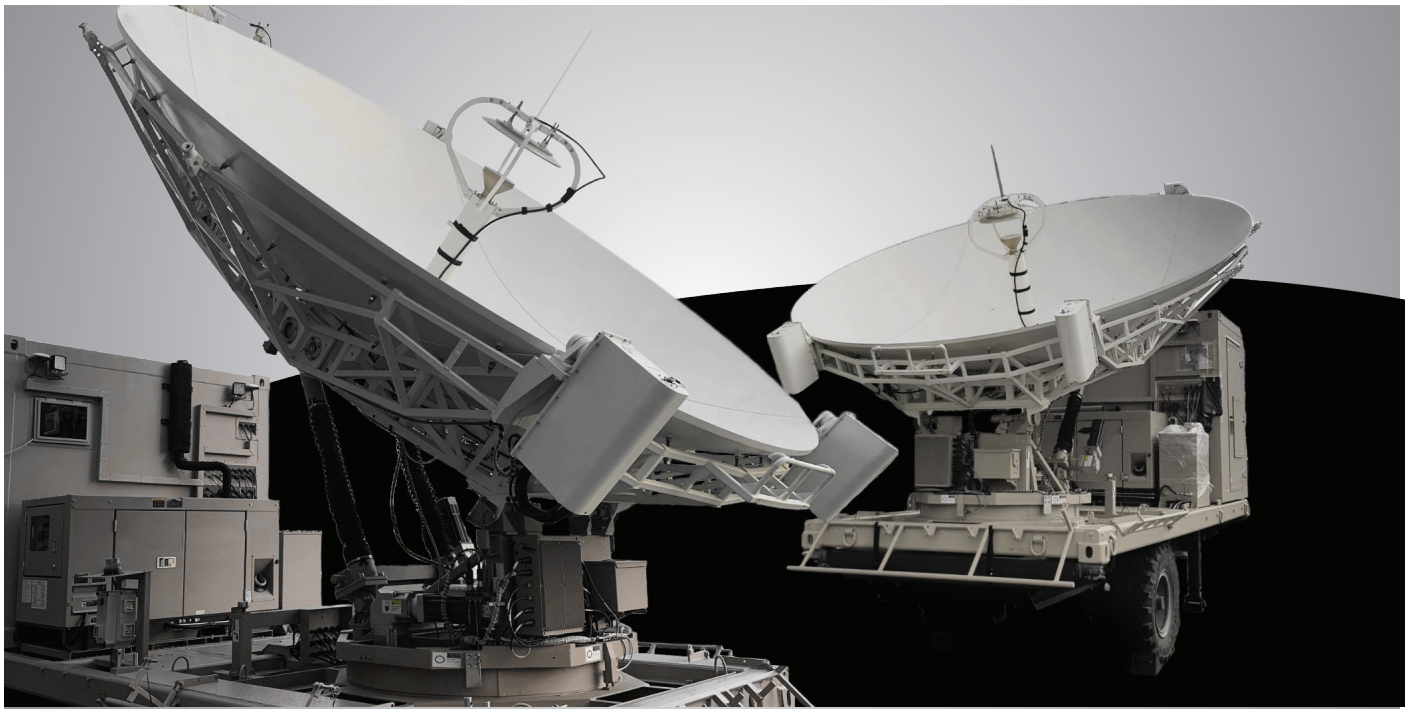
Product Fact Sheet

4.0m Trailer Mounted Mobile Earth Station (MES)



Communication Terminal for Transportable Hub

The Mobile Earth Station (MES) combines the power of a high-quality satellite communications system with the mobility of a durable trailer to provide reliable field communication. Designed with the ease of transportability and mobility in mind, the system complies with commercial land, air and sea transport restrictions and specifications.

The MES can be easily and safely deployed for efficient commercial operations as it has been designed for easy transportation by land, air or sea.

The Station is attached to a mobile trailer with interconnecting brakes and fastened by electrical lines to the tow vehicle. The 20ft removable platform housing the customised shelter, the 15kVA generator and a 4.0m Ku-Band tri-fold antenna, connects and locks easily to the trailer using corners with twist locks that meet international ISO standards. Each system includes customised air-conditioned enclosures to provide cooling to the equipment and comfortable environment for operators.

