5G CPE

UF51

Milesight

UF51 5G CPE is dedicated to cost effective solutions for 5G wireless networking application. Adopting high-performance industrial platform of quad-core CPU and 5G cellular module, UF51 is capable of providing ultra-fast network and ultra-small package to ensure the extremely safe and reliable connection to the wireless network. With various kinds of installation methods, IP67 waterproof enclosure and novel design, UF51 is applicable to indoor and outdoor applications.

Meanwhile, UF51 also supports 2-port Gigabit Ethernet switch, serial ports (RS232/RS485) and DI/DO (Digital input/Digital output), which enable you to scale up M2M application combining data and video in limited time and budget.

UF51 is particularly suitable for smart offices, video surveillance, digital media implementations, industrial automation, traffic applications, robots and so on.

◆ Fast & Reliable Network

- Qualcomm quad-core CPU with big memory, providing high performance for data transmission
- Global 5G NSA&SA/4G LTE network for backup among multiple carrier networks
- Gigabit Ethernet ports for lightning transmission of data
- 2.4G & 5G dual band Wi-Fi support
- Embedded 8 5G antennas and 4 Wi-Fi antennas for best signal reception
- Equipped with I/O, serial port, GPS for industrial transmission applications

◆ Robust Hardware Design

- Wide operating temperature range from -40°C to 70°C and industrial design for harsh environment
- IP67 waterproof and UV-protective enclosure for outdoor applications
- PoE or DC power supply optional
- Equipped with a vent plug to prevent condensation in enclosure
- Pole mounting, wall mounting, desktop, bottom magnetic or lock mounting for various applications
- 3-year warranty included

◆ Security & Reliability

- Embedded Python SDK for functional programming and seamless deployment to edge nodes
- Automated failover/failback among Ethernet, Cellular and Wi-Fi
- Secure transmission with VPN tunnels such as IPsec/OpenVPN/GRE/L2TP/PPTP /DMVPN/MilesightVPN
- Reliable firewall for secure networking: SPI, ACL, port mapping, IP/MAC binding,etc.
- Embeds hardware watchdog to automatically recover from various failure, ensure highest level of availability

◆ Easy Maintenance

- The user-friendly web interface design and more than one option of upgrade help administrator to manage the device as easy as pie
- WEB GUI and CLI enable the admin to achieve simple management and quick configuration among a large quantity of devices
- DeviceHub provides easy setup, mass configuration, and centralized management of remote devices
- Efficiently manage the remote device through SNMP protocol

◆ Specifications

Hardware System	
CPU	Qualcomm Quad-core ARM Cortex-A7, 716.8 MHz
Memory	512 MB DDR3 RAM and 8 GB Flash
Cellular Interface	
Network	5G/4G LTE
Antenna	8 × Internal Antennas
SIM Slot	1 (Mini SIM-2FF)
Ethernet Interface	
Numbers	2 × 10/100/1000 Mbps
Property	1 × WAN + 1 × LAN or 2 × LAN
Mode	Full or Half Duplex (Auto-Sensing)
PoE	1 × 802.3af PoE PD on WAN/LAN1 Port
Wi-Fi Interface	
Antenna	4 × Internal Antennas
Standards	IEEE 802.11b/g/n, 2.4 GHz IEEE 802.11a/n/ac, 5 GHz
Tx Power	2.4 GHz: 26dBm (max) 5 GHz: 26.4dBm (max)
Rx Sensitivity	
2.4 GHz	802.11b: ≤ -92dBm@11Mbps 802.11g: ≤ -78dBm@54Mbps 802.11ac VHT20: ≤ -91dBm@MCS0 802.11ac VHT20: ≤ -66dBm@MCS8 802.11ac VHT40: ≤ -88.5dBm@MCS0 802.11ac VHT40: ≤ -64dBm@MCS8
5 GHz	802.11a: ≤ -91dBm@6Mbps 802.11a: ≤ -76dBm@54Mbps 802.11ac VHT20: ≤ -90dBm@MCS0 802.11ac VHT20: ≤ -68dBm@MCS8 802.11ac VHT40: ≤ -87dBm@MCS0 802.11ac VHT40: ≤ -65dBm@MCS9 802.11ac VHT80: ≤ -84dBm@MCS0

	802.11ac VHT80: ≤ -60dBm@MCS9
Modes	AP and Client Mode
Security	WPA/WPA2 authentication, WEP/TKIP/AES encryption

GNSS[1]

Antenna	1 × Internal Antenna
Technology	GPS/GLONASS/Beidou/Galileo/QZSS

Serial Interface

Numbers	1 × RS232 or 1 × RS485 (Switchable)
Connector	3.5 mm Terminal Block
Baud Rate	300bps to 230400bps

DI/DO

Numbers	1 × DI (Dry Contact) + 1 × DO (Wet Contact)， Galvanic Isolation
Connector	3.5 mm Terminal Block
Maximum V/A	0.3A@30VDC (DO)

Others

Reset Button	1 × RESET
LED Indicators	1 × STATUS， 1 × Cellular Network
Built-in	Watchdog, Timer

