

A2 Series Edge Computing Gateways



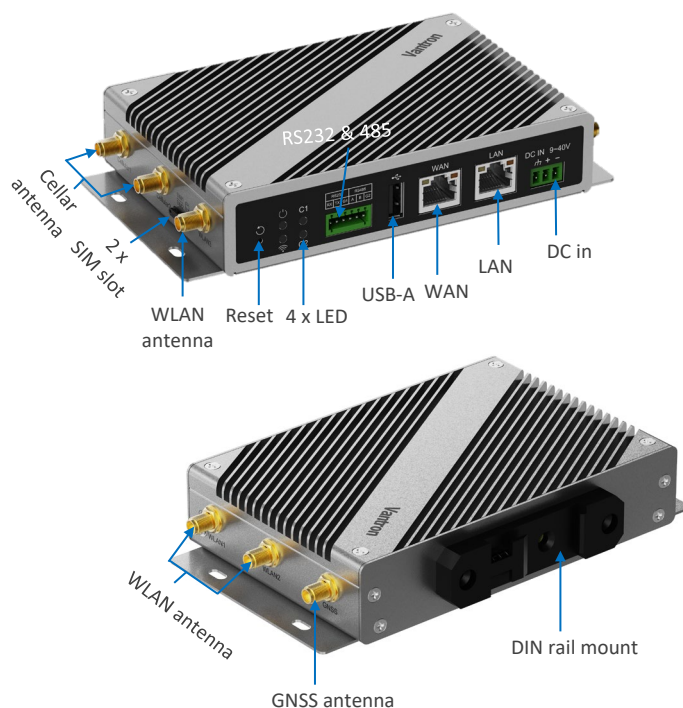
Product Overview

Vantron A2 series consists of multi-network integrated edge gateways engineered for entry-level commercial and industrial IoT deployments. Equipped with native Wi-Fi 6 and dual Gigabit Ethernet, the lineup provides optional multi-RF modules including 4G/5G RedCap cellular, GNSS and Wi-Fi HaLow, allowing customers to select tailored variants for their unique field scenarios.

Leveraging the proven field-proven merits of the existing gateway product families, the A2 series expands functional capabilities and optimizes bill-of-material efficiency for improved cost-performance. Equipped with a USB 2.0 Type-A port and optional RS232 and RS485 serial interfaces, the gateways enable flexible local device access.

The modular architecture optimizes cost efficiency, delivers broad scenario adaptability and reduces long-term operational overhead, making this series an ideal edge access solution for industrial automation, smart buildings, and cold-chain logistics.

Layout and Features



- ❖ On-board support for Wi-Fi 6 and dual GbE
- ❖ Optional RF including HaLow, 4G/5G RedCap, GNSS
- ❖ Compatible with mainstream industrial protocols
- ❖ Edge data collection & local processing over serial port
- ❖ Hybrid wired/wireless networking support
- ❖ BlueSphere GWM for centralized deployment & control
- ❖ DIN rail mount & wall mount
- ❖ Industrial extended temperature and input voltage range
- ❖ Cost-efficient modular configurable design

