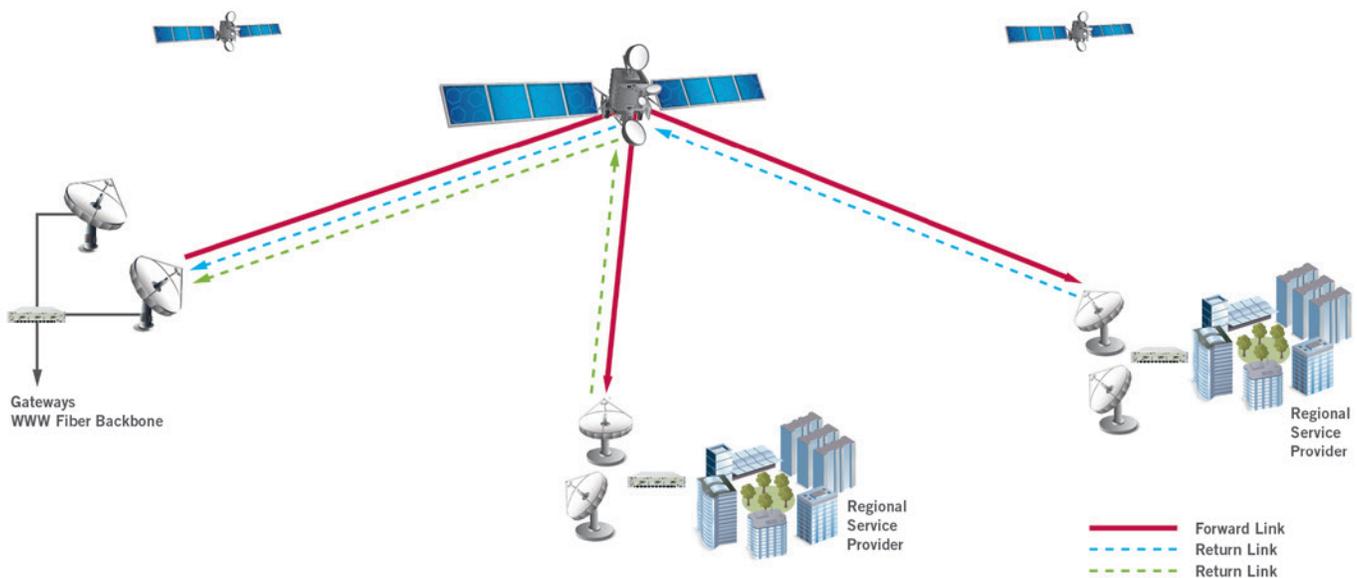


Viasat's MEOLink IP trunking terminal enables emerging market telcos and ISPs to offer fiber-like performance for high-speed internet services over O3b's medium earth orbit (MEO) satellite constellation. In combination, the O3b satellites and the MEOLink terminal extend high-speed internet access to rural markets over a cost effective satellite connection, making the internet a truly global and universal experience.

Viasat's MEOLink terminal includes precision tracking antennas, the high-speed DVB-S2 MEOLink modem, and an advanced uplink power control system. The system operations are coordinated with the fully automated MEOLink monitor and control system.



MODEM DESIGNED FOR SPEED AND EFFICIENCY

Viasat's MEOLink modem is designed for high data rates extending the reach of internet services to rural and underserved communities supported by the O3b constellation. Based on the efficiency of the DVB-S2 waveform, the modem automatically provides the greatest data rates based on the signal strength. Integrated Adaptive Coding and Modulation (ACM), with modulations up to 32APSK, enables Ethernet data rates up to 810 Mbps in each direction. To optimize forward channel efficiency based on the application, the modem can be used in point-to-point and point-to-multipoint networks.

FLEXIBLE ARCHITECTURE

The modem acts as a specialized Layer 2 VLAN bridge with selectable QoS and flow control features allowing it to be combined with industry standard networking equipment to support IP network designs. It has wide range L-band intermediate frequency (IF) interfaces to allow maximum flexibility in RF equipment selection. These interfaces support internal and external referenced RF block converters as well as providing power to RF block downconverters.

Dual receivers have been incorporated to seamlessly manage the make-before-break connections during satellite transfers without loss or repetition of data.

MEOLINK MODEM AT-A-GLANCE

- » Data rates of up to 810 Mbps in each direction
- » Bandwidth efficient DVB-S2 waveform with modulations up to 32-APSK
- » Adaptive coding and modulation
- » Point-to-multipoint and Point-to-point connectivity
- » Layer 2 Ethernet connectivity with VLAN
- » Ethernet header compression
- » Dual receivers for seamless connections during satellite transfers

SPECIFICATIONS

TRANSMIT IF INTERFACE

Frequency	950 to 2450 MHz
Frequency Step Size	100 Hz
Reference	Internal or external 10 MHz
Transmit Power Level	-5 to 25 dBm
IF Monitor Power	-25 dBc typical
Output Impedance	50 ohm
Output Connector	SMA (f)
IF Monitor Connector	SMA (f)
BUC Reference Frequency	10 MHz
BUC Reference Level	-1 to +5 dBm

RECEIVE IF INTERFACE

Frequency	950 to 2450 MHz
Signal Input Level	-75 dBm + 10 log (SR) (symbol rate in units of MHz)
AGC Range	Up to 40 dB above minimum, maximum -25 dBm
Local IF Loopback	Present
Input Impedance	50 Ohms
Input Connector	SMA (f)
LNB Power	350 mA at 18 VDC (to each LNB)
LNB Reference	10 MHz, -1 to +5 dBm on RX port

MODULATION & CODING

Modulation and Coding	QPSK, 8PSK, 16APSK, & 32APSK per ETSI EN 302307 DVB-S2
Baseband Roll-Off	0.20, 0.25, 0.35
Connectivity	Point-to-point and point-to-multipoint
Adaptive Coding & Modulation	Included
Symbol Rates	10 to 180 Msym/s
Data Rate	As waveform allows (4.9 to 810 Mbps)

BASEBAND

Traffic Physical Interface	Dual RJ45 Gigabit Ethernet interfaces with additional redundant pair for back up router
Bridging	802.1Q VLAN
Ethernet Frame Size	Normal and jumbo (9 KB)
QoS	Layer 2 prioritization for marked packets including 802.1p with 8 priority queues
Flow Control	802.3x, Ethernet flow control
Logical Interface	Configurable VLAN range per interface
Ethernet Header Compression	25% compression (small packets)
Loopbacks	Terrestrial and IF loopbacks diagnostics

MONITOR AND CONTROL

Remote Web GUI Included

Physical Interface

- » RJ45 Ethernet interface
- » Primary and backup connection

Remote SNMPv2c Included

ENVIRONMENTAL & PHYSICAL CHARACTERISTICS

Input Power 100 to 240 VAC, 47 to 63 Hz

Power Consumption 150 W typical with both LNB power sources
enabled (each LNB is allocated 7.5 W)

Temperature

- » Operating 15° to 40° C
- » Storage -20° to +70° C

Humidity

- » Operating 20% to 90% relative humidity,
non-condensing
- » Storage Up to 95% non-condensing

Size

EIA standard rack-mount 2 RU high

Mounting

Minimum rack depth 74 cm with vertical
rail spacing between 74 to 79 cm

MTBF

80,000 hr

Cooling

Hot-swappable blower modules
with 3-for-2 redundancy



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