

Mobile Broadband Satellite Communications Very Small Aperture Terminal (VSAT) 1200mm 2-Piece Reflector

Type MVS1200P2

The MVS Series allows non-skilled personnel to operate mobile Very Small Aperture Terminal (VSAT) satellite communications equipment enabling the user to access any broadband application over satellite.

The MVS Series antennas are typically used by organisations for:

- Military applications requiring rapid deployment and SATCOM on the pause
- Remote or mobile office and monitoring applications
- Education, civil protection, law enforcement and emergency response
- Satellite news gathering (SNG) applications

With the MVS Series antennas, users enjoy the same reliable, secure, high-speed IP based data communications they are accustomed to in the office, while mobile. Users can get connected *Anywhere/ Anytime* for applications such as:

- Secure, high-speed digital communications
- High-speed Internet access
- Voice and Fax communications
- Teleconferencing
- Wide area private network extension
- Video broadcasting



The MVS Series of auto-acquisition antennas feature:

- Automatic satellite acquisition with a single button push eliminates the need for -
 - Special test equipment for antenna alignment
 - Computers or peripheral equipment to operate the antenna
 - Phone calls to network operators or service providers
- Rapid deployment and operation on every Ku-band satellite, worldwide
- Works with every satellite modem

Every antenna comes equipped with the following standard equipment:

- High precision and stiffness, low backlash drive system
- Built-in GPS and compass
- Built-in satellite receiver
- Built-in level compensation
- Automatic polarization alignment
- Safe and easy installation, no calibrations required

RACAL ANTENNAS LTD

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Racal reserve the right to vary in detail from the description and specification in this publication.

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Mobile Satellite Link

The MVS1200 will convert from stowed to automatically locked-on in a few minutes. The simple push of a button will put the unit in either mode. There are no external computers or other devices needed to operate the antenna. Serial communications are available including a GPS string for satellite modems.



Ease of Deployment

Easily configurable into any mobile environment, the MVS1200 is ready to deploy anywhere. The base is designed to accommodate flat roof or rack mount vehicles. The antenna automatically compensates for sloped surfaces up to 10 degrees.



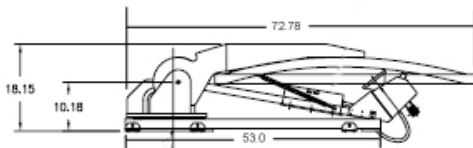
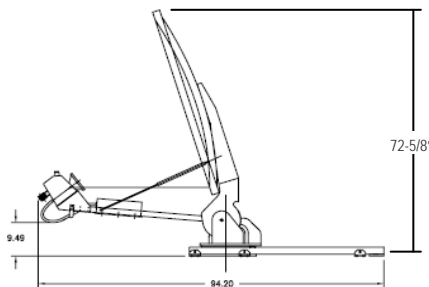
Control Panel

The One Touch Go and Slow technology maximizes ease of deployment. The menu driven control panel comes in a portable hand-held unit or a 1U rack mount panel. The controller is used for standard operation, or for configuring the antenna for worldwide operation.



Portability MVS1200P2

The MVS1200P2 solution provides a rugged 2-piece reflector, with a portable container for a shippable and highly flexible rapid deployment requirement. Quick assembly of the reflector allows full access to a ready-to-deploy antenna in minutes.



Reflector

Size 1.2M Prime Focus Offset
Offset Mount Geometry Elevation over Azimuth
Polarization Rotation of Feed

Travel

Azimuth
Full Coverage $\pm 200^\circ$ Roto-Lok from Stow Position
Elevation
Standard Configuration $0-90^\circ$ of reflector boresight
Polarization $\pm 95^\circ$

Travel Velocity

Slewing/Deploying 2° /second
Peaking 5° /second
Manual Jog 1.0° or 0.2° /second
Manual Drive Handcrank on Az and El Axil

Electrical Interface

RF 75Ω Tx / Rx Type F Connector (50 Ω option)
Waveguide Grove Flexible Waveguide from Feed
Interfacility Link 30 ft: 2ea. RG6 Coax, 1 Control Cable
Motors 26VDC Servo w/ Optical Encoder
Controller (1U) / Power Supply 50/60Hz, 110/220VAC, Single Phase
Power Consumption – Motors Active 250 Watts
Power Consumption – Idle 30 Watts

Antenna Characteristics

	Receive	Transmit
Frequency	10.95 – 12.75 Ghz	13.75 – 14.5Ghz
Gain ($\pm 2\text{dBi}$)	42.0 dBi	43.2 dBi
VSWR	1.30:1	1.30:1
Beamwidth (degrees)		
-3dB	1.4	1.2
-10dB	2.5	2.1
First Sidelobe Level (typical)	-19dB	-22dB
Radiation Pattern Compliance	FCC §25.209, ITU-R S.528.5	
Antenna Noise Temperature @ 30° EL	30°K	
Cross-Pol Isolation		
On Axis (min)	35dB	35dB
Off-Axis (within 1dB BW)	26dB	28dB
Off-Axis (peak)	22dB	25dB
Feed Port Isolation TX to Rx	75dB	
Power Handling Capability	40 Watts	
Satellite System Compliance	FCC and PanAmSat Worldwide	

Physical Data

Approximate Weight (w/o BUC/ LNB) 115 to 125 lbs (Options Dependent)
Max. Length with IFL Cables Connected $74''$
Height
Stowed (w/o loadframe)* $17''$
Deployed (w/o loadframe) * $72.25''$
Emergency Drive Manual Handcrank of Az & El axis

Antenna Controller

One button operation automatic satellite acquisition with integrated GPS/Compass/Level Sensors and user configurable satellite selection

Portable Power Supply/Display Unit

Weight: Power Supply/Display Unit - 4.5 lbs / .5 lbs.
Dimensions: Power Supply - $9''\text{W} \times 10.25''\text{D} \times 2.5''\text{H}$
Display Unit $5\frac{1}{2}''\text{W} \times 3\frac{1}{4}''\text{D} \times 1-3/8''\text{H}$
Rack Mount (1U)
Weight 4.5 lbs
Dimensions (inches) $19''\text{W} \times 8.0''\text{D} \times 1.75''\text{H}$

Environmental

Wind
Survival - Stowed 100 mph
Survival - Operational 60 mph
Temperature
Operational -20°F to 125°F
Storage -30°F to 140°F

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