SNAP 1.2M VSAT Terminal

Benefits/Features

- Custom Outdoor Equipment Enclosure (OEE) which houses an integrated spectrum analyzer, Trackstar for auto-acquisition, and power
- Uninterruptible Power Source (UPS) provides highly reliable power backup and conditioning at 1250VA of nominal 115VAC outputs from an input range of 80-265 VAC47-400HZ or 20-32 VDC
- RF equipment case is four modem capable allowing multiple configurations
- Unique pack-in-the box pedestal design
- KA and X-band certified

The SNAP 1.2M VSAT Terminal, a pack-in-the-box Ku VSAT solution providing Ka connectivity with a simple feed boom assembly swap, is designed for rapid deployment and ease of use in harsh operating environments. Four modem capable, the SNAP 1.2M is available in both Ku and Ka and interfaces with the SNAP Rack/Stack Baseband and the SNAP Embedded Baseband network packages, providing the flexibility of multiple configuration options for the end-user.

Certification

The SNAP 1.2M and 2.0M terminals with the SNAP Rack Mount and Embedded Baseband kits have successfully completed ARSTRAT Ka Band and DISA Defense Satellite Communications System (DSCS) testing. The terminals were validated as fully interoperable with DOD networks and approved for operation on Government owned Ka Band space craft.
ARSTRAT Certification numbers 11-003 for 1.2M 12watt, 11-004 for 2.0M 12watt, 11-005 for 2.0M 50watt DISA Certification number 11-007 for 2.0M 100watt.

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Specifications

EIRP:
Ku: 59.2 dBW (@ 14.25 GHz CW)
Ka: 61.6 dBW (@ 30.5 GHz CW)

G/T:
Ku: G/T of 21.4 dB/K (clear skies @ 11.85 GHz & 20° elevation angle)
Ka: G/T of 23.2 dB/K (clear skies @ 20.7 GHz & 20° elevation angle)

Operational Frequency:
Ku: Receive: 10.95-12.75 Hz
Transmit: 13.75-14.5 GHz
Ka: Receive: 20.2-21.2 GHz
Transmit: 30.00-31.0 GHz

Polarization:
Ku: Linear Orthogonal configured for cross pol, optional co-pol
Ka: Circular including reverse polarization

Positioning Accuracy:
0.1 degree of azimuth, elevation, and polarization

Type Approvals:
Intelsat K-2 certification
Ka and X-band certified

Wind Loading:
30 mph Operational

Gusts to 45 mph

Temperature:
-10° C to +52° C operational

-40° C to +60° C (non-operating)

Dimension, Weight, and Number of Cases - 2 man lift

Case 1: 26 x 24 x 26 in., 150 lbs

Case 2: 43 x 27 x 20 in., 110 lbs

Case 3: 39 x 24 x 18 in., (RF Case) 127 lbs

Case 4: 39 x 24 x 13 in., (UPS Case) 165 lbs

Case 5: 31.3 x 20.4 x 12.2, 92 lbs

Recent non-RF Chain design improvements reduced case count and allowed for a folding split-boom arm design which makes assembly and packing much easier.

Uninterruptible Power Source

Input AC Range: 80-265VAC, 47-400Hz

Input DC Range: 22-32VDC

Output: 1250VA/ 1000W continuous

Operating Temperature: -18° C to 50° C

Storage Temperature: -32° C to 66° C

Dimension, Weight: 39 x 24 x 13 in., 165 lbs, Case 4 above

RF Equipment Case

Modem Type: Linkway LWS2-S2-BPBP Crypto, IDIRECT E8350 Satellite Modem, NCW modem, MIL-STD 188-165A compliant FDMA modems, future JIPM modems.

Dimension, Weight: 39 x 24 x 18 in., 130 lbs

Frequency Stabilizer

Primary Frequency: 10 MHz. Meets MTIE requirement for Stratum-1 primary clock source.

Long-Term Stability: $1x10^{-12}$ hours of tracking. ($\Delta t=24$ hours)

Short-Term Stability: $1x10^{-11}$ ($\Delta t=1$ second)

Accuracy While Coasting: $5x10^{-10}$ per day after 3 days of locked operation, standard OCXO.

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