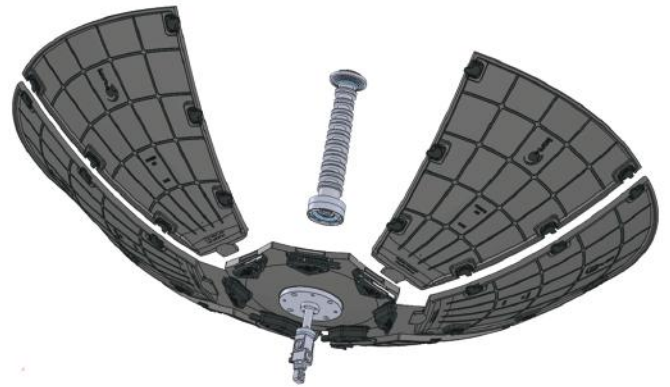
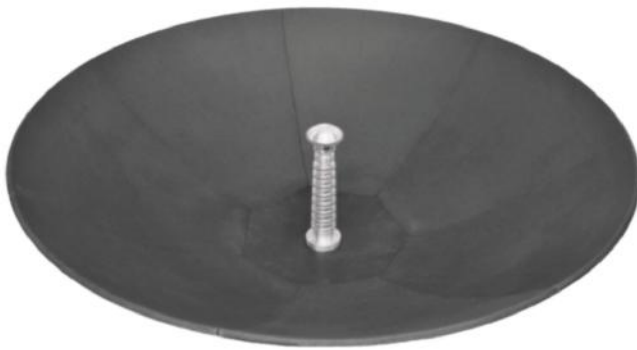




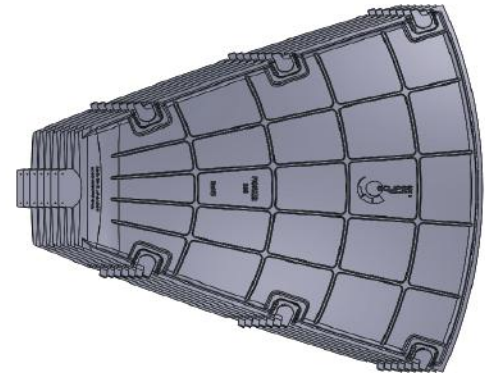
Segmented Carbon Fiber Manpack Antennas



Compact, Light-weight Design

Eclipse Composites Engineering has teamed with Optim Microwave to produce an affordable 'off-the-shelf' antenna system. Designed for use in military, emergency, exploratory and SNG applications requiring easy transport and rapid deployment.

- 50% lighter than aluminum
- Less than 2 minute antenna assembly time
- Multiband reflector (X, Ku, Ka-band)
- Removeable Feed
- Identical, Interchangeable petals
- No particular order of assembly
- Mil-Std 810G Environmental Compliance
- 45 Km/h Wind Load
- Painted / Cerakote Options available
- Patented Design



Ka-BAND Carbon Fiber Fiber Segmented Antennas

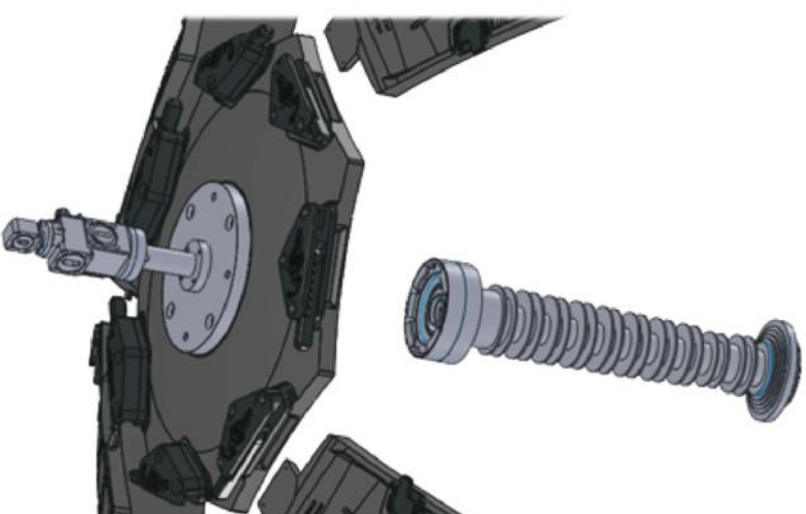
Mechanical Specifications	Pioneer 60	Pioneer 80	Pioneer 100	Pioneer 120 (avail 5/2017)
Antenna Size	60cm	80cm	1m	1.2m
Number of Petals	6	5	7	7
Petal Dimensions	31cm x 27cm	47.7cm x 36.7cm	44cm x 45.7cm	52.5cm x 54.5cm
Petal Stack Height	7.5cm	9.5cm	11.7 cm	13.9cm
Hub dia	23.5cm	27.9cm	31.75cm	34cm
F/D	0.25	0.25	0.25	0.25
Petal Set Weight	1.2 kg	1.8 kg	3.7 kg	TBD
Feed/Hub/OMT Weight	1.7 kg	1.7 kg	2.2 kg	TBD
Feed Removeable	yes	yes	yes	yes
Temp	-40C to +80C	-40C to +80C	-40C to +80C	-40C to +80C
Environmental	Mil Std 810G	Mil Std 810G	Mil Std 810G	Mil Std 810G
Wind Load	45 Km/h	45 Km/h	45 Km/h	45 Km/h

RF Specifications	Pioneer 60	Pioneer 80	Pioneer 100	Pioneer 120
Frequency TX	29.0-31.0 GHz	29.0-31.0 GHz	29.0-31.0 GHz	29.0-31.0 GHz
Frequency RX	19.2-21.2 GHz	19.2-21.2 GHz	19.2-21.2 GHz	19.2-21.2 GHz
Gain TX (+/-0.2dB)*	43.2dbi	45.7 dbi	47.6 dbi	TBD
Gain RX (+/-0.2dB)*	40.2dbi	42.6 dbi	44.5 dbi	TBD
Losses (Antenna + PRD)	~0.9 dB Tx / 0.7 dB Rx	~0.9 dB Tx / 0.7 dB Rx	~0.9 dB Tx / 0.8 dB Rx	~0.9 dB Tx / 0.8 dB Rx
Polarization**	Circular / RHCP or LHCP	Circular / RHCP or LHCP	Circular / RHCP or LHCP	Circular / RHCP or LHCP
Axial Ratio***	< 0.75 dB	< 0.75 dB	< 0.75 dB	< 0.75 dB
Isolation	>55dB	>55dB	>55dB	>55dB
Waveguide Interfaces	Tx=WR28 / Rx=WR42	Tx=WR28 / Rx=WR42	Tx=WR28 / Rx=WR42	Tx=WR28 / Rx=WR42
TX / RX Port VSWR	Tx<1.25:1 / Rx<1.50:1	Tx<1.25:1 / Rx<1.50:1	Tx<1.25:1 / Rx<1.50:1	Tx<1.25:1 / Rx<1.50:1

Warranty

Reflector **1 year manufacturer's defects thru Eclipse Composites**
 Feed & OMT **1 year manufacturer's defects thru Optim Microwave**

* Gain measured midband at OMT ports
 ** Depending on feed orientation (4 port OMT)
 *** With OMT ports terminated in a good load



14663 Heritagecrest Way
 Bluffdale, UT 84096 USA
 +1 801.601.8559



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www.eclipsecomposites.com
 info@eclipsecomposites.com