











5G-FR1 Multiband Flat 2x2 MiMo Antenna

W1856 – 617MHz to 7125MHz



Features & Applications:

-  2xMiMo antenna configuration
-  Omnidirectional radiation
-  Clip mount connections
-  Low profile (thickness 9.6mm/.377")
-  RoHS compliant
-  5G-FR1 Laptop connectivity
-  5G-FR1 Access Point and Routers
-  5G-FR1 Accessories
-  4G LTE Backward compatible
-  WiFi-6E/7 2xMiMo compatible

ELECTRICAL SPECIFICATIONS @ 25°C

General Specifications

| Antenna type | Nominal Impedance | Polarization | Radiation pattern | Power withstanding | DC Ground |
|--------------|-------------------|-------------------|-------------------|--------------------|-----------|
| Dipole | 50Ω | Vertical / Linear | Omni | 2W | Yes |

Typical RF Performance: 617 – 7125MHz

| Port | Frequency (MHz) | 617 - 960 | 1710 - 2690 | 3300 - 4200 | 4400 - 5150 | 5150 - 7125 |
|-----------------------|----------------------|-----------|-------------|-------------|-------------|-------------|
| Port 1 & 2 | Return Loss (dB) | -6 | -6 | -7 | -7 | -5 |
| | Avg. Peak Gain (dBi) | 1.6 | 3.1 | 4.0 | 4.8 | 5.3 |
| | Avg. Efficiency (%) | 73 | 70 | 65 | 69 | 65 |
| | Cable Loss dB | 0.8 | 1.2 | 1.8 | 2.2 | 3.0 |
| Port 1 to 2 Isolation | Port 1-2 (dB) | 15 | 20 | 25 | 25 | 20 |
| | | | | | | |
| | | | | | | |

MECHANICAL SPECIFICATIONS

Orderable P/N: W1856

| Dimension (Length x Width x Height) | Housing Material | Color | Weight | Connector Type | Cable Type Length |
|--|------------------|-------|---------------------|----------------|--------------------------|
| 159.5 x 127.5 x 9.6 mm (6.28 x 5.02 x 0.377") | PC/ABS | Black | 131.5g (1.85lbs) | SMA Male | RG174 1000mm (39.37") |

ENVIRONMENTAL SPECIFICATIONS

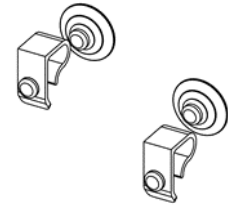
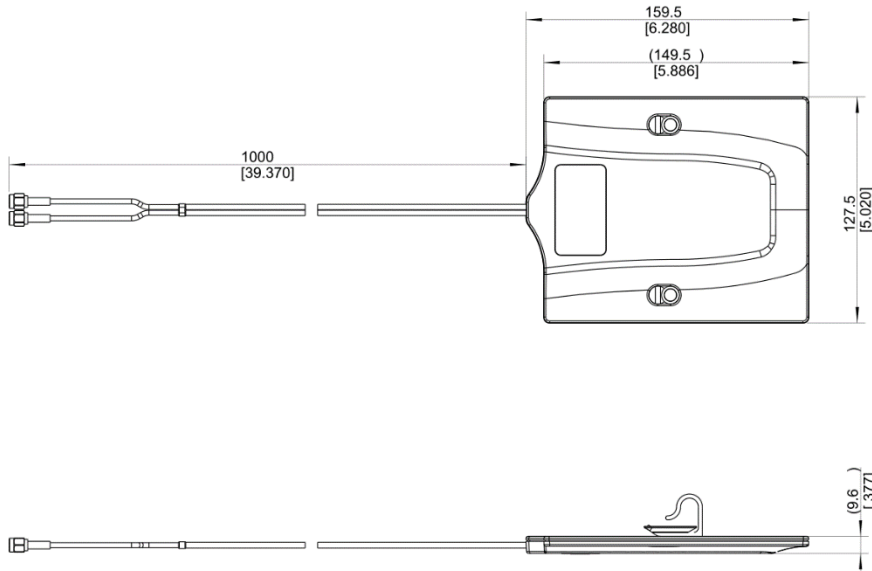
| Operating Temperature | Storage Temperature | Ingress Protection | RoHS Compliant |
|-----------------------|---------------------|--------------------|----------------|
| -40 / +85° C | -40 / +85° C | IP51 | Yes |

