



$$e = \sum_{n=0}^{\infty} \frac{1}{n!} = \lim_{n \rightarrow \infty} \left( \frac{1}{0!} + \frac{1}{1!} + \frac{1}{2!} + \dots + \frac{1}{n!} \right)$$

### RADIO SPECIFICATIONS

|                     |                           |
|---------------------|---------------------------|
| Frequency range     | 600~620 MHz / 662~688 MHz |
| Channel Band Width  | 2.5 ~ 10 MHz (Customized) |
| Frequency Stability | ± 2 ppm                   |
| Modulation          | SISO HT-OFDM              |

| MCS Index | SISO HT-OFDM @ 2.5MHz |                |                | SISO HT-OFDM @ 7MHz |                |                |
|-----------|-----------------------|----------------|----------------|---------------------|----------------|----------------|
|           | Data Rate (Mbps)      | Tx Power (dBm) | Rx Sensitivity | Data Rate (Mbps)    | Tx Power (dBm) | Rx Sensitivity |
| MCS0      | 0.81                  | 33 (±1.5)      | -92 dBm        | 2.36                | 33 (±1.5)      | -90 dBm        |
| MCS1      | 1.62                  | 33 (±1.5)      | -90 dBm        | 4.73                | 33 (±1.5)      | -87 dBm        |
| MCS2      | 2.44                  | 33 (±1.5)      | -87 dBm        | 7.09                | 33 (±1.5)      | -83 dBm        |
| MCS3      | 3.25                  | 31 (±1.5)      | -84 dBm        | 9.45                | 31 (±1.5)      | -81 dBm        |
| MCS4      | 4.88                  | 31 (±1.5)      | -81 dBm        | 14.18               | 31 (±1.5)      | -79 dBm        |
| MCS5      | 6.50                  | 29 (±1.5)      | -77 dBm        | 18.90               | 29 (±1.5)      | -75 dBm        |
| MCS6      | 7.31                  | 29 (±1.5)      | -75 dBm        | 21.18               | 29 (±1.5)      | -73 dBm        |
| MCS7      | 8.12                  | 28 (±1.5)      | -73 dBm        | 23.63               | 28 (±1.5)      | -72 dBm        |

### INTERFACES

1 x N-type Female Connector (HYCN(V)400cS, HYCN(V)400dS), 2 x N-type Female Connectors (HYCN(V)40cdS)  
 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   |
| Operating mode        | MESH Ad-Hoc  |
| Antenna Alignment     | WEB GUI Local / Remote Information   |
| Built-in NMS          | Live linking status of the network by GPS coordinates and internet map database      |
| Built-in GPS Receiver | Self-locate GPS coordinates to synchronize NMS live linking status <b>(Optional)</b> |

### SECURITY

|                   |  |
|-------------------|--|
| Data Encryption   | WPA-PSK / WPA2-PSK                                       |
| Advanced Security | MAC access control / Disable SSID / Proprietary protocol |

### ENVIRONMENT

|                       |                    |
|-----------------------|--------------------|
| Operating Temperature | -30~60 °C          |
| Storage Temperature   | -30~70 °C          |
| Humidity              | 95% non-condensing |

### POWER SUPPLY & CONSUMPTION

Power Supply : AC 100-264V, 50-60Hz convert to DC 48V Adapter (Max. 45Watts) with 48VDC POE or DC 10-30V (Optional)  
 Power consumption : 25Watts

### PHYSICAL

|           |  |
|-----------|--|
| Dimension | 259 (L) * 250 (W) * 75 (H) ; mm (External antenna model) |
| Weight    | 2Kg (ground station & boat station versions)             |

### WARRANTY

1 YEAR

### ORDERING INFORMATION

|               |   |
|---------------|---|
| HYCN400cS-33  | 600 ~ 620 MHz 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, PoE version                        |
| HYCN400dS-33  | 662 ~ 688 MHz 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, PoE version                        |
| HYCNV400cS-33 | 600 ~ 620 MHz 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, DC10-30V version                   |
| HYCNV400dS-33 | 662 ~ 688 MHz 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, DC 10-30V version                  |
| HYCN40cdS-33  | 600 ~ 620 / 662 ~ 688 MHz dual 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, PoE version       |
| HYCNV40cdS-33 | 600 ~ 620 / 662 ~ 688 MHz dual 2Watts SISO HT-OFDM MESH Ad-Hoc Radio, DC 10-30V version |
| ACF610        | 610 MHz Channel Filter, N-Female  |
| ACF675        | 675 MHz Channel Filter, N-Female  |



