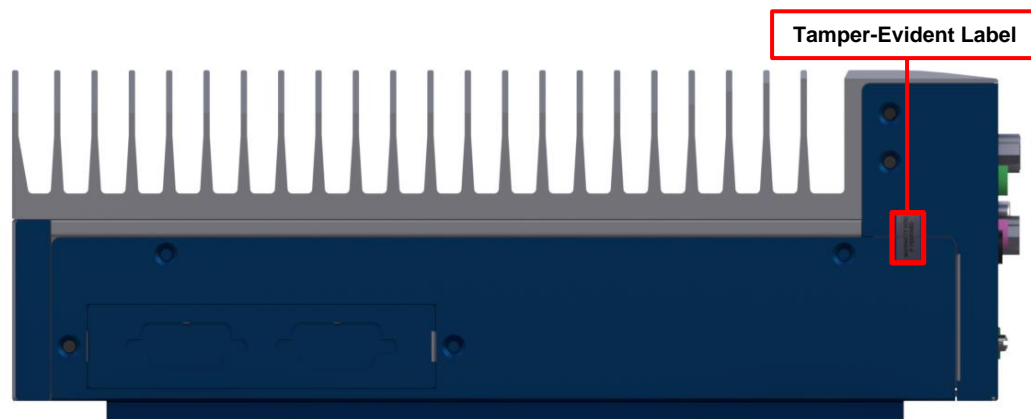
Figure 3 - Label on the Bottom

Product Identification Label
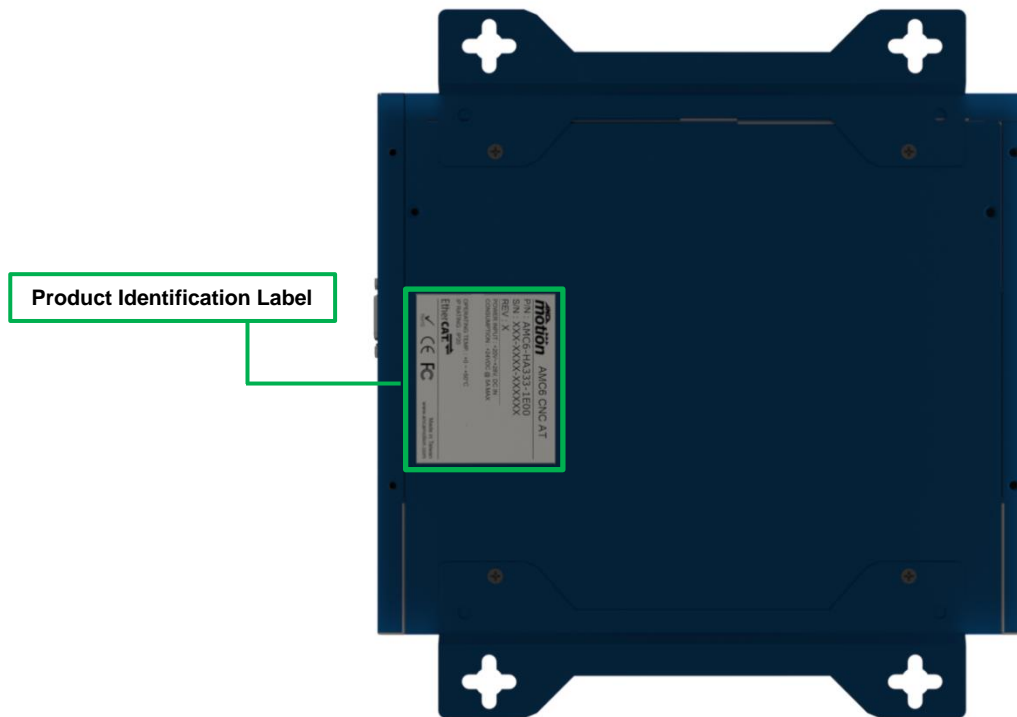
Figure 4 - Label on the Back

⚠️ **WARNING:**

Do not tamper with these labels in any circumstances. Your warranty may be invalidated if the labels are damaged.

