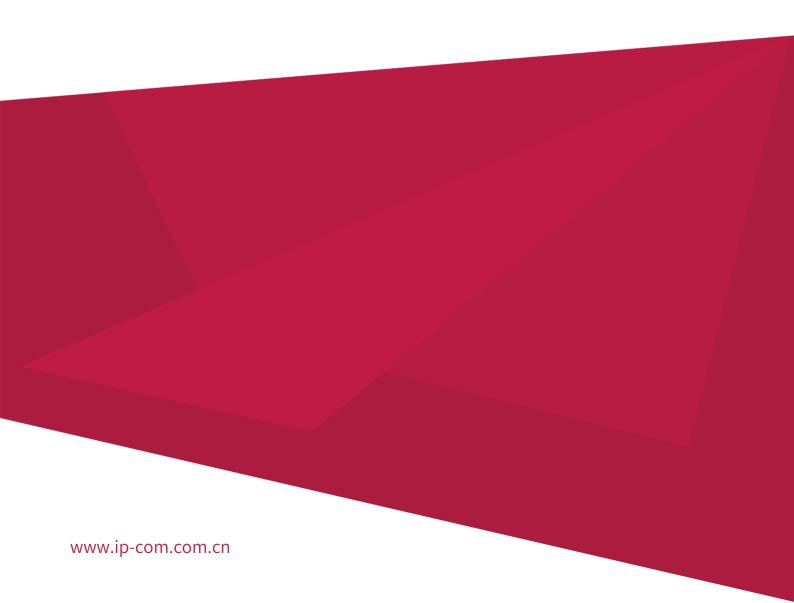


# Wavebeam M5

5GHz 23dBi ipMax ac Outdoor CPE



## Wavebeam M5

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## **Products Description**

Wavebeam M5 5GHz 23dBi ipMax ac Outdoor CPE is designed to PtP&P2MP solutions for video surveillance transmission and wireless broadband access. Adopts of 11ac technology to deliver a high wireless rate for better performance. It features with 23dBi vertical polarization directional antenna to provide an efficient way to pick up and maintain a stable long range range connection.



## **Key Feature**

- 5GHz 11AC 433Mbps
- 23dbi directional antenna
- · One fast Ethernet Port
- IP65 waterproof enclosure
- · 6000V Lightning Protection
- AP,Station,WISP operating mode supported

#### **Product Features**



#### 20+km transmission Range

Wavebeam M5 adopts of independent external power amplifier and 23dBi directional antenna to provide an efficient way to pick up and maintain a stable signal for a wireless network up to 20km.



#### ipMAX--IP-COM TDMA proprietary protocol

ipMAX is IP-COM TDMA (Time Division Multiple Access) proprietary protocol to improve performance and capacity for wireless P2MP outdoor application scenarios.

In outdoor environment, the CPE use highly directional antennas to connect to the Basestation from distances that can span several kilometers. the CPE can't sense each other, they become "hidden nodes" and cannot coordinate access to the wireless channel. Thus the Basestation experiences frequent collisions from stations transmitting simultaneously. As the network scales, these collisions build up exponentially, increasing latency and lowering throughput.

With ipMAX, it coordinate all the data transmission and allocates time to active clients to provide greater noise immunity performance when compared to the conventional 802.11 CSMA/CA (Carrier Sense Multiple Access / Collision Avoidance) protocol.



#### iLink--Auto-bridge Technology Enable it To Easy Setup

iLink is IP-COM proprietary auto-bridge technology, It enables the CPE or basestation in factory default settings connect to each other automaticaly after the device is powered on. It is very useful for the person who is not familiar with network knowledge, especilly for for CCTV surveillance transmission application.



#### **Multiple Application Scenarios**

Long-Distance Wireless Connection

One work as AP mode and another work as Station mode to create a long distance wrieless connecton for video surveillance and data transmission.

WISP(Client+Router) Mode

Wirelessly connect to WISP station/hotspot to share Internet to local wireless and wired network.

