

## HAP103 Wi-Fi HaLow Access Point



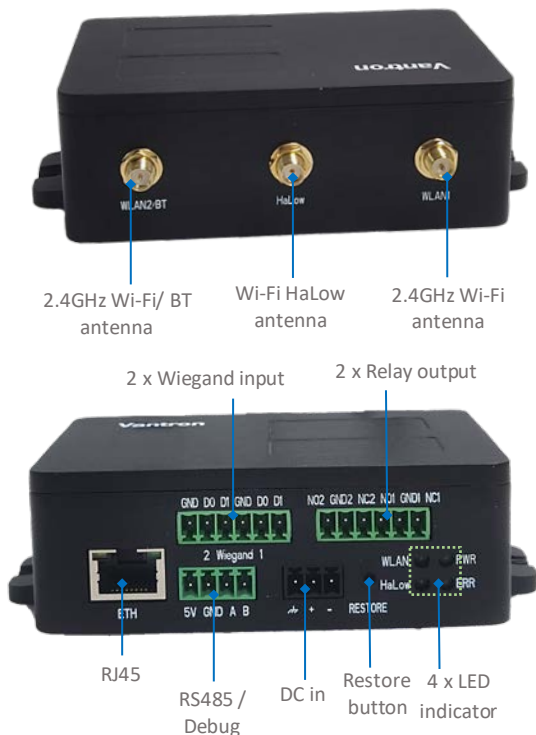
### Product Brief

Vantron HAP103 Wi-Fi HaLow access point conforms to the prominent IEEE 802.11ah (Wi-Fi HaLow) standard and IEEE 802.11 b/g/n (2.4GHz Wi-Fi). It supports up to 1km coverage at ultra-low power consumption while still delivering optimal performance with data rates up to 150 Mbps (2.4GHz Wi-Fi) and 32.5 Mbps (Wi-Fi HaLow), respectively. With IEEE 802.11ah complied, HAP103 supports stable connection of over 8,000 clients in AP mode, making it an ideal solution for replacing complex networking requirements in confined spaces.





HAP103 provides user options including two Wiegand input connectors for data transmission in access control scenarios. The RS485 connector allows for flexible industrial data collection and transfer, and it can be switched to the debug mode to support device debugging. The optional PoE Powered Device (PD) feature eliminates the need for a separate power source, providing significant benefits in scenarios where efficient power management and connectivity are crucial.

HAP103 is designed for large-scale dense deployment of low-power stations to eliminate multiple access points in application scenarios such as access control systems, smart home appliances, surveillance systems, logistics and asset management, portables, and wearables.

### Exterior and Features



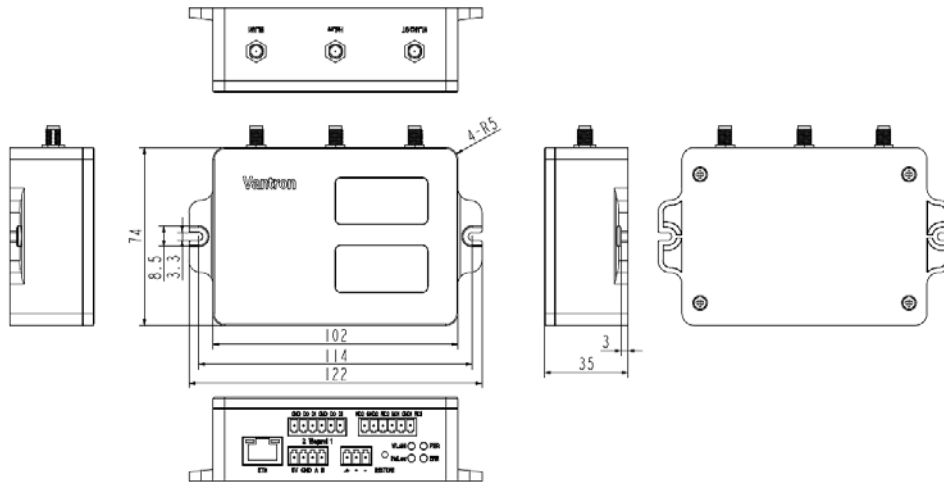
#### HAP103

-  Wi-Fi HaLow with 2.4GHz Wi-Fi combined
-  Sub-1 GHz frequency bands supported
-  Longer distance: up to 1km
-  More than 8,000 stable connections, 4x legacy AP
-  Data rates up to 150 Mbps (2.4GHz) and 32.5 Mbps (HaLow)
-  Ultra-low power consumption
-  Better penetration through walls and obstacles
-  Enhanced Wi-Fi security protections
-  Optional multiple I/Os for varied purposes
-  PoE PD optional
-  AP and STA modes supported

