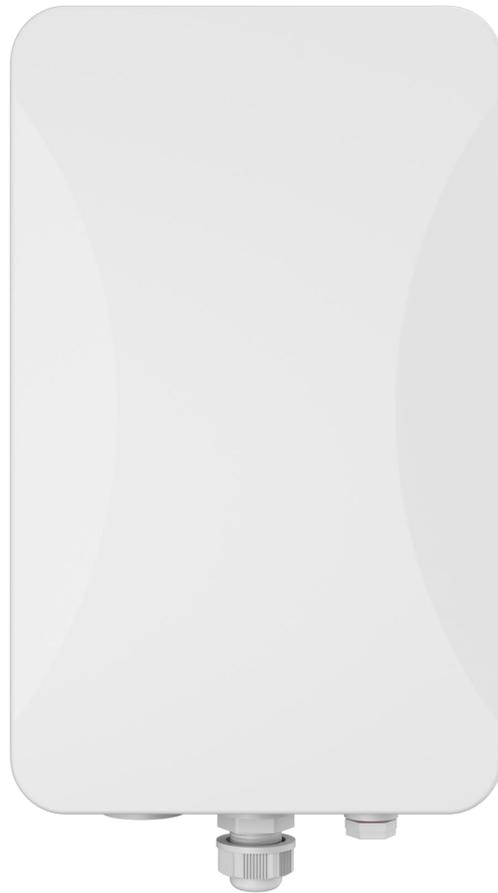


# ComFi W510-Q

**5G Dual Band Wi-Fi6 3000Mbps Outdoor High Power  
Wireless AP**

## Product Specifications



- Embedded high-gain directional antennas
- Up to 100 devices
- Waterproof Outdoor Casing, IP67 Protection
- Support 5G NR NA/NSA Cellular Networks
- 3000Mbps, Dual Band WiFi6 802.11ax MU-MIMO
- Adjustable High Tx Power, Coverage Radius 200 Meter

## Product Description

ComFi W510 is an outdoor 2x2 dual-band WiFi6 wireless AP, suitable for outdoor areas that require wireless coverage such as scenic spots, parks, schools, and squares. ComFi W510 supports 2x2 11ax, and the maximum concurrent connection rate of dual-band can reach up to 3000Mbps, which can build a stable and high-speed wireless network for users. ComFi W510 has high-performance wireless indicators, can get a larger wireless coverage area and better wall penetration performance. ComFi W510 supports the access of up to hundreds of wireless terminals to meet the application scenarios of high-density wireless terminals. At the same time, ComFi W510 also has good compatibility and supports the access of most wireless terminals on the market. Users can use mobile phones, tablets or laptops to easily connect.

Equipped with high-gain directional antennas in a compact form factor, the W510 supports up to 6 dBi radio gain in multiple bands and enhances 5G NR signals for better performance. With the built-in IEEE 802.3at standard PoE powered device (PD) feature, only one Ethernet cable is required to carry data and power between the W510 and local networks for easing the device installation.

## Product Features

### 5G Cellular Network

Support 5G NR mobile operator's networks. It is compatible with 5G networks of major operators in the market and backward compatible with 4G LTE and 3G WCDMA networks.

### Wi-Fi6 (IEEE 802.11ax) Standard

- 802.11ax, as the latest generation of IEEE 802.11 Wi-Fi standard, can increase user access capacity and bandwidth in high-density access scenarios, reduce service delays, and enhance user experience.
- Support 2.4GHz and 5GHz dual-frequency UL/DL MU-MIMO, enabling AP to send data to multiple terminals at the same time, and the utilization rate of wireless spectrum resources is higher than predecessor 802.11ac.
- Support 1024QAM modulation, data transmission efficiency is increased by 40% compared with 802.11ac (256QAM).
- Support UL/DL OFDMA technology, use different subcarriers to transmit data to multiple terminals at the same time, reduce delay and improve network efficiency.
- Support spatial multiplexing technology, through the BSS coloring mechanism (BSS coloring) so that AP and terminal can distinguish overlapping BSS (basic service set), to minimize co-channel interference.
- Support target wake time\* mechanism, allowing AP and terminal to negotiate sleep and wake time, reducing conflicts between terminals and unnecessary wake-up times, saving terminal power, and improving battery life.

