

SURFBEAM SUBSCRIBER TERMINAL AT-A-GLANCE

- Always-on high-speed connectivity
- Sophisticated quality of service (QoS)
- Built-in TCP and Web acceleration functions
- Built-in firewall and network address translation (NAT)¹
- Built-in security against theft-of-service and theft-of-subscriber
- Wireless LAN¹ and 10/100 Mbps Ethernet interfaces
- Web GUI local management and SNMP-based remote management and control
- Adaptive coding and modulation (ACM) on forward link — high availability without throughput loss
- Rate adaptable return link — increased dynamic range counters fade conditions
- Standard Ku- and Ka-band ODU's available

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



The SurfBeam® subscriber terminal is available with either a wireless LAN interface (left) or Ethernet interface (right).

Compact and easy to install, the SurfBeam® subscriber terminal for broadband services delivers fast two-way data by satellite. With its built-in wireless LAN¹ 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.



SPECIFICATIONS

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 LAN¹ and 10/100 Mbps Ethernet interfaces

NETWORKING

IP Inter-networking

Transparent TCP and HTTP acceleration
 Network Address/Port Translation¹

Quality-of-Service

Layer 2–4 packet classification and filtering
 Per-flow queuing and policing

Security

Firewall with Stateful Packet Inspection (SPI)¹
 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 60950, CE, IEC 60950, EN 60950, CB Scheme

EMC: FCC B, CE, IEC 61000, EN 55022, EN 61000

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 LAN¹: IEEE 802.11 a, b, g

Ethernet: IEEE 802.3, 10/100 BaseT

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

Output Frequency: 14.0 – 14.5 GHz

Nominal EIRP: 42 – 46.1 dBW

KU LNB

Input Frequency Range: 10.95 – 11.7 GHz, 11.7 – 12.2 GHz,
 or 12.25 – 12.75 GHz

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

EMC: FCC CFR 47 Part 25.202, Part 15, Part 25.138, ETSI EN 301 459

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

¹Available with SM3000 series satellite modem.

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