

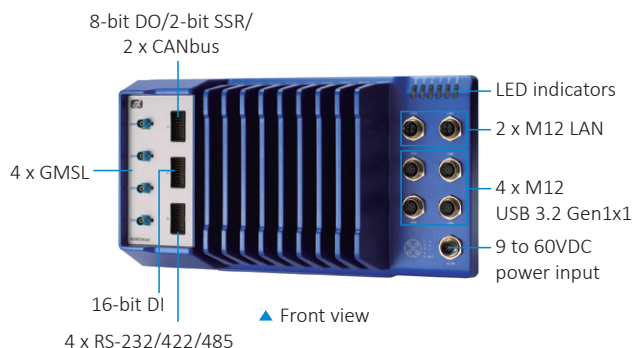
ROBOX500

ROS 2 AMR Controller for Navigation and Control Solutions

GMSL ::2

Features

- Certified for IEC 60721-3-5 5M3
- 13th/12th gen Intel® Core™ i7 processor (Alder Lake-P), 28W/15W TDP
- 4-channel GMSL camera
- 4 RS-232/422/485 and 2 CAN 2.0A/B
- Supports Wi-Fi/Bluetooth/5G/LTE
- Wide operating temperature from -40°C to +70°C
- Wide voltage input from 9 to 60 VDC
- Supports Linux Ubuntu 22.04 LTS
- Supports Axiomtek AMR Builder Package



▲ Rear view

Specifications

Standard Color	Blue	
Construction	Aluminum extrusion and heavy-duty steel, IP40	
CPU	13th/12th gen Intel® Core™ i7 processor, 28W/15W TDP	
System Memory	2 x DDR4 SO-DIMM slot, up to 64GB	
System I/O Outlet	Front Side 2 x M12 X-code GbE Ethernet 4 x M12 A-code USB 3.2 Gen1x1 & USB 2.0 1 x DIO with isolation, 16-CH DI, 8-CH DO, 2-CH SSR 4 x 4-wire RS-232/422/485 2 x CAN 2.0 A/B with isolation 4 x GMSL camera interface (FAKRA universal type) 4 x Antenna opening	Maintenance Side 1 x HDMI (4K x 2K @30Hz) 1 x Mic-in 1 x Line-out 1 x RJ-45 GbE 1 x USB 2.0 (Type A) 1 x USB 3.2 Gen1x1 (Type A)
Storage	1 x M.2 Key M 2280 for NVMe	
Expansion Interface	1 x M.2 Key E 2230 for Wi-Fi/Bluetooth module 1 x M.2 Key B 3052 for 5G module 1 x M.2 Key M 2242 slot for AI module 1 x SIM slot	
System Indicator	1 x Green LED for system power-on 1 x Orange LED for M.2 storage 2 x Green/orange LED for GbE Ethernet 2 x Green LED for user-defined functions	
Power Supply	9 to 60VDC, typically 24V or 48V battery	
Operating Temperature	-40°C to +70°C (-40°F to +158°F) *For the 15W SKU, at 0.5 CFM airflow, the CPU frequency reduces to 400 MHz when the temperature reaches 70°C (158°F).	

Specifications

Humidity	10% to 95%, non-condensing
Vibration Endurance	IEC 60721-3-5 5M3 vibration operating; 5 Grms (5 to 500Hz, X/Y/Z direction; random, operating)
Shock	IEC 60721-3-5 5M3 shock operating
Dimensions	289 mm (11.38") (W) x 106.5 mm (4.19") (D) x 161.7 mm (6.37") (H)
Weight (net/gross)	3.87 kg (8.53lb)
Certifications	CE, FCC Class A, and UKCA
OS Support	Linux Ubuntu 22.04 LTS

Ordering Information

Standard

ROBOX500-AD-174 (P/N: E27V500100)	Fanless AMR controller Intel® Core™ i7-1265UE 15W TDP, 3 LAN, 6 USB, four 4-wire RS-232/422/485, 2 CAN, 16 DI, 8 DO, 4 GMSL, HDMI, Mic-in/Line-out, and 9 to 60 VDC
ROBOX500-AD-274 (P/N: E27V500101)	Fanless AMR controller Intel® Core™ i7-1270PE 28W TDP, 3 LAN, 6 USB, four 4-wire RS-232/422/485, 2 CAN, 16 DI, 8 DO, 4 GMSL, HDMI, Mic-in/Line-out, and 9 to 60 VDC
ROBOX500-RP-274 (P/N: E27V500102)	Fanless AMR controller Intel® Core™ i7-1370PE 28W TDP, 3 LAN, 6 USB, four 4-wire RS-232/422/485, 2 CAN, 16 DI, 8 DO, 4 GMSL, HDMI, Mic-in/Line-out, and 9 to 60 VDC

Software Support

Linux Ubuntu 22.04 LTS
Axiomtek AMR Builder Package
Intel® OpenVINO™
ROS/ROS 2

Packing List

Wall mount kit
M12 power cable
Thermal pads
Screws
Wire fixer

Optional Accessories

590000030900	CAN and DO L=3M
590000031100	RS-232 L=3M
590000031000	RS-422/485 L=3M
590000030800	DI L=3M
590000031300	FAKRA for GMSL camera
590000031200	M12 USB cable L=1.5M
594B8152710E	M12 LAN cable L=1.8M
E9C1914J05	DDR4-2666 SO-DIMM module 8GB (system operation temp. -40°C to +70°C)
E9C1915J07	DDR4-2666 SO-DIMM module 16G (system operation temp. -40°C to +70°C)
E9C1000016	DDR4-3200 SO-DIMM module 32G (system operation temp. -40°C to +70°C)
E9C2000076	M.2 NVMe SSD module 256GB (system operation temp. -40°C to +70°C)
E9C2000074	M.2 NVMe SSD module 512GB (system operation temp. -40°C to +70°C)
E9C2000274	M.2 NVMe SSD module 1TB (system operation temp. -40°C to +70°C)
E9C2000073	M.2 NVMe SSD module 1024GB (system operation temp. -40°C to +70°C)
E9C2000293	M.2 NVMe SSD module 128GB (system operation temp. -40°C to +70°C)

5G module

LTE module

* Specifications and certifications may vary based on different requirements.

Dimensions

