The SurfBeam® subscriber terminal for wireless broadband services is a compact, easy-to-install terminal that delivers fast two-way data by satellite. The terminal will seamlessly integrate into a home-based network with its built-in Ethernet interface (10/100 Mbps).

The complete terminal includes the indoor unit and a small, non-obtrusive outdoor antenna. The 2-watt or 4-watt power amplifier (SSPA) and Low Noise Block (LNB) transmits data at rates above 1 Mbps and receives at rates up to 72 Mbps. ViaSat’s SurfBeam subscriber terminal provides fast, reliable, high-quality bandwidth-on-demand for a variety of digital communication services.

Features
- Low cost broadband satellite modem
- Always on high-speed connections
- No PC software required
- Built-in security against theft-of-service and theft-of-subscriber
- Built-in TCP and Web acceleration functions
- Sophisticated QoS
- 10/100 Mbps Ethernet interface
- Remote management and control
- Dynamic multi-rate forward link provides high availability without throughput loss
- Rate adaptable MF-TDMA return link for increased dynamic range to counter fade conditions
- Standard Ku- and Ka-band ODUs available

DOCSIS™ 1.1 Standard Based
- Subscriber terminals based on high volume cable modem chipset standard
- Mature infrastructure products available
- Low-cost scalable hub equipment
- Off-the-shelf BSS and OSS equipment

Applications
- Internet access
- Voice-over-IP
- MPEG video over IP
- High bandwidth FTP
- IP Multicast
SPECIFICATIONS

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)
- Reed-Solomon outer code
Modulation Types: 8PSK and QPSK
Downlink Symbol Rates: 5 to 30 Msps
Nominal Data Rates: 5 to 72 Mbps

Return Channel Modulation Coding:
- Rate 1/2 Turbo
- Reed-Solomon outer code (Optional)
Modulation Types: QPSK
Uplink Symbol Rate: 160, 320, 640, 1280 or 2560* kbps
Nominal Data Rates: 150 – 2400* kbps

IDU AND IFL INTERFACE
Transmit IF:
- 1800 – 2300 MHz (Ka-band ODU)
- 950 – 1450 MHz (Ku-band ODU)
Receive IF:
- 950 – 1700 MHz
I/O Impedance: 75 Ohms, nominal
Tx Output Level: 0 to -30 dBm
Rx Input Level: -30 to -60 dBm
SSPA Power: Supplied by IDU

ODU AND ANTENNA INTERFACE
Typical EIRP:
- 48.3 to 58.5 dBW (Ka); 42 to 46.1 dBW (Ku)
Typical G/T: 15.4 dB/°K
Noise Temperature: 70°K, typical
Uplink Frequency Range:
- (13.75°) 14.0 – 14.5 GHz (Ku); 29.5 – 30.0 GHz (Ka)
Downlink Frequency Range:
- 10.7 to 12.75 GHz (Ku); 19.7 – 20.2 GHz (Ka)

NETWORKING
IP Inter-networking:
- Transparent TCP and HTTP acceleration
Quality-of-Service:
- Layer 2–4 packet classification and filtering
- Per-flow queuing and policing

ENVIRONMENTAL
Indoor Unit
Temperature: 0° C to +40° C
Humidity: 10% to 95% (non-condensing)
Altitude: 10,000 feet

Outdoor Unit
Temperature: -40° C to +55° C
Humidity: 0 to 100% (condensing)
Dust, Sand and Fungus:
- Withstand and operate without degradation in the presence of dust, sand, and fungus growth

PHYSICAL
CPE Interface:
- Ethernet: IEEE 802.3, 10/100 BaseT (single RJ-45 connector)
IDU / ODU Interface:
- RG-6 (<30m) cable, F-type connector
Status Indicators:
- Power, Satellite Acquisition, Activity and Fault
Power Supply:
- 85 to 264 VAC, 47 to 63 Hz
Size:
- Indoor unit: 23 x 23 x 3.8 cm (9 x 9 x 1.5 inches)
- Outdoor unit: Transceiver: 11 x 15 x 5 cm
- Outdoor unit: Antenna: 62 to 120 cm
Weight:
- Indoor unit: 0.6 kg
- Outdoor unit: Transceiver – 1.5 kg
- Outdoor unit: Antenna – varies

* Italics indicate planned capability
Specifications subject to change without notice.