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Mechanical data and RF Test Setup

Drawings



Clips & suction cups

- Dimensions: inches (mm) Unless otherwise specified, all tolerances are ± 0.10 (0.25mm)

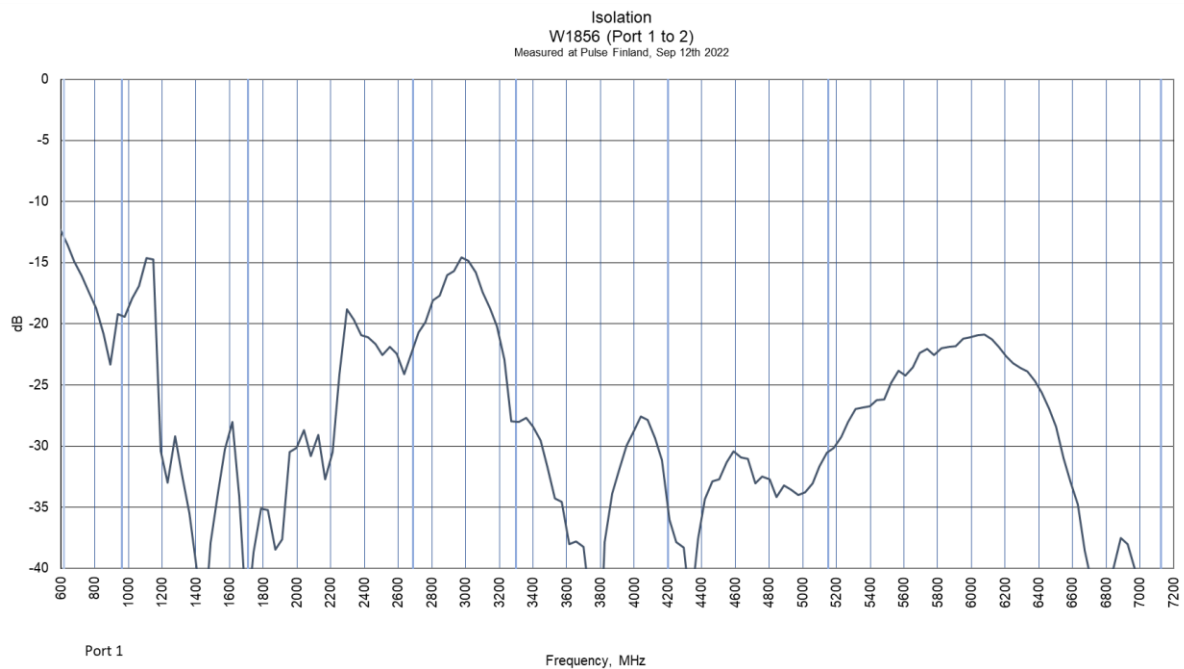
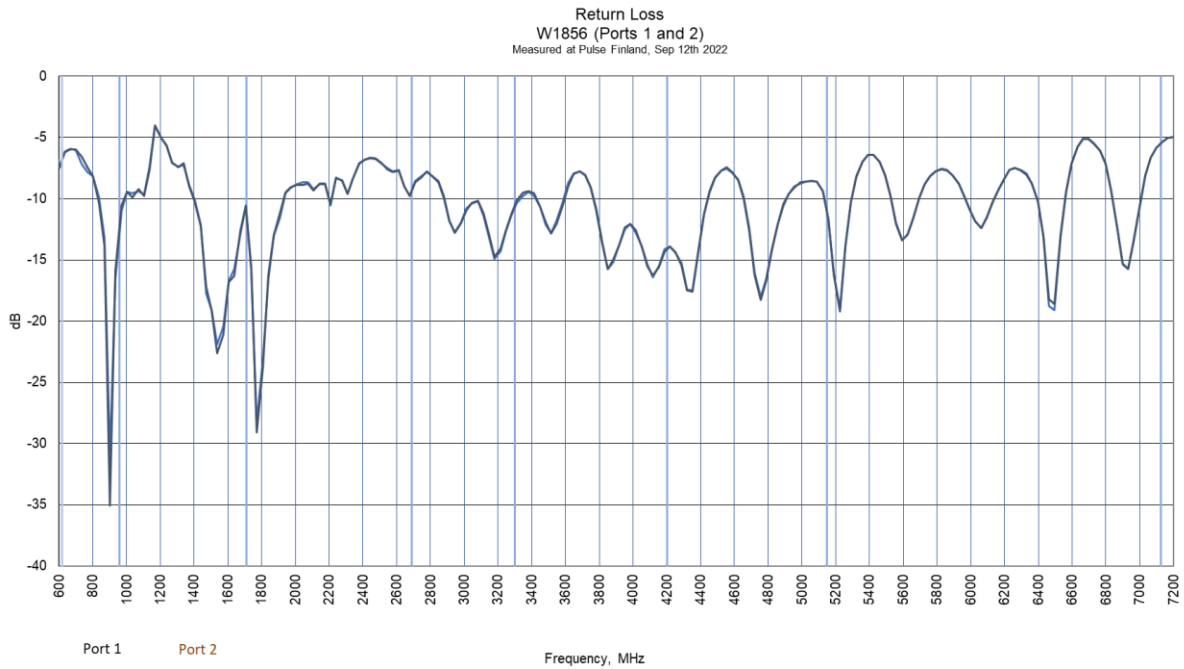
RF Test Setup

