

R105 Industrial Router

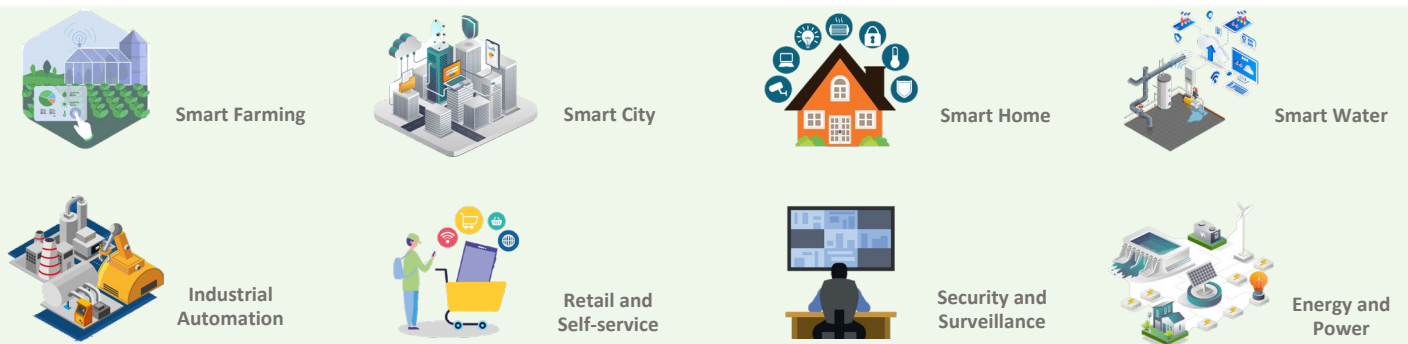


Product Brief

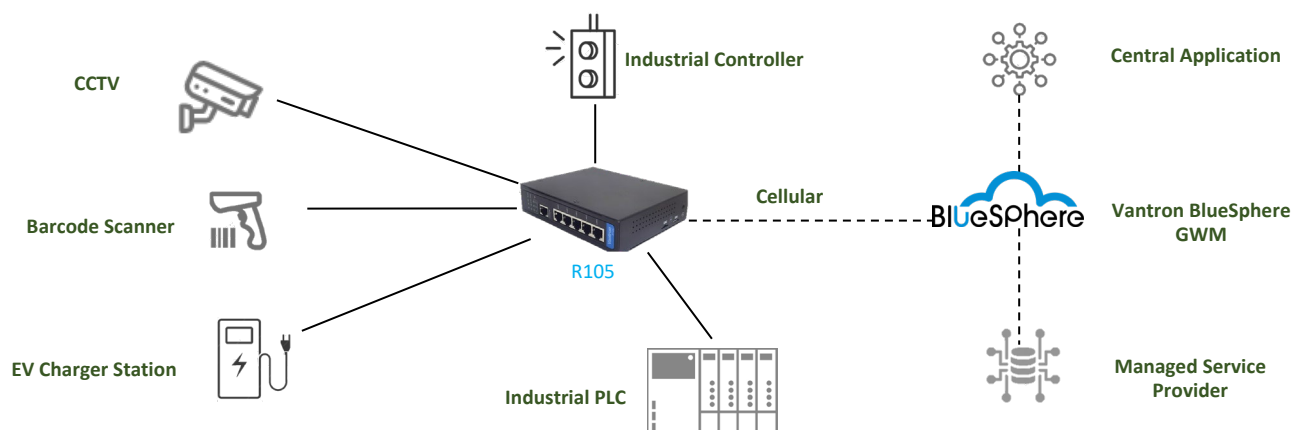
Vantron R105 industrial router offers different options for industrial IoT connectivity, including cellular, Wi-Fi, Ethernet, and virtual private network to meet diversified networking requirements. It offers the mid- and high-speed 4G/5G cellular networks with major carriers supported. It implements 5 gigabit Ethernet jacks, including 1 LAN port that offers PoE option to supply up to 30W of power to client devices. With Wi-Fi IEEE 802.11 b/g/n/ac supported, R105 offers IEEE 802.11ax (Wi-Fi 6) as an option to customers to meet higher communication needs.

R105 industrial router supports multi-channel failover to maintain secure and stable network access. With BlueSphere GWM, a web-based cloud platform for centralized management of mass routers and gateways, you can further configure and control the router remotely. R105 is very suitable for application in industrial automation, smart home, smart city, etc.