2.6 Interface
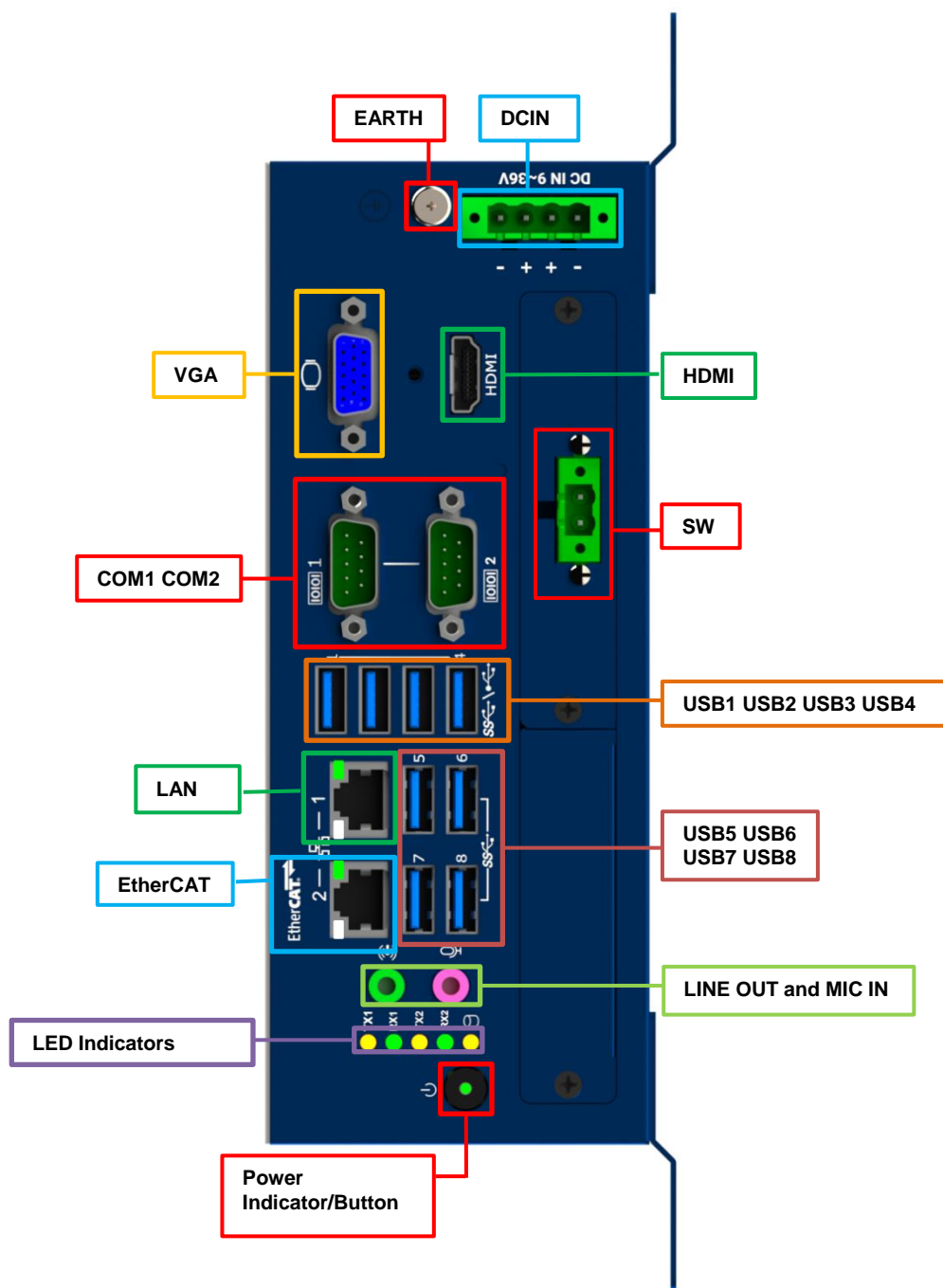
Figure 5 – I/O Interface

Main Power - DCIN

The main power interface provides the DC power to the CNC and the acceptable input voltage rage is between +20~+28V_{DC}. Recommended input voltage is +24V_{DC}.

Pin	Function
1	0V_IN
2	+24V_{DC}_IN
3	+24V_{DC}_IN
4	0V_IN

Table 6 - Main Power Pinout

WARNING:

Even though the main power interface offers reverse polarity protection against motherboard damage, short circuiting to Earth will draw high current from power supply. Therefore appropriate circuit breaker is recommanded to protect the overall electrical power system.

Ground Screw - EARTH

The CNC must be connected to a common earth point in the machine electrical cabinet via this ground screw during operation all the time.

Power Indicator/Button

The Power On/Off button has an integrated LED indicator representing the CNC status. The meaning of the lighting colour is summarised below:

LED	CNC Status
Green	CNC Power on status
Red	CNC Off/Suspend status

Table 7 - Power Indicator

Remote Switch - SW

The remove switch provides the dry contact switch to power up the CNC with ATX variant. Be careful this that this switch is only support dry contact switch button and cannot connected to the external power and will cause CNC permanent damaged.

