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SkyMesh-MIMO
PTP/PTMP Series

HYC-ATHNL1051B-45

Lite 5 GHz Outdoor MIMO HT-OFDM PTP/PTMP Ethernet Backhaul

Narrow Channel BW for crowded urban environment

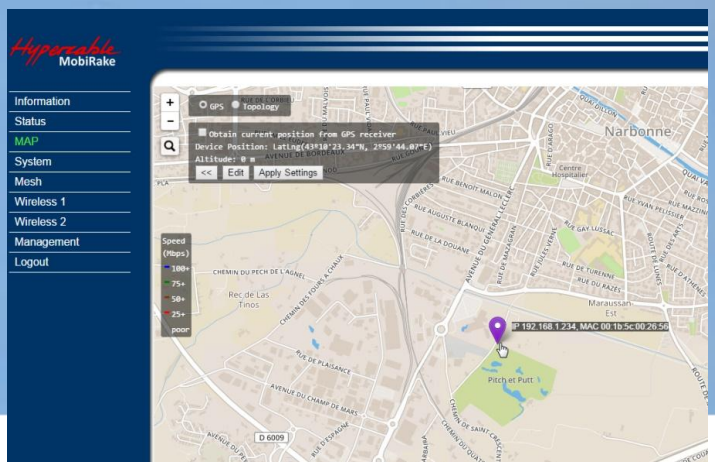
Up to 9 Channel BWs >> 2.5-3-3.5-4-5-6-7-8-10MHz

5.2 bits/s/Hz amazing spectral efficiency

GPS Coordinates and Internet Map Database System

Features:

- PTP/ PTMP Ethernet backhaul
- 5.4 ~ 5.9 GHz Operating Frequency
- MIMO HT-OFDM Modulation
- 9 Channel Bandwidths
- Up to 51 Mbps Real TCP Throughput
- GPS Coordinates and Internet map database
- WPA-PSK / WPA2-PSK
- LOW Latency



With MIMO HT-OFDM (High Throughput OFDM) technology, this radio is a high capacity PTP / PTMP backhaul for 5GHz ISM band wireless deployment. It utilizes coordinate and internet map database to show the environment and status of the link. Customers can easily figure out the linking situation of the deployed radios.

There are 9 channel bandwidths options can be selected easily by software. This feature provides the flexibility of deployment channel plan in crowded city area with valuable bandwidth backhaul -- throughput up to 51Mbps.

This MIMO HT-OFDM PTP/PTMP Ethernet Backhaul has powerful security mechanism such as: WPA-PSK (TKIP) / WPA2-PSK (AES128), access control by allow/deny MAC address list, plus the proprietary protocol. This outdoor radio also supports excellent MTBF performance by IP-67 dust & water resistant ratings, integrated surge protection circuit in both radio and POE unit. All these functions make this outdoor radio much more secure and reliable.

Product Highlights

➢ **Effective spectrum utility / variable capacities with 9 Channel BWs**

This radio has **9 channel Bandwidths (2.5-3-3.5-4-5-6-7-8-10MHz)** for optional, which is adjustable via software. This function provides flexibilities of channel plan in crowded urban environment and variable capacities for different applications.

➢ **MIMO HT-OFDM technology provides amazing spectral efficiency**

Up to **5.2 bits/s/Hz** amazing spectral efficiency for all channel bandwidth provided by the MIMO HT-OFDM technology. Work with the variable channel BW options, these two combination features provides great benefits for both crowded urban area and rural area with less interference.

■ TCP Throughput Table at different Channel BW

Channel BW (MHz)	2.5	3	3.5	4	5	6	7	8	10
Real TCP throughput (Mbps)	12	14	17	20	25	30	35	40	51
Application area	Valuable spectrum				Crowded urban				

➢ **Robust design for harsh environment**

For complete outdoor applications, radio can balance the internal pressure itself automatically, complies with IP-67 water resistant standard and IEC61000-4-5 surge protection standard.

Specifications

RADIO SPECIFICATIONS	
Frequency range	5.4 ~ 5.9 GHz
Channel Band Width	2.5 / 3 / 3.5 / 4 / 5 / 6 / 7 / 8 / 10 MHz
Channel Step	2.5 MHz the minimum
Frequency Stability	± 10ppm
Modulation	MIMO HT-OFDM
RX Sensitivity	-94 to -72dBm
Integrated Antenna	18dBi Integrated MIMO Panel Antenna
INTERFACES	
10/100/1000 Base-T RJ-45 port with M25 Cable Gland	
MANAGEABILITY	
Management and Setup	Web-based (Chrome / IE 9.0 or later)
SNMP agents	MIB II
Protocol	TCP/IP, IPX/SPX, NetBEUI
Network Architecture	PTP / PTMP
Antenna Alignment	WEB GUI Local / Remote Information
Radio Locator	GPS coordinates and internet map database
Security	
Data Encryption	WPA-PSK / WPA2-PSK
Advanced Security	MAC access control / Disable SSID / Proprietary protocol
ENVIRONMENT	
Operating Temperature	-30~60 ℃
Storage Temperature	-30~70 ℃
Humidity	95% non-condensing
POWER SUPPLY & CONSUMPTION	
Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE Power Consumption : 10Watts (typical) / 12 Watts (Max.) @ DC 48V	
PHYSICAL	
Dimension	230 (L) * 230 (W) *75 (H) ; mm
Weight	2.5Kg
WARRANTY	
1 YEAR	

PTP 5KM real throughput performance in crowded urban area									
Bandwidth (MHz)	2.5	3	3.5	4	5	6	7	8	10
Throughput (Mbps)	10.86	13.13	15.35	17.6	22.34	27.74	32.6	37.36	45.93
RSSI (dBm)	-67/-69	-68/-69	-66/-69	-66/-69	-67/-69	-68/-69	-68/-69	-68/-69	-67/-69