

Direcstar WX Series Autodeploy VSAT Antennas

Direcstar WX Series vehicle-mount antennas are the toughest, highest quality, lowest cost, auto-deploy satellite antennas in the market today. WX series antennas are capable of pointing at any satellite with an accuracy of 0.1 degrees in less than 2 mins. The antennas stow into a folded position for easy travel, on the roof of emergency (FEMA), Satellite News Gathering (SNG) or other vehicles, trailers and busses. Made with the strongest, most rugged actuators in the industry, the WX series antennas are built for maximum reliability. The WX series antennas are available in 0.98M, 1.2M and 1.8M versions and are integrated and tested with all common satellite modems offering flexibility and scalability for the emergency, energy and enterprise markets.



Direcstar WX980



Direcstar WX1200



WX Control Unit



Direcstar WX1800



WX Series Benefits

- Heavy duty construction to withstand extreme environments (humidity, temperature, dust)
- 2-way communication capability for simultaneous data, video and voice
- Simple single button operation requiring no external PC
- Easy vehicle installation
- Little or no periodic maintenance
- Rack-mountable controller included
- FCC part 25.209 compliant
- Built in DVB receiver, GPS, compass and tilt sensors
- Perfect for emergency vehicle and other enterprise applications
- Ideal for low cost SNG applications
- Auto acquisition and peaking of target satellite
- Easy field repair
- Quick deployment
- Low cost spares kit
- Fastest satellite acquisition in the industry
- Integrated and tested with multiple BUCs ranging from 1 to 200Watts

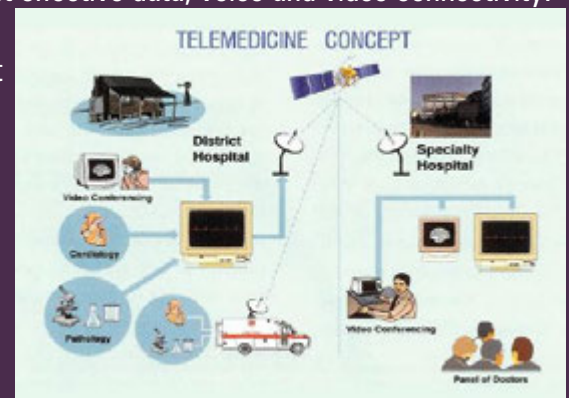
When terrestrial methods of communication are not available due to location or other circumstances; or when high data rates are required in short notice; VSAT systems can deliver reliable and cost effective data, voice and video connectivity. From mobile banking applications, oil and gas platform installations, telemedicine applications, first response teams, military deployments to just plain mobile internet access, the WX series antennas can outperform competition in quality, durability and price.



Direcstar WX1200 stowed



CABSAT



Direcstar WX Series



WX980



WX1200



WX1800

General Information

Reflector type	0.98 M Glass Fiber Reinforced Polyester SMC Prime Focus Offset Feed	1.2 M 0.8 F/D Glass Fiber Reinforced Polyester SMC Prime Focus Offset Feed	1.8 M Glass Fiber Reinforced Polyester SMC Prime Focus Offset Feed
Optics offset			
Buc supported*	6.8Kg / 30.48cm L x 19.7cm W x 14cm H	6.8Kg / 30.48cm L x 19.7cm W x 14cm H	2.72Kg / 18.67cm L x 19.7cm W x 7.62cm H
Polarization*	Cross-Pol	Cross-Pol	Cross-Pol
Mount Geometry	Elevation over Azimuth	Elevation over Azimuth	Elevation over Azimuth

Dimensions

Stowed Dimensions	38.1cm H x 179cm L x 100.3cm W	38.1cm H x 217.8cm L x 124.5cm W	61cm H x 274.3cm L x 181cm W
Max Deployed Height	181.6cm	213.4cm	247.7cm
Mount Rail Width	33cm	33cm	33cm
Weight	63.5Kg Approx	68Kg Approx	113.4Kg Approx