### **Product Features**



#### **Professional Outdoor Design**

Equipped with IP65 waterproof enclouse and high quality hardware design, Wavebeam M5 can work in various weather conditions, such as sunshine, rainfall or extremely low/high temperature environment

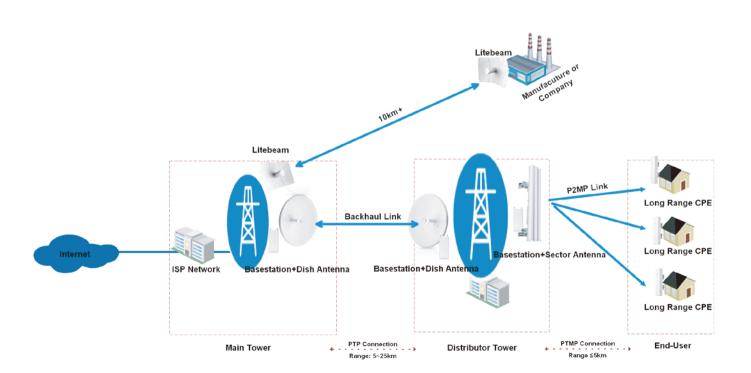


#### **Easy to Setup and Manage**

Wavebeam M5 comes with a centralized management software that helps users easily to manage all the devices in the network from a single PC-CPE Controller.

## **Application Scenarios**

Wavebeam M5 Long Range Outdoor CPE is designed to PtP&P2MP solutions for video surveillance transmission and wireless broadband access.



## **Related Product**



#### CPE6

- \* 2+km transmission range
- \* 5GHz 11n 300Mbps
- 12dbi directional antenna
- \* IP65 waterproof enclosure
- \* 6000V Lightning Protection
- \* AP,Station,WISP operating mode supported



#### CPE12

- \* 5+km transmission range
- 5GHz 11n 300Mbps
- 14dbi directional antenna
- \* IP65 waterproof enclosure
- \* 6000V Lightning Protection
- \* AP,Station,WISP operating mode supported



BS6

- \* 5GHz 11n 300Mbps
- \* 2\*RP-SMA connector
- \* IP65 waterproof enclosure
- \* 6000V Lightning Protection
- \* AP,Station,WISP operating mode supported



- \* 19dBi Dual Polarity Sector Antenna\* Frequency Range 5100~5850MHz
- ANT19-5G120 \* Horizonal 120° Vertical 120° Elevation 4° \* 2\*RP-SMA Connector

