

## R105 Industrial Router



### Product Brief

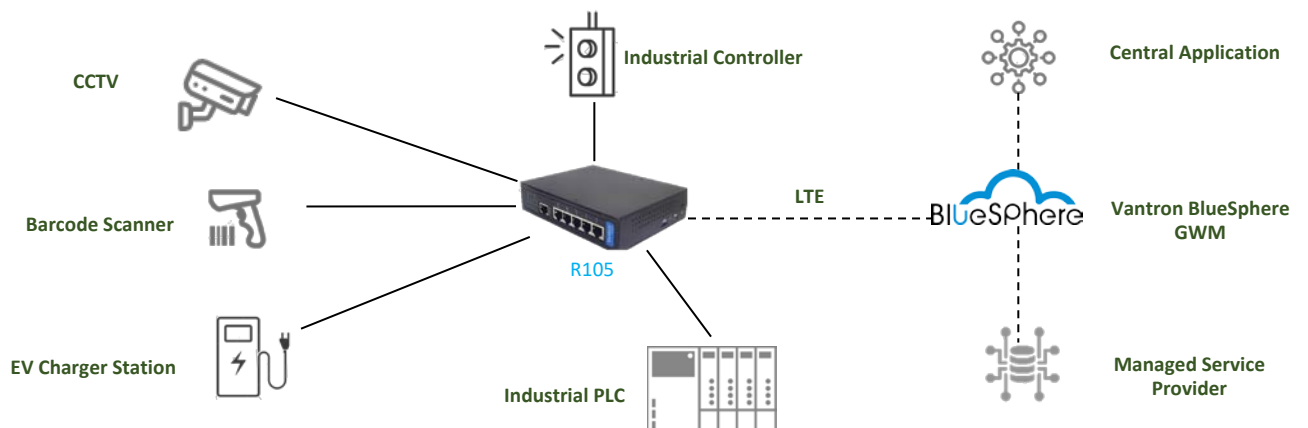
Vantron R105 industrial router offers different options for industrial IoT connectivity, including cellular, Wi-Fi, Ethernet, and virtual private network to meet diversified networking requirements. It offers the mid- and high-speed CAT 4 cellular networks with major carriers supported. It implements 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	CAT 4, multi-carrier supported	
	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	Temperature	Operating: -20°C~+60°C	Storage: -40°C~+70°C
	Humidity	Storage: 5%~95% RH (non-condensing)	
Certification	Compliance	FCC, ISED, PTCRB	
	Carrier certification	AT & T, Verizon, T-Mobile	

## R105 Industrial Router Specifications (Software)

<b>Device Management</b>	Operating system	Web-based VantronOS	
	Configuration	VantronOS, SSH, console, cloud-based BlueSphere GWM (Optional)	
	Remote management	BlueSphere GWM (Optional)	
<b>Routing &amp; Network Reliability</b>	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	
<b>Network Diagnostics</b>	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	
<b>Security</b>	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



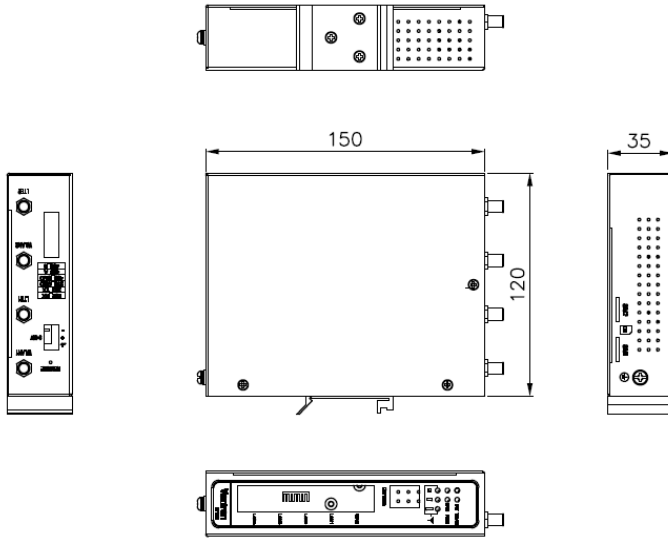
- (1): 4 x LED indicator (Net, WLAN, SYS, PWR)
- (2): Cellular signal strength indicators
- (3): Console port
- (4): WAN
- (5): 4 x LAN
- (6): 2 x Micro SIM slot

- (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.	4G LTE	4G LTE Antenna	Wi-Fi Antenna	PoE	Wi-Fi	DIN rail mount
R105-F4NA	CAT 4	Yes	Yes	-	Wi-Fi 5	Yes
R105-F4NA-PW6	CAT 4	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 stick)	2
4G LTE antenna (rubber stick)	2
DC Power connector (Female)	1
Serial port connector (Female)	1

Optional accessories	
12V DC Power adapter	1
Power cord	1
4G LTE antenna (magnetic sucker)	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.