SwarmKa
Ultra Portable Ka-Band Flat Panel Terminal

Paradigm provide a combination of simple setup and optimal performance with the SWARM terminal, offering ultra portable communication services utilising high-throughput Ka-Band satellite constellations for the commercial, government, disaster recovery and military sectors.

Terminal Overview

The Paradigm SWARM is an extremely compact, rugged, lightweight and discreet system providing superior data rates. Complete with stowable legs, the SWARM is fully portable and quick to deploy and stow.

The system is designed around the PIM (Paradigm Interface Module) which hosts a modem for use on both Velocity and Evolution networks and provides on board monitor and control to manageable terminal components.

The SWARM provides everything needed for straightforward setup and pointing, allowing the user to be operational in less than 5 minutes. This simple, intuitive and tool-free deployment/setup method involves audio and visual pointing aids and provides an effective method of acquiring the satellite without the extra bulk of motors and controllers.

As a single integrated system, the SWARM can withstand harsh environmental conditions. It has comparable performance to a 65cm parabolic antenna and can be assembled and operated in half the height making it more unobtrusive and less affected by wind.

Compared to a parabolic the link budget's rain margin is also significantly reduced, as the signal passes through the antenna only once, reducing rain attenuation and increasing wet performance. Additionally, the flat panel design sheds water easily and avoids water pooling.

To increase flexibility and adaptability, Paradigm also offer a complete range of interface options.

The SWARM is packaged in a single pack which can be carried as airline hand baggage.

Features

- Flat Panel Antenna
- High Data Rates
- Total Weight only 14.5kg/32lbs
- Integrated PIM Baseband
- Integrated Antenna Mount
- Rapid Deploy and Stow
- Full Ka-Band
- Low Power Consumption
- Tool-Free Assembly and Alignment
- Backpack, Hand Carry Case or IATA Checkable Case Options
- Certified on Global Xpress for Global Satellite Usage
Paradigm Communication Systems Ltd.
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Reflector
Reflector 45cm Flat Panel
EIRP 46.0 - 52.0 dBW
G/T 14 dB/K
Positioner Ultra Lightweight Manual Adjust

Performance
Ka-Band
Frequency Range (GHz)
Rx 19.2 – 21.2 GHz *
Tx 29.0 – 31.0 GHz *
BUC Power 5W, 10W, 20W
Polarisation Circular, RH or LH
Local Oscillator Rx 18.25GHz *
Tx 28.55GHz *
Local Oscillator Phase @100Hz -50dBc/Hz
@1KHz -75dBc/Hz
@10KHz -81 dBc/Hz
@100KHz -95 dBc/Hz
@1MHz -105 dBc/Hz
@10MHz -112 dBc/Hz
Noise (Transmit)

Environmental
Ambient Operating Temperature
SWARM Antenna & PIM -25°C to +55°C
Operating Humidity
SWARM Antenna & PIM 0 to 95% (Condensing)
MIL-STD-810G for vibration, shock, salt fog, sand and dust, humidity and driving rain.

Available On Request
Customised Fibre & Wireless Solutions
Extending Stabiliser Legs
Tripod Mount
Backpack, Hand Carry Case or IATA Checkable Case
POE on Dataports
DC External Power
Mil-Ka Operation
X-Band Operation
Ku-Band Operation

Inmarsat Partner for Global Xpress Terminal Manufacturing and Integration
Paradigm is an approved Inmarsat Global Xpress Terminal Manufacturer, providing fixed and transportable land terminals in a range of antenna apertures up to 1.8m for commercial and government markets. Paradigm is also an approved Inmarsat Global Xpress Terminal Integrator, delivering complex value-added services to meet customers’ demands for global coverage, seamless mobility and affordable high-speed broadband connectivity.