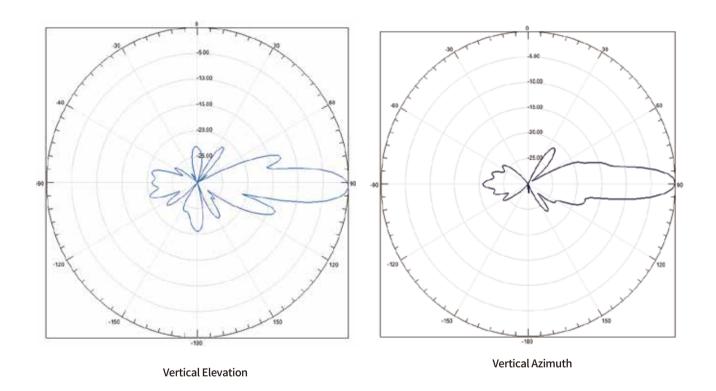
  - \* 5+km transmission range with BS6

Model         ILBE -M5           Dimensions         3915*280*223mm           Deployment         Pole Mount           Application Scenarios         P8P and PtMP wireless connection for Privated ISP access or CCTV Surveillance           Hardware Specifications         Frequency Range           Compliant Standards         IEEE 802.11a/n/ac           Private TDMA Protocol         ipMAX           Maximum Wireless Rate         433Mbps           Interfaces         1*10/100Mbps Ethernet Port           Antennas Gain         23dBl           Antennas Gain         23dBl           Antennas Beamwidth         Vertical Azimuth: 10* Vertical Elevation: 10*           Reset Button         1           Power Consumption         5.5W           Waterproof Level         IP65           LED indicator         PoE/LAN,LED1,LED2,LED3           Power Method         24V0.5A Passive PoE           Lightning Protection         6000V           Receiver sensitivity         11a 6Mbps - 966mm±1.5dBm 11a McS7 HT20 - 72dBm±1.5dBm 11a McS7 HT20 - 72dBm±1.5dBm 11a McS7 HT20 - 72dBm±1.5dBm 11a McS7 HT20 - 72dBm±1.5dBm           Software Features           Operating mode         AP/Station/WiSP/PZMP/WDS Repeater/Router           Enable/Disable Wireless Radio         Support	Specifications	
Pole Mount Application Scenarios PtP and PtMP wireless connection for Privated ISP access or CCTV Surveillance  Hardware Specifications  Frequency Range SGHz Compliant Standards IEEE 802.11a/n/ac Private TDMA Protocol IpMAX Maximum Wireless Rate 433Mbps Interfaces 1*10/100Mbps Ethernet Port Antennas Gain 23dBi Antennas Gain Vertical Azimuth: 10* Veritcal Elevation: 10* Reset Button 1 Power Consumption 5.5W Waterproof Level IP65 LED indicator PoE/LAN,LED1,LED2,LED3 Power Method 24V0.5A Passive PoE Lightning Protection 6000V Passive PoE Passive power over ethenet via PoE/LAN(+4,5pins, -7,8pins) Voltage range: 9:31VDC  Receiver sensitivity 11a MCS7 HT20 - 72dBm±1.5dBm 11a MCS7 HT20 - 72dBm±1.5dBm 11a MCS9 HT80 - 64dBm±1.5dBm 11a MCS9 HT80 - 64dBm±1.5dBm 25DHidden Support  SSID Hidden Support  Wireless Client isolation Support  SSID Isolation Support	Model	iLBE -M5
Application Scenarios PtP and PtMP wireless connection for Privated ISP access or CCTV Surveillance  Hardware Specifications  Frequency Range 5GHz  Compliant Standards IEEE 802.11a/n/ac  Private TDMA Protocol ipMAX  Maximum Wireless Rate 433Mbps  Interfaces 1*10/100Mbps Ethernet Port  Antennas Gain 23dBi  Antennas Gain Vertical Azimuth: 10* Veritcal Elevation: 10*  Reset Button 1  Power Consumption 5.5W  Waterproof Level IP65  LED indicator PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31VDC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11a MCS7 HT20 -72dBm±1.5dBm 11a MCS7 HT20 -72dBm±1.5dBm 11a MCS7 HT20 -72dBm±1.5dBm 11a MCS9 HT80 -64dBm±1.5dBm 20 Features  Software Features  Operating mode AP/Station/WISP/P2MP/MDS Repeater/Router Enable/Disable Wireless Radio Support  Wireless Client isolation Support  SSID Hidden Support	Dimensions	391.5*280*223mm
Hardware Specifications  Frequency Range 5GHz  Compliant Standards IEEE 802.11a/n/ac  Private TDMA Protocol ipMAX  Maximum Wireless Rate 433Mbps Interfaces 1°10/100Mbps Ethernet Port  Antennas Gain 23dBi  Antenna Beamwidth Vertical Azimuth: 10° Veritcal Elevation: 10°  Reset Button 1  Power Consumption 5.5W  Waterproof Level IP65  LED indicator PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins,-7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a GMbps -95dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 25oftware Features  Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router Enable/Disable Wireless Radio Support  Wireless Client isolation Support  SSID Hidden Support	Deployment	Pole Mount
Frequency Range 5GHz  Compliant Standards IEEE 802.11a/n/ac  Private TDMA Protocol ipMAX  Maximum Wireless Rate 433Mbps Interfaces 1*10/100Mbps Ethernet Port  Antennas Gain 23dBi  Antennas Gain Vertical Azimuth: 10* Veritcal Elevation: 10*  Reset Button 1  Power Consumption 5.5W  Waterproof Level IP65  LED indicator PoE/LAN_LED1_LED2_LED3  Power Method 24Y0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive PoE 11ad Mbps - 95dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 25GtWare Features  Operating mode AP/Station/WiSP/P2MP/WDS Repeater/Router Enable/Disable Wireless Radio Support  Wireless Client isolation Support  SSID Hidden Support	Application Scenarios	PtP and PtMP wireless connection for Privated ISP access or CCTV Surveillance
Compliant Standards IEEE 802.11a/n/ac  Private TDMA Protocol ipMAX  Maximum Wireless Rate 433Mbps Interfaces 1*10/100Mbps Ethernet Port  Antennas Gain 23d6i  Antenna Beamwidth Vertical Azimuth: 10* Veritcal Elevation: 10*  Reset Button 1  Power Consumption 5.5W  Waterproof Level IP65  LED indicator PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11a cMCS9 HT80-64dBm±1.5dBm 11a cM	Hardware Specifications	
Private TDMA Protocol  ipMAX  Maximum Wireless Rate  433Mbps  Interfaces  1*10/100Mbps Ethernet Port  Antennas Gain  23dBi  Antenna Beamwidth  Vertical Azimuth: 10° Veritcal Elevation: 10°  Reset Button  1  Power Consumption  5.5W  Waterproof Level  IP65  LED indicator  PoE/LAN,LED1,LED2,LED3  Power Method  24V0.5A Passive PoE  Lightning Protection  6000V  Passive PoE  Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity  11a 6Mbps -95dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm Software Features  Operating mode  AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio  Support  Wireless Client isolation  Support  SSID Isolation  Support	Frequency Range	5GHz