Pin	Function
1	GND
2	PS_ON#

Table 8 – Remote Switch Pinout

USB2.0 – USB1, USB2, USB3 and USB4

Four USB2.0 ports are used to connect peripheral devices to the CNC. These USB connectors are built onto the motherboard.
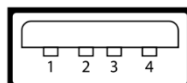
| Pin	Signal	Pin	Signal
1	5V	3	D+
2	D-	4	GND

Table 9 - USB2.0 Pinout

USB3.0 – USB5, USB6, USB7 and USB8

Four USB3.0 ports are used to connect peripheral devices to the CNC. These USB connectors are built onto the motherboard.
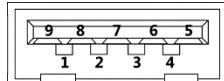
Pin	Signal	Pin	Signal
1	5V	5	Rx-
2	D-	6	Rx+
3	D+	7	GND
4	GND	8	Tx-
		9	Tx+

Table 10 – USB3.0 Pinout

WARNING:

The stability of the USB signal can be degraded by overly long or low quality USB cable. If the USB cable is longer than 5m (USB2.0) or 3m (USB3.0), extension solutions such as active USB cable or power hub must be considered for reliable USB peripheral operation.

Ethernet/EtherCAT – LAN and EtherCAT

Two RJ-45 connectors allow the CNC to be connected to a local area network (LAN) or EtherCAT devices. The connector EtherCAT is the EtherCAT connector. The connector LAN is the Ethernet connector.

Pin	Signal	Pin	Signal
1	Transmit +	5	Reserved
2	Transmit -	6	Receive -
3	Receive +	7	Reserved
4	Reserved	8	Reserved
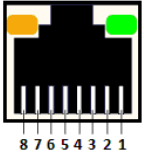
Table 11 - LAN Pinout

> **NOTE:**
>
> The user must connect EtherCAT devices to EtherCAT for correct operation of EtherCAT devices.

VGA Interface - VGA

One D-SUB VGA port is used to connect to standard VGA display devices.

Pin	Signal	Pin	Signal
1	Red	2	Green
3	Blue	4	NC
5	GND	6	GND
7	GND	8	GND
9	+5V	10	GND
11	NC	12	DDC_DAT
13	H-SYNC	14	V-SYNC
15	DDC-CLK		
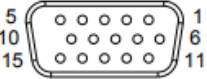
Table 12 – VGA Pinout

HDMI Interface - HDMI

One HDMI port can be used to connect to HDMI display devices.

Pin	Signal	Pin	Signal
1	TMDS Data 2+	2	TMDS Data 2 shield
3	TMDS Data 2-	4	TMDS Data 1+
5	TMDS Data 1 shield	6	TMDS Data 1-
7	TMDS Data 0+	8	TMDS Data 0 shield
9	TMDS Data 0-	10	TMDS clock+
11	TMDS clock shield	12	TMDS clock-
13	CEC	14	Reserved
15	SCL	16	SDA
17	DDC/CEC Ground	18	+5V
19	Hot Plug Detect		
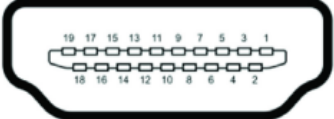
Table 13 - HDMI Pinout

LED Indicators - LED 1-5

There are five LEDs showing the status of CNC.

LED	Function
1	COM Port 1 – TX1
2	COM Port 1 – RX1
3	COM Port 2 – TX2
4	COM Port 2 – RX2
5	HDD Status
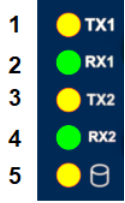
Table 14 - LED Indicators and Audio

Audio Ports – LINE OUT and MIC IN
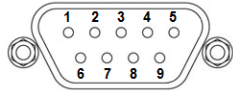
MIC IN (pink) is the analog microphone audio input (mono or stereo). LINE OUT (green) is the analog line level audio output for the main stereo signal.

Serial COM Port – COM1 and COM2

Standard Serial COM Port (COM1 and COM2) can be used to support RS-232/422/485 function by BIOS selection. Serial communication interface uses the 9-pin male D-SUB connector and default setting is RS-232.

RS-232

Pin	Signal	Description	Pin	Signal	Description	
1	DCD	Data Carrier Detect	6	DSR	Data Set Ready	
2	RD	Receive Data	7	RTS	Request to Send	
3	TD	Transmit Data	8	CTS	Clear to Send	
4	DTR	Data Terminal Ready	9	RI	Ringing Indicator	
5	GND	Ground				
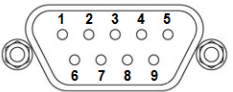
Table 15 - RS-232 Pinout

RS-422

Pin	Signal	Description	Pin	Signal	Description	
1	TD-	Transmit Data -	6		NC	
2	TD+	Transmit Data +	7		NC	
3	RX+	Receive Data +	8		NC	
4	RX-	Receive Data -	9		NC	
5	GND	Ground				
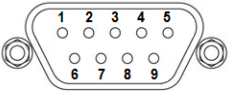
Table 16 - RS-422 Pinout

RS-485

Pin	Signal	Description	Pin	Signal	Description	
1	D-	Data -	6		NC	
2	D+	Data +	7		NC	
3		NC	8		NC	
4		NC	9		NC	
5	GND	Ground				

Table 17 - RS-485 Pinout

2.7 Video Interface

2.7.1 Video Signal Cable

There are two video interfaces available on the CNC, which are VGA and HDMI interfaces. When using these video interfaces to connect the monitor, the length of the cable can greatly impact display quality due to signal attenuations.