- S-parameters tested with 1.0 m RG174 cable
- Gain and Efficiency tested with 0.15 m Semirigid cable
- Measured at Pulse Finland in Satimo/MVG SG24L



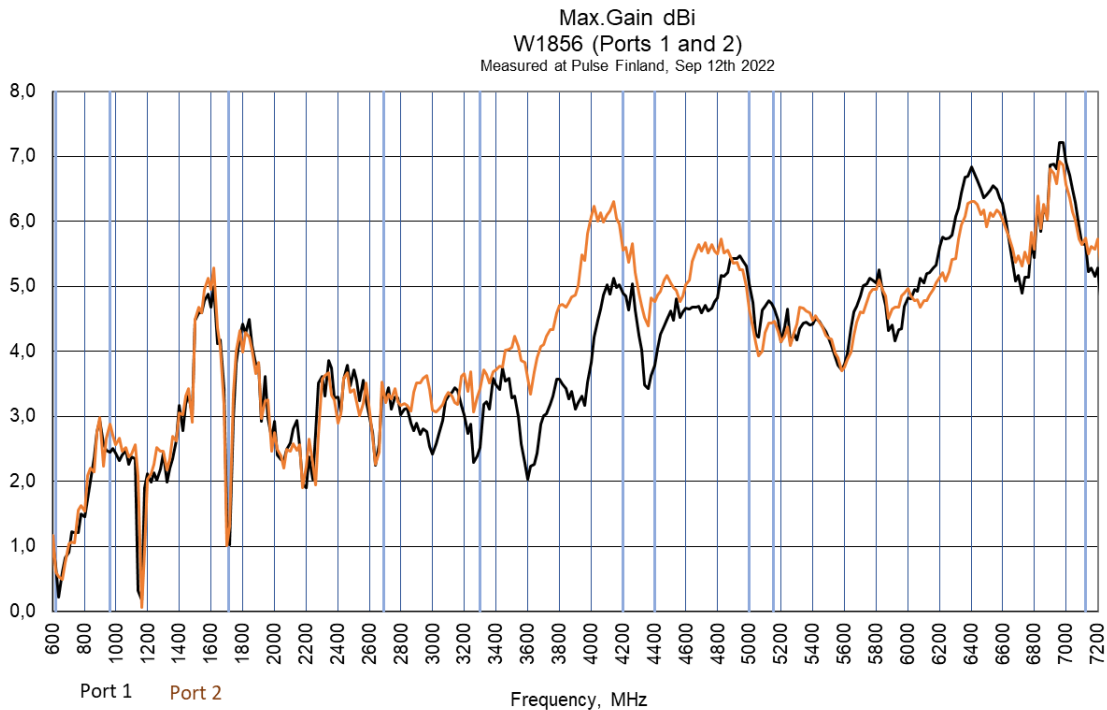
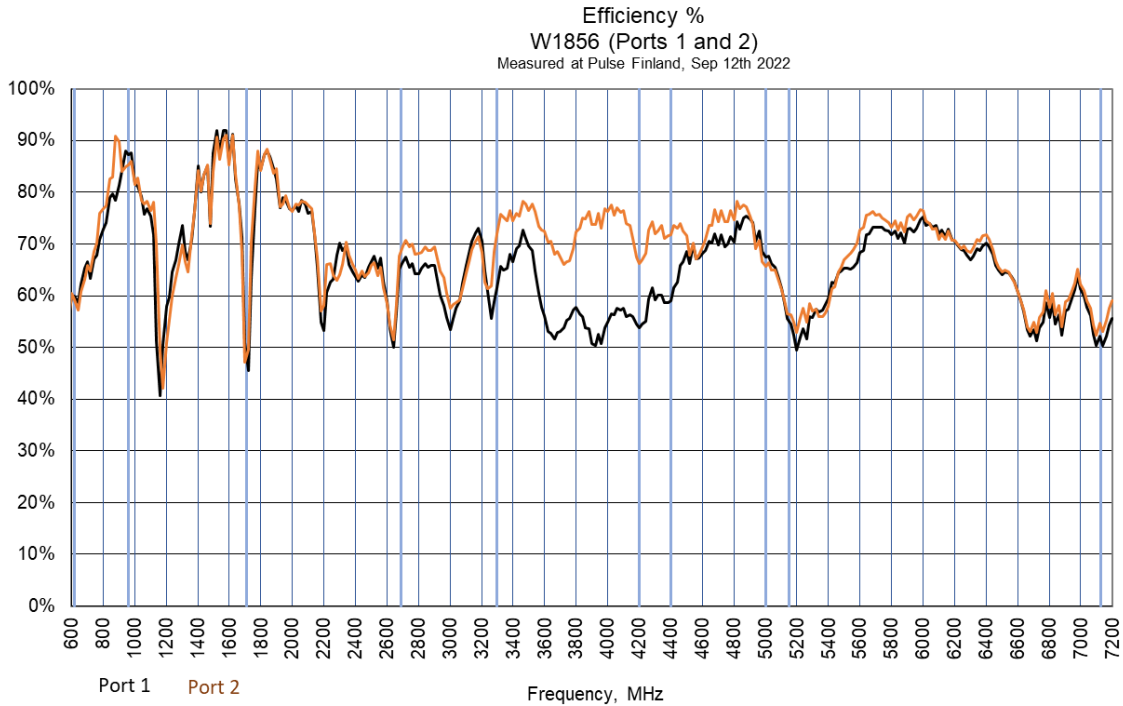
Charts - Return Loss and Isolation

