

5G/4G IoT HD Bullet IP Camera

F-SC241



Introduction

F-SC241 IoT RTU camera as the main product of the intelligent IoT surveillance system, specially designed for industrial-grade IoT applications. The camera can provide long distances and low latency HD video wirelessly by using the industrial 4G/5G module. At the same time, the built-in high-performance industrial-grade MCU will acquire data from various types of sensors and process basic protocol conversion, performs AI video analysis at the front-end in real-time.



High Performance

- ▶ Support various IoT protocol
- ▶ Embedded RTU function allow user to do active acquisition from sensors
- ▶ Integrated with most common IoT interfaces
- ▶ Remote management SYSLOG/SNMP/TELNET/SSH/HTTPS
- ▶ H.265, optimized in bit rate, bandwidth and storage usage, 50% off than H.264.
- ▶ Super WDR, up to 140dB wide dynamic range
- ▶ Support remote management & upgrade



Stability & Reliability

- ▶ WDT Watchdog design to ensure system stability
- ▶ Adopt a complete anti-drop mechanism
- ▶ Built-in 1.5KV electromagnetic isolation protection for Ethernet interface
- ▶ RS232/RS485 interface power and data isolation with CSA, UL and IEC standards
- ▶ SIM/UIM card interface built-in 15KV ESD protection
- ▶ Built-in reverse phase protection and over voltage protection for power interface



Standard & Convenience

- ▶ Standard RS232, RS485 and Ethernet interfaces
- ▶ Front-end edge integration and equipment intercommunication linkage
- ▶ Easy to use, flexible, multiple working mode options
- ▶ Support DIN-rail, pole-mounted installation

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Industrial-grade Design

- ▶ High-performance industrial-grade wireless module
- ▶ SONY top-level CMOS sensor
- ▶ Metal casing, protection grade IP67. Metal housing and system safety isolation
- ▶ Industrial-grade components

Product Specification

Camera		
Model	F-SC241-21 (Fixed Len)	F-SC241-216 (16X)
Items	Contents	
Image Sensor	1/2.8" Progressive Scan CMOS	
Resolution	2MP 5MP (In development)	
Min. Illumination	Color: 0.002Lux@F1.2 B/W: 0Lux with IR on	
Shutter Time	1/100000s~1/5s	
IR Distance	150m	
Day & Night	ICR Filter Auto Switch	
Lens	Fixed Lens 2.8mm @F2.0	16X AF Motorized Lens 5.85~93.6mm @F1.8~F3.9
Field of View	H123°/D142°/V68°	H55.4°~H3.55° D62.6°~D4.05° V31.6°~V2°
Video		
Items	Contents	
Max. Image Resolution	1920×1080	
Primary Stream	30fps@(1920×1080, 1280×960,1280×720, 704x576)	
Secondary Stream	30fps@(704x576, 640×480, 640×360, 352x288, 320x240, 320x192, 320x176)	
Tertiary Stream	30fps@(1920×1080, 1280×720, 704×576, 640×480, 640×360, 320×240, 320x192, 320x176)	
Video Compression	H.265(HEVC)/H.264/MJPEG	
Bit Rate	16Kbps~16Mbps (CBR/VBR Adjustable)	
Image Setting	Brightness/Contrast/Saturation/Sharpness	

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Network	
Items	Contents
Ethernet	1*RJ45 10M/100M Ethernet Port
Network Storage	NAS (Support NFS, SMB/CIFS)
Protocol	IPv4/IPv6, TCP, UDP, RTP, RTSP, RTCP, HTTP, HTTPS, DNS, DHCP, NTP, SNMP, NFS, CIFS
System	
Items	Contents
Storage	Support microSD/SDHC/SDXC Card Local Storage, up to 128G
Advanced Function	Motion Detection, Privacy Masking, Backlight Compensation, HLC, 2D DNR, 3D DNR, ROI, Anti-fog, White Balance, EIS, IP Address Filtering
Event Trigger	Motion Detection, Network Disconnection, External Input, etc.
Event Action	FTP Upload/SMTP Upload/SD Card Record
Video Analysis (Optional)	Region Entrance, Region Exiting, Advanced Motion Detection, Tamper Detection, Line Crossing, Loitering, Human Detection, People Counting, Object Left, Object Removed (* In development)
Cellular (Optional)	
Items	Contents
Standard & Band	5G, LTE FDD, LTE TDD, EVDO, WCDMA, TD-SCDMA, CDMA1X, GPRS/EDGE
Bandwidth	5G NR: Downstream rate 3.4Gbps, uplink rate 350Mbps FDD-LTE: Downstream rate 150Mbps, uplink rate 50Mbps TD-LTE: Downstream rate 130Mbps, uplink rate 35Mbps
Transmit Power	<23dBm
Sensitivity	<-97dBm
GPS (Optional)	
Items	Contents
GPS Module	Industrial GPS module, compatible with Beidou, GLONASS
Accuracy	Positioning: 2.5m CPE SBAS: 2.0m CPE
Sensitivity	Tracking: -160dBm Recapture: -160dBm Cold Boot: -146dBm

