Residential Broadband Terminals

Fast, Proven Internet Access Over Satellite

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. The Viasat Residential 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.

Two terminal models are available. The Residential Broadband Terminal 1240 builds on the success of the Viasat SurfBeam 2 Residential Terminal, offering higher speeds, four Gigabit Ethernet ports, integrated 802.11b/g/n Wi-Fi, consumer and SME 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.

Viasat Residential Broadband Terminals include an embedded acceleration client for a faster, more responsive user experience, and the units integrate seamlessly into any home-based network 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.

Incorporating advanced new technologies, the highly integrated terminals set 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 residential terminal was designed for quick and reliable professional installation.

The terminals are 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

RESIDENTIAL BROADBAND INDOOR UNITS

INDOOR UNIT (IDU) SPECIFICATIONS

FORWARD CHANNEL

Modulation/Coding

- **32-APSK Rate** 3/4, 4/5, 5/6, 8/9, 9/10 (1240 only)
- **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 and Modulation

Symbol Rate 10 to 52 MSym/sec

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/sec

USER SPEEDS

Residential 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

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 3A

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
REACH	Compliant to REACH directive

INTERFACES

Residential Broadband Terminal 1240

- **CPE (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

SurfBeam 2

- **CPE (x1)** IEEE 802.3, 10/100/1000 BASE-T, 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 dBWi
Nominal G/T	18.5 dB/K
Polarization	
» **Standard**	Circular, cross-polarized, with remote switching
» **Optional**	Circular, fixed co-polarized, Arabsat 5C frequency plan
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 directive 2002/95/EC
REACH	Compliant to REACH directive

PHYSICAL CHARACTERISTICS

Reflector Size	77 x 72 cm
Weight	30 lb; 13.6 kg (with transceiver and universal wall mount)

INTER-FACILITY LINK (IFL) CABLE

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

ORDERING INFORMATION

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

CONTACT

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