# Sector RHCP Antenna

## Specifications of Sector Antennas

### Electrical Specification

|                         |                |
|-------------------------|----------------|
| Frequency Band          | 662 – 688 MHz  |
| Gain (Max.)             | $\geq 10$ dBi  |
| Nominal Impedance       | 50 $\Omega$    |
| VSWR                    | $\leq 2.0:1$   |
| Polarizations           | Circular, RHCP |
| HPBW-Azimuth            | 80°            |
| HPBW-Elevation          | 25°            |
| Front - to - back ratio | > 25 dB        |
| Max. Power Handling     | 100 W cw       |
| Operating Temperature   | -40°C ~ +70°C  |
| Lightning Protection    | DC Grounded    |

### Mechanical Specification

|                    |  |
|--------------------|--|
| Connector          | N Type, Female                                     |
| Dimension          | 905(L) x 326(W) x 86(H) $\pm$ 5.0mm                |
| Weight             | $\leq 7$ Kg (with Mounting Kit)                    |
| Wind Survival      | 200 Km/h   |
| Wind Load @150km/h | Front : 467 N, Side : 123 N                        |
| Color              | Gray   |
| Mounting           | MT-007 Mounting Kit , on pole $\Phi$ 40<br>~ 80 mm |

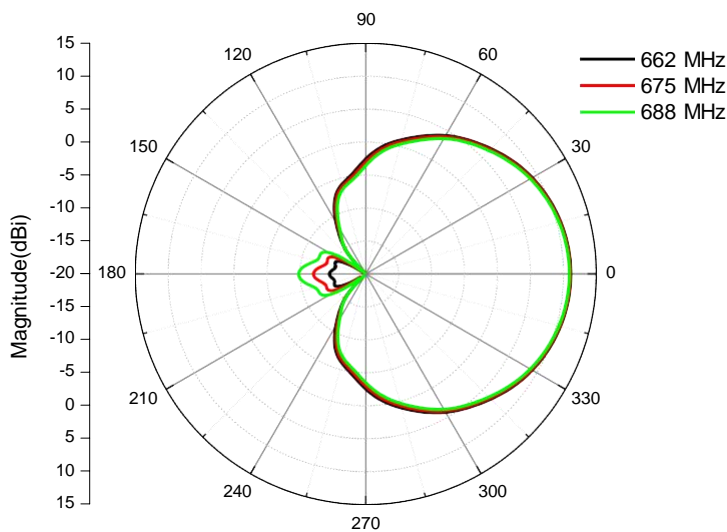


Ordering Information:

