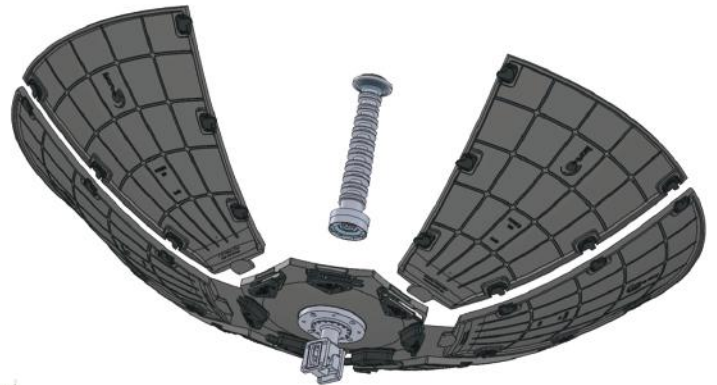
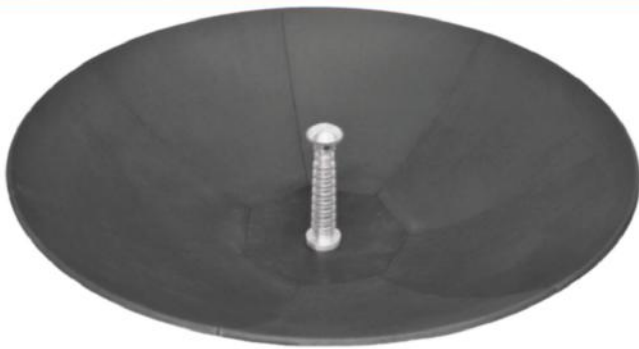


Pioneer Series

X-band



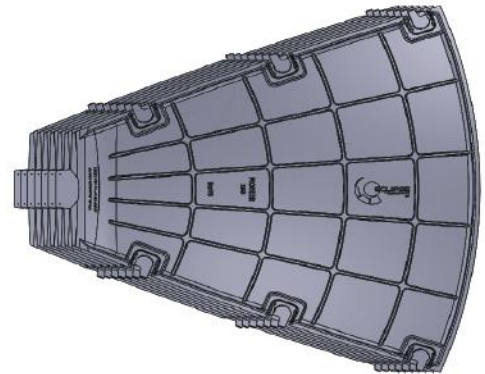
Segmented Carbon Fiber Manpack Antennas



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 reflector 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



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CARBON FIBER ANTENNAS

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X-BAND Carbon 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	2.0 kg	2.1 kg	2.5 kg	TBD
Feed Removeable	yes	yes	yes	yes
Temp	-40°C to +80°C	-40°C to +80°C	-40°C to +80°C	-40°C to +80°C
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	7.90-8.40 GHz	7.90-8.40 GHz	7.90-8.40 GHz	7.90-8.40 GHz
Frequency RX	7.25-7.75 GHz	7.25-7.75 GHz	7.25-7.75 GHz	7.25-7.75 GHz
Gain TX (+/-0.2dB)*	32.7dbi	35.0dbi	37.0 dbi	TBD
Gain RX (+/-0.2dB)*	32.1dbi	34.6dbi	36.4 dbi	TBD
Losses (Antenna + PRD)	~0.1dB	~0.1dB	~0.15dB	~0.1dB
Polarization** (2-Port Feed)	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	>23 dB	>23 dB	>23 dB	>23 dB
Waveguide Interfaces	WR-112	WR-112	WR-112	WR-112
TX / RX Port VSWR	<1.25:1	<1.25:1	<1.25:1	<1.25:1

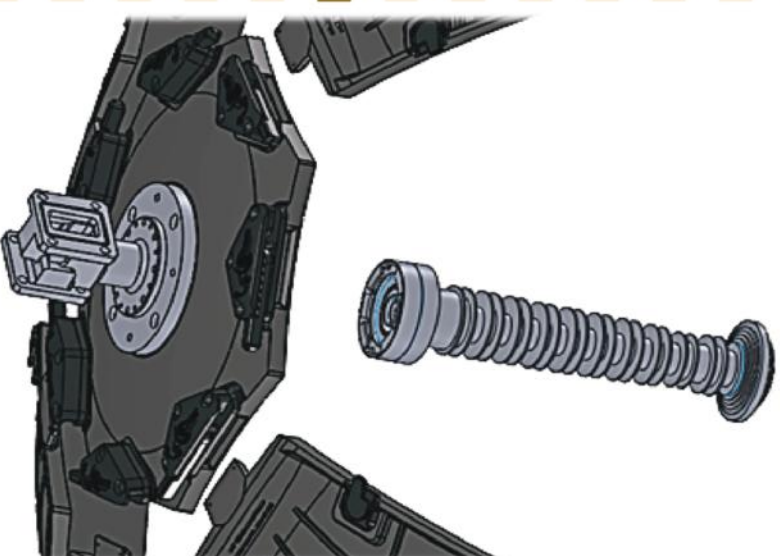
Warranty

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

*** With OMT ports terminated in a good load



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