

The **EtherCAT** Master based embedded motion controller platform for industrial robots.

CG4300-DMC

DAINCUBE Corp.

ARM Cortex-A9 Linux system



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Preface

Copyright notice

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Important information

This documentation is intended for qualified audience only. The product described herein is not an end user product. It was developed and manufactured for further processing by trained personnel.

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Product support

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Safety precautions

Be sure to observe all of the following safety precautions.

Strict observance of these warning and caution indications are a **MUST** for preventing accidents, which could result in bodily injury and substantial property damage. Make sure you fully understand all definitions of these terms and related symbols given below, before you proceed to the manual.

Symbols

The following symbols may be used in this specification:



Warnings indicate conditions that, if not observed, can cause personal injury.

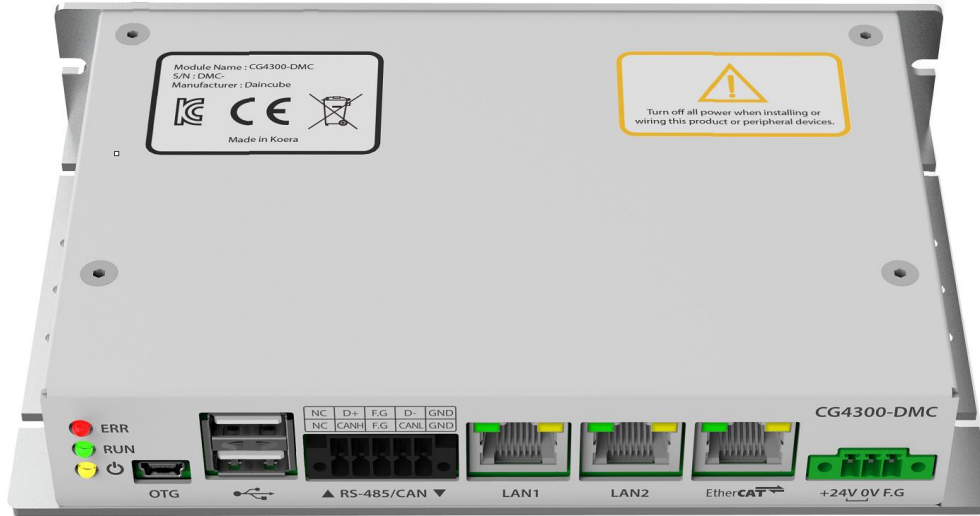


Cautions warn the user about how to prevent damage to hardware or loss of data.

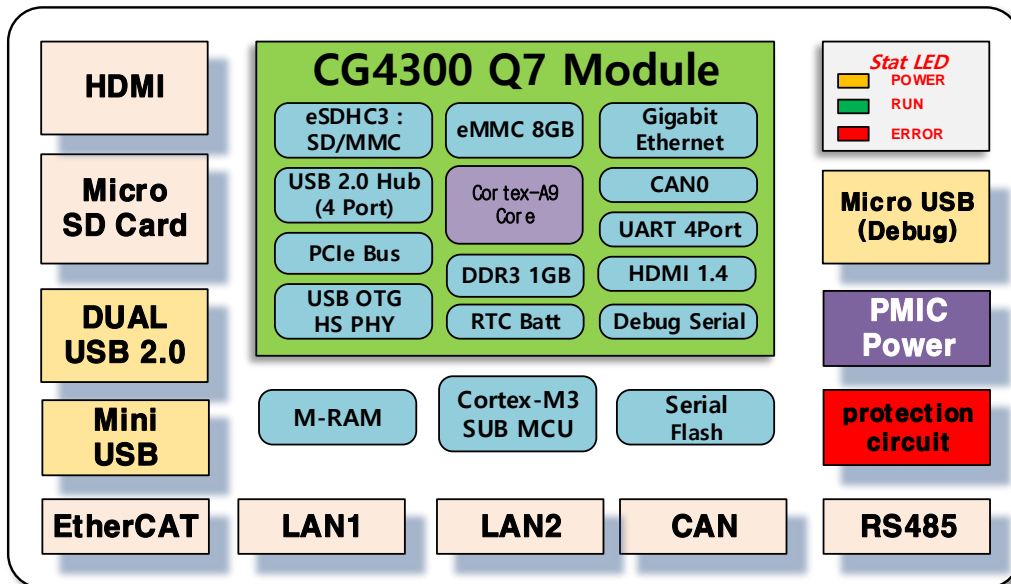


Notes call attention to important information that should be observed.

