



The SurfBeam® 2 Pro satellite terminal unlocks unprecedented satellite capacity and performance for your enterprise market. Part of the high-capacity ViaSat Ka-band space and ground technology, this new generation terminal builds on the success of ViaSat's popular SurfBeam® and LinkStar® platforms, combining the scalability, management and enterprise networking into a single platform that delivers extraordinary throughput, efficiency, flexibility and affordability.

HIGH-PERFORMANCE, HIGH THROUGHPUT, AND A WIDE RANGE OF ENTERPRISE APPLICATIONS

The high performance SurfBeam 2 Pro terminal has bandwidth to spare and a rich set of enterprise networking features that deliver the performance required by the most demanding enterprise applications. Whether connecting a small remote office, mission-critical remote industrial rig, or large warehouse with multiple complex networks, the SurfBeam 2 Pro terminal accomplishes the mission.

Performance starts with raw speed and the SurfBeam 2 Pro terminal delivers, with downstream rates to 50 Mbps/s and upstream rates to 20 Mbps/s. The terminal supports classes of services to fit any enterprise bandwidth requirement. Constant Bit Rate (CBR) and Committed Information Rate (CIR) can be configured on an individual terminal basis. Application-based traffic prioritization supports demanding services such as high quality Voice-over-IP (VoIP) and high-speed video conferencing.

Flexibility to configure Layer 2 or Layer 3 networking eliminates the need to adapt the network design to the terminal. Instead, the SurfBeam 2 Pro terminal adapts to the network more seamlessly than ever, including the ability to deliver end-to-end Ethernet services.

The terminal features embedded acceleration that works with servers in the gateway for a more responsive user experience. File sharing and web-based application performance is comparable to terrestrial services. A gigabit Ethernet connection allows seamless integration into any enterprise network.

EASY INSTALLATION, FLEXIBLE CONFIGURATION, AND PROVEN OPERATION

Installation of the SurfBeam 2 Pro terminal is designed to be quick, simple, and reliable.

The complete SurfBeam 2 system includes the terminal, an innovative Satellite Modem Termination System (SMTS) gateway, Network Management Systems (NMS) and a robust set of Virtual Network Operator (VNO) features. Features such as automated service provisioning, diagnostics, customer support and hierarchical views enable the subscriber, partner, and reseller to have easy and flexible access with a high quality level of network management.

TERMINAL AT-A-GLANCE

Features and Benefits

- » High-speed two-way performance-up to 50 Mbps/s downstream and 20 Mbps/s upstream
- » Can be configured to operate as a Layer 2 or Layer 3 network device for total enterprise networking flexibility
- » Sophisticated quality of service (QoS), including CBR, CIR and traffic prioritization
- » Built-in TCP and web acceleration
- » Remote monitoring and control tools support Virtual Network Operator (VNO) requirements
- » Adaptive coding and modulation (ACM) on the forward link optimizes network capacity and availability
- » Automatic power control and rate adaptation on the return link provides high availability during fades
- » High quality 1 RU metal chassis designed for the desktop with an optional rack mount kit
- » Multiple Outdoor Unit (ODU) configuration options to meet strict performance and availability requirements

Applications

- » High-speed Internet access
- » Private network access with full Ethernet capabilities
- » High quality Voice-over-IP (VoIP)
- » High-speed video conferencing
- » Multicast media and content delivery
- » Remote office connectivity-extending the corporate network
- » Remote communications for industry, government and disaster recovery
- » Business continuity



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, 10000 and 20000 kSym/s

RF Spectrum FCC 47CFR25.138, 47CFR25.202, ETSI EN 301 459

USER SPEEDS

Forward Channel Operator configurable up to 50 Mb/s

Return Channel Operator configurable up to 20 Mb/s

QUALITY OF SERVICE (QOS)

Dynamic Service Flows

MANAGEMENT

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

NETWORKING

IP Internetworking

- » Per flow queuing
- » Layer 2 mode
 - Transparent bi-directional TCP and HTTP acceleration
 - 802.1p packet classification and priority filtering
 - Private IP network addressing
 - Transparent support for 802.1q VLANs tagging
- » Layer 3 mode
 - Transparent TCP and HTTP acceleration
 - DSCP packet classification and filtering

POWER SUPPLY

- » 100-240 VAC; 50-60 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, Procedure 3A, 2008

REGULATORY

Safety cULus, CE, CB Scheme
EMC FCC 47 CFR Part 15 Subpart B, CE
RoHS Compliant to RoHS Directive 2002/95/EC
REACH Compliant to REACH Directive

PHYSICAL

Status Indicators Power; Satellite Acquisition; Activity; Fault
Size 4.3 x 22 x 21 cm
Weight 2.2 kg (including 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

CHARACTERISTICS

Description SurfBeam 2 120 cm, 4 Watt Ka-band System
Receive Frequency Range 18.3 to 20.2 GHz
Transmit Frequency Range 28.1 to 30.0 GHz
EIRP (Nominal) 54 dBW at 29.75 GHz
G/T (Nominal) 23 dB/K at 19.95 GHz
Polarization Circular, with remote switching control

OUTDOOR ENVIRONMENT

Power Supplied by IDU on IFL coax, 30 to 55 Vdc
Ambient Temperature -40° to +55° C (up to +80° C survival)
Humidity 0 to 100% (condensing)
Rain < 100 mm/hr
Wind 50 mph

REGULATORY

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

PHYSICAL

Reflector Size 120 x 120 cm
Weight 54.7 lb; 24.9 kg
Mast Size 2.88 in O.D.; 3mm

INTER-FACILITY LINK (IFL) CABLE

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



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