### Multi-User Uplink and Downlink-multiple Input and Multiple Output Technology (MU-MIMO)

Support MU-MIMO technology, support up to 4 spatial streams, 2.4GHz frequency band supports 2 spatial streams, 5GHz frequency band supports 2 spatial streams, through DL/UL MU-MIMO technology, AP can send data to multiple terminals at the same time, The utilization rate of wireless spectrum resources has been doubled, increasing the number of access users and bandwidth, and improving user experience in high-density access scenarios.

### High-Speed Access

Supports 160MHz bandwidth. The increase in bandwidth has increased the available data sub-carriers and expanded the transmission channel; in addition, the use of 1024QAM modulation, MU-MIMO and other technologies makes the 5GHz single frequency band rate up to 2.4Gbps, and the whole machine rate is up to 3Gbps.

### 5GHz Priority

The AP supports both 2.4GHz and 5GHz dual-band access. By controlling the terminal to preferentially access the 5GHz frequency band, dual-frequency end users in the 2.4GHz frequency band are migrated to the 5GH frequency band, reducing the load and interference on the 2.4GHz frequency band, and improving user experience.

### High-level Protection

- It adopts metal shell and overall heat dissipation design, suitable for wide temperature operation of -30°C to +65°C and adopts IP67 waterproof and dustproof design. Ethernet interface supports
- 6KA/6KV enhanced lightning protection, fully meet the requirements of industrial-grade use;
- Reinforced with metal fasteners and cable connectors to ensure connection fastening performance and equipment working stability;

### External Indicator

The external high-bright status indicator light makes the equipment running status clear at a glance, saving troubleshooting time.

## Hardware Specifications

Model	W510-Q
Dimension	304mm×181mm×88mm (L x W x H) (Including N-Type connector)
Weight	553g
Installation	Wall or Pole Installation
Antenna	5G NR 6dBi Angle: Horizontal 180° ±10° Vertical 80±10°
LED Indicators	PWR / NET / 2.4GHz / 5GHz
Interfaces	1 x GbE Uplink, Support 802.3at Power Supply 1 x SIM Card Slot Interface

Power Input	50V ~ 57V, 802.3at PSE
<b>Environment</b>	
Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
Operating Humidity	5% - 95% (non-condensing)
Air Pressure	86kPa ~ 106kPa Altitude
IP Rating	IP67
Safety Certification	SRRC, can do according to the customer's request
<b>Stability</b>	
Annual Failure Rate	AFR < 1.5% (Continuous Operation Status)
<b>Chipset Solution</b>	
CPU	MTK MT7981BA+MT7976CN+MT7531AE
Flash	32MB SPI NOR Flash
RAM	256MB DDR3L Memory
<b>Wi-Fi Characteristics</b>	
Wi-Fi Standards	2.4GHz: 802.11b/g/n/ax 5GHz: 802.11a/n/ac/ax
Max Speed Rate	2.4GHz: Max. 574Mbps 5GHz: Max. 2400Mbps
Antenna	Omni-Directional Antenna
Working Frequency	2.4GHz Radio: 2.4000GHz ~ 2.4835GHz
	5GHz Radio: 5.150 ~ 5.850GHz
Max. Transmit Power	2.4GHz Radio: 24 ± 2dBm@MCS0, 21 ± 2dBm@MCS7 5GHz Radio: 24 ± 2dBm@MCS0, 21 ± 2dBm@MCS7
Data Rate	2.4G Radio: 802.11b: 1, 2, 5.5, and 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps 802.11n HT20/HT40: MCS0~MCS15 (400/ 800ns GI) 802.11ax HE20/HE40: MSC0 ~ MCS11 (400/ 800ns GI)

