

R102 Industrial Router



Product Brief

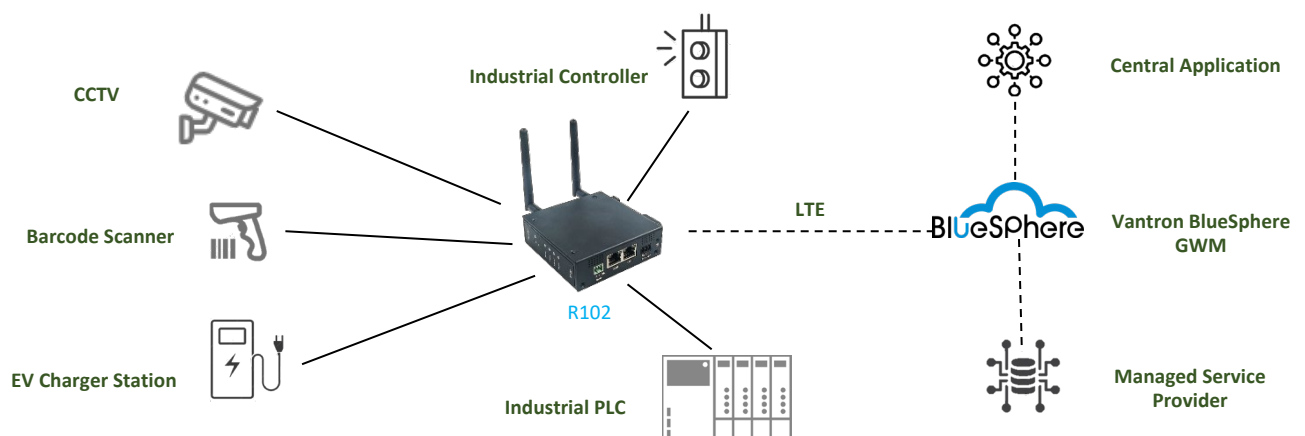
Vantron R102 industrial wireless router is designed for industrial IoT applications, offering dual SIM support to ensure uninterrupted connectivity by seamlessly switching between different cellular networks. It integrates auto-routing and failover mechanisms that optimize network performance by efficiently transitioning between Ethernet, Wi-Fi, and 4G connections to maintain operational continuity. The firewall rigorously inspects network packets using whitelist control and ingress/egress filtering, effectively safeguarding against unauthorized access and potential threats. Additionally, users can seamlessly onboard the router onto Vantron BlueSphere cloud platform for remote management. This facilitates real-time monitoring, remote maintenance, OTA updates, and more.

R102 features high stability, reliability, and ease of networking deployment. It is particularly suited for large-scale distributed networking in diverse scenarios such as intelligent business applications, smart city infrastructure, intelligent security systems, and environmental protection devices. This versatility makes it a valuable choice for reliable connectivity solutions in demanding industrial environments.

Applications



Typical Topology



R102 Industrial Router Specifications (Hardware)

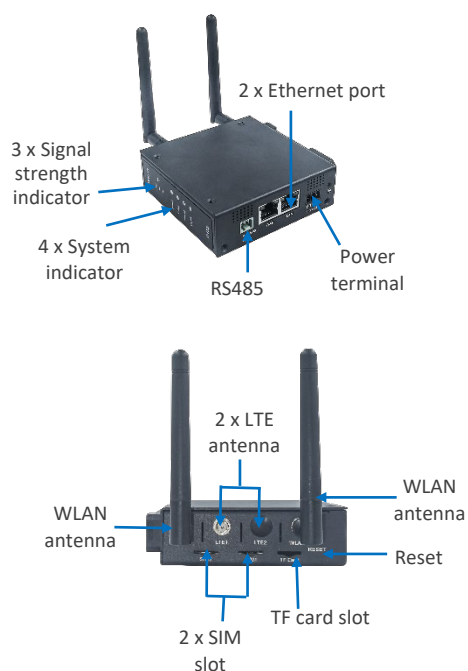
R102			
System	CPU	MIPS24KEc, 580MHz	
	Memory	256MB DDR2	
	Flash	64MB	
Cellular	Modem	CAT 4/M, multi-carrier supported	
	SIM	2 x Micro SIM slot	
	Antenna	2 x Antenna (SMA-K connector)	
Ethernet	Port	2 x RJ45, 10/100Mbps	
	Configuration	1 x WAN + 1 x LAN	
Wi-Fi	Standard	IEEE 802.11 b/g/n	
	Frequency band	2.4GHz	
	Working mode	AP, Station	
	Antenna	2 x Antenna (RPSMA-K connector)	
	Security	64/128 bits WEP, TKIP, WPA, WPA2, WPA3, AES, WPS	
I/Os	Serial port	1 x RS485	Socket: 1 x 3-pin x 3.81mm Baud rate: 115200 (def.)
Power	Input	9~36V DC	
	Socket	1 x 3-pin x 3.81mm	
	Protection	Over-current protection, reverse polarity protection	
	Consumption	Full load: 600mA @12V DC	
System Control	LED indicator	1 x Power indicator	1 x WLAN indicator
		1 x Internet indicator	1 x System indicator
		3 x Cellular signal strength indicator	
	Button	1 x Pinhole reset button	
Physical Characteristics	Dimensions	93.8mm x 93.3mm x 29mm	
	Enclosure	Metal	
	Installation	DIN rail mounting, panel mounting, wall mounting	
	IP rating	IP30	
	Cooling mode	Fanless	
EMC	Static	EN61000-4-2 level 3	
	RF electromagnetic field immunity	EN61000-4-3 level 3	
Environmental	Temperature	Operating: -20°C~+60°C	Storage: -40°C~+70°C
	Humidity	Storage: 5%~95% RH (non-condensing)	
Certification	Compliance	FCC, CE, PTCRB, ISED*, UL*, SRRC	
	Carrier certification	AT & T, Verizon, T-Mobile	