The cable length depends on the cable specification of manufacturer and the monitor's receiver capability. There are a few factors which determine the maximum of cable length:

1. Signal bandwidth: What resolution and refreshing rate are being used.

2. Physical cable characteristics: Cable loss characteristics, impedance matching quality …etc.

Although no maximum length for a cable is specified by video interface specification, signal attenuation (which depends on the cable's construction quality and conducting materials) limits usable lengths in practice. While these video interfaces offer support for passive cables of varying lengths, the maximum of cable length which ANCA Motion recommends for optimal performance is:

Maximum Length of VGA Cable

The maximum of cable length which is recommended for maximum resolution (2048x1152 @ 60Hz) is 1.8 metres and the cable must meet the electrical specification of VGA.

Maximum Length of HDMI Cable

The maximum of cable length which is recommended for maximum resolution (3840x2160 @ 30Hz) is 1.8 metres and the cable must meet the electrical specification of HDMI.

NOTE:

The cable length can be longer with lower resolution and under less noisy environment. Typically a high quality cable can run up to 5 meters without any issue but application test is recommended under the specific use case scenarios.

Video Cable Applications

There are four solution strategies, depending on the required length of the video cable between the CNC and the monitor.

1. **Video connection kit for distances 5 metres or less**
   A 5 metres video connection kit (ANCA Motion 619-0-00-1933) is required. This kit contains:
   - 1 x 5 metres HDMI-HDMI copper cable (ANCA Motion ICN-1026-2256)
   - 2 x Ferrite Cores (ANCA Motion ICN-3132-0083)
   - 1 x 600mm Adaptor Cable HDMI-DVI (ANCA Motion 619-0-00-1398)

   Photograph of 5 metres video connection kit contents below:

Figure 6 - 5 metres video connection kit (ANCA Motion 619-0-00-1933)

Fit one Ferrite Core (ANCA Motion ICN-3132-0083) to each end of the 5 metres copper HDMI cable. Ensure that each half of the plastic housing contains a Ferrite Core before clipping it over the cable (see Figure 7). Use the key to release the latches if you need to remove the Ferrite Core from the cable.

Figure 7 - Ferrite core on copper HDMI cable

2. **Video connection kit for distances more than 5 metres**
   Video cable kits are available with 10 meters, 15 metres and 20 metres hybrid fibre optic cables.
   a) 10 metre video cable (ICN-1026-2293) connection kit (619-0-00-2233)
   b) 15 metre video cable (ICN-1026-2294) connection kit (619-0-00-2234)
   c) 20 metre video cable (ICN-1026-2255) connection kit (619-0-00-1934)

   Each kit contains:
   - 1 x HDMI Hybrid Optic Fibre Cable
   - 2 x Ferrite Cores (ANCA Motion ICN-3132-0084)
   - 1 x 600mm Adaptor Cable HDMI-DVI (ANCA Motion 619-0-00-1398)

   Photograph of kit contents below:

Figure 8 - video cable kit

Fit one ferrite core (ANCA Motion ICN-3132-0084) to each end of the HDMI hybrid optical fibre cable. Note that even though this is an optical fibre cable, there are still copper conductors employed, and the ferrite cores are necessary. Ensure that each half of the plastic housing contains a ferrite core before clipping it over the cable (see *Figure 9*). Use the key to release the latches if you need to remove the ferrite core from the cable.

Figure 9 - Ferrite core on hybrid optic fibre cable

WARNING:

The hybrid optical fibre cable is directional. Be sure to connect the "Source" end to the CNC, and the

"Display" end to the cable of monitor/adaptor. There are arrows marked on the hybrid optical fibre cable to show the signal direction, which is away from the CNC, and towards the monitor. When running hybrid optical fibre cable, please pull/place the cable carefully. Kinks due to careless handling will result in poor performance (or complete failure).

2.7.2 Stability of the Video Signal

There are multiple factors affecting the stability of the video signal. The quality of the cable as described in *2.7.1 Video Signal Cable* is one of the factors. It is also equally important to ensure the conductive noise is minimised.

It is recommended that only one Video output is connected (Primary and only Display) to the CNC, to avoid Windows unintendedly switching to the wrong display. Windows detects the connected monitors/cables and make decision to configure multiple displays which occasionally can cause malfunction of the Primary Display.

It is also recommended that the video cable is routed through to the CNC avoiding close proximity to high voltage or radiated source.

Running non-core software in the CNC might affect the display stability if the software stresses the display system. For instance, 3D simulation software might cause extensive use of the video RAM which might reduce the video bandwidth for the primary display.

Ensure that cabinet design complies with installation requirements of all the other ANCA Motion components in the system. ANCA Motion Field Applications Engineers can assist with a system audit.

