



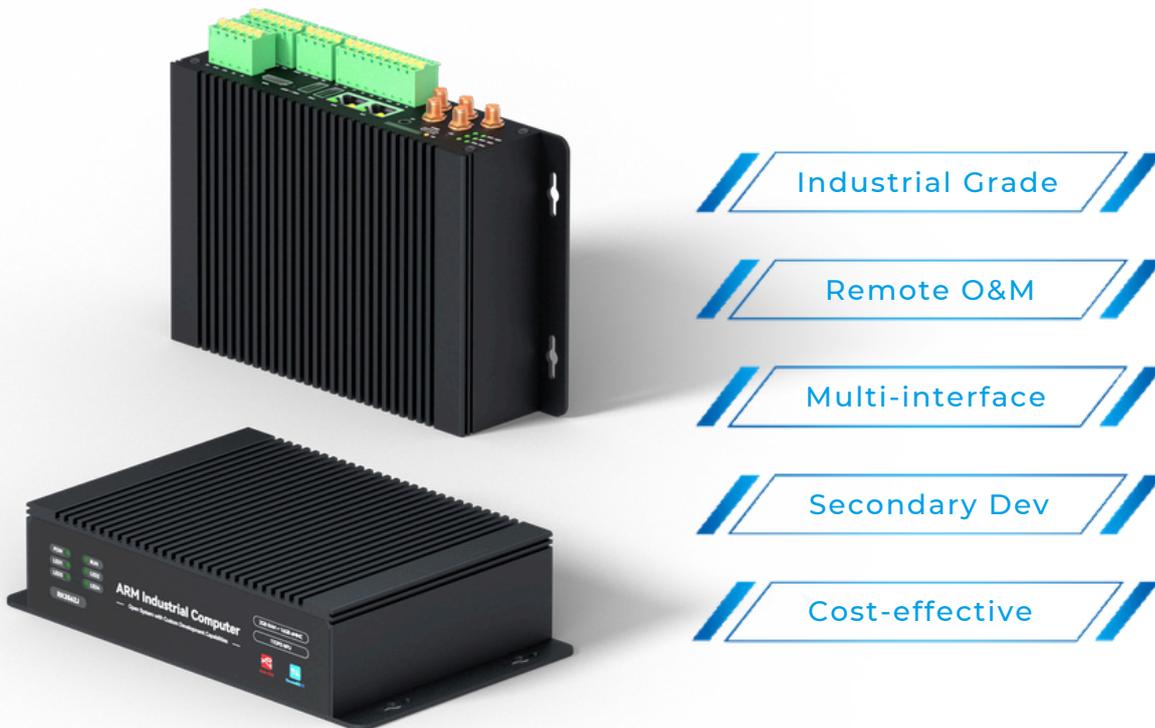
PRODUCT SPECIFICATION

EC301



Devanture Technologies
(S) Pte. Ltd.

Product Introduction



The **EC series ARM industrial PC** are specifically designed for harsh industrial environments, featuring industrial-grade reliability (operating temperature: -40~85°C). They integrate rich interfaces (Ethernet/RS485/CAN, etc.) and multiple networking methods (4G/5G/Wi-Fi/Ethernet). They come with free remote management software and comprehensive SDK/documentation to facilitate quick deployment and customization.

Based on an optimized Linux system, the EC series is pre-installed with **Node-RED 4.0** and **NeuronEX-Lite**. **Node-RED** enables visual drag-and-drop programming for rapid business logic building, while **NeuronEX-Lite** as lightweight edge computing software supports millisecond-level device connectivity via multi-protocol compatibility. This "Dual-N" architecture seamlessly integrates development efficiency with professional data acquisition, enhancing the reliability of industrial IoT solutions.

Product Specification

Model		EC301
Core Configuration	CPU	RK3562J 4 × Cortex-A53@1.8GHz
	RAM	2G
	eMMC	16G
	OS	Linux
	GPU	Mali G52 2EE
	Computing Power	1TOPS
	SD Card	Micro SD Card Socket
	SSD	M.2 NVMe SSD Socket*
	Module	Quectel - Cat.4 (4G)
4G (Optional)	Supported Bands	LTE-FDD: B1/B3/B5/B8 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B5/B8 GSM: 900MHz/1800MHz
	Transmit Power	LTE-TDD: Class 3 (23 dBm ±2 dB) LTE-FDD: Class 3 (23 dBm ±2 dB) WCDMA: Class 3 (24 dBm +1/-3 dB) PCS1900 8-PSK: Class E2 (26 dBm ±3 dB) DCS1800 8-PSK: Class E2 (26 dBm ±3 dB) EGSM900 8-PSK: Class E2 (27 dBm ±3 dB) GSM850 8-PSK: Class E2 (27 dBm ±3 dB) PCS1900: Class 1 (30 dBm ±2 dB) DCS1800: Class 1 (30 dBm ±2 dB) EGSM900: Class 4 (33 dBm ±2 dB) GSM850: Class 4 (33 dBm ±2 dB)
	Bandwidth (Max rates are theoretical)	LTE-FDD: Max 150Mbps (DL) / Max 50Mbps (UL) LTE-TDD: Max 130Mbps (DL) / Max 30Mbps (UL)