* Certification in progress.

R102 Industrial Router Specifications (Software)

Device Management	Operating system	Web-based VantronOS	
	Configuration	VantronOS, SSH, cloud-based BlueSphere GWM (Optional)	
	Remote management	BlueSphere GWM (Optional)	
Routing & Network Reliability	Network protocol	IPv4, HTTPS, TCP & UDP, NTP client & server, ARP, TLS	
	Link detection & report	Address: IP, URL	Protocol: ICMP, TCP, HTTP
	Failover	Auto routing	Network priority: Ethernet > Wi-Fi client > LTE/5G
	Dual SIM	Dual SIM failover, automatic switch	
	NAT	Network address translation Supported	
	WAN protocol	DHCP client, PPPoE, Static IP	
	Network management	SNMP v2c/v3	
	IP application	Ping, Traceroute, DHCP Server/Client, DDNS	
	IP routing	Static routing	
Network Diagnostics	Packets filtering	VTShark (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, ingress/egress filtering	
	Access control	MAC address filtering, IP address filtering	
	VPN	PPTP, L2TP, GRE, IPSec, OpenVPN	
	Firmware validation	SHA256 checksum	

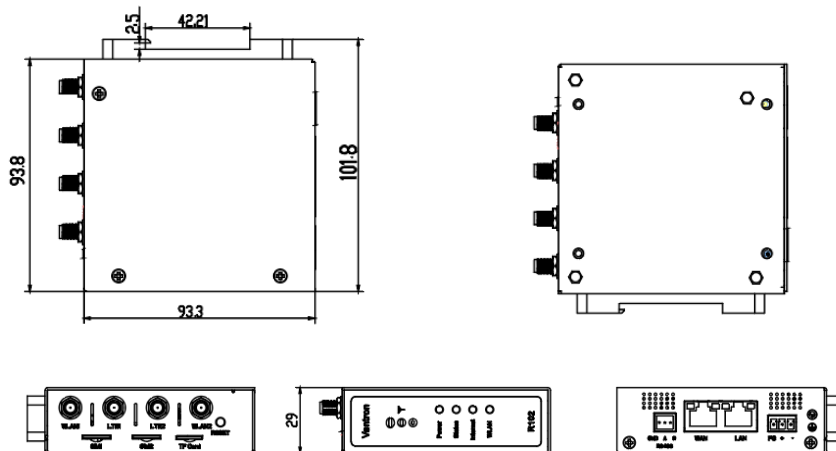
Exterior and Features



R102

- LTE CAT M/4 supported
- Dual Ethernet ports rating 10/100Mbps
- Dual SIM hot spot, multi-channel failover
- Multiple VPN functions
- Vantron BlueSphere GWM for remote management
- Industrial design to adapt to rugged conditions
- Compact size and flexible installation for varying sites

Product Outlines



Ordering Information

Example Ordering No.	LTE Category	Memory	Flash
R102-FMNA	CAT M for the U.S.	256MB	64MB
R102-F4NA	CAT 4 for the U.S.	256MB	64MB

Packing List	
R102 Industrial router	1
Wi-Fi antenna	2
4G LTE antenna	2
DC Power connector (Female)	1
Serial port connector (Female)	1

Optional Accessories	
12V DC Power adapter	1
Power cable	1

Since 2002 established by two Silicon Valley entrepreneurs, Vantron Technology has been a pioneer in connected IoT devices and IoT platform solutions. Today, Vantron is serving customers all over the world, including many Global Fortune 500 companies. The product lines cover intelligent edge hardware, IoT communication devices, industrial displays, and cloud-based BlueSphere management platforms. Vantron's IoT solutions have helped organizations facilitate their digital transformation, streamline operations, enhance productivity, etc.

Vantron IoT communication devices support multi-protocol connection of industrial equipment, edge computing of local data. Abundant wired and wireless connectivity make remote operations and maintenances possible. From electricity and transportation to smart retail, medical and warehousing, Vantron IoT communication device can be deployed anywhere in any business section. Its IoT solutions have helped many customers significantly improve manufacturing efficiency and productivity.