Maximum Wireless Rate 433Mbps Interfaces 1*10/100Mbps Ethernet Port Antennas Gain 23dBi Antenna Beamwidth Vertical Azimuth: 10° Veritcal Elevation: 10° Reset Button 1 Power Consumption 5.5W Waterproof Level IP65 LED indicator PoeF/LAN,LED1,LED2,LED3 Power Method 24V0.5A Passive PoE Lightning Protection 6000V Passive PoE Passive PoE 11a6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11n CMS9 HT80-64dBm±1.5dBm Software Features Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router Enable/Disable Wireless Radio Support Wireless Client isolation Support SSID Hidden Support	Compliant Standards	IEEE 802.11a/n/ac
Interfaces 1*10/100Mbps Ethernet Port Antennas Gain 23dBi Antenna Beamwidth Vertical Azimuth: 10° Veritcal Elevation: 10° Reset Button 1 Power Consumption 5.5W Waterproof Level IP65 LED indicator PoE/LAN,LED1,LED2,LED3 Power Method 24V0.5A Passive PoE Lightning Protection 6000V Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm Software Features  Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router Enable/Disable Wireless Radio Support  SID Hidden Support  Wireless Client isolation Support  Support	Private TDMA Protocol	ipMAX
Antennas Gain 23dBi Antenna Beamwidth Vertical Azimuth: 10° Veritcal Elevation: 10° Reset Button 1 Power Consumption 5.5W Waterproof Level IP65 LED indicator PoE/LAN, LED1, LED2, LED3 Power Method 24V0.5A Passive PoE Lightning Protection 6000V Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11a MCS9 HT80-64dBm±1.5dBm 11a CMCS9 HT80-64dBm±1.5dBm 11a CMCS9 HT80-64dBm±1.5dBm 15d MCS9 H	Maximum Wireless Rate	433Mbps
Antenna Beamwidth  Reset Button  1  Power Consumption  5.5W  Waterproof Level  IP65  LED indicator  PoE/LAN,LED1,LED2,LED3  Power Method  24V0.5A Passive PoE  Lightning Protection  6000V  Passive PoE  Passive PoE  11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm Software Features  Operating mode  AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio  Support  Wireless Client isolation  Support  Support  Support	Interfaces	1*10/100Mbps Ethernet Port
Reset Button 1  Power Consumption 5.5W  Waterproof Level IP65  LED indicator POE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive PoE Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm 15d MCS9 HT80 -64dBm±1.	Antennas Gain	23dBi
Power Consumption 5.5W  Waterproof Level IP65  LED indicator PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11a MCS9 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm Software Features  Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio Support  SSID Hidden Support  Wireless Client isolation Support  SSID Isolation Support	Antenna Beamwidth	Vertical Azimuth: 10° Veritcal Elevation: 10°
Waterproof Level IP65  LED indicator PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Possive PoE Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm 11a	Reset Button	1
PoE/LAN,LED1,LED2,LED3  Power Method 24V0.5A Passive PoE  Lightning Protection 6000V  Passive PoE Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Receiver sensitivity 11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 15dBm 15	Power Consumption	5.5W
Power Method  Lightning Protection  6000V  Passive PoE  Passive PoE  Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31V DC  Lia 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm	Waterproof Level	IP65
Lightning Protection  Passive PoE  Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins) Voltage range: 9-31VDC  Receiver sensitivity  11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm  Software Features  Operating mode  AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio  Support  SSID Hidden  Support  SSID Isolation  Support  Support	LED indicator	PoE/LAN,LED1,LED2,LED3
Passive PoE  Passive power over ethenet via PoE/LAN (+4,5pins; -7,8pins)  Voltage range: 9-31V DC  11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm 11ac MCS9 HT80-64dBm±1.5dBm  Software Features  Operating mode  AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio  Support  SSID Hidden  Wireless Client isolation  Support  Support  Support  Support	Power Method	24V0.5A Passive PoE
Passive PoE  Voltage range: 9-31V DC  11a 6Mbps -95dBm±1.5dBm 11n MCS7 HT20 -72dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm 11ac MCS9 HT80 -64dBm±1.5dBm  Software Features  Operating mode  AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio Support  SSID Hidden Support  Support  Support  Support  Support	Lightning Protection	6000V
Receiver sensitivity  11n MCS7 HT20 -72dBm±1.5dBm  11ac MCS9 HT80 -64dBm±1.5dBm  Software Features  Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio Support  SSID Hidden Support  Wireless Client isolation Support  SUPPORT Support  Support  Support	Passive PoE	
Operating mode AP/Station/WISP/P2MP/WDS Repeater/Router  Enable/Disable Wireless Radio Support  SSID Hidden Support  Wireless Client isolation Support  SSID Isolation Support	Receiver sensitivity	11n MCS7 HT20 -72dBm±1.5dBm
Enable/Disable Wireless Radio  Support  SSID Hidden  Support  Wireless Client isolation  Support  SSID Isolation  Support	Software Features	
SSID Hidden Support Wireless Client isolation Support SSID Isolation Support	Operating mode	AP/Station/WISP/P2MP/WDS Repeater/Router
Wireless Client isolation Support  SSID Isolation Support	Enable/Disable Wireless Radio	Support
SSID Isolation Support	SSID Hidden	Support
·	Wireless Client isolation	Support
Channel Bandwidth 20/40/80MHz	SSID Isolation	Support
	Channel Bandwidth	20/40/80MHz