* Form Factor: M.2 (2280), Slot: M-KEY, Interface: PCIe 3.0 + NVMe

Product Specification

5G (Optional)	Module	Quectel - 5G
	Supported Bands	5G NR SA: n1/n28/n41/n77/n78/n79 5G NR NSA: n41/n78/n79 LTE-FDD: B1/B2/B3/B5/B7/B8/B20/B28 LTE-TDD: B34/B38/B39/B40/B41 WCDMA: B1/B2/B5/B8
	Transmit Power	5G NR n41/n78/n79 HPUE: Class 2 (26 dBm +/-3 dB) 5G NR n77/n78/n79: Class 3 (23 dBm +/-3 dB) 5G NR n28: Class 3 (23 dBm +/-2.5 dB) 5G NR n1/n41: Class 3 (23 dBm +2 dB) LTE B41 HPUE: Class 2 (26 dBm +2 dB) LTE: Class 3 (23 dBm +2 dB) WCDMA: Class 3 (23 dBm ±2 dB)
	Bandwidth (Max rates are theoretical)	NSA: 2.2 Gbps (DL) / 575 Mbps (UL) SA: 2 Gbps (DL) / 1 Gbps (UL) LTE: 600 Mbps (DL) / 150 Mbps (UL)
Wi-Fi	Wireless Standard	802.11a/b/g/n/ac/ax (Wi-Fi6)
	Operating Frequency Band	Dual-band (2.4GHz + 5GHz)
	Operating Mode	STA + AP + Wi-Fi Direct modes
	Maximum Data Rate	600.4 Mbps (20/40/80MHz bandwidth)
	Technical Support	STBC, Beamforming, Wi-Fi 6 TWT, LDPC, MU-MIMO, OFDMA
Ethernet Ports	Security Encryption	WEP/WPA/WPA2/WPA3-SAE Personal, MFP
	WAN	1 × 10M/100M/1000M Auto-Negotiation
USB	LAN	1 × 10M/100M Auto-Negotiation
	2.0	2 Ports
RS232	Type-C	1 Port (Debugging Interface)
	Interface Quantity	1 Port
	Connection Terminals	RX、TX、GND
	Baud Rate	2400~921600bps
	Data Bits	7、8
	Stop Bits	1、2
	Parity	NONE (No Parity), EVEN (Even Parity), ODD (Odd Parity)
Protection	Anti-static, Anti-surge	
RS485	Interface Quantity	2 Ports
	Connection Terminals	A、B
	Baud Rate	2400~921600bps
	Data Bits	7、8
	Stop Bits	1、2
	Parity	NONE (No Parity), EVEN (Even Parity), ODD (Odd Parity)
Protection	Electrical Isolation, Anti-static, Anti-surge	

Product Specification

CAN	Interface Quantity	2 Ports
	Connection Terminals	H, L
	Arbitration ID Segment	
	Baud Rate	40K~1Mbps
DI	Protection	Electrical Isolation, Anti-static, Anti-surge
	Interface Quantity	2 Ports
	Connection Terminals	DI × 2, COM × 2
	Detection Range	NPN/PNP: 5~28V supported
DO	Protection	Optocoupler Isolation, Anti-static, Anti-surge
	Interface Quantity	2 Ports
	Output Type	NPN
	Output Current	5A/DC12~24V
Indicator Lights	Protection	Optocoupler Isolation, Anti-static, Anti-surge
	LED	6 pcs (4 user-programmable)
Multimedia	HDMI	1 Port
	3.5mm Audio Jack	1 Port
Electrical Parameters	Certification	CE
	Operating Voltage	9~36V
	Operating Current	350mA/12V
Environmental Parameters	Operating Temperature	-40~85°C
	Storage Temperature	-40~85°C
	Operating Humidity	0~95%RH (non-condensing)
	Storage Humidity	0~95%RH (non-condensing)
Mechanical Parameters	Dimensions	200×122×47mm
	Enclosure Material	Aluminum Alloy Profile
	Installation Method	Wall-mounted / Desktop
	Heat Dissipation	Passive Cooling
	Reset Button	Press & hold for 10s to reset
EMC	Electrostatic Discharge (ESD)	Air Discharge: Level 3 ±8KV Contact Discharge: Level 2 ±4KV
	Surge (SURGE)	Level 2 ±1KV
	Electrical Fast Transient (EFT)	Level 2 ±1KV
	Node-RED	Pre-installed (Node-RED 4.0)
	NeuronEX	Pre-installed (NeuronEX-Lite)
Software Features	Web Configuration	Pre-installed (FUXA)
	Secondary Development	Supported
	Open System	Supported

