RADITEK INC.

RoHS COMPLIANT

code-j8

IP Based Intelligent Satellite Network Solution
RISNS-99-VRT VSAT Remote Terminal, Smart IP Switched, Router Modem
Remote, 4 channels: 8MB up and down, stand alone for point -point

- In the **MESH Network Mode** it operates as a **single channel VSAT terminal and Internet router**
- In the **SCPC/STAR Mode**, it allows **16Kbps to 8Mbps traffic** to go directly from one remote to another, with a single hop. It beats TDMA terminals in every way: lower latency and highest efficiency.
- In the **Stand Alone Mode**, it operates as a high rate, pre-assigned multiple access (PAMA) SCPC/MCPC modem, with an embedded router.

The RISN-99VRT, with it's built in Internet router, and operates with such advanced features like BOD (Bandwidth on Demand) and DAMA (Demand Assigned Multiple Access), with 98% Network Channel Efficiency. An SCPC carrier uses 30% - 50% less bandwidth than a TDMA carrier with similar rates, because no framing overhead is needed for multiplexing. It also needs a smaller antenna and lower powered ODU, compared with TDMA carrier types, because it uses superior Turbo code FEC and only requires power for a single SCPC link. Lower power BUCs and/or smaller antennas can be used with the improved Eb/No.

Applications:
- Supports 1 or 2 Channels (Option)
- 2 Channel for popular dual STAR
- Ideal for ATM Transactions
- Remote Database Replication
- Internet Access and DVB-SCPC
- Mobile Communications
- SCPC Pt-Pt and Pt-MultiPoint
- Surveillance & SCADA
- Private VSAT Networks
- Wireless Backhaul
- Rural Telecommunications

Advantages:
- Lowest BUC and antenna cost!
- Highest Channel Efficiency
- Fastest Response Time
- Expandable for MESH connection
- Support DVB-S/S2 carriers

RADITEK RISN-99VRT™ together with their other intelligent, digital Satellite terminals are becoming the leading VSAT networks around the world, due to their high performance, ease of use, very fast acquisition. They are the most flexible, with the widest range of data rates from **16 Kbps to 8 Mbps** in SCPC mode, and most importantly, their high channel efficiency for the absolute lowest cost network operations.
in a star network.

Due to its low latency and high channel efficiency, it is a preferred alternative to TDM/TDMA or DVB-RCS(TDMA) terminals.

RADITEK's multi-channel modems, used at the hub, provides the most cost efficient point-to-multipoint SCPC connections.

The terminals have the option to upgrade their SCPC network to full DAMA (Demand Assigned Multiple Access), BOD (Bandwidth on Demand), and support of intelligent network traffic switching by adding their advanced NMCS (Network Management and Control Subsystem) to the network.

Features:
Data Rates up to 8 Mbps	Graphical Traffic Display
Standalone or Network Mode	Automatic Channel Switching
Web based GUI	Looks like a Satellite IP Router
Multicasting	Single or Multiple Star Network

RISNS-99-VRT-j8   *Specifications may be subject to change*   03/26/12

RoHS COMPLIANT

RADITEK INC.

IP Based Intelligent Satellite Network Solution
RISNS-99-VRT VSAT Remote Terminal, Smart IP Switched, Router Modem
Remote, 4 channels: 8MB up and down, stand alone for point -point

Service Applications

High performance, broadband IP based..multiple 2-way for mesh.. multi-STAR network VSAT links

ACCESS Technology

Composite TDM Outbound Carrier using Packet Division Multiple Access (PDMA).

Contention Access Slotted Aloha Inbound (CSC-IB) to initiate DAMA (Demand Assigned Multiple Access).

SCPC / MCPC Inbound Carrier for IP traffic services

Bandwidth-On-Demand (BOD) automatic Inbound Carrier rate to match real time IP traffic demands

Internet routing

Intranet/Internet, Multicast, TCP/HTTP acceleration

DNS Caching

Standard & Customized QoS traffic Prioritization Protocols:
   TCP, UDP, RIP, ARP, DHCP, ICMP, IGMP, TELNET, PPP, FTP, HTTP, SMTP, SNMP

Outbound Carrier

Proprietary TDM with PDMA, or SCPC/MCPC

BPSK, QPSK and 8PSK Modulation available

Turbo Product Code FEC at ~1/2, ~3/4, ~7/8 Rates

Carrier Data Rate 16 to 8,192 Kbps, 1.20 or 1.30 Symbol Rate Carrier Spacing Options

Inbound Carrier (Inbound Carrier rate adaptability to match actual site traffic)

Slotted Aloha at 24~48 Kbps for initial network entry and DAMA SCPC/MCPC with BOD for IP traffic.

Turbo Product Code FEC available at: ~1/2, ~3/4 and ~7/8 Rates.

QPSK and 8PSK Modulation.

Carrier Data Rate: 16Kbps to 8.192 Mbps

Real Time Demand, 1.20 or 1.30 Symbol Rate Carrier Spacing Options

ODU Interface

Transmit: 950-1850 MHz L-band with 2.5 KHz steps; +24VDC @ 2.7A and 10 MHz Reference @ 0 dBm,
   Type "F" (f) Coaxial connector, 75Ω, Level: -45 to -0 dBm in 1 dB steps.

Receive: 950-1850 MHz L-band with 2.5 KHz steps; +24 VDC @ 0.3A and 10 MHz Reference @ 0 dBm,
   Type "F" (f)Coaxial connector, Type "F", 75 Ω, Level: -75 to -35 dBm

Mechanical & Environmental

RJ-45, 10/100 Base T Ethernet Interface

RS-232 Asynchronous Serial Interface to ACU

 RS-530 Synchronous Serial Interface (option)

AC Power, IEC-320 Interface 110-240 VAC (47-63Hz) 100 watts, 48VDC @ 3.5A (option)

Dimensions: 43 x 250 x 310 mm (1.7"x9.84"x12.2") Desktop/Rack, Weight: 2.2 Kg (4.84 Lbs)

Operational: 0 to +45°C, Storage: -30 to +70°C

Humidity: Up to 95 %, non-condensing

Options: ♪3D Turbo Product Code ♪AES Encryption ♪FSK Smart ODU M&C ♪High Stability Clock