



IP67HYC-UVNP5005R-27 For Unmanned Vehicle Mobile Handheld



HYCN(V)5055 Station  
2 Watts per wireless chain  
Hybrid HT-OFDM/FDMA dual 2x2 MIMO

### UVNP5005R-27, S Band Hybrid HT-OFDM/FDMA Tactical SYSTEM

The MobiRake UVNP5005R-27 is a 2 GHz range with Hybrid HT- OFDM/FDMA (Frequency Division Multiple Access) tactical MESH IP Radio.

UVNP5005R-27 can be set to either HT-OFDM or FDMA to meet the needs of various applications. Generally selecting HT-OFDM can get a larger bandwidth to complete the backbone, relay, fixed mesh or mobile mesh requirements. The maximum effective bandwidth of HT-OFDM be reach 200 Mbps more throughput capacity.

If there is massive interference or deliberate interference in the environment, adjust to FDMA mode which provides 4ms channel hopping rate to secure the system running stable within the effective operating frequency range.

Operating Frequency	2200 – 2560 MHz (UVNP5005R)
Modulation	HT-OFDM / FDMA (Frequency Division Multiple Access) († Manual switching by software)
Output power	27 dBm 33 dBm (Advanced version)
Channel Bandwidth	2.5 ~ 40 MHz (HT-OFDM) 10 MHz Fixed (FDMA)
Channel Hopping Rate	4 ms (250 hops/sec)
Antenna System	2x2 MIMO
Antenna Connectors	Type SMA – Female x 2
Interfaces of UVNP5001R	3 pins (DC In) 9 pins (Ethernet) 6 pins (RS232 Data & Reset)
IP Throughput of OFDM	200 Mbps in 40 MHz BW
IP Throughput of FDMA	20 Mbps in 10 MHz BW
Operating mode of OFDM	PTP/PTMP/Mesh Ad-Hoc
Operating mode of FDMA	PTP/PTMP
GPS	GPS coordinates and internet map database
Security	128 AES Encryption / proprietary protocol / MAC address control
Management & setup	Web-based
SNMP agents	MIB II
Dimension / Weight	144 x 85.5 x 46, mm / 340 g (UVNP5005-27)
Power Consumption	Max. 12 W (UVNP5005)
Power feed	DC 12 – 24 V
Waterproof	IP67
Ordering information	ANTM2225GD6-M-NF, 2 GHz 6dBi 2x2 MIMO Omni-directional ant. ANTM2225GD9-M-NF, 2 GHz 9dBi 2x2 MIMO Omni-directional ant.



# S Band 2200 MHz – 2500 MHz Omni-Directional Gooseneck Antenna

## ANTV222502V-MGN-TM, Electrical Specification

Frequency Band	2200 – 2500 MHz
Gain	2 dBi
Nominal Impedance	50 Ω
VSWR	≤2.0:1
Polarization	Linear, Vertical
HPBW - Azimuth	360°
HPBW - Elevation	70°
Max. Power Handling	50 W
Operating Temperature	-40 °C~ +70 °C

## Mechanical Specification

Connector	TNC, Male (Non-Rotating)
Length	210 ±5.0 mm
Diameter	Φ 14.8 ± 1.0 mm
Weight	78 g
Color	Matte Black
Mounting	Connector mode locking

## ANTV222502H-MGN-TM, Electrical Specification

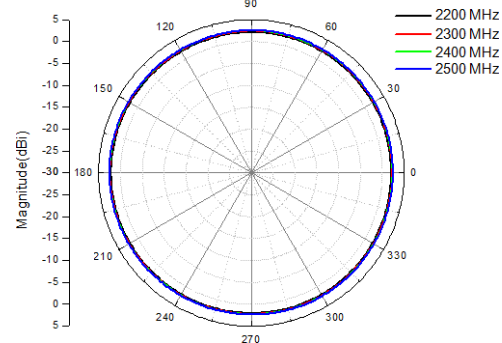
Frequency Band	2200 – 2500 MHz
Gain	2 dBi
Nominal Impedance	50 Ω
VSWR	≤2.0 : 1
Polarization	Linear, Horizontal
HPBW-Azimuth	360°
HPBW- Elevation	75° (Approx.)
Max. Power Handling	10 W
Operating Temperature	-40 °C~ +70 °C