Wiring Instruction

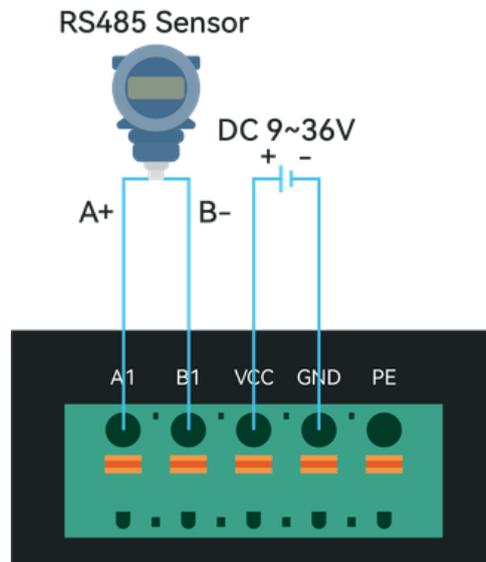


Interface Identification Diagram - 1

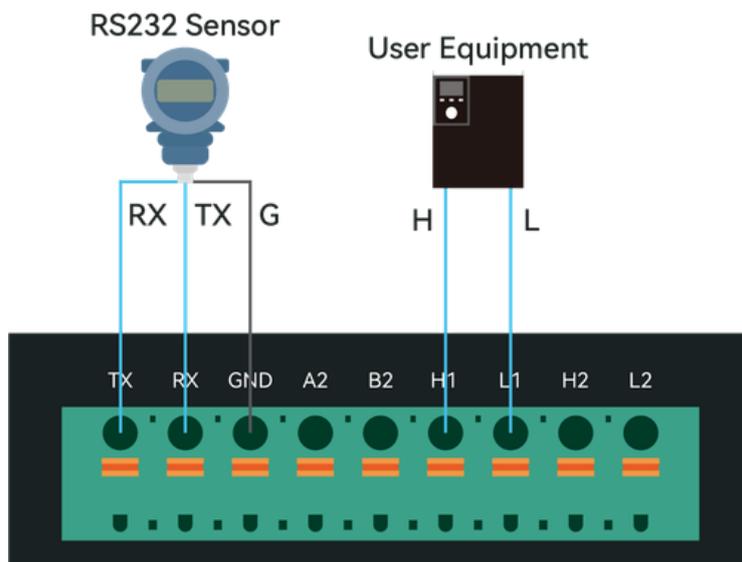


Interface Identification Diagram - 2

Wiring Instruction



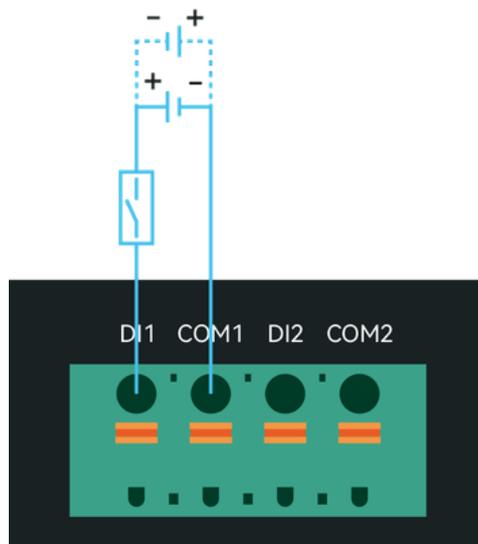
Power Supply & RS485 Wiring Diagram



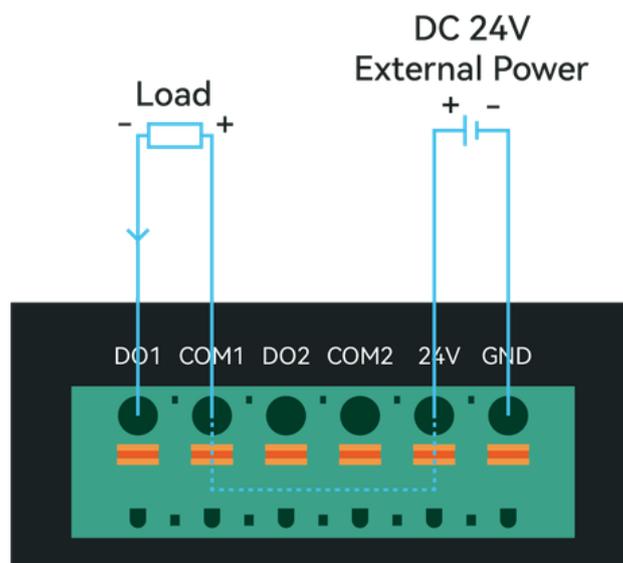
RS232 & CAN Wiring Diagram