	5G Radio: 802.11a: 6, 9, 12, 18, 24, 36, 48 and 54Mb/s 802.11n HT20/ HT40: MCS0~MCS15 (400/ 800ns GI) 802.11ac VHT20/VHT40/VHT80: MCS0 ~ MCS9 (400/ 800ns GI) 802.11ax HE40/HE80/HE160: MSC0 ~ MCS11 (400/ 800ns GI)		
Reception Sensitivity	802.11 b : -90 dBm@ 11 Mbps 802.11g : -77dBm @ 54 Mbps		
	802.11n:		
		HT20	HT40
	MCS7	-73dBm	- 72 dBm
	MCS 11	- 65 dBm	- 61 dBm
2.4GHz 802.11ax:			
	HT20	HT40	
MCS 11	- 62 dBm	-6 1 dBm	
5.8GHz 802.11ax :			
	HT20	HT40	HT80
MCS 11	- 63 dBm	-62dBm	- 62 dBm

## 5G Sub-6 NR Technical Specifications

Cellular Technology	5G Category: 3GPP Release 16 NSA/SA 5G Sub-6 GHz LTE Category: DL Cat 18/ UL Cat 19	
Frequency Bands(GL)	5G NR (NSA)	n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79
	5G NR (SA)	n1/ 2/ 3/ 5/ 7/ 8/ 12/ 13/ 14/ 18/ 20/ 25/ 26/ 28/ 29/ 30/ 38/ 40/ 41/ 48/ 66/ 70/ 71/ 75/ 76/ 77/ 78/ 79
	LTE-FDD	B1/ 2/ 3/ 4/ 5/ 7/ 8/ 12/ 13/ 14/ 17/ 18/ 19/ 20/ 25/ 26/ 28/ 29/ 30/ 32/ 66/ 71
	LTE-TDD	B34/ 38/ 39/ 40/ 41/ 42/ 43/ 48
	LAA	B46
	WCDMA	B1/ 2/ 4/ 5/ 8/ 19
Data Transmission	5G SA Sub-6	Max. 2.4Gbps (DL) / Max. 900Mbps (UL)
	5G NSA Sub-6	Max. 3.4Gbps (DL) / Max. 550Mbps (UL)

	LTE-FDD	Max. 1.6Gbps (DL) / Max. 200Mbps (UL)
	WCDMA	Max. 42Mbps (DL) / Max. 5.76Mbps (UL)
Antenna	Cellular x 4	
MIMO	DL: 4 x 4, UL: 2 x 2	
Antenna Type	Internal Antenna	

## Product Views



## Order Information

Product Model	Product Description
ComFi W510	Complete Product Unit including 1 x 48V PoE Power Supply 1 x Pole Mounting Gear 1 x Network Cable

To see more MovingComm products,

Visit:-

Movingcomm official website <http://www.movingcomm.com/en>

Movingcomm Alibaba global site: <https://movingcomm.en.alibaba.com>

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH MOVINGCOMM PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN MOVINGCOMM'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, MOVINGCOMM ASSUMES NO LIABILITY WHATSOEVER, AND MOVINGCOMM DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF MOVINGCOMM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY MOVINGCOMM, THE MOVINGCOMM PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE MOVINGCOMM PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

MovingComm may make changes to specifications and product descriptions at any time, without notice. Buyers must receive a confirmation from MovingComm prior using the product. MovingComm shall have no responsibility whatever for conflicts or incompatibilities arising from future changes to them.

Copyright © 2013-2022 Shenzhen MovingComm Technology Co., Ltd. All rights reserved.

## 深圳星恒讯科技有限公司

SHENZHEN MOVINGCOMM TECHNOLOGY CO., LTD.

Addr: 4F, No. 5 Building, TongFuKang ShuiTian Industrial Zone,  
ChangCheng Road, ShuiTian Community, ShiYan, BaoAn  
District, 518108 ShenZhen, GuangDong, China

Tel: 86-755-23125215

Fax: 86-755-23125215-802

Email: [sales@movingcomm.com](mailto:sales@movingcomm.com)