3　Installation and Operation

3.1　Removing the CNC from the Packaging

Once the CNC is received please do the following:

- Remove CNC from packaging.
- Dispose of packaging in an environmentally friendly manner.
- Ensure delivered contents match your order.
- Any inconsistencies should be reported to your local ANCA Motion support agency.

3.2　Installation Guidelines

The CNC is designed to be installed in an enclosure which remains closed during operation. The CNC heat sink should be mounted perpendicularly to the ground to allow the best air flow for natural cooling. Please use M8 screws to mount the CNC bracket. Please refer to *5.2 Physical Dimensions for screw spacing.* The cabinet layout should be arranged in such a way that:

- System identification labels and markings can be easily sighted.
- External cabling can be installed and accessed easily.
- Ensure that the CNC is protected all the times from dust, heat and moisture.

WARNING:

Do not access the system bios to make changes to CNC settings. Unauthorised system changes may result in unreliable operation and possible serious damage to the CNC machine and/or personal injury.

3.3　Ventilation Spacing

When the CNC is installed in an enclosed cabinet please ensure adequate space for ventilation. The recommended ventilation spacing is larger than 50 mm is required to pass though the heat sink.
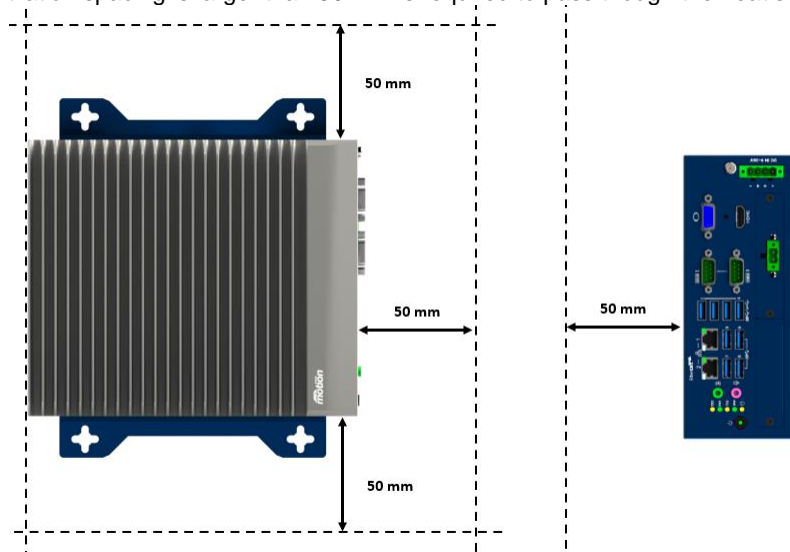

Figure 10 - Ventilation Spacing

NOTE:

Insufficient airflow or ventilation spacing may result in overheating of the CNC which may compromise its performance and lifespan.

3.4 Wiring Power to the CNC and Earthing Guidelines

Use correct wire sizes to connect to the main power connector.

Main Power - DCIN	Description	Wire Size
Pin 1, 4	0V_IN	1.0 ~ 0.75 mm^2
Pin 2, 3	+24V$_{DC}$_IN	1.0 ~ 0.75 mm^2

Table 18 - Main Power Wire Size

Connect the CNC to a central earth point in the machine electrical cabinet.
The minimum standards for the wire connecting to the earth stud (EARTH) are shown as below:

Wire Gauge	2.0 mm^2
Terminator	M4 Ring Lug
Torque	1 Nm

Table 19 - Earth Stud Wire Size

3.5 Powering the CNC

The CNC with AT variant is designed to be powered by a 24V$_{DC}$ supply and automatic power up when 24V$_{DC}$ supply be provided.

The CNC with ATX variant is designed to be powered by a 24V$_{DC}$ supply and used a dry contact remote switch to power up the CNC. Below illustration is the schematic diagram of remote switch signal and be careful that do not connect to any external voltage on there that it could be cause permanent damaged the CNC.
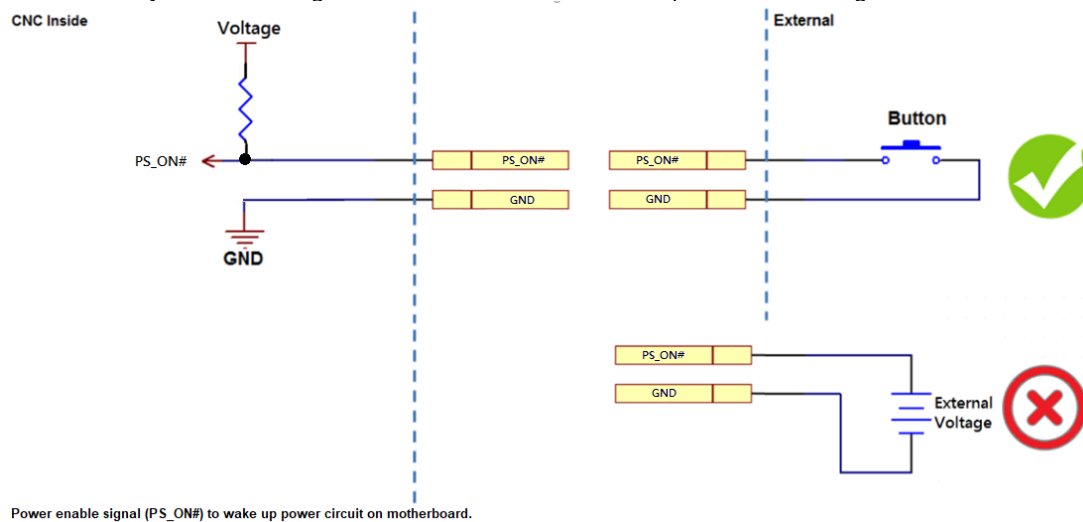

