Compact and easy to install, the SurfBeam® subscriber terminal for broadband services delivers fast two-way data by satellite. With its built-in wireless LAN\(^1\) and Ethernet interfaces (10/100Mbps), this economical, high-performance terminal integrates seamlessly into a home-based network.

Consisting of an indoor unit (IDU) and a small, unobtrusive outdoor unit (ODU), the subscriber terminal transmits data at rates above 2 Mbps up to 3.5 and receives at rates up to 72 Mbps.

The SurfBeam subscriber terminal provides fast, secure and reliable bandwidth-on-demand for a variety of digital communication services. As part of ViaSat’s SurfBeam Broadband Satellite Access Network, the terminal allows you to offer easy-to-use, low-cost broadband Internet access to both current and new markets.

**DOCSIS™ 1.1 STANDARDS BASED**
- Integrated data-over-cable service interface specification (DOCSIS) provisioning and operations support systems (OSS)
- Scalable, proven network management system (NMS)
- Compatible with DOCSIS-integrated billing systems
- Plug-and-play installation of IDU

**APPLICATIONS**
- High-speed Internet access
- Software-as-a-Service (SaaS)
- Video and Voice-over-IP
- High bandwidth file transfer
- IP multicast
**INDOOR UNIT (IDU)**

**FORWARD CHANNEL**
- Modulation/Coding:
  - Rate 2/3, 3/4, 5/6, 8/9 Turbo (8PSK)
  - Rate 1/2, 2/3, 3/4, 5/6 Turbo (QPSK)
- Concatenated Forward Error Correction (FEC) coding
- Adaptive Coding & Modulation (ACM)
- Modulation Types: 8PSK and QPSK
- Symbol Rate: 5 – 30 Msps
- Data Rates: 5 – 72 Mbps

**RETURN CHANNEL**
- Modulation/Coding:
  - Rate 1/2, 3/4 Turbo
  - Reed-Solomon outer code (Optional)
- Modulation Types: QPSK
- Symbol Rate: 160, 320, 640, 1280, or 2560 ksps
- Data Rates: 150 – 3500 kbps

**PERFORMANCE**
- Forward Channel: 6 Mbps
- Return Channel: 1.5 Mbps

**MANAGEMENT**
- Web GUI local diagnostics and SNMP-based remote management and control

**LAN INTERFACES**
- Wireless LAN and 10/100 Mbps Ethernet interfaces

**NETWORKING**
- IP Inter-networking:
  - Transparent TCP and HTTP acceleration
  - Network Address/Port Translation
- Quality-of-Service
  - Layer 2-4 packet classification and filtering
  - Per-flow queuing and policing
- Security
  - Firewall with Stateful Packet Inspection (SPI)
  - Content filtering

**POWER SUPPLY**
- 85 – 264 VAC; 47 – 63 Hz

**ENVIRONMENT**
- Operational: 0° to +40° C
- Storage: -30° to +65° C
- Humidity: 0 to 95% (non-condensing)
- Altitude: 10,000 feet

**REGULATORY**
- Safety: UL 1950, CE, IEC 60950
- Compliant to RoHS Directive 2002/95/EC

**PHYSICAL**
- Status Indicators: Power, Satellite Acquisition, Activity and Fault
- Size: 23 x 23 x 3.8 cm
- Weight: 0.6 kg

**CPE INTERFACE**
- Wireless LAN: IEEE 802.11 a, b, g
- Ethernet: IEEE 802.3, 10/100 BaseT

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**OUTDOOR UNIT (ODU)**

**KA TRANSCEIVER**
- Input Frequency: 19.7 – 20.2 GHz
- Output Frequency: 29.5 – 30.0 GHz
- Nominal EIRP: 48.3 – 58.5 dBW

**KU BUC**
- Input Frequency Range: 10.95 – 11.7 GHz, 11.7 – 12.2 GHz, or 12.25 – 12.75 GHz

**KU LNB**
- Input Frequency Range: 10.95 – 11.7 GHz, 11.7 – 12.2 GHz
- Nominal EIRP: 42 – 46.1 dBW

**POLARIZATION**
- Circular or linear orthogonal

**ENVIRONMENT**
- Ambient Temperature: -40° to +55° C (up to +80° C survival)
- Humidity: 0 to 100% (condensing)
- Rain: 0.5”/hr. (up to 3”/hr. survival)
- Wind: 45 mph
- Dust, Fungus, Sand and Salt Fog: Withstands and operates without degradation in the presence of dust, fungal growth, sand and salt fog

**REGULATORY**
- Safety: UL 1950, EN 60950
- Compliant to RoHS Directive 2002/95/EC

**POWER**
- Supplied by IDU, 2A max. @ 30 VDC

**PHYSICAL**
- Size
  - Transceiver: 11 x 15 x 5 cm
  - Antenna: 62 – 120 cm
- Weight
  - Transceiver: 1.5 kg
  - Antenna: varies

**INTER-FACILITY LINK (IFL)**

**IF IN**
- Connector: F (female)
- Impedance: 75 Ohm
- Acquisition range: +/- 7.5 MHz
- Frequency: 950 – 1700 MHz
- RX level: -25 to -60 dBm

**IF OUT**
- Connector: F (female)
- Impedance: 75 Ohm
- Frequency: 1800 – 2300 MHz (Ka); 950 – 1450 MHz (Ku)
- TX level: 0 to -33 dBm

**CABLE**
- Connector: F (male)
- Type: RG-6, 75 Ohm, solid copper center conductor
- Attenuation (max):
  - 6.2 dB/30 m @ 900 MHz; 8.1 dB/30 m @ 1450 MHz
- Length (max): 60 m

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Available with SM3000 series satellite modem.