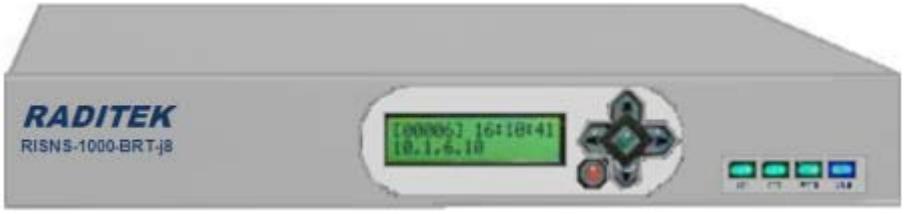
SCPC Satellite network modem

RISNS-1000-BRT-j8 Smart VSAT Router Terminal



The RISNS-1000-BRT, IP (internet) router satellite modem can support from 16Kbps up to 12Mbps, and selectable modulations to 8PSK and 16QAM *as standard*.
It is not only the best solution for any internet SCPC link, up to 12Mbps, but its support of both static and dynamic internet routing make it an ideal modem for any internet network applications too. The modem also has a DVB-S2 receive option as well.

Applications:

- **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**

Features:

- **To 12 Mbps for 8PSK and 16QAM**
- **Standalone or Network Mode**
- **Web based GUI**
- **Works as a Satellite IP Router**
- **Automatic Channel Switching**
- **Multicasting**
- **Single or Multiple Star Network**
- **Graphical Traffic Display**

RADITEK RISNS-1000BRT 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 12 Mbps (for 8PSK and 16QAM) in SCPC mode, and most importantly, their high channel efficiency for the absolute lowest cost network operations.

When the terminal is used in the networking mode, it functions as a single channel VSAT terminal and IP router 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.

In the *Standalone Mode*: The modem functions as a high performance and high data rate, pre-assigned (PAMA) SCPC modem with embedded IP (static and dynamic) router.

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

In the *NETWORK mode*: The modem becomes a multi-channel terminal and IP router in a MESH network.

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

Certifications:

47 CFR FCC Part 15, Subpart B; Canada ICES-003; CE EN-55022 Class A, EN 61000-3-2, EN-61000-3-3, EN-55024, EN-61000-4-3/5/8.

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Specifications:

Composite TDM Outbound Carrier using Packet Division Multiple Access (PDMA)
Contention Access Slotted Aloha Inbound to initiate DAMA activation
SCPC / MCPC Inbound Carrier for IP traffic Bandwidth-On-Demand (BOD) automatic Inbound rate adaptability to match real time IP traffic IP Features and Routing Function
Intranet/Internet, Multicast, TCP/HTTP Acceleration. DNS Caching
Standard & Customized QoS traffic Prioritization Protocols: TCP, UDP, RIP, ARP, DHCP, ICMP, IGMP, PPP, FTP, HTTP, SMTP, SNMP

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 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**

Outbound Carrier

Proprietary TDM with PDMA, or SCPC/MCPC
BPSK, QPSK, 8PSK and 16QAM Modulation available
Turbo Product Code FEC at ~3/4 (0.72), ~7/8(0.79) Rates
Carrier Data Rate 16K to 12.228 Mbps (8PSK and 16QAM)
Carrier Spacing Options: 1.20 or 1.30

Inbound Carrier **(Inbound Carrier rate adaptability to match actual site traffic)**
DAMA Signaling Channel (only): Slotted Aloha at 24 / 48 Kbps for initial network entry and DAMA SCPC/MCPC (optionally with BOD), for: BPSK, QPSK, 8PSK and 16QAM Modulation.
Carrier Data Rate: 16Kbps to 12 Mbps (8PSK and 16QAM) and 16Kbps to 8Mbps (QPSK)
Turbo Product Code FEC at 1/2, ~3/4 (0.72), ~7/8(0.79) Rates
Carrier Spacing Options: 1.20, 1.30

ODU Interface

Transmit: 950-1850 MHz, L-band with 2.5 KHz steps; +24VDC @ 2.7A and 10 MHz Ref. @ 0 dBm,
Type "BNC" (f) Coaxial connector, 75 Ω, 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 Ref. @ 0 dBm,
Type "BNC" (f) Coaxial connector, 75 Ω, Level: -75 to -35 dBm

Options

- **AES Encryption, FSK Smart ODU M&C, *High Stability Clock (for stand alone SCPC)*, front panel LCD, 3-D Turbo product code.**

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