Wiring Instruction



DI Wiring Diagram

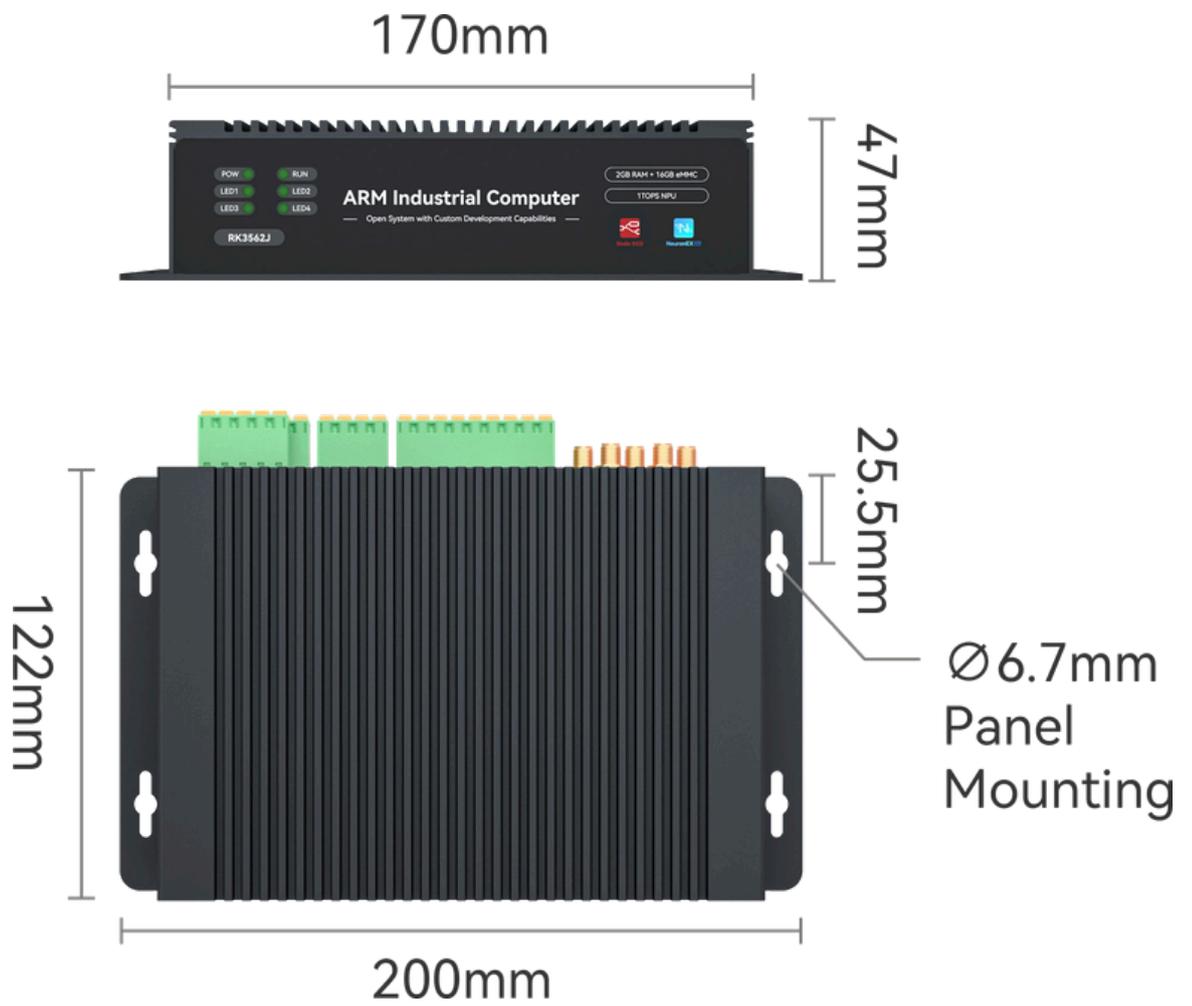


DO Wiring Diagram

* COM and 24V are internally connected. For load wiring, simply connect the positive pole (+) to COM and the negative pole (-) to DO.



Installation Instruction



Product Size



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