Key Features

- Transportable 4.0m Ku-Band tri-fold carbon fibre antenna
- Integrated LNA, HPA, converter in redundancy configuration
- Modular HVAC shelter with rooftop access
- Intelligent network management system
- 1-hr uninterrupted power supply for critical electronics
- On-board power generation, 24hr diesel fuel tank & power distribution
- Lightning protection & grounding kit
- Removable platform for full earth station payload
- Off-road qualified heavy duty trailer
- Stabilisers & level provisions
- Lifting gears, tools, ladders & accessories

Ease of Transportability

- 20ft ISO container footprint
- Suitable for paved highways, gravel roads and rough terrain travel
- Sea transport in ISO standard 20/40ft flat rack
- Trailer and truck bed mountable
- Air Transport (C130)

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Technical Specifications

General Parameters		
Configuration	Mobile, Trailer Mounted Terminal	
Antenna Size	4.0m Tri-fold	
Standard Regulation	ITU	
Management and Control System	Integrated Network Management System (iNMS)	
RF Specifications		
Operating Band	Ku-Band	Ka-Band
Frequency	13.75 GHz – 14.50 GHz (Tx) 10.70 GHz – 12.75 GHz (Rx)	27.5 GHz – 30.0 GHz/30.0 GHz to 31.0 GHz (Tx) 17.7 GHz – 20.2 GHz/20.2 GHz to 21.2 GHz (Rx)
Gain	53.3 dBi @ 14.125 GHz (Tx) 51.6 dBi @ 11.725 GHz (Rx)	59.7 dBi @ 29.25 GHz (Tx) 56.0 dBi @ 19.45 GHz (Rx)
Typical System G/T	30.7 dB/K	31.7 dB/K
Feed and Polarisation	2-port Linear	2-port Circular
Cross Pol/Axial Ratio	35 dB	2 dB
EIRP Capability	With 80W BUC (Ku): 70.5dBW	
HPA & LNA/LNB Configuration	1:1 BUC system (80W) | 1:1 LNA system/1:1 LNB system	
Antenna Control	Motorised azimuth, elevation, polarisation	
Optics Type	Dual-reflector, ring focus	
Reflector Material	Carbon fibre	
Reflector Segments	3	
Sidelobe Performance	Meets ITU-R S.580 and S.465	
HPA Configuration	Redundant	
LNA/LNB Configuration	Redundant	
Standard IFL Length	10m	
Mechanical Specifications		
3-man Deployment	15 - 20minutes	
Commercial Transport System	Land, sea and air	
Weight	12T approx	
Shelter Size (L x W x H)	2440 x 1715 x 2180mm	
Overall System Dimension (L x W x H)	7820 x 2456 x 3569mm	
Trailer Specifications		
Overall Dimension (L x W x H)	7642 x 2410 x 1195mm; Adjustable according to ride height (+/- 100mm min.)	
Weight	4.1T	
Allowable Payload	9T	
Tow Eye Height	850mm – 1050mm	
Axle Capacity	2 x standard axle (12T each)	
Suspension Type (ride height)	Air suspension (400mm)	
Brake Type	Air brake, 2 line brake system as European Standard	
Tires and Trailer Wheel Size	16 ply, 335/80 R20	
Electrical Interface	DIN 7 (Plug)	
Maximum Speed	Primary Roads: 50 kmph | Secondary Roads: 25 kmph | Off roads: 10kmph	
Departure Angle	30*	
Electrical Specifications		
Generator	15 KVA	
System Voltage/Frequency	240 VAC 1ø/50 – 60Hz	
Power Source Input	Shore cable and on-board generator	
Power Consumption	12 KVA	
UPS Run-time @ Operational Load	~1hr	
On-board Generator Run-time @ 75% load	24hrs	
Environmental Specifications		
Operational Temperature	Outdoor: -30°C to 55°C | Indoor: 0°C to 40°C	
Humidity	Outdoor: 100% RH | Indoor: 95% RH non-condensing	
Rain	MIL-STD-810 Compliant	
Icing	0.5in	
Snow	100 kg/m	
Salt Atmosphere	MIL-STD-810 Compliant	
Vibration	1.98GRMS 5-500 GHz, MIL-STD-810 Compliant	
Shock	MIL-STD-810 Compliant	
Solar Radiation	1120 w/sq , MIL-STD-810 Compliant	
Wind Loading, Survival	With and without motor: 125 mph (200 kmph) in stationery position	
Altitude	10000 ft	

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