



The SurfBeam® 2 system delivers a quantum leap in affordable broadband Internet access via satellite. This next-generation satellite terminal builds on the success that made ViaSat SurfBeam the product of choice for WildBlue, the premier Ka-band satellite broadband service provider. With more than 800,000 terminals shipped, only ViaSat has proven market acceptance of Ka-band performance, cost, and capacity for satellite broadband services.

HIGH-PERFORMANCE, COST-EFFICIENT INTERNET ACCESS

The complete SurfBeam 2 residential terminal includes an attractive indoor unit (IDU) similar to a typical cable or DSL modem, and an unobtrusive outdoor unit (ODU) similar to a dish for satellite television reception. The terminal enables fast web browsing at DSL-like speeds and supports video streaming, file sharing, and bandwidth-intensive Internet applications. It is capable of delivering downstream rates up to 40 Mbps/s and upstream rates up to 10 Mbps/s, and the network operator can define lower classes of service using provisioning tools to configure the terminal for lower downstream and upstream speeds.

The IDU has an embedded acceleration client that works with acceleration servers in the gateway to provide a faster, more responsive user experience. The unit integrates seamlessly into any home-based network via a standard Ethernet connection. The ODU includes a satellite reflector and feed, transmit and receive electronics, and a mounting kit, and is available with either pole-mount or universal wall mount.

Incorporating advanced new technologies, the highly integrated SurfBeam 2 residential satellite terminal sets a new standard for performance and reliability. High-volume production ensures flexible product delivery schedules and the lowest possible volume pricing.

EASY INSTALLATION AND OPERATION

The compact SurfBeam 2 satellite terminal was designed for a quick and reliable professional installation.

The terminal is part of a complete system that also includes an innovative Satellite Modem Termination System (SMTS) gateway and Network Management Systems (NMS) that facilitate subscriber management with features such as automated service provisioning, diagnostics, and customer support.

TERMINAL AT-A-GLANCE

- » Always-on high-speed connectivity
- » Sophisticated quality of service (QoS)
- » Built-in TCP and web acceleration
- » Built-in security against theft-of-service and theft-of-subscriber
- » Gigabit Ethernet CPE interface
- » Web GUI local management and SNMP-based remote management and control
- » Adaptive coding and modulation (ACM) on the forward link—optimized network capacity
- » Automatic power control and rate adaptation on the return link—high availability during fades

Applications

- » High-speed Internet access
- » Video and Voice-over-IP
- » High-speed file transfer
- » Email
- » Web browsing



INDOOR UNIT (IDU) SPECIFICATIONS

FORWARD CHANNEL

Modulation/Coding

- » 16-APSK Rate 2/3, 3/4, 4/5, 5/6, 8/9
- » 8PSK Rate 3/5, 2/3, 3/4, 5/6
- » QPSK Rate 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
- » Adaptive Coding & Modulation

Symbol Rate 10 to 52 MSym/s

RETURN CHANNEL

Modulation/Coding

- » 8PSK Rate 7/12, 2/3, 3/4
- » QPSK Rate 3/8, 1/2, 5/8, 3/4
- » BPSK Rate 1/2
- » Automatic power control and rate adaptation

Symbol Rate 625, 1250, 2500, 5000 and 10000 kSym/s

USER SPEEDS

Forward Channel Operator configurable up to 40 Mb/s
Return Channel Operator configurable up to 10 Mb/s

MANAGEMENT

Web GUI local management and SNMP-based remote management and control

NETWORKING

IP Internetworking

- » Transparent TCP and HTTP acceleration
- » Packet classification and filtering
- » Per-flow queuing

POWER SUPPLY

- » 100 to 240 VAC; 50 to 60 Hz

INDOOR ENVIRONMENT

Operational 0° to +40° C
Storage -35° to +65° C
Humidity 0 to 95% (non-condensing)
Altitude 3000 m
Shock and Vibration Per ISTA, July 2000, Procedure 1A

REGULATORY

Safety cULus, CE, CB Scheme
EMC FCC 47 CFR 15B class B, ICES-003, AS/NZS CISPR 22, CE
RoHS Compliant to RoHS Directive 2002/95/EC
REACH Compliant to REACH Directive

PHYSICAL

Status Indicators Power; Satellite Acquisition; Activity; Fault
Size 23 x 23 x 3.8 cm
Weight 1.3 lb; 0.6 kg (with external power supply)

INTERFACES

CPE IEEE 802.3, 10/100/1000 BaseT, RJ-45 connector
Expansion USB 2.0, type A connector

OUTDOOR UNIT (ODU) SPECIFICATIONS

Input Frequency 18.3 to 20.2 GHz
Output Frequency 28.1 to 30.0 GHz
Nominal EIRP 48.4 dBW
Nominal G/T 17.5 dB/K
Polarization Circular, with remote switching option
Mounting Available pole mount or universal wall mount

OUTDOOR ENVIRONMENT

Power Supplied by IDU on IFL coax, 30-55 Vdc
Ambient Temperature -40° to +55° C (up to +80° C survival)
Humidity 0 to 100% (condensing)
Rain < 100 mm/hr
Wind 45 mph

REGULATORY

Safety cULus, CE, CB Scheme
EMC FCC 47 CFR 15B, 25.138, 25.202, ETSI 301 459, CE
RoHS Compliant to RoHS Directive 2002/95/EC
REACH Compliant to REACH Directive

PHYSICAL

Reflector Size 77 x 72 cm
Weight 33.5 lb; 15.2 kg (with transceiver and universal wall mount)

INTER-FACILITY LINK (IFL) CABLE

Type RG-6, 75 Ohm
Connector F (male)
Length (max) 60 m



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