Product Design



Main board Block diagram



EtherCAT Master Platform specification

Item	Specification
Processor	<ul style="list-style-type: none"> ➤ i.MX6Q: Quad, 1.0GHz Cortex-A9 Quad core ➤ i.MX6S: Solo, 1.0GHz Cortex-A9 Single core (option)
Memory	➤ DDR3 memory 1GB/2GB(option)
Internal Storage	<ul style="list-style-type: none"> ➤ 8GB eMMC onboard ➤ 4GB ~ 16GB (option)
Serial Flash	➤ 128KB Boot ROM
M-RAM	➤ 4Mbyte or 512Kbyte (option)
RTC	➤ Lithium 7 years(Max)
Graphics	➤ HDMI: V1.4 resolution up to 1920x1200 @60Hz

External Port	<ul style="list-style-type: none"> ➤ USB A Type 2port : USB2.0 ➤ Micro SD Card ➤ EtherCAT Master 100 base-T 1 port ➤ Ethernet 10/_100Base-T 2 port ➤ Isolated RS-485 ➤ Isolated CAN(Controller Area Network) ➤ LED X 3 : power , Error , Run
Port for development	<ul style="list-style-type: none"> ➤ Mini USB : USB OTG Port ➤ Micro USB : Debug Serial
Power Supply	➤ DC +24V ±5% / Max. 300mA
Unit / Paint color	<ul style="list-style-type: none"> ➤ Base Aluminum 6061 : Anodizing natural Color ➤ TOP Cover : EGI Coating Ivory color
Size	➤ 168 x 102.5 x 30 mm
weight	➤ 455g
Environment	<ul style="list-style-type: none"> ➤ Operating temperature: 0℃ to +50℃ (Fanless) ➤ Storage temperature: -20℃ to +70℃ ➤ Humidity : 10% to 90% (Non-condensing) ➤ Altitude: Max. 2000 meters ➤ Pollution Degree 2 ➤ Indoor Use Only (실내사용 용)
Cooling method	<ul style="list-style-type: none"> ➤ Ambient ➤

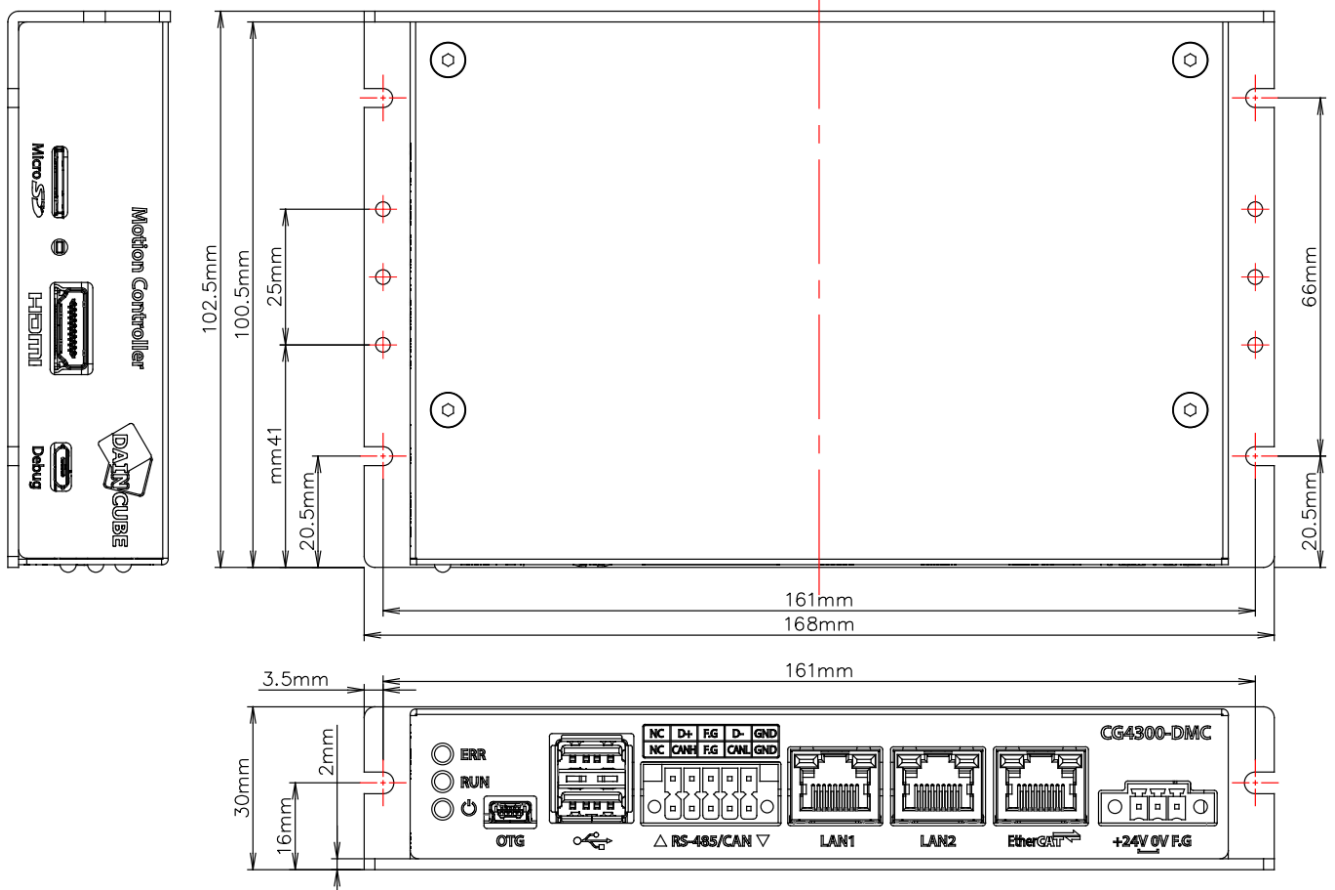
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SW Specification