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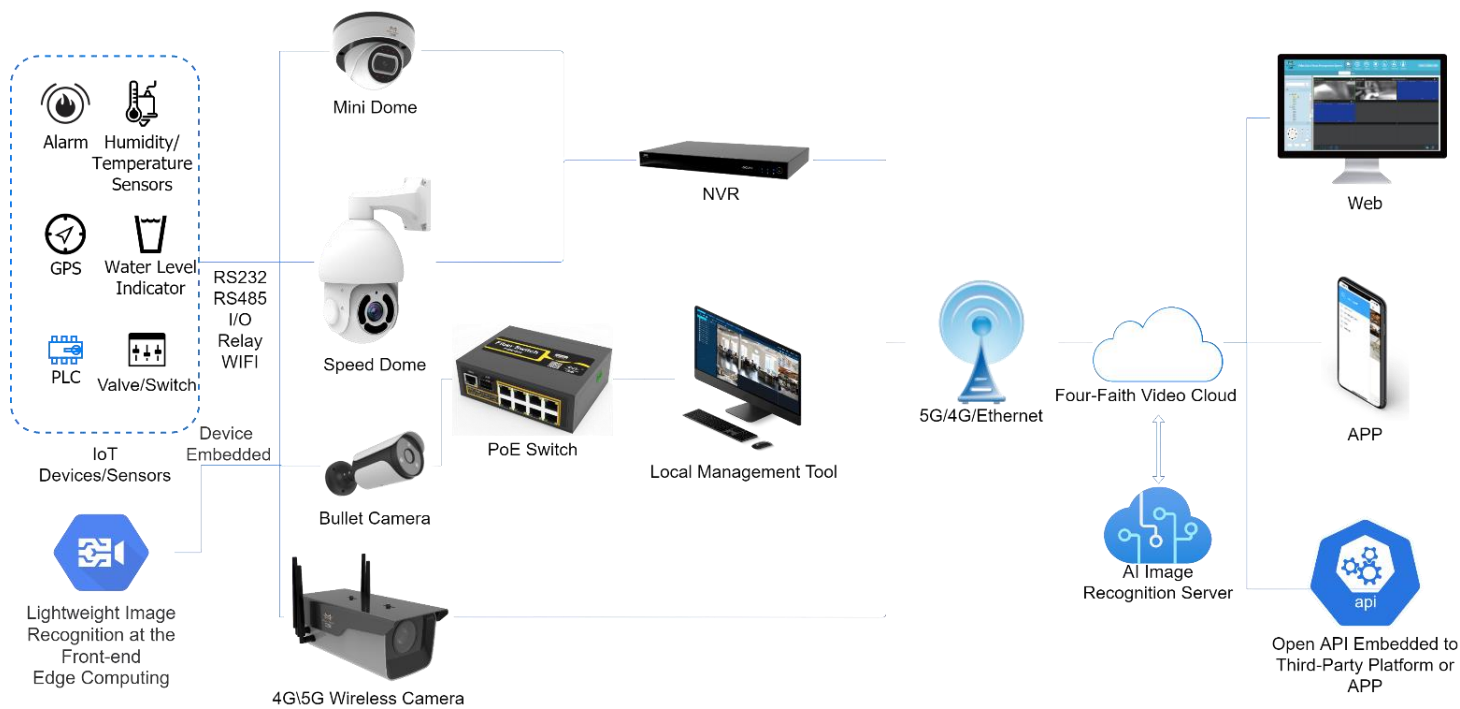