## Mechanical Specification

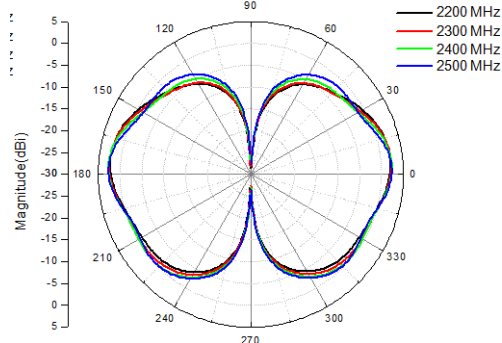
Connector	TNC, Male (Non-Rotating)
Length	≤220 mm
Diameter	19.4 ± 1.0 mm
Weight	≤100 g
Radome Materials	GFRP
Color	Matte Black (or customer specified)
Mounting	Connector mode locking



Azimuth Plane Radiation Pattern



Elevation Plane Radiation Pattern



ANT222502V-MGS-TF

# FDMA Mode (Frequency Division Multiple Access)

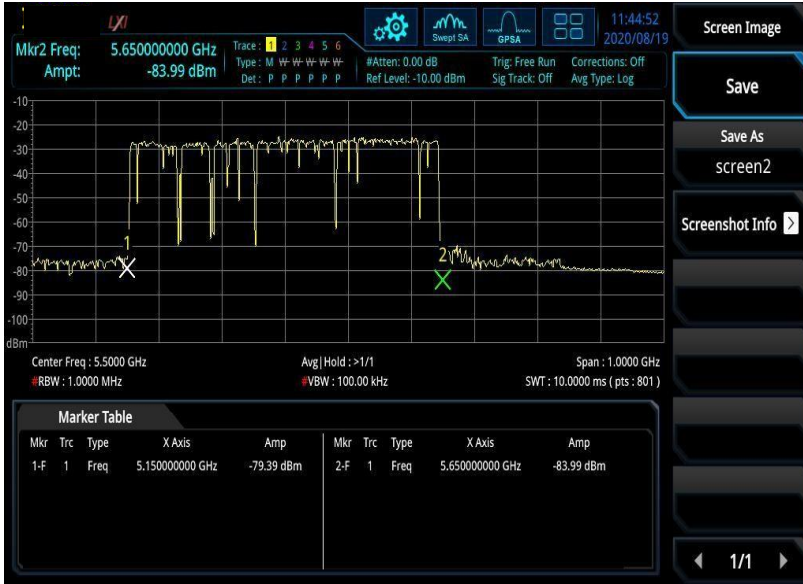


Figure 1

FDMA mode:

- The maximum hopping range of a channel is 300 MHz as **figure 1**. (5 GHz with 500 MHz maximum range)
- A 10 MHz channel bandwidth random hopping in operating frequency band.
- A fixed 10 MHz bandwidth supports 64 QAM 2x2 MIMO and be with 20 Mbps IP throughput maximum.
- FDMA mode supports PTP and PTMP Networks architecture

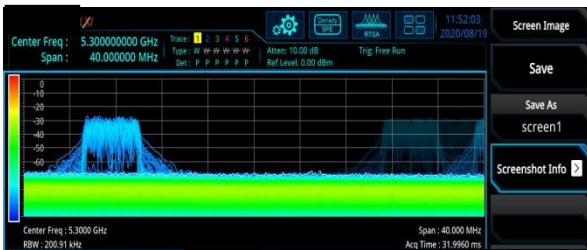


Figure 2

- **figure 2 – figure 4** Frequency channel multiple access and hopping step is 1 MHz
- Fixed hopping rate is 4 ms (250 hops per second)



Figure 3

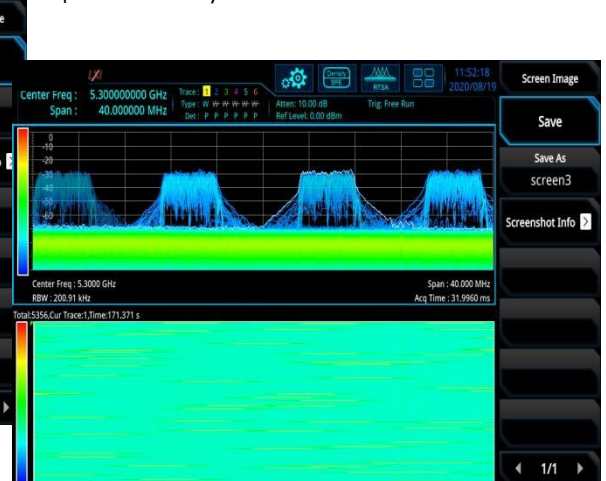


Figure 4