**HAP103 Datasheet**

HAP103			
<b>System</b>	CPU	MediaTek 580MHz MIPS® CPU	
	Wi-Fi HaLow SoC	Morse Micro MM6108	
	Memory	256MB	
	Storage	64MB	
<b>Wireless communication</b>	2.4GHz Wi-Fi	Standard: IEE 802.11 b/g/n	
		Frequency range: 2.412GHz ~ 2.462GHz	
		Channel bandwidth: 20/40 MHz	
		Data rate: up to 150 Mbps	
	Antenna: 2T2R		
	Wi-Fi HaLow	Standard: IEE 802.11 ah	
		Frequency range	US: 903.5MHz~926.5MHz    Europe: 863MHz~868MHz Japan: 916.5MHz~927.5MHz    Korea: 917.5MHz~923.5MHz Singapore: 866MHz~869MHz & 920MHz~925MHz
Channel bandwidth: 1/2/4/8 MHz			
	Data rate: up to 32.5 Mbps @8MHz or 15 Mbps @4MHz		
	Working mode: AP, STA configurable		
Bluetooth	Optional		
<b>I/O</b>	Fast Ethernet	1 x RJ45, 10/100 Mbps (PoE PD optional)	
	RS485 with 5V output	Serial communication mode (default mode, baud rate: 115200)	
		Debug mode (baud rate: 57600)	
	Antenna	1 x Wi-Fi HaLow antenna	1 x 2.4GHz Wi-Fi/BT antenna
		1 x 2.4GHz Wi-Fi antenna	
Relay (Optional)	2 x Relay output		
Input (Optional)	2 x Wiegand input (5V)		
<b>System Control</b>	LED indicators	1 x Power indicator	1 x WLAN activity indicator
		1 x Wi-Fi HaLow activity indicator	1 x Error indicator
	Button	1 x Restore button	
<b>Mechanical</b>	Dimensions	122mm x 74mm x 35mm (with wall mount)	
	Casing material	Plastics (UL94, SP6 compliant)	
	Installation	Wall mounting	
	Heat dissipation	Fanless	
<b>Power</b>	Input	9V ~ 40V DC	
	Port	3-pin terminal (Over-current protection, reverse polarity protection)	
<b>Software</b>	Operating system	VantronOS	
	VPN	OpenVPN, IPSec	
	Device management platform	Vantron BlueSphere GWM	
	Upgrade	Local upgrade, OTA upgrade	
<b>Security</b>	2.4GHz Wi-Fi	64/128-bit WEP, TKIP, WPA, WPA2, AES, WPS	
	Wi-Fi HaLow	WPA3	
<b>Environment Condition</b>	Temperature	Operating: -20°C ~ +70°C	Storage: -40°C ~ +85°C
	Humidity	≤ 95% RH (non-condensing)	
	Certificate	FCC, IC	

## Product Outlines



## Ordering Information

Ordering No.	Memory & storage	Main I/Os & power input	Wi-Fi HaLow	Bluetooth
HAP103	256MB + 64MB	RS485, RJ45, 9V~40V DC input	Yes	-
HAP103-W	256MB + 64MB	RS485, Wiegand input, RJ45, 9V~40V DC input	Yes	-
HAP103-BT	256MB + 64MB	RS485, BT chipset, RJ45, 9V~40V DC input	Yes	Yes

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

Packing list	
HAP103 Wi-Fi HaLow Access Point	1
Wi-Fi HaLow antenna	1
2.4GHz Wi-Fi antenna	1
2.4GHz Wi-Fi/BT antenna	1
RS485 terminal connector	1

Optional accessories	
12V/1A power adapter and power cord	1 kit
DC power connector	1
Wiegand input terminal connector	1
Relay output terminal connector	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 the cloud-based BlueSphere device management platform.

Vantron offers IoT communication devices that enable multi-protocol connections for industrial equipment and local data processing through edge computing. With abundant wired and wireless connectivity options, remote operations and maintenance have become easier than ever. Such devices can be deployed across different sectors such as smart retail, medical and warehousing. Moreover, Vantron's IoT solutions are designed to facilitate enterprises' digital transformation, streamline operations, enhance productivity, etc.