Software

Network Protocols	IPv4/IPv6, PPP, PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, RIPv1/v2, OSPF, DDNS, VRRP, HTTP, HTTPS, DNS, ARP, QOS, SNTP, Telnet, VLAN, SSH, etc.
VPN	DMVPN, IPsec, OpenVPN, PPTP, L2TP, GRE
Security	Access Control, DMZ, Port Mapping, MAC Binding, SPI Firewalls, DoS&DDoS Protection, Filtering(IP&Domain), IP Passthrough
Management	Web, CLI, SMS, On-demand dial up, SNMP v1/v2/v3, DeviceHub
AAA	Radius, Tacacs+, LDAP, Local Authentication
Multilevel Authority	Multiple Levels of User Authority
Reliability	VRRP, WAN Failover
Serial Port	Transparent (TCP Client/Server, UDP), Modbus Master/Slave, Modbus Gateway (Modbus RTU to Modbus TCP)

Power Supply and Consumption

Power Input[2]	1. 9-48 VDC, with Surge-Protection and Reverse Polarity Protection

[1] GNSS is under development.
[2] DC and PoE supply can not be used at the same time.

	2. 802.3af PoE PD
Power Connector	2-pin 3.5 mm Terminal Block
Power Consumption	≤ 7 W
Physical Characteristics	
Ingress Protection	IP67
Housing	Polycarbonate + Metal
Dimension	No Waterproof Connector: φ105 x 110 x 187 mm (φ4.13 x 4.33 x 7.36 in)
	With Waterproof Connector: φ105 x 110 x 218 mm (φ4.13 x 4.33 x 8.58 in)
Installation	Desktop, Pole Mounting, Wall Mounting, Bottom Magnet/Screw Mounting
Environmental	
Operating Temperature	-40°C to +70°C (-40℉ to +158℉) Reduced Cellular Performance Above 60°C
Storage Temperature	-40°C to +85°C (-40℉ to +185℉)
Ethernet Isolation	1.5 kV RMS
Relative Humidity	0% to 95% (Non-condensing) at 25°C/77℉

◆ Dimensions (mm)
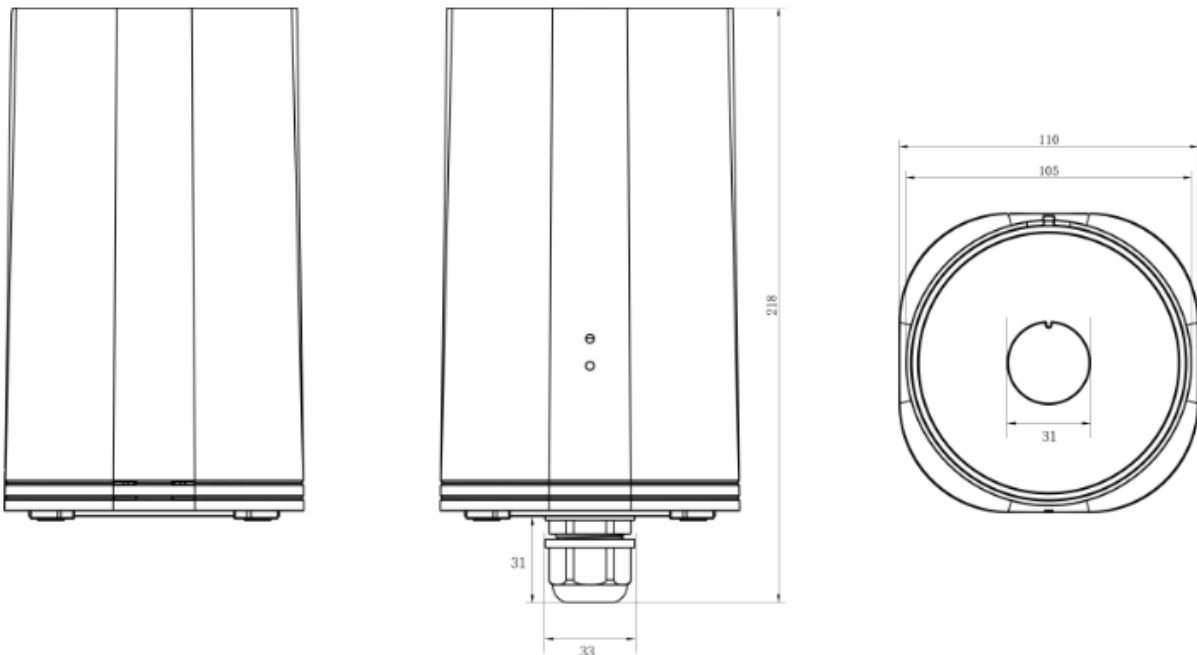
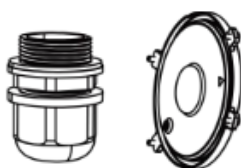# ◆ Accessories
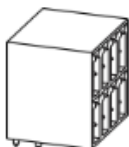
1 × PoE Injector	1 × 8-Pin Pluggable Terminal	1 × Mounting Bracket	4 × Rubber Feet
1 × Bottom Cover with Cable Gland	1 × Waterproof Rubber Ring	4 ×Wall Mounting Kits	2 ×Hose Clamps
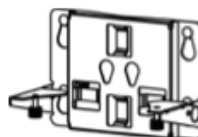
*Note: Contact us if you need any other special accessories or customized accessories.