

## 2.4m HMMWV Mounted Terminals: 2400HV Series



### System Architecture

Multi-configuration quad-band system with full motion antenna; user equipment compartment, HVAC, built-in generator, UPS & shore power input

Configurations:

- all equipment contained in vehicle
- modem & user equipment up to 500 feet from vehicle
- equipment shelter detached from vehicle

### Antenna

Aperture	2.4 Meter effective
Motion	motorized two axis, elevation over azimuth
Travel range	azimuth $\pm 170^\circ$ ; elevation 5 to $90^\circ$
Positioning	manual & automatic step/program/ephemeris tracking; L-band tracking rcvr.
Satellite acquisition	automatic
Polarization C-band	circular & linear cross-pol; linear co-pol optional
Polarization Ku-band	linear cross-pol; linear co-pol optional
Polarization X-band	circular; RHCP tx, LHCP rx reversible
Polarization Ka-band	circular; RHCP or LHCP tx and rx (1 tx port, 2 rx ports)
Type approval	GVF/Intelsat; IA086A00 (C-band); IA088A00 (Ku-band)
Certifications	ARSTRAT/DISA X and Ka-band

### RF Characteristics

Frequency bands	C	X	Ku	Ka
TX (GHz)	5.850 – 6.650	7.9 – 8.4	13.75 – 14.5	30.0 – 31.0
RX (GHz)	3.400 – 4.200	7.25 – 7.75	10.95 – 12.75	20.2 – 21.2
Max. EIRP (dBW)	59.5	62.0	65.0	68.5
	(100W BUC)	(100W BUC)	(70W BUC)	(40W BUC)
G/T (dB/K, 10 elev)	18.0	22.0	26.0	27.5

### Monitor & Control

Platform	PC
Software	Windows-Based Global Satcom proprietary M&C software
M&C points (PC system)	antenna controller, RF/IF equipment, satellite modem
Local M&C points:	<ul style="list-style-type: none"> <li>• antenna emergency stop</li> <li>• auxiliary antenna hand-held controller</li> <li>• tx RF warning light</li> <li>• HVAC control panel</li> <li>• motor/generator control panel</li> <li>• transfer switch UPS/shore</li> <li>• power control panel for individual equipment units</li> </ul>
Operating configurations	local or remote up to 500 feet

### User Interfaces

Power entry	<ul style="list-style-type: none"> <li>• one 60 amp power input connector</li> <li>• one 60 amp power output connector</li> <li>• two 120 VAC 15 amp utility output connectors with two 100-foot extension cords and 4-way GFI utility outlet</li> <li>• one duplex 120 VAC 15 amp GFI utility outlet</li> <li>• one ground lug, split bolt</li> </ul>
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Signal entry	<ul style="list-style-type: none"> <li>• user defined interface connectors</li> <li>• lockable entry doors</li> </ul>
Electronic equipment	<ul style="list-style-type: none"> <li>• patch panel termination for signal access/interface</li> <li>• 24”H x 46”W x 36”D compartment for equipment racks or cases</li> <li>• UPS power</li> <li>• lockable door</li> <li>• power control panel for individual equipment units</li> <li>• environmentally controlled</li> <li>• thermally insulated</li> <li>• electromagnetic security shielded</li> </ul>
Test equipment support	<ul style="list-style-type: none"> <li>• compartment for shock mounted Agilent E4407B spectrum analyzer</li> <li>• compartment for shock mounted Fireberd 6000 data test set</li> </ul>
Satellite modem support	<ul style="list-style-type: none"> <li>• communications L-band monitor ports, tx &amp; rx</li> <li>• tx/rx L-band interface to BUC/LNB; 50 Ω or 75 Ω</li> <li>• satellite modem monitor/control consolidated with RF/IF equipment</li> </ul>

### **Deployment**

Setup time	less than 30 minutes with two trained technicians
Frequency band change	less than 5 minutes
Tools	tools not required
Exterior tent interface	Velcro fasteners on Pallet rear wall
Equipment compartments	weather-sealed, lockable with common key; intrusion alarms, lighting
Mobility	Pallet can be detached from HMMWV for stand-alone operation
Stabilizing and leveling	four hand-crank jacks; built-in spirit levels
Antenna and RF accessibility	steps and hand rails for roof access; anti-slip surfaces

### **Power**

Power system architecture	fully enclosed independent system with motor-generator & UPS
External source	120/208 VAC 3 phase 60Hz, 9KVA
Generator	120/208 VAC 3 phase 60Hz, 10KW; Diesel motor
Transfer	manual transfer from external power
UPS	3,000VA; 5-minute battery; dual conversion (no-break)
UPS mounting	EIA 19" rack in lockable compartment; shock mount
Generator mounting	slide out rails from compartment for maintenance
Generator fuel consumption	1.3 gal/hour with 36 amp load; 3.2 gal/hour with 69 amp load
Generator fuel tank capacity	8 gal

### **Equipment Environmental Control**

HVAC system architecture	closed HVAC system for electronic equipment compartments, sized for environmental conditions below
Heating	8 kW electric heaters, thermostatic control; user control panel
Cooling	12,000 BTU refrigerated air cooling, remote control panel
Insulation	fire-retardant natural fiber; mold, mildew & fungus resistant

### **Environmental Capability**

Operating temperature	-40° to +50°C ambient, with 360 BTU/ft <sup>2</sup> /hour solar loading
Storage temperature	-46° to 70°C
Relative humidity	100%
Rain	2 inches per hour
Ice	2 inch accumulation on exposed surfaces (storage/transportation)
Atmospheric conditions	salt, sand, & pollutants as encountered in coastal & industrial locations
Fording	30 inches with no degradation of vehicle/equipment capabilities
Wind	Operational to 45 mph, gusting to 60 mph; survival 75 mph with antenna stowed