



# NATO Radio HYCNAV40f6

Why dual band mesh radio

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# Specifications of NATO Radio HYCNV40f6

Operating Frequency	1350 – 1850 MHz	4430 – 4950 MHz
Modulation	HT-OFDM	HT-OFDM
Output power	27 dBm (33 dBm OEM optional)	27 dBm (33 dBm OEM optional)
Channel Bandwidth	2.5 ~ 40 MHz	2.5 ~ 40 MHz
Antenna System	2x2 MIMO	2x2 MIMO
Antenna Connectors	SMA-Female x 5 (One for GPS receiver)	
IP Throughput of OFDM	200 Mbps in 40 MHz BW	200 MHz in 40 MHz BW
Operating mode of OFDM	PTP/Hops-Relay /MESH	
GPS	GPS coordinates and internet map database	
Security	128 AES Encryption / proprietary protocol / MAC address control	
Management & setup	Web-based	
SNMP agents	MIB II	
Power feed	DC 10 – 30 V	



**Dual NATO band (III and IV) &  
Dual 2x2 MIMO (4x4)  
Tactical MESH IP Radio**

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# Specifications of HYC-ANT4450GD10-M

## HYC-ANT4450GD10-M NATO Band IV Dual Polarized Omni-Directional Antenna

### 📡 Electrical Specification

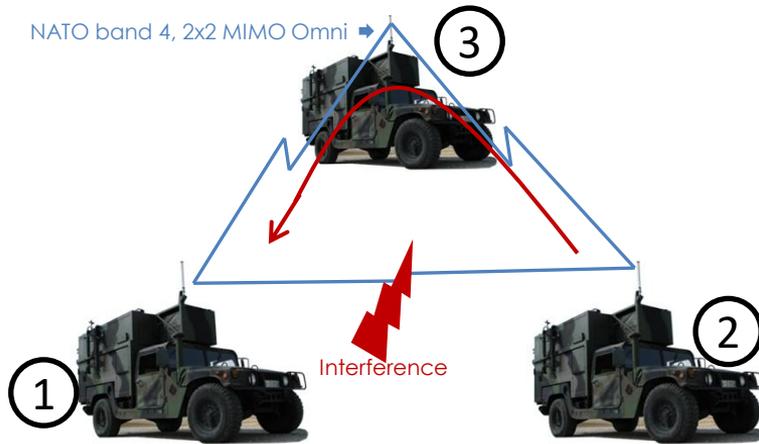
📡 Frequency Band	4400 – 5000 MHz
📡 Gain	2 x 10 dBi
📡 Nominal Impedance	50 $\Omega$
📡 VSWR	$\leq 2.0 : 1$
📡 Polarization	Linear, Vertical & Horizontal
📡 HPBW-Azimuth	360°
📡 HPBW- Elevation	10° (Approx.)
📡 Port to Port Isolation	> 30 dB
📡 Max. Power Handling	20 W
📡 Operating Temperature	-40 °C~ +70 °C
📡 Lightning Protection	DC Grounded

**2x2 MIMO antenna for  
Tactical MESH IP Radio**



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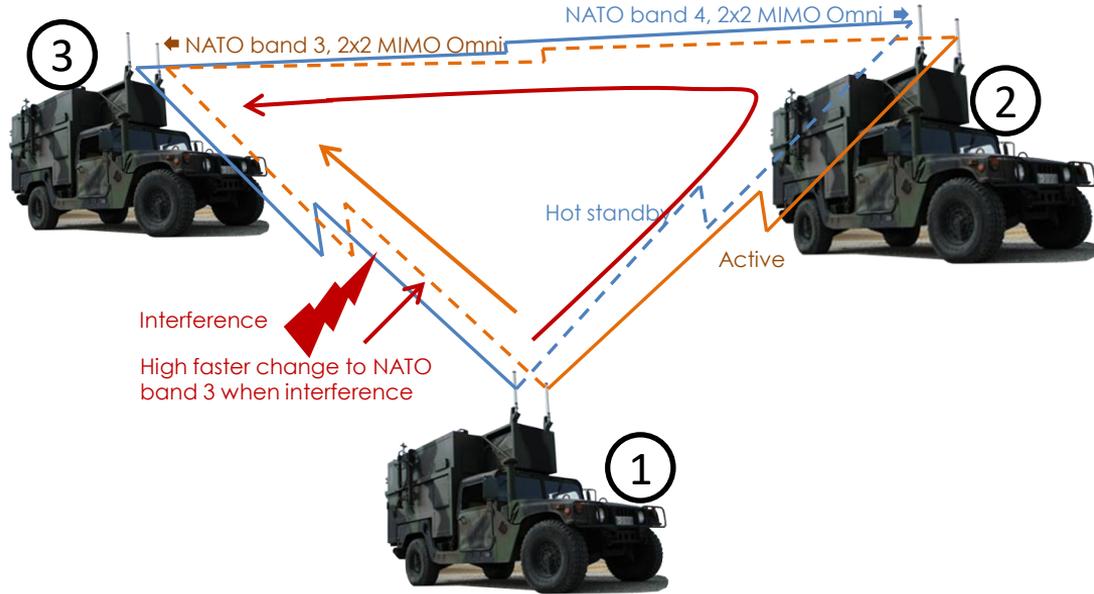
## Single band mesh – HYCNV4006



- ☉ When interference happened to be only ONE way from vehicle 2 after 3 to 1.
- ☉ Vehicle 3 radio must talk to both 2 and 1, then vehicle 2 after 3 to 1 the throughput will be dropped 50% around even more (under mobile harsh conditions).