Figure 11 - Remote Switch Schematic Diagram

3.6 Operating Systems

The AMC6 CNC will be pre-installed with Windows operating system. An USB memory stick will also be delivered with the CNC as a recovery media.

Figure 12 - Platform Maintenance Kit

The type of operating system required for the user depends on the application:

PMK	Core Features
Platform Maintenance Kit 10 (PMK10)	Windows 10 IoT Enterprise 2016 LTSB INtime 6, Whitelist Antivirus

NOTE:

1. All required drivers are pre-installed with the operating system.

2. See *2.3 Ordering Information*

3. Regarding to how to configure the PMK, please see relevant PMK User Manual.

3.7 BIOS Information

The AMC6 BIOS is specifically optimised for real time performance. The settings of the BIOS can be viewed by entering BIOS screen, pressing **DEL** key during boot-up, and entering with the following password:

User Password: **anca**
Administrator Password: **service**

The user can change the boot device sequence, but the authority level of the above password will not allow the user to change other settings. Please contact ANCA Motion support if you need to make other adjustments.
The BIOS also contains critical manufacturer information such as part number, serial number, vendor name, and product name. Please do not attempt to modify the BIOS in anyway because it can invalidate the device warranty.

3.8 Connecting External Devices to the CNC

When connecting any device to the CNC, please ensure that both the device and CNC are not connected to a power supply. Ensure all relevant devices' documents are read before installing and connecting peripherals to the CNC. All cables must be handled properly; handling should be done on the plug. ANCA Motion does not recommend disconnecting cables / wires from devices.

> **WARNING:**
>
> 1. If installed, please ensure the power supply has been turned off for at least five minutes before connecting any device to the CNC, or it will allow any residual voltages to discharge.
>
> 2. Before connecting the $24V_{DC}$ power supply to the CNC, please ensure the correct voltage is being supplied.

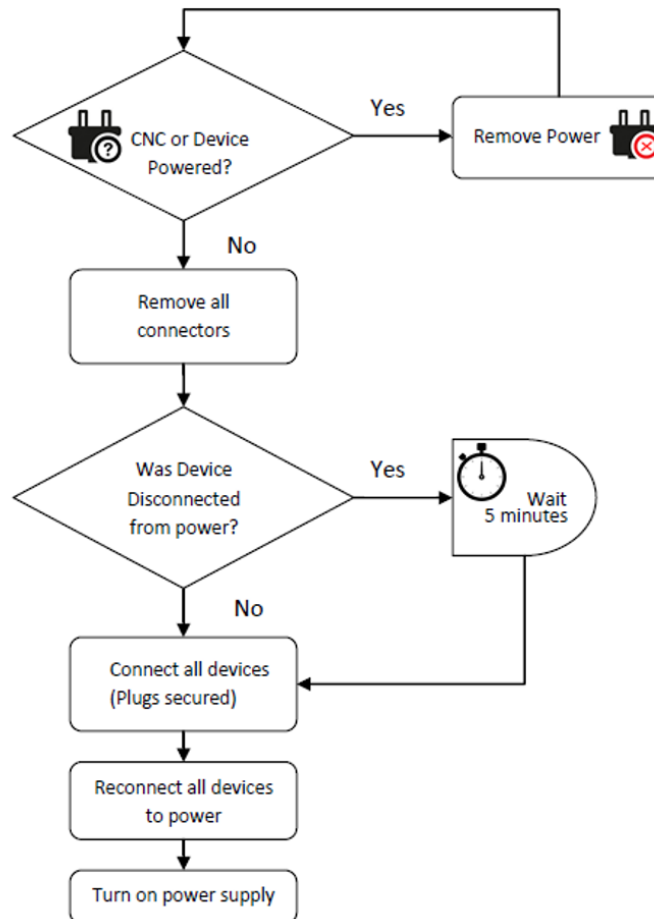When connecting devices to the CNC, the following procedure should be followed:

Figure 13 - Connecting Procedure

4   Trouble Shooting

Symptom	Possible Cause
Nothing happens when CNC is turned on	✓ Check power supply to the CNC ✓ Check system on switch
LCD displays "no video input"	✓ Check VGA connection ✓ Check other display connections
System displays "Boot Disk Failure"	✓ Check any attached USB flash drives or USB DVD drives
System is running but software doesn't operate	✓ Software fault or fault external to CNC
CNC operating system locks up during boot and or operation	✓ Check system for virus / spyware ✓ Faulty hardware component ✓ Temperature limit exceeded
System is running slow when idle	✓ Check system for virus / spyware ✓ Check available HDD space
System reboots during operation	✓ Check power supply to the CNC ✓ Check system for virus / spyware ✓ Faulty hardware component ✓ Temperature limit exceeded

Table 20 - Trouble Shooting

5 Product Specifications

5.1 Technical Specifications

5.1.1 General Specifications

Dimensions (W x H x D) (mm)	230 x 250 x 82.2 Details refer to section *5.2 Physical Dimensions*
Weight (kg)	2.8
Nominal Input Voltage	$24V_{DC}$
Input Voltage Range	$20\text{-}28V_{DC}$
Nominal Input Current	5A
Maximum Power Consumption	116W
IP Protection	20
Ambient Temperature	0-50 °C (Operating)
Relative Humidity	95% @ 40 °C non-condensing (Operating)
Vibration	3 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct/min., 1 hr/axis, x,y,z 3 axes (Operating)
Shock	20 G, IEC 60068-2-27, half sine, 11 ms duration. (Operating)

Table 21 - General Specifications

5.1.2 Hardware Specifications

CPU	Intel® Core™ i5-9500TE 2.2GHz 6 Cores Processor
Chipset	Intel H310
Memory	8GB DDR4
Graphics	**Controller**: Intel® UHD Graphics 630, supports DirectX12 and OpenGL 4.5 **Graphics Video Max Memory**: 1.7 **VGA**: supports max resolution 2048x1152 @ 60 Hz **HDMI 2.0**: supports max resolution 3840x2160 @ 30 Hz
Ethernet	GbE LAN1: Intel i219V GbE LAN2: Intel i210IT
SSD	64GB mSATA module SATA Revision 3.2 compliant Supports Fragment Writing and Flush Manager
Rear I/O	**VGA** x 1 **HDMI** x 1 **Ethernet** x 2 **USB3.0** x 4 **USB2.0** x 4 **Audio** x 2 (Mic-in, Line-out) **Serial COM Port** x 2 (Supports RS-232/422/485 function by BIOS selection) **Remote Switch** x1 (only available on ATX variant)
Watchdog Timer	Interval programmable 1 ~ 255 sec/min

Table 22 - Hardware Specifications

5.1.3 Supported Field Buses

EtherCAT Interface	Standard**: IEC 61158** Physical Comm**: IEEE-802.3** LED Indicators**: Connect/Activity** Connector**: RJ45** Data Rate**: 100Mbps** PC Interface**: Onboard LAN2: Intel i210IT (LAN2)**

Table 23 - Field Buses

5.2 Physical Dimensions

All dimensions given are in mm.