Specifications	
Client Limitation For SSID	Support
Wireless Access Control	Support
Weak Signal Client Limitation	Support
Transmission Power	Adjustable power by 1dBm
WMM Capable	Support
APSD Capable	Support
Wireless Security	64/128 WEP,WPA-PSK,WPA2-PSK,WPA&WPA2-PSK,WPA,WPA2
Transparent Bridge	Support
VLAN Tagging for SSID	Support
DHCP Server	Support
VPN Pass-Through	PPTP,L2TP
Remote Web access	Support
Schedule Reboot	Support
Page Timeout	Support
Ping Watchdog	Support
Dyndns	noip, dyndns.org
Network Diagnoses	Ping, Traceroute, Signal Scan
Time&Date Setting	Support
Firmware upgrade	Support
Backup/Restore Configuration	Support
Username Managerment	Support
System Log	Support
Managed By Controller	PC Software – CPE Controller
Others	
Package Contents	1*5GHz 23dBi ipMax ac Outdoor CPE iLBE-M5V1.0 1*Power Adapter 1*PoE Injector 1*Quick Installation Guide
Operating Temperature	-30°C ~ 60°C
Storage Temperature	-40°C ~ 70°C
Operating Humidity	10%~90% non-condensing

Working Environment	
Storage Humidity	10%~90% non-condensing
Default login IP	192.168.2.1
Default Login Username	admin
Default Login Password	admin
Certifications	FCC/CE/RoHS

### Antenna





## Headquarters

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