

HCAM102 Wi-Fi HaLow IP Camera

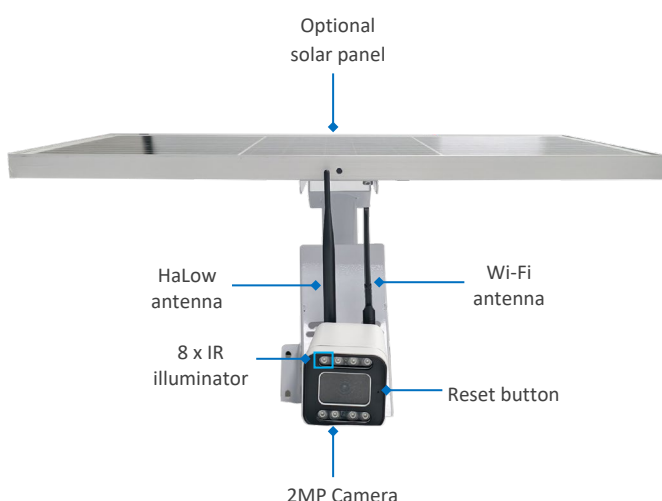


Product Brief

Vantron HCAM102 Wi-Fi HaLow IP camera is designed for long-range, low-power IoT surveillance applications. It integrates VT-MOB-AH, a self-developed Wi-Fi HaLow module that complies with the prominent sub-1GHz IEEE 802.11ah (Wi-Fi HaLow) standard, featuring exceptional wall penetration and coverage over extended distances—ideal for industrial parks, agricultural sites, and large-scale outdoor deployments. Operating in the HaLow station mode, the device supports quick pairing with a HaLow access point (HaLow DPP). The WPA3-Enterprise with EAP-TLS encryption enhances data security.

Equipped with a fixed-focus lens and IR-cut filter, HCAM102 delivers up to 2MP imagery day and night, augmented by built-in infrared illuminators, providing effective illumination up to 5 meters. The 100Mbps RJ45 port and 2.4GHz Wi-Fi offer both wired and wireless ways for device access, making it easy for maintenance. It supports optional solar panels and battery pack to achieve 24/7 continuous operation, capable of running for up to two days without any solar input. This makes it a perfect solution for off-grid sites, remote monitoring, and sustainable security applications where reliable power infrastructure is unavailable.

Exterior and Features



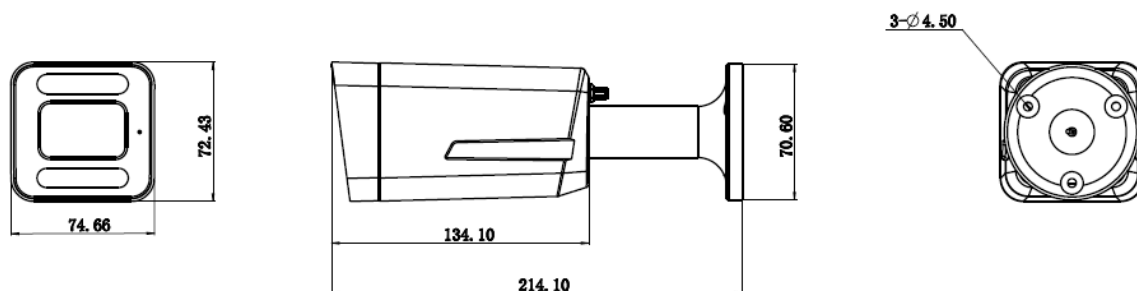
HCAM102

-  Sub-1 GHz frequency bands
-  Up to 1km coverage range
-  Superior wall/obstacle penetration
-  Fixed lens with IR-Cut filter, 2MP resolution
-  128MB memory + 1GB storage
-  Solar or DC supply, ultra-low power
-  Remote management via ETH/Wi-Fi
-  HaLow DPP quick pairing supported
-  WPA3-Enterprise (EAP-TLS) encryption

HCAM102 Wi-Fi HaLow IP Camera Datasheet

HCAM102			
System	SoC	Single-core ARM Cortex-A35 processor, up to 1.2GHz	
	Memory	128MB DDR3	
	Storage	1GB Flash	32GB Built-in USB flash
Camera Features	Image sensor	1/3" 4-Mega CMOS image sensor	
	Resolution	1920 × 1080 @30fps	
	Video compression	H.265/H.264	
	Backlight compensation	8 × IR illuminator (Up to 5m)	
	Day/night switch	IR-Cut filter with auto switching for day/night mode	
	Motion detection	Auto recording or snapshot on trigger	
	Time OSD	Supported	
Wi-Fi HaLow Features	Wi-Fi standard	IEEE 802.11ah	
	Wi-Fi mode	Station	
	Frequency range	US: 902MHz ~ 928MHz	
	Security	WPA3, AES, SHA1, SHA2	
2.4GHz Wi-Fi Features	Wi-Fi standard	IEEE 802.11a/b/g/n/ac	
	Wi-Fi mode	AP (For web UI login)	
I/O	RJ45	1 × 10/100Mbps RJ45 (For web UI login)	
	DI	2 × DI, Configurable for 2.4GHz Wi-Fi wakeup, snapshot or recording trigger	
	DC jack	1 × DC jack for direct mains adapter or solar panel input	
System Control	Button	1 × Reset pinhole button (HaLow DPP pairing / 2.4GHz Wi-Fi wakeup / factory reset)	
Mechanical	Dimensions	241.10mm × 74.66mm × 72.43mm (Without solar panel)	
	IP rating	IP66	
	Installation	Pole mounting, wall mounting	
Power	Input	12V DC (1A) via the DC jack or solar panel	
	Consumption	< 8W (Average)	
Software	Remote management	Web UI login via Ethernet / 2.4 GHz Wi-Fi	
	Access control	IP/MAC address filtering	
	Onvif	Supported	
	Data transfer	HTTP Post, MQTT	
Environmental Condition	Temperature	Operating: -20°C ~ +60°C	Storage: -30°C ~ +80°C
	Humidity	5%~ 95% RH (Non-condensing)	
	Certification	FCC, CE (In progress)	

Product Outlines



Ordering Information

Ordering No.	Memory & Storage	Description	Add-on	Installation
HCAM102	128MB DDR3	2MP resolution, auto day/night switch,	NA	Pole mounting,
HCAM102-SP	1GB Flash + 32GB USB flash	motion detection, extended coverage	Solar powered	wall mounting

Packing List	
HCAM102 Wi-Fi HaLow IP camera	1
2.4GHz Wi-Fi antenna	1
HaLow antenna	1

Optional Accessory	
12V/1A power adapter & power cable	1 kit
Solar panel + battery pack	1 kit
Cable pigtail (ETH, DI, DC)	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.