Item	S/W Specifications
OS	• Embedded Linux 4.1.15
Real-time OS	• Xenomai 2.6.5
EtherCAT Master	• Software EtherCAT Master Stack Ver 1.5.2
File System	* Xwayland
GUI	• Qt 5.8.0 , Qt creator : 4.2.1

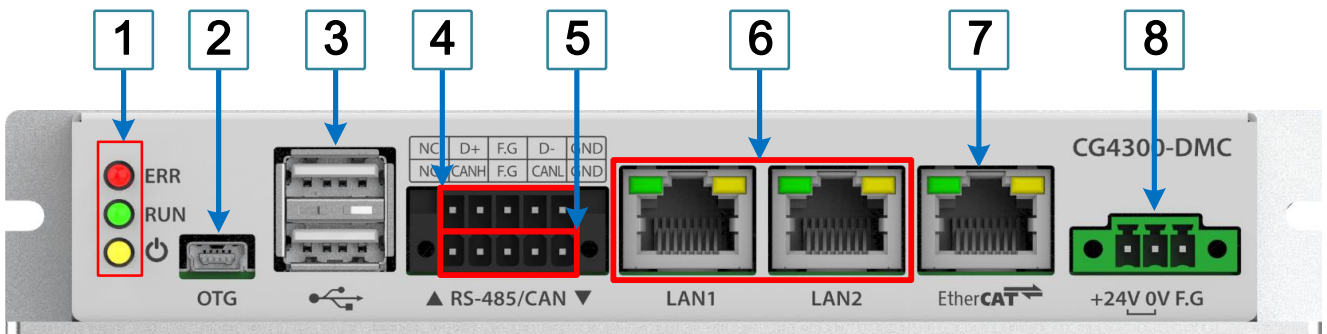
Size

- Case: 168 mm x 102.5 mm x 30mm (L x W x H)