FRONT VIEW

SIDE VIEW

Unit: mm

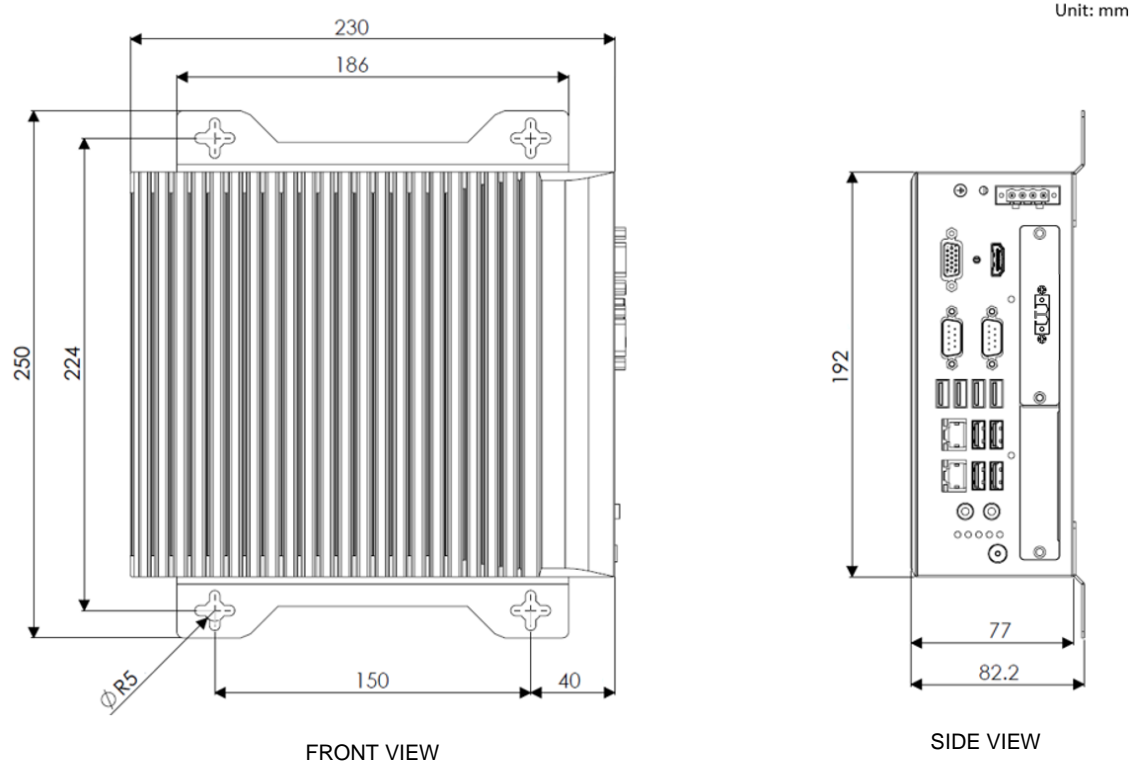**Figure 14 - Physical Dimension**

5.3 Mounting Bracket Setup

Please see below instruction for setup the bracket on AMC6 CNC:
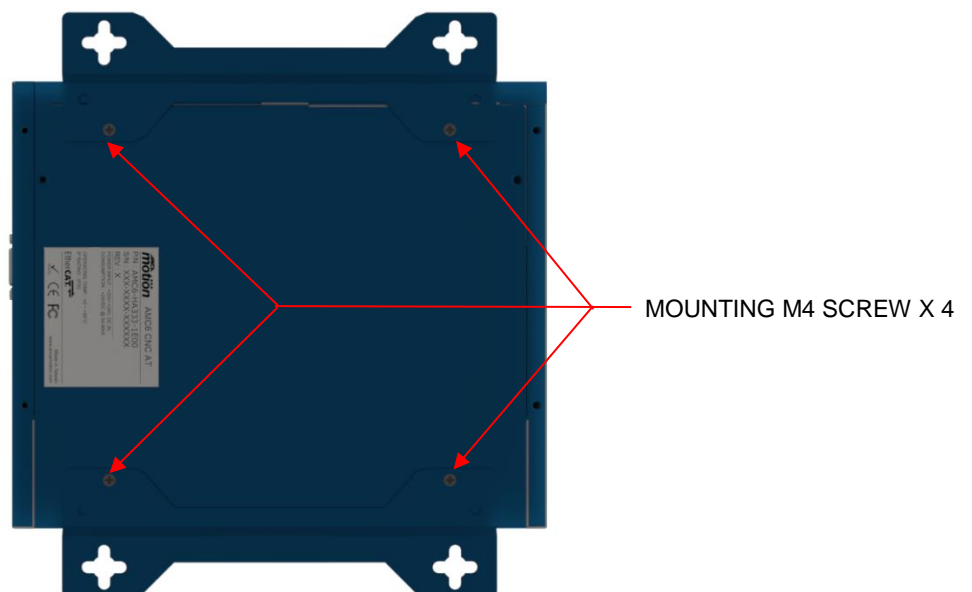

MOUNTING M4 SCREW X 4

Figure 15 - Mounting bracket setup

6 Certificates and Approvals

6.1 CE Approval

This product is in conformance with the following European Directives while installing in accordance to the installation instructions contained in the product documentation:

2014/30/EU   **EMC Directive**

To demonstrate conformity, this product has been designed to adhere to the following standards:

Item	Test Standard	
Emission	EN 55032:2015	Electromagnetic compatibility of multimedia equipment. Emission requirements
Immunity	EN 55024:2010/A1:2015	Information technology equipment - Immunity characteristics - Limits and methods of measurement

Table 24 - Certificate

The EC declarations of conformity are available for the relevant authorities at the following address:

ANCA GmbH
Alois-Senefelder-Str.4
68167 Mannheim
Germany

6.2 FCC Certification

The AMC6 CNC complies with the Federal Communication Commission standard FCC Part 15 subpart B Class A and its operation is subjected to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference which may cause undesired operation.

6.3 Software License Agreement

Software agreements for any software installed in the AMC6 CNC must be observed.

6.4 Low Voltage Directive

The AMC6 CNC meets 2014/35/EU LVD Directive, Article 1. The input voltage is DC 24V and not included in 75V~1500V for direct current. Its operation is in safe low voltage range.

7 Product, Sales and Service Enquiries

After reading the user manual, if you still require assistance of installation, training or other customer support issues, please contact the nearest ANCA Motion Customer Service Office in your area for details.

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