NATO Radio HYCNV40f6

Why dual band mesh radio
# Specifications of NATO Radio HYCNV40f6

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

**Dual NATO band (III and IV) & Dual 2x2 MIMO (4x4) Tactical MESH IP Radio**
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 Ω
- VSWR: ≤ 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
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).

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 Thetered Kite is another solution for long distance radio network deployment when the stations are not in line of sight. NATO radio IP Hight speed data is welcome in the Helikite Payload.

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

Considerable top-frontal lift creates high wind stability.

Hypercable
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
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.