Interface

■ Front

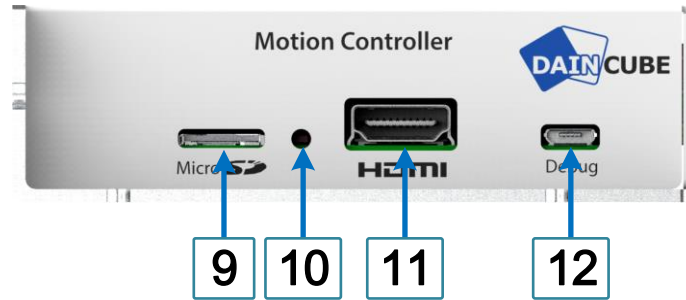


1. State LED	ERR : RED RUN LED : GREEN Power LED: Yellow
2. USB Type B	S/W Update Port
3. USB Type A	USB 2.0 - Usb Memory, Keyboard, Mouse Etc.
4. Terminal Block 3.5mm Pitch	RS485 :NC, RS485_D+, RS485_D-, GND
5. Terminal Block 3.5mm Pitch	CAN :NC, CANH, CANL, GND
6. RJ45	LAN1 : Ethernet 10/_100Base-T LAN2 : Ethernet 10/_100Base-T
7. RJ45	EtherCAT Master Port

8. Terminal Block 3pin/3.5mm pitch | Power input

Use shielded CAT5e/6 cables for Ethernet and EtherCAT communication.