Mechanical

Range of motion: Azimuth	375° (+/- 187.5°)	375° (+/- 187.5°)	375° (+/- 187.5°)
Elevation	5° to 90° Operational	5° to 100° Operational	11.6° to 118° Operational
Polarization	+/- 90°	+/- 90°	+/- 90°
Speed: Deploying Elevation	4.6° Per Second	4.6° Per Second	4.6° Per Second
Stowing Elevation	5.0° Per Second	5.0° Per Second	5.0° Per Second
Deploying Azimuth	7.5° Per Second	7.5° Per Second	7.5° Per Second
Time to Acquisition	< 2 minutes (Typical)	< 2 minutes (Typical)	< 2 minutes (Typical)
Motors: Elevation	24V HD Linear Actuator (0.1° Resolution)	24V HD Linear Actuator (0.1° Resolution)	36V HD Linear Actuator (0.1° Resolution)
Azimuth	24V HD Brushless Motor (0.1° Resolution)	24V HD Brushless Motor (0.1° Resolution)	24V HD Brushless Motor (0.1° Resolution)
Polarization	24V HD Brushless Motor (0.1° Resolution)	24V HD Brushless Motor (0.1° Resolution)	24V HD Brushless Motor (0.1° Resolution)
Drive Override	Electrical Elevation, Manual for AZ and SK	Electrical Elevation, Manual for AZ and SK	Electrical Elevation, Manual for AZ and SK

RF

Tx Interface	Waveguide - 3' WR75	Waveguide - 3' WR75	Waveguide - 3' WR75
Rx Interface	Flange Flexible and Twistable Waveguide	Flange Flexible and Twistable Waveguide	Flange Flexible and Twistable Waveguide
Frequency Range: Rx	WR75 Flange	WR75 Flange	WR75 Flange
Tx	10.95 - 12.75 Ghz	10.95 - 12.75 Ghz	10.95 - 12.75 Ghz
Gain (Midband): Rx	13.75 - 14.50 Ghz	13.75 - 14.50 Ghz	13.75 - 14.50 Ghz
Tx	39.8 dBi	41.5 dBi	45.3 dBi
VSWR Rx & Tx	41.3 dBi	43 dBi	46.8 dBi
Rx Beamwidth: Rx	1.3:1	1.3:1	1.3:1 tx / 1.5:1
Tx	1.8° (-3 dB), 3.3° (-10 dB)	1.4° (-3 dB), 2.4° (-10 dB)	1.0° (-3 dB), 2.4° (-10 dB)
Radiation Pattern Compliance	1.5° (-3 dB), 2.8° (-10 dB)	1.2° (-3 dB), 2.1° (-10 dB)	0.8° (-3 dB), 2.1° (-10 dB)
Antenna Noise Temperature	FCC § 25.209	FCC § 25.209	FCC § 25.209
Cross Pol Isolation on Axis Rx & Tx (Minimum)	47K (20° EL), 46K (30° EL)	46K (20° EL), 43K (30° EL)	28K (20° EL), 23K (30° EL)
Isolation Port to Port (Minimum): Rx	30 dB	30 dB	30 dB
Tx	35 dB	35 dB	35 dB
	80 dB	80 dB	80 dB

Environmental

Wind: Operational Deployed	80+ Km/h	80+ Km/h	56 Km/h
Survival Deployed	121 Km/h	121 Km/h	121 Km/h
Survival Stowed	241 Km/h	241 Km/h	241 Km/h
Temperature: Operational	-40°F to 127°F (-40°C to +50°C)	-40°F to 127°F (-40°C to +50°C)	-40°F to 127°F (-40°C to +50°C)
Survival	-58°F to 176°F (-50°C to +80°C)	-58°F to 176°F (-50°C to +80°C)	-58°F to 176°F (-50°C to +80°C)
Snow Load	20.3cm deep (@16Kg/cu. mt)	20.3cm deep (@16Kg/cu. mt)	20.3cm deep (@16Kg/cu. mt)

Electrical

Controller Dimensions	2U 19" Rack Mountable	2U 19" Rack Mountable	2U 19" Rack Mountable
Power Supply: Input	100-250V 3A Max	100-250V 3A Max	100-250V 3A Max
Running Load	47-63Hz 300W Max	47-63Hz 300W Max	47-63Hz 300W Max
Output	48V 6.7A Max	48V 6.7A Max	48V 6.7A Max
Electrical Data Interface*	RG6 60' (18.25 m)	RG6 60' (18.25 m)	RG6 60' (18.25 m)
Transmit (Tx)*	RG6 Compression F Connector	RG6 Compression F Connector	RG6 Compression F Connector
Receive (Rx)*	RG6 Compression F Connector	RG6 Compression F Connector	RG6 Compression F Connector
Sensors	GPS	GPS	GPS
	Compass +/- 15°	Compass +/- 15°	Compass +/- 15°
	Tilt +/- 0.5°	Tilt +/- 0.5°	Tilt +/- 0.5°

*Options

Larger BUCs supported using High power BUC mounting kit and waveguide • Co-Pol • Thermal Formed Rear Cover • RG11 Cables