Interfaces (* = Optional)	
Items	Contents
DC-12V IN*	Standard DC12V, Support 12~60V
Audio I/O @Audio Compression*	1/1&G.711/AAC
IO & Relay*	2 x DI, 2 x DO, 2 x Relay
ADC	2@12bit
UART*	2 x RS232 & 2 x RS485
Power Return*	12V@500MA & 5V@1000MA
Storage*	Internal Micro SD Slot, support Micro SD/Micro SDHC/Micro SDXC card (Support Maximum 128G) Internal 2.5" Hard Disk SATA interface, support maximum 6TB HDD or SSD
Network	RJ45 10/100M ethernet
Interface Type	M16 Waterproof Interface
Protocol & Industrial Standard	
Items	Contents
Protocol & Industrial Standard	Onvif Profile S
	GB/T28181-2016
	Modbus RTU
	MQTT
	IEC101*, IEC104* (*In development)
Others	
Items	Contents
Working Temperature	-35°C~75°C
Working Humidity	0~90% (Non-condensing)
Power Supply	PoE (802.3at) Standby < 0.5W
Power Consumption	4G Date Mode (without hard disk) < 2.2W 4G Date Mode (with hard disk) < 3.5W 4G Night Mode (with hard disk) < 9W
Weather Proof	IP67
Weight	4.5 KG
Dimensions	260*130*110mm (Without Accessories)
Warranty	1 Years

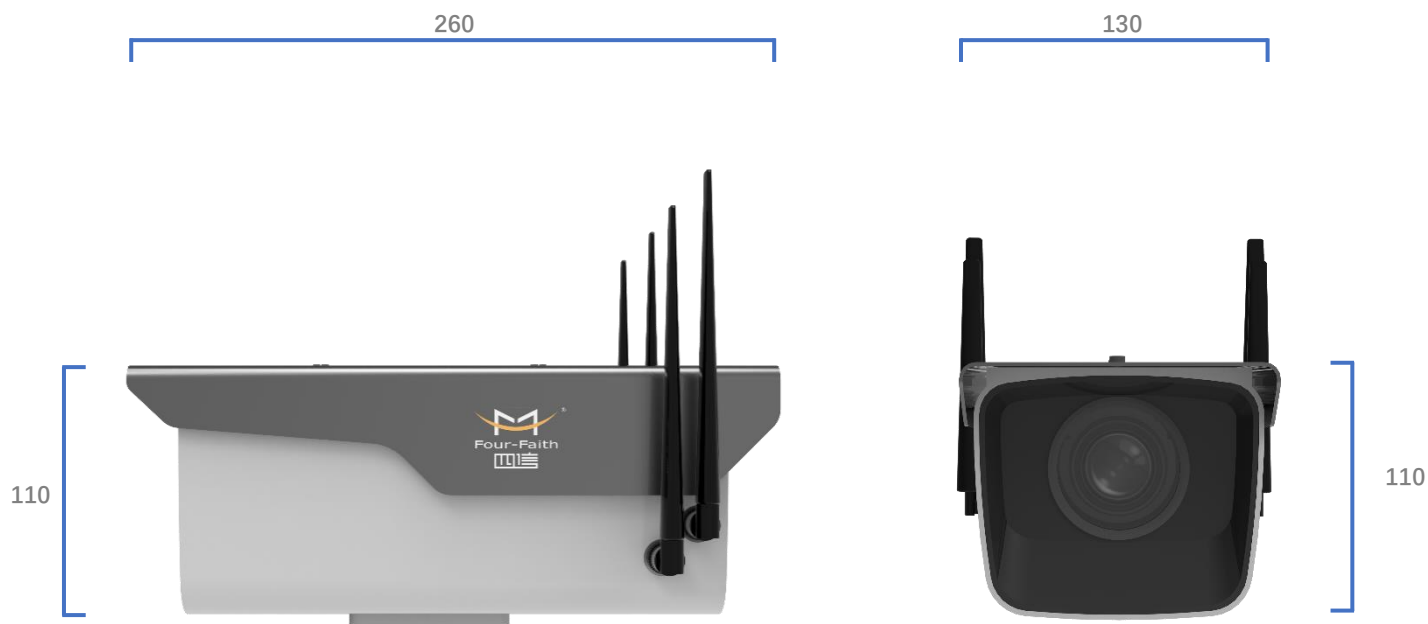
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Topology



Dimension (mm)







Note: There may be differences between models of accessories and interfaces, actual products shall prevail

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Accessories (Optional)

Cardan Joint 1	Cardan Joint 2	Bracket	Motorized PTZ Bracket *In development
			

Order Information

Models	Megapixel	Lens	Description
F-SC241-21-5G	2MP	Fixed Lens	SD, DC&POE, 5G High-speed Module
F-SC241-216-5G	2MP	16X AF Motorized Lens	SD, DC&POE, 5G High-speed Module
F-SC241-21-4G	2MP	Fixed Lens	SD, DC&POE, 4G High-speed Module
F-SC241-216-4G	2MP	16X AF Motorized Lens	SD, DC&POE, 4G High-speed Module

Naming Convention