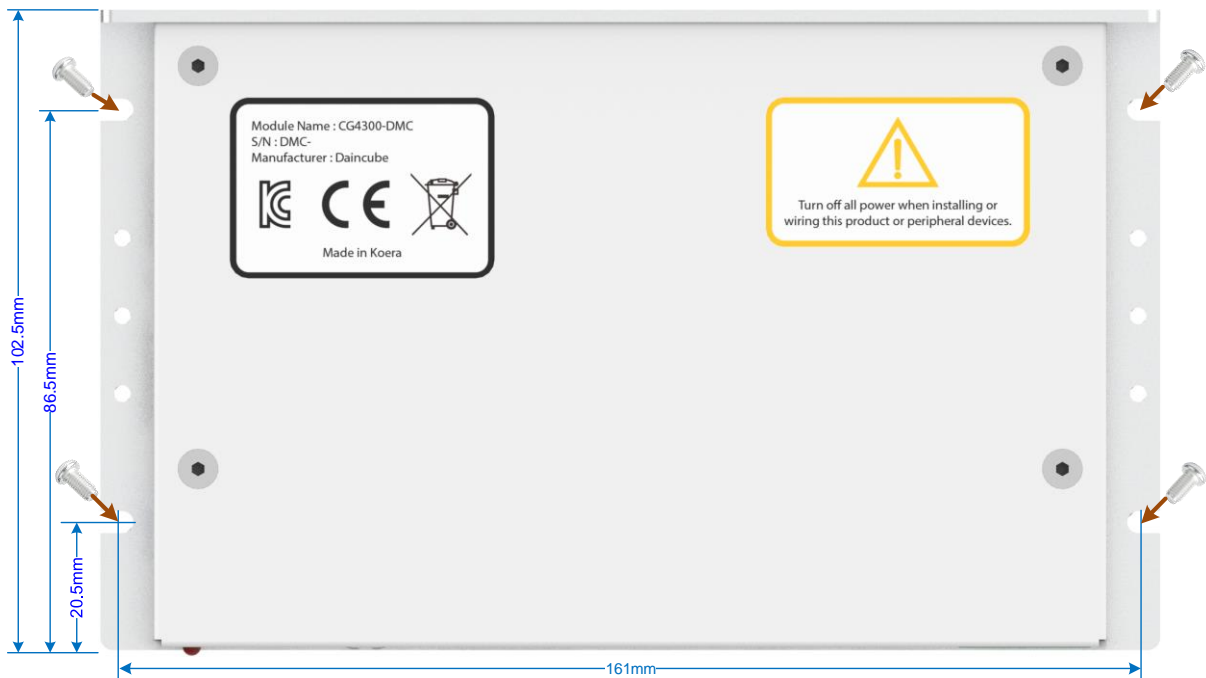
■ **Side Part**



[그림 오류! 지정한 스타일은 사용되지 않습니다..1] 측면부 구성

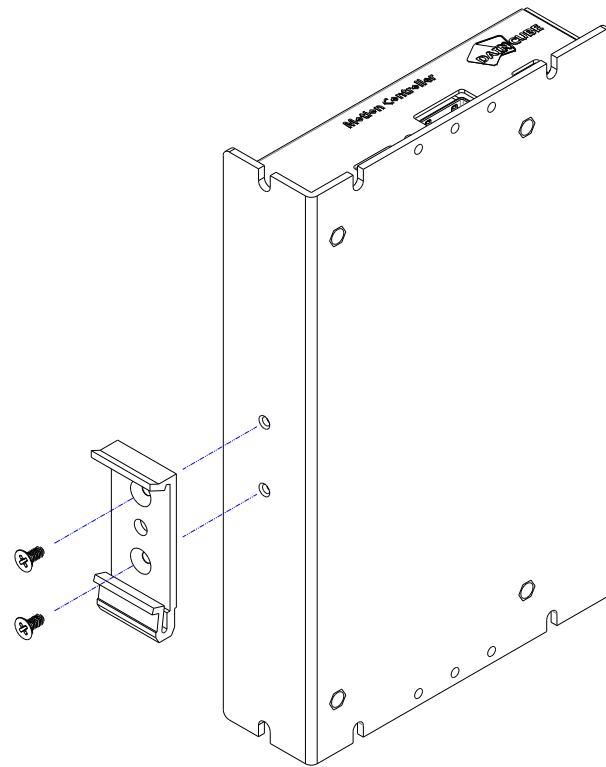
9. Micro SD Card	Micro SD Memory
10. Reset	System Reset Switch
11. HDMI	Video Port
12. Micro USB	Debugging Serial

● **Back side**

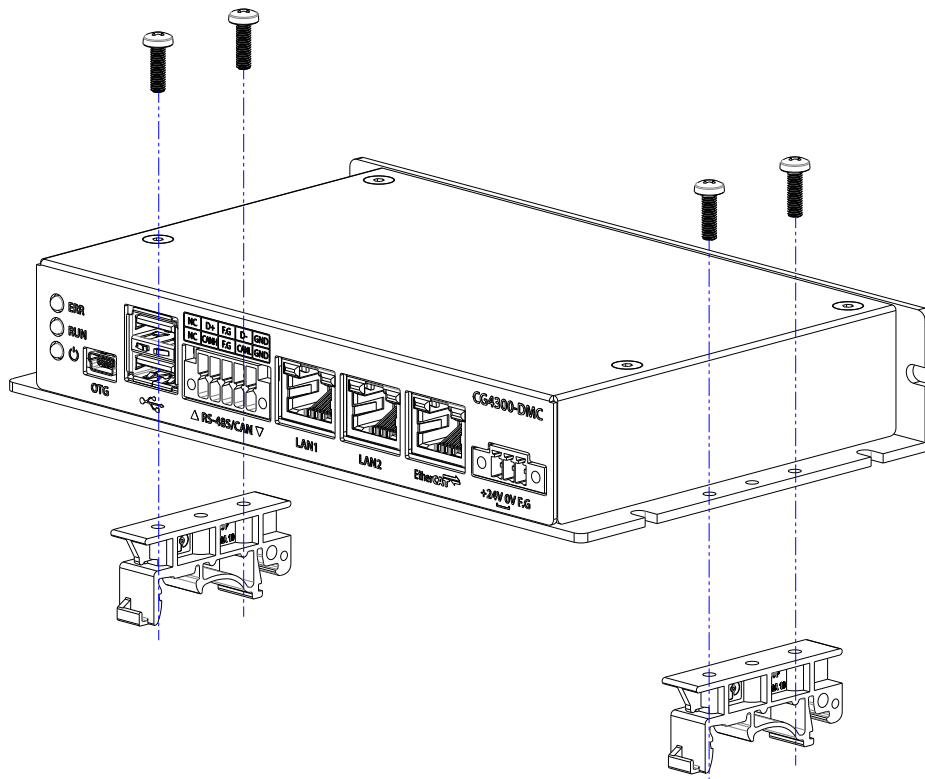


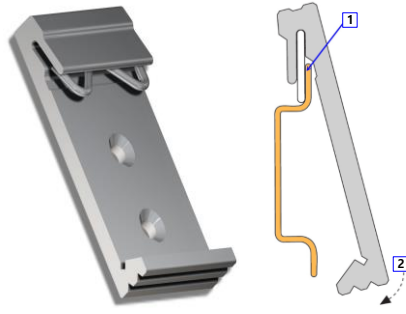
[그림 오류! 지정한 스타일은 사용되지 않습니다..2] 벽면 설치

■ Din Rail



- PHOENIX 1201578





DM-A35-20mm