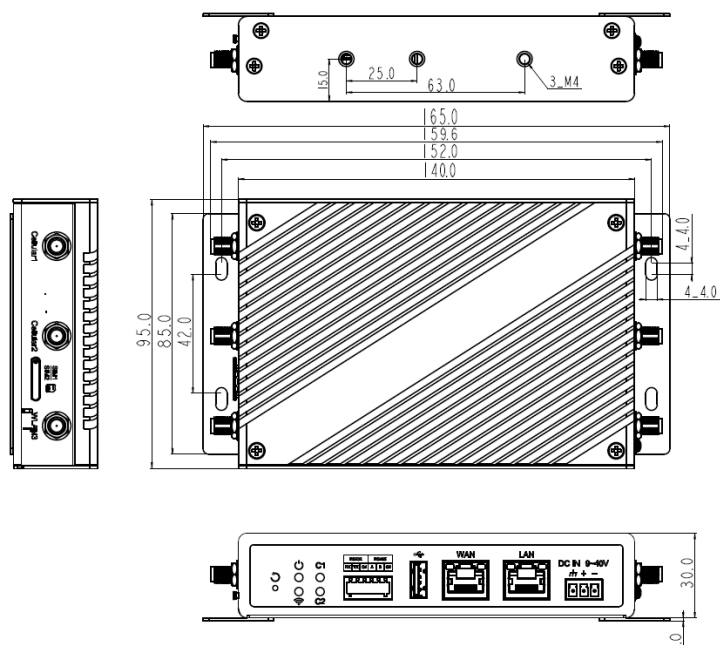
Specifications

A2 Series			
HARDWARE			
System	CPU	Dual-core ARM Cortex-A53 processor, 1.0GHz (Max.)	
	Memory	512 MB DDR3L	
	Storage	256 MB SPI NAND Flash	
Ethernet	Port	2 × RJ45, 10/100/1000Mbps	
	Configuration	1 × WAN + 1 × LAN	
Wi-Fi 6	Standard	IEEE 802.11 b/g/n/ac/ax	
	Frequency Band	2.4GHz, 5GHz	
	Working Mode	AP, Station, Mesh	
	Antenna	2 × Antenna (RP-SMA-K connector)	
Bluetooth	Advanced Features	EasyMesh	
	Version	V5.1	
Cellular (Optional)	Modem	4G LTE (Cat 4), 5G (RedCap)	
	SIM	2 × Micro SIM slot, dual SIM single standby	
	Antenna	2 × Antenna (SMA-K connector)	
GNSS (Cellular Integrated)	Constellations	GPS, BDS, GLONASS, Galileo	
	Antenna	1 × Antenna (RP-SMA-K connector)	
Wi-Fi HaLow (Optional)	Standard	IEEE 802.11 b/g/n/ac/ax	
	Frequency Band	902-928 MHz	
	Working Mode	AP, Station, Mesh	
	Antenna	1 × Antenna (RP-SMA-K connector)	
I/O	Serial Port (Optional)	1 × RS232 (isolated), Max. 150kbps	1 × RS485 (isolated), Max. 150kbps
	USB	1 × USB 2.0 Type-A	
	Debug	Built-in UART connector (1.8V, 1 × 3 × 3.81mm)	
System Control	Button	1 × Reset button ([2, 6s): Restart; [6, 12s): Configuration clear; [12, 20s): Factory reset; [20s,+∞): Normal operation)	
	LED Indicator	1 × Power LED	2 × User-defined LED
		1 × WLAN LED	
Power	Watchdog Timer	Hardware watchdog	
	Input	9V-40V DC	
Physical Characteristics	Socket	1 × 3-pin × 3.81mm	
	Dimensions	159.6mm × 95mm × 30mm (without wall mount)	
	Enclosure	Sheet metal	
	Weight	TBD	
	Installation	DIN rail mounting, wall mounting	
	IP Rating	IP40	
EMC	Cooling Mode	Heat sink	
	ESD	Contact: 4kV; Air: 8kV	
Environmental Condition	Temperature	Operating: -20°C ~ +70°C	Storage: -40°C ~ +85°C
	Humidity	≤ 95% RH (Non-condensing)	
Certification	Compliance	FCC, ISED, CE	
	Carrier Certification	AT & T, Verizon, T-Mobile	

Specifications

A2 Series		
SOFTWARE		
Edge Computing	Edge Computing Script	JavaScript, MicroPython
	Southbound Protocol	Modbus TCP, Modbus RTU, EtherNet/IP, ISO-on-TCP, CC-link, etc.
	Northbound Protocol	MQTT
Custom Development	IPK Import	Supported
	Documentation Support	SDK available, API documentation
Device Management	Operating System	Web-based VantronOS
	Configuration	VantronOS, SSH, cloud-based BlueSphere GWM (Optional)
	Remote Management	BlueSphere GWM (Optional)
	Upgrade	VantronOS, BlueSphere GWM (Optional)
Routing & Network Reliability	Network Protocol	IPV4, HTTPS, TCP & UDP, NTP client and server, ARP, TLS
	Link Detection & Report	Address: IP, URL Protocol: ICMP, TCP, HTTP
	Failover	Auto routing, Auto reconnection Network priority: Ethernet > Wi-Fi client > Cellular (def.)
	NAT	Dynamic, Static
	WAN Protocol	DHCP client, PPPoE, Static IP
	IP Application	Ping, Traceroute, Nslookup, DHCP Server/Client, DDNS
	IP Routing	Static routing
Network Diagnostics	Network Capture	By time or packet count
	Statistics	Traffic data and up time at Ethernet WAN, Wi-Fi client WAN, cellular WAN Cellular and Wi-Fi signal strength; SIM card switch frequency
	Health Check	Usage of CPU, memory, disk Service running status Alarm on Ethernet/Wi-Fi/cellular hardware abnormality
	Log	System log, diagnostic log Log export supported
Security	Firewall	Stateful, whitelist control, port mapping
	Access Control	MAC address filtering, IP address filtering
	VPN	PPTP, L2TP, GRE, IPSec, OpenVPN
	Firmware Validation	SHA256 checksum

Mechanical Outline



Ordering Information

Ordering No.	Memory	Storage	Description
A2S-A21	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE
A2S-A22	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE, 1 × RS232, 1 × RS485
A2S-A23	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE, 4G LTE (Cat 4)
A2S-A24	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE, 5G (RedCap)
A2S-A25	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE, 1 × RS232, 1 × RS485, HaLow
A2S-A26	512 MB	256 MB	Wi-Fi 6 (ax), 2 × GbE, 5G (RedCap), HaLow

Packing List	
A2 Series edge computing gateway	1
Wi-Fi antenna	2
DC power connector	1
DIN rail mount	1
Wall mount	1

Optional Accessories	
12V DC Power adapter & power cord	1 kit
Cellular antenna	2
GNSS antenna	1
HaLow antenna	1
Serial port mating connector	1