# RADITEK *INC.*

code-j8

# IP Based Intelligent Satellite Network Solution

## RISNS-88VRT VSAT Remote Terminal, Smart IP Switched, Router Modem

### 1 channel: 2M up and 8M down Needs NCMS (not stand alone)

The RISN-88VRT, with its built in Internet router, is the preferred smart satellite modem/terminal for Office, real time SCADA and Banks, with other financial institutions, who, for example, prefer SCPC (Single Channel per carrier) over TDMA (Time division multiple access). RADITEK provides a new kind of SCPC with BOD (Bandwidth on Demand) and DAMA (Demand Assigned Multiple Access), with *98% Network Channel Efficiency*.

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.

### Applications:

- Bank ATM Transactional
- Rural Telecoms
- Remote Database Access
- Remote Internet Access
- Mobile Communications
- SCADA
- Private VSAT Network
- Video Surveillance etc.
- Remote Backhaul

### Advantages:

- Low Cost remote modem
- Lowest RFT (ODU & ANT.) Cost
- Fast Response Time
- Highest Channel Efficiency
- Light Weight Flyaway apps

### Features:

- Tx Data Rates up to 2 Mbps
- Rx Data Rates up to 8 Mbps
- Every modem has a Satellite IP Router
- Network Mode operation
- *Receive-Only/Transmit-Only/2-Way*
- Automatic Channel Switching
- Web based GUI with Traffic Statistic display
- *Internet Gateway Router*
- Traffic Filtering
- *Automatic Bandwidth On Demand (ABOD)*
- Multicasting

Probably the industry's smallest and lowest cost VSAT terminal of this sophistication, featuring on-demand, SCPC/ABOD (Single Channel per carrier/Automatic Bandwidth On Demand) and PSMA (Packet Switching Multiple Access) with an internal IP Router.

It delivers the same high channel efficiency and performance as all other RADITEK, RISN smart terminals. The modem transmits with a data rates from 16 kbps to 2048 kbps, receiving at up to 8192 Kbps.

As a STAR Network, smart VSAT terminal, it easily beats the performance of TDM/TDMA or DVB-RCS (TDMA) terminals.

RISNS-88-VRT-j8          Specifications may be subject to change          03/22/13

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## Terminal Specifications

- High performance, broadband IP, 2-way communications for STAR networks
- On-Demand Composite TDM Outbound Carrier using Packet Division Multiple Access (PDMA)
- SCPC / MCPC with BOD (Bandwidth on Demand) for IP (Internet Protocol) traffic
- BPSK, QPSK or 8PSK Modulation on demand
- Turbo Product Code FEC: ~3/4 or ~7/8 Rates available
- *Carrier Data Rate: Selectable from 16 to 8192 Kbps*
- Contention Access, Slotted Aloha Inbound (CSC-IB)  DAMA
- SCPC / MCPC Inbound Carrier for IP traffic services with Bandwidth-On-Demand (BOD) automatic Inbound Carrier rate matches the real time IP traffic demands, Features and Routing Functions

## IP Features and Routing Function

- Intranet/Internet, Multicast, TCP/HTTP Acceleration
- DNS (Domain Name System) Caching
- Standard & Customized QoS traffic Prioritization Protocols: TCP, UDP, RIP, ARP, DHCP, ICMP, IGMP, Telnet, PPP, FTP, HTTP, SMTP, SNMP
- *Data interface: RJ-45, 10/100 Base T Ethernet Interface*
- AC/DC Power, IEC-320 Interface 110-240 VAC 47-63 Hertz, 60 watts **OR** 24VDC/(48VDC), 3.5A
- Dimensions: 48 x 195 x 232 mm Desktop Unit
- Weight: 2.1 Kgvgf          vg ffffffffffff
- Operational temperature : 0 to +45° C, Storage: -30 to +70° C
- Humidity: Up to 95 %, non-condensing

## Outbound Carrier

- Proprietary TDM with PDMA, or SCPC/MCPC
- BPSK/QPSK/8PSK Modulation
- Advanced Turbo Product Code FEC, 3/4, 7/8 Rates, Approx.
- Carrier Data Rate 16 to 2,048 Kbps, with 1.20 or 1.30 Symbol Rate Carrier Spacing Options

## Inbound Carrier

- Shared Slotted Aloha at 24 / 48 Kbps for initial network entry with (DAMA) Demand Assignment
- Inbound Carrier rate adapts to the site Real Time Demand, 1.20 or 1.30 Symbol Rate Carrier Spacing

## Options ODU Interface

- *RF Transmit:* 950-1525 MHz L-band with 2.5 KHz steps; VDC @ 2.7A and 10 MHz Reference @ 0 dBm
- Connector Type F (f/m): 75Ω, Level: -45 to 0 dBm
- *RF Receive:* 950-1750 MHz @ L-band, 2.5 KHz steps; VDC @ 0.3A and 10 MHz Reference @ 0 dBm,
- Cconnector Type F (f/m): 75Ω, Level: -75 to – 35 dBm desired carrier

## Certification

-  EN 55024, EN 55022, FCC Part 15, Subpart B, Industry, Canada ICES-003, EN 61000-3-2, EN-61000-3-3

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