S-parameter test data



Charts- Efficiency and Max Gain

Chamber test data

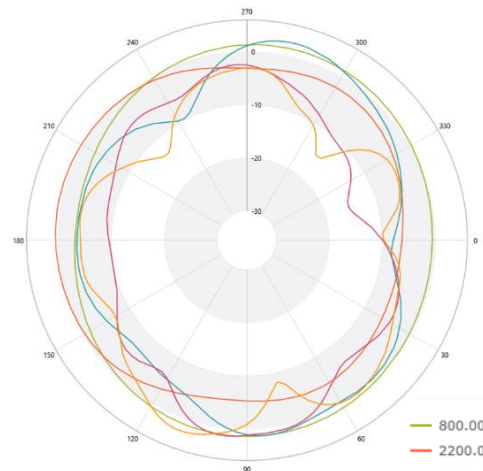
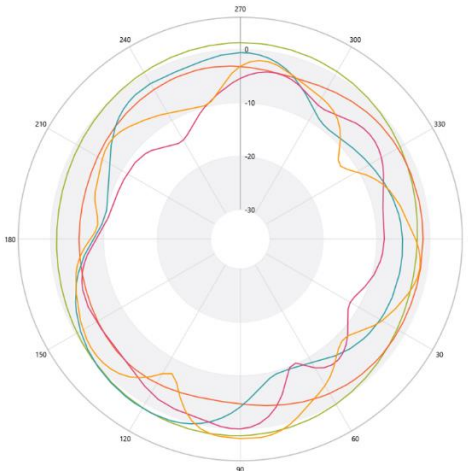
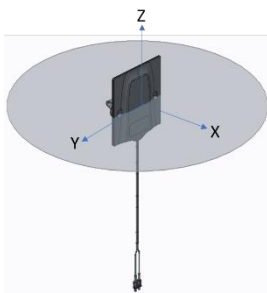
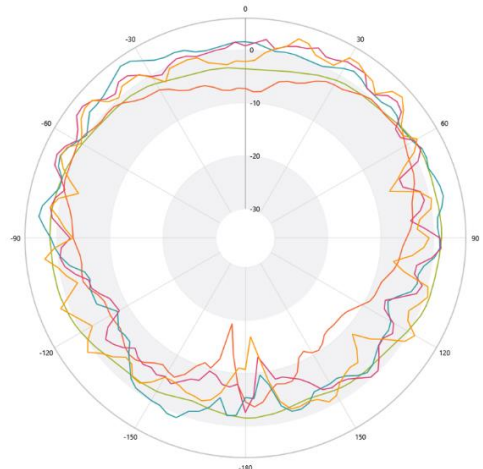
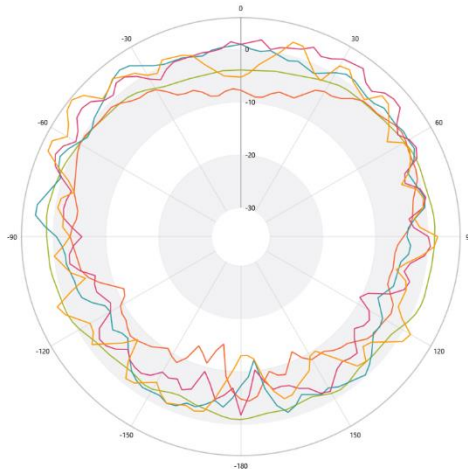
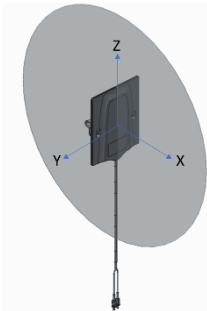
