OUTDOOR UNIT

ViaSat-1 fixed broadband terminals

The Viasat broadband system delivers a quantum leap in affordable internet access via satellite. These next-generation satellite terminals integrate with the world's highest capacity Ka-band satellites. With more than 2 million terminals shipped, Viasat has proven market leadership in Ka-band performance, cost, and capacity for broadband services.

High-performance, cost-efficient internet access

Only Viasat Ka-band innovations enable the world's highest capacity Ka-band satellites to deliver the best broadband internet speeds around the world. ViaSat-1 fixed broadband terminals include an attractive indoor unit (IDU) and an unobtrusive outdoor unit (ODU) that enable fast web browsing, video streaming, file sharing, and bandwidth-intensive internet applications.

This terminal builds on the success of the Viasat SurfBeam 2 Terminal, offering higher speeds, four Gigabit Ethernet ports, integrated 802.11b/g/n Wi-Fi, router capabilities, and built-in VoIP adapter (RJ-11 interface). It is capable of delivering downstream rates up to 60 Mbps and upstream rates up to 20 Mbps, and the network operator can define varying classes of service using provisioning tools to configure the terminal for lower downstream and upstream speeds.

The terminal includes an embedded acceleration client for a faster, more responsive user experience, and the units integrate via a standard Ethernet connection. The ODU includes a satellite reflector and feed, transmit and receive electronics, a mounting kit, and is available with either pole-mount or universal wall mount.

Easy installation and operation

This terminal was designed for quick and reliable professional installation, and 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 Wi-Fi
› 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 TR-069 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
› Streaming video

INDOOR UNITS

Indoor unit (IDU) specifications

FORWARD CHANNEL

Modulation	32-APSK, 16-APSK, 8PSK, QPSK
Symbol rate	10 to 52 MSym/sec

RETURN CHANNEL

Modulation	8PSK, QPSK, BPSK
Symbol rate	625, 1250, 2500, 5000 and 10000 kSym/sec

USER SPEEDS

Fixed Broadband Terminal 1240

› **Forward channel**	Configurable up to 60 Mbps accelerated TCP
› **Return channel**	Configurable up to 20 Mbps accelerated TCP

SurfBeam 2

› **Forward channel**	Operator configurable up to 40 Mbps
› **Return channel**	Operator configurable up to 10 Mbps

MANAGEMENT

› Web GUI local management and TR-069 and SNMP-based remote management and control

NETWORKING

IP internetworking	› Transparent TCP and HTTP acceleration
	› Packet classification and filtering
	› Per-flow queuing

INDOOR ENVIRONMENT

Temperature	› 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 3A
Power requirements	100 to 240 VAC; 50 to 60 Hz

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 2011/65/EU
Altitude	Compliant to REACH directive

INTERFACES

Fixed Broadband Terminal 1240

› **Ethernet (x4)**	IEEE 802.3, 10/100/1000 BASE-T, RJ-45 connector
› **Wi-Fi**	802.11b/g/n
› **VoIP**	RJ-11
› **Expansion**	USB 3.0, type A connector

SurfBeam 2

› **Ethernet (x1)**	IEEE 802.3, 10/100/1000 BASE-T, RJ-45 connector
› **Expansion**	USB 2.0, type A connector

Outdoor unit (ODU) specifications

POLARIZATION

Standard	Circular, cross-polarized, with remote switching
Optional	Circular, fixed co-polarized, Arabsat 5C frequency plan

FORWARD CHANNEL

Input frequency	18.3 to 20.2 GHz
Nominal G/T	18.5 dB/K

RETURN CHANNEL

Output frequency	28.1 to 30.0 GHz
Nominal EIRP	48.4 dBWi

PHYSICAL CHARACTERISTICS

Reflector size	77 × 72 cm
Weight	30 lb; 13.6 kg (with transceiver and universal wall mount)
Mounting	Available pole mount or universal mount

OUTDOOR ENVIRONMENT

Power	Supplied by IDU on IFL coax
Ambient temperature	−40° to +55° C (up to +80° C survival)
Humidity	0 to 100% (condensing)
Rain	<100 mm/h
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 directive2002/95/EC
REACH	Compliant to REACH directive

INTER-FACILITY LINK (IFL) CABLE

Type	RG-6, 75 Ohm
Connector	F (male)
Length (Maximum)	50 m

ORDERING INFORMATION

Broadband Terminal 1240 IDU	RM5111N
SurfBeam 2 IDU	RM4100N
Standard Antenna	1182925
European Antenna	1201831 or 1201832
TRIA	X01012000A001S or X01012000A003S

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