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## Dual band mesh – HYCNV40f6



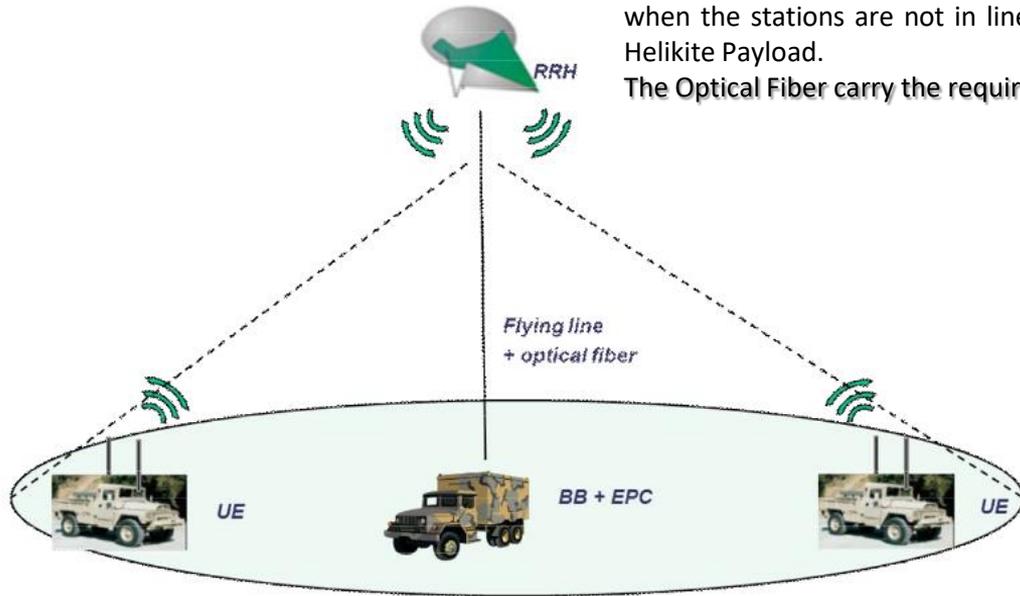
- ☉ When interference happened to be with TWO ways from vehicle 1 after 2 to 3 & vehicle 1 direct back to 3. The system will go through better **red** or **orange** way from vehicle 1 to 3.
- ☉ High faster change to NATO band 3 when interference interrupted NATO band 4. Keeping a higher reliability wireless connectivity.
- ☉ Without throughput dropped once from vehicle 1 direct back to 3 if goes this way (after mesh routing calculated).
- ☉ there is 10~20% throughput dropped once if vehicle 1 after 2 to 3 (after mesh routing calculated) because of dual band running.

# PMPT Single band mesh – HYCNV4006 or Dual band mesh – HYCNV40f6 With radio relay repeater terrestrial or aerial

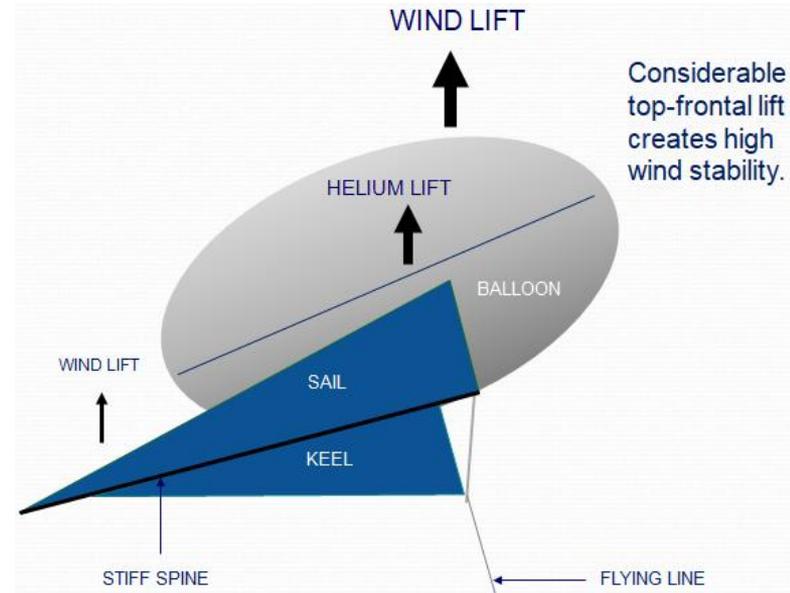
When distances between stations is too large and when the radio visibility is not possible, a radio relay repeater station is required.

The Helikite, a Tethered Kite is another solution for long distance radio network deployment when the stations are not in line of sight. NATO radio IP High speed data is welcome in the Helikite Payload.

The Optical Fiber carry the required DC power for the embedded battery.



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## **HYC-ND400cS-39 3 Watts SISO HT-OFDM Radio**

### **Features:**

- 600 & 620 MHz Operating frequencies
- VHF/UHF OEM Frequencies 25MHz/900MHz
- Supports 2.5 MHz ~ 10MHz channel bandwidth
- CCK, DSSS, HT-OFDM
- 3 Watts Output Power
- Dual SISO Antenna System (UHF)
- MESH Ad-Hoc
- 32.5Mbps max throughput of Eth. port of ground station in 10MHz channel bandwidth
- Supports 2.5 MHz narrow channel bandwidth
- RS232 for traffics data

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PMPT Single band mesh or Dual band mesh VHF / UHF Flight case Radio and computer for Drones & Robotics long Range Video, data & remote control.



Details about the Base Radio station SISO or MIMO 2x2 for UHF or SHF with GPS. Embedded batteries and host for computers or Tablet PC

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