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 & 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 Layer2 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 32APSK
- Adaptive Coding and Modulation
- Point-to-Multipoint and Point-to-Point connectivity
- Layer2 Ethernet connectivity with VLAN
- Ethernet header compression
- Dual receivers for seamless connections during satellite transfers
**SPECIFICATIONS**

**TRANSMIT IF INTERFACE**
- Frequency: 950-2450 MHz
- Frequency step size: 100 Hz
- Reference: Internal or External 10MHz
- 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: 950-2450 MHz
- Signal input level: -75dBm + 10 log(SR) (symbol rate in units of MHz)
- AGC Range: Up to 40dB above minimum, maximum -25dBm
- Local IF Loopback: Present
- Input impedance: 50 ohms
- Input connector: SMA (f)
- LNB Power: 350mA @ 18 VDC (to each LNB)
- LNB Reference: 10MHz, -1 to +5 dBm on Rx port

**MODULATION AND 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/sec
- Data rate: As waveform allows (4.9 to 810Mbps)

**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 (9K bytes)
- 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
- Remote SNMPv2c: Included

**PHYSICAL AND ENVIRONMENTAL**
- Input power: 100-240 VAC, 47-63 Hz
- Operating temperature: 15° to 40° C
- Operating humidity: 20 to 90% relative humidity, non-condensing
- Storage temperature: -20° to +70° C
- Storage humidity: Up to 95% non-condensing
- Size: EIA Standard Rack-Mount 2 RU high
- MTBF: 80,000 hours
- Cooling: Hot-swappable blower modules with 3-for-2 redundancy

**CONTACT**

VIAST INC.
1725 Breckinridge Plaza
Duluth, GA 30096
TEL: +1 678 924 2631
EMAIL: iptrunking@viasat.com
WEB: www.viasat.com

O3B NETWORKS LIMITED
St John’s Manor Offices, Le Neuf Chemin
St John, Jersey, JE34EH, Channel Islands
TEL: +44 1534 865 000
FAX: +44 1534 862 301
WEB: www.o3bnetworks.com