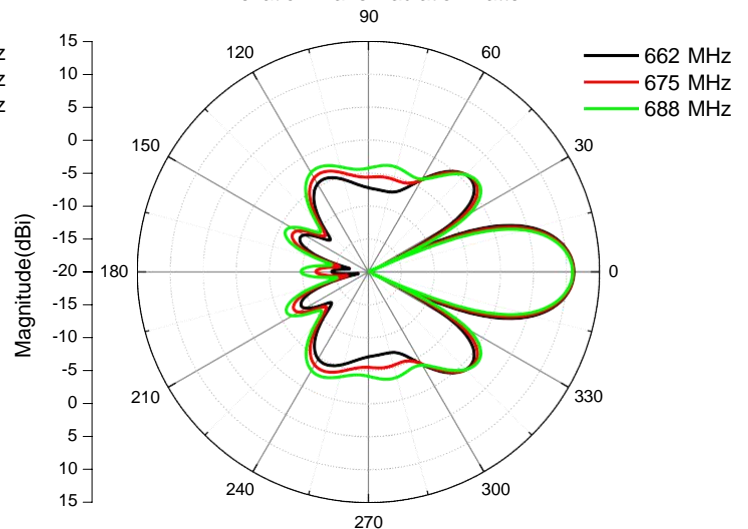
ANTU606210-S80-NFRC, 610MHz

ANTU666910-S80-NFRC, 675MHz

Azimuth Plane Radiation Pattern



Elevation Plane Radiation Pattern





# Omnidirectional Antenna

## Specifications of Omni Antennas

### Electrical Specification

|                       |                  |
|-----------------------|------------------|
| Frequency Band        | 600 ~ 620 MHz    |
| Gain                  | 7 dBi            |
| Nominal Impedance     | 50Ω              |
| VSWR                  | < 1.5 : 1        |
| Polarizations         | Linear, Vertical |
| HPBW-Azimuth          | 360°             |
| HPBW-Elevation        | 17°              |
| Max. Power Handling   | 150 W            |
| Operating Temperature | -40°C ~ +80°C    |

### Mechanical Specification

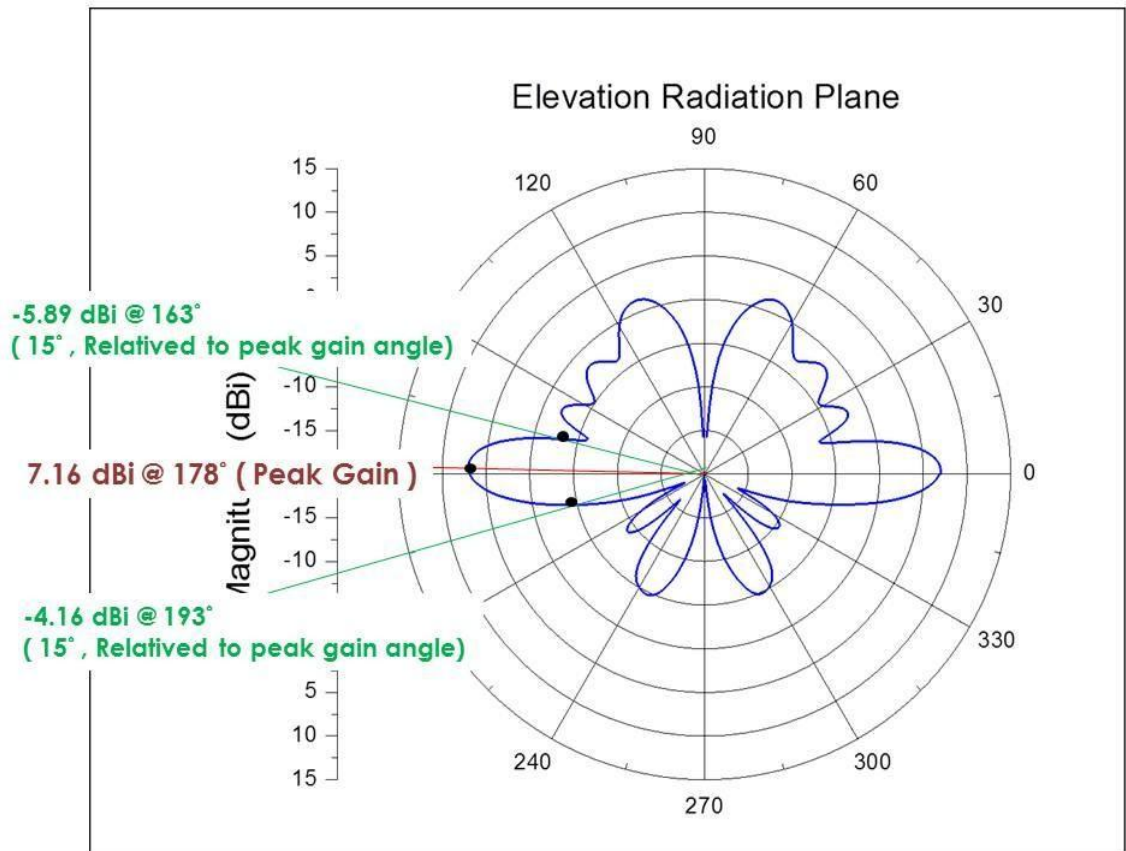
|                     |                                   |
|---------------------|-----------------------------------|
| Connector           | N-Type, Female                    |
| Length              | 2110 ± 10.0 mm                    |
| Diameter            | 42 ± 0.5 mm                       |
| Antenna Weight      | 2.0 Kg                            |
| Mounting Weight     | 2.7 Kg                            |
| Wind0 Load @150km/h | 90 N                              |
| Color               | Green                             |
| Mounting            | Clamp Set ,<br>On pole Φ 30~70 mm |

