

SNAP 2.0M VSAT Terminal



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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 1250 VA of nominal 115 VAC outputs from an input range of 80-265 VAC50/60HZ or 20-32 VDC
- RF equipment case is four modem capable allowing multiple configurations
- Deployment and setup in under 30 minutes
- Ka and X-band certified

Product Specifications

The SNAP 2.0M VSAT Terminal is a pack-in-the-box Ku VSAT solution. Field-upgradeable to Ka or X-band with a swap of the feed boom assembly, it is designed for rapid deployment, ease of use, and suitability for harsh operating environments. Four modem capable, the SNAP 2.0M interfaces with the SNAP Rack/Stack Baseband and the SNAP Embedded Baseband network packages. As part of the SNAP suite of products, these packages provide the flexibility of multiple configuration options for the end-user.

Certifications

- ARSTRAT Certified
- DSCS Certified
- JITC Certified

SNAP 1.2M and 2.0M terminals with the SNAP Rack Mount and Embedded Baseband kits have been validated as fully interoperable with DOD networks and approved for operation on Government owned Ka Band and X 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 (DSCS) Certification number: 11-007 for 2.0M 100watt

JITC Certification: DITPR ID: 11703, IT Registry ID: AB223116, JCPAT-E: NIPRNet #100176 (acronym "SNAP"), SIPRNet #100357 (acronym "VSAT"), STP System #: 3531

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Specifications

EIRP

Ku: 65.1 dBW (@ 14.25 GHz CW)

Ka: 65.9 dBW (@ 30.5 GHz CW)

X: 62.7 dBW (@ 8.25 GHz CW)

G/T

Ku: 25.9 dB/K (clear skies @ 11.85 GHz & 20° elevation angle)

Ka: 27.6 dB/K (clear skies @ 20.7 GHz & 20° elevation angle)

X: 21.7 dB/degree K (clear skies @ 7.5 GHz & 20° elevation angle)

Operational Frequency

Ku: Receive: 10.95 – 12.75 GHz
Transmit: 13.75 – 14.5 GHz

Ka: Receive: 20.2 – 21.2 GHz
Transmit: 30.00 – 31.0 GHz

X: Receive: 7.25 – 7.75 GHz
Transmit: 7.9 – 8.4 GHz

Polarization

Ku: Linear Orthogonal configured for cross pol, optional co-pol

Ka: Circular including reverse polarization

X: Circular convertible to RHCP or LHCP (reverse polarization)

Dimension and Weight

Case 1: 2.0M Positioner Case (w/OEE)
26 x 24 x 26 in., 159 lbs

Case 2: Boom/Feed Case
43 x 28 x 20 in., 139 lbs

Case 3: 2.0M Reflector/Petal Case
25 x 40 x 39 in., 158 lbs

Case 4: RF Accessory Assy Case
(minus laptop and phone)
39 x 24 x 15 in., 151 lbs

Case 5: UPS Case
18 x 20 x 18 in., 74 lbs

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

Temperature

-10° C to +50° C operational

-40° C to +60° C (non-operating)

Uninterruptible Power Source

Input AC Range: 80-265 VAC, 50/60Hz

Input DC Range: 20-32 VDC

UPS run time: 5 to 15 minutes based on requirements

Output: 1250VA / 1000W continuous

Operating Temperature: -18° C to +50° C

Storage Temperature: -32° C to +66° C

Dimension, Weight: 39 x 25 x 13 in., 166 lbs

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 25 x 19 in., 136 lbs

Frequency Stabilizer

- **Primary Frequency:** 10 MHz. Meets MTIE requirement for Stratum-1 primary clock source
- **Long-Term Stability:** 1×10^{-12} hours of tracking ($\Delta t = 24$ hours)
- **Short-Term Stability:** 1×10^{-11} ($\Delta t = 1$ second)
- **Accuracy While Coasting:** 5×10^{-10} per day after 3 days of locked operation, standard OCXO

Positioning Accuracy

0.1 degree of azimuth, elevation, and polarization

Type Approvals

Intelsat K-3 certification, authorized for use on XSTAR satellites, Ka and X-band certified

Wind Loading

30 mph operational

Gusts to 45 mph