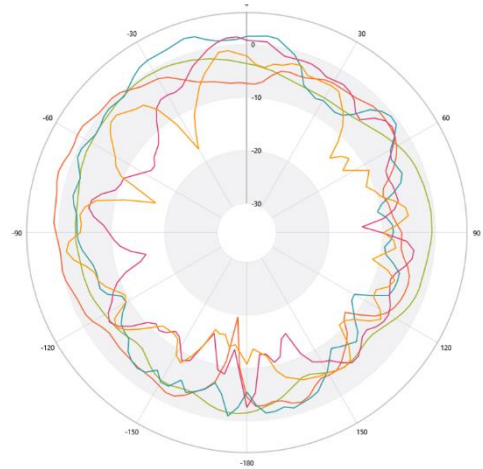
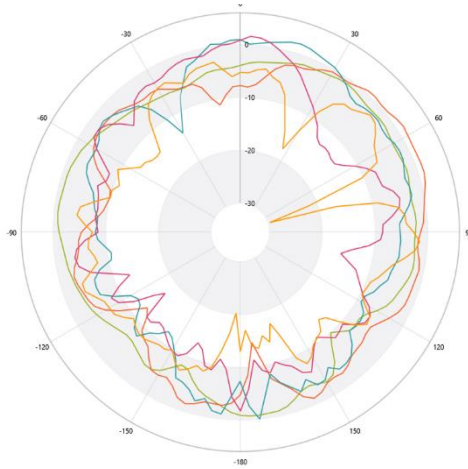
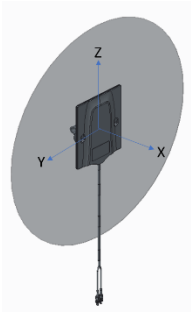


Radiation Pattern – Gain Plots

YZ, ZX, XY Planes

Port 1

Port 2



- 800.00 MHz 0.00 ° E Total
- 2200.00 MHz 0.00 ° E Total
- 3800.00 MHz 0.00 ° E Total
- 5160.00 MHz 0.00 ° E Total
- 7120.00 MHz 0.00 ° E Total