### Electrical Specification

|                       |                  |
|-----------------------|------------------|
| Frequency Band        | 600 ~ 620 MHz    |
| Gain                  | 5 dBi            |
| Nominal Impedance     | 50 Ω             |
| VSWR                  | < 1.5 : 1        |
| Polarizations         | Linear, Vertical |
| HPBW-Azimuth          | 360°             |
| HPBW-Elevation        | 28°              |
| Max. Power Handling   | 150 W            |
| Operating Temperature | -40°C ~ +80°C    |

### Mechanical Specification

|                     |                                   |
|---------------------|-----------------------------------|
| Connector           | N-Type, Female                    |
| Length              | 1457 ± 10.0 mm                    |
| Diameter            | 42 ± 0.5 mm                       |
| Antenna Weight      | 1.4 Kg                            |
| Mounting Weight     | 2.7 Kg                            |
| Wind0 Load @150km/h | 60 N                              |
| Color               | Green                             |
| Mounting            | Clamp Set ,<br>On pole Φ 30~70 mm |



#### Ordering Information:

ANTM600620M05-M

ANTM662687M05-M

ANTM600620M07-M

ANTM662687M07-M



# Directional Yagi Antenna

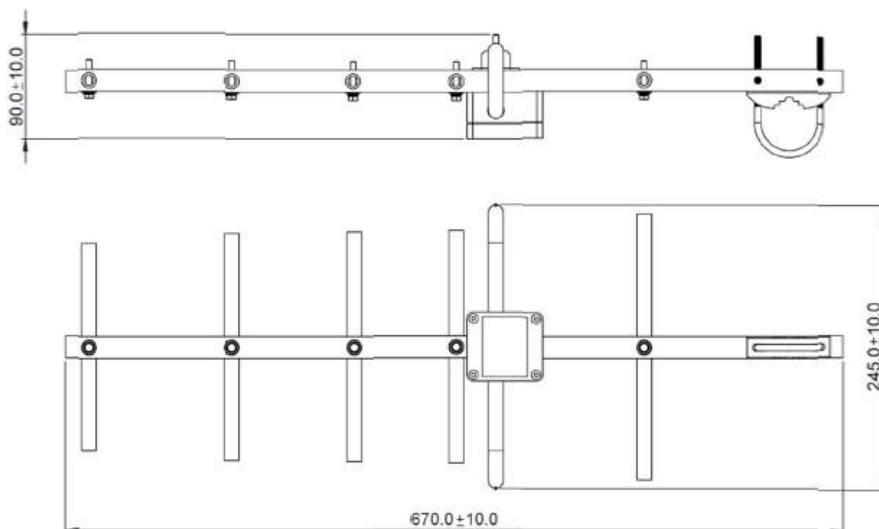
## Specifications of Yagi Antennas

### Electrical Specification

|                         |                        |
|-------------------------|------------------------|
| Frequency               | 600 ~ 620 MHz          |
| Gain                    | 10 dBi                 |
| Nominal Impedance       | 50 Ω                   |
| VSWR                    | ≤ 1.5:1                |
| Polarization            | Horizontal or Vertical |
| HPBW-Azimuth            | 47°                    |
| HPBW-Elevation          | 56°                    |
| Front - to - back ratio | > 15 dB                |
| Max. Power Handling     | 250 W                  |
| Operating Temperature   | -40°C ~ +70°C          |
| Lightning Protection    | DC Ground              |

### Mechanical Specification

|                   |                                   |
|-------------------|-----------------------------------|
| Connector         | N Type, Female                    |
| Dimension         | 670(L) x 245(W) x 90(H) ± 10.0 mm |
| Weight            | 1.2 Kg                            |
| Wind Survival     | 200 Km/h                          |
| Color             | Silver                            |
| Mounting          | On pole Φ30 ~ 45 mm               |
| Mounting Material | SUS304                            |



Ordering Information:  
 ANT600620M10-Y-NF  
 ANT662687M10-Y-NF