Applications



Typical Topology



R105 Industrial Router Specifications (Hardware)

R105				
System	CPU	MIPS1004Kc, 880MHz		
	Memory	256MB DDR3		
	Flash	64MB SPI		
Cellular	Modem	4G/5G		
	SIM	2 x Micro SIM slot		
	Antenna	2 x Antenna (SMA-K connector)		
Ethernet	Port	5 x RJ45, 10/100/1000Mbps		
	Configuration	1 x WAN + 4 x LAN		
	PoE (PSE)	Optional, 30W output		
Wi-Fi	Standard	IEEE 802.11 b/g/n/ac	Optional: IEEE 802.11 ax	
	Frequency band	2.4GHz, 5GHz	Optional: Wi-Fi 6	
	Working mode	AP, Station, AP + Station	Support 16 clients working simultaneously in AP mode	
	Antenna	2 x Antenna (RPSMA-K connector)		
	Security	64/128-bit WEP, TKIP, WPA, WPA2, WPA3, AES, WPS		
I/Os	Console	1 x Console for local configuration	Baud rate: 57600 (def.)	
	Serial port	1 x RS485 + 1 x RS232 (isolated)	Socket: 1 x 6-pin x 3.81mm	Baud rate: 115200 (def.)
Power	Input	9~36V DC		
	Socket	1 x 2-pin x 3.81mm		
	Protection	Over-current protection, reverse polarity protection		
	Consumption	Full load: 700mA @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		
	Watchdog timer	Hardware watchdog		
Physical Characteristics	Dimensions	150mm x 120mm x 35mm		
	Enclosure	Metal		
	Installation	DIN rail mounting, panel mounting, wall mounting		
	IP rating	IP30		
	Drop test	6 ft. drop test		
	Cooling mode	Fanless		
	EMC	Static	EN61000-4-2 level 3	
RF electromagnetic field immunity		EN61000-4-3 level 3		
Environmental Condition	Temperature	Operating: -20°C~+60°C	Storage: -40°C~+70°C	
Certification	Humidity	Storage: 5%~95% RH (non-condensing)		
	Compliance	FCC, CE, ISED, PTCRB		
	Carrier certification	AT & T, Verizon, T-Mobile		

R105 Industrial Router Specifications (Software)

Device Management	Operating system	Web-based VantronOS	
	Configuration	VantronOS, SSH, console, cloud-based BlueSphere GWM (Optional)	
	Remote management	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	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

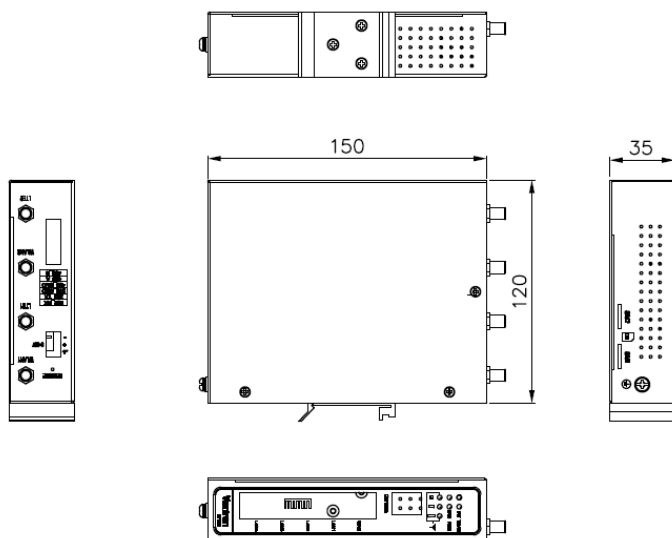


- (1): 4 x LED indicator (Net, WLAN, SYS, PWR)
- (2): Cellular signal strength indicators
- (3): Console port
- (4): WAN
- (5): 4 x LAN
- (6): 2 x Micro SIM slot
- (7): DIN rail mount
- (8): WLAN antenna 1
- (9): Secondary 4G antenna
- (10): Primary 4G antenna
- (11): WLAN antenna 2
- (12): Power terminal
- (13): 1 x RS232, 1 x RS485

R105

- 5 Ethernet jacks rating 10/100/1000Mbps
- Cellular and Wi-Fi wireless communication
- Industrial design to adapt to rugged conditions
- Compact size and flexible installation for varying sites
- Vantron BlueSphere GWM for remote management
- Dual SIM hot spot, multi-channel failover
- Improved data security

Product Outlines



Ordering Information

Ordering No.	Cellular	Cellular Antenna	Wi-Fi Antenna	PoE	Wi-Fi	DIN rail mount
R105-F4NA	4G	Yes	Yes	-	Wi-Fi 5	Yes
R105-F4NA-PW6	4G	Yes	Yes	Yes	Wi-Fi 6	Yes

* More variants are available, please contact the sales executive for details.

Packing list	
R105 industrial router	1
Wi-Fi antenna (rubber)	2
Cellular antenna (rubber)	2
DC Power connector (female)	1
Serial port connector (female)	1

Optional accessories	
12V DC power adapter	1
Power cord	1
Cellular antenna (magnetic mount)	2
Wall mount	2

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 the cloud-based BlueSphere device management platform.

With more than 20 years of experience in R&D of embedded intelligent edge hardware like SOMs and motherboards, Vantron provides users with various ARM- or X86-based embedded solutions. Such solutions provide users with flexible options, from Linux to Windows, from embedded level to desktop level, from gateways to servers. In the meantime, we also offer system clipping, driver transplantation and other services for custom development.