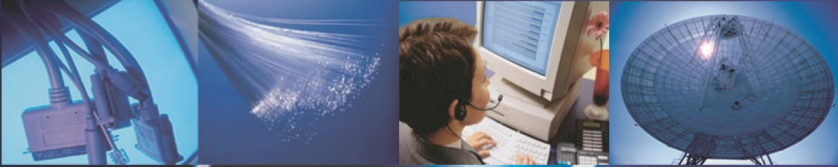


SATPATH SkySwitch™



SkySwitch® Mini Satellite Router SCPC/MCPC/PSMA Highest Channel Efficiency VSAT Network

Applications:

- Bank ATM Transaction
- Remote Database Access
- Fast Internet Access, Packet Compression
- Surveillance & SCADA
- Private VSAT Network
- Rural Telecommunications

Advantages:

- Lower RFT (BUC/ANT.) Cost
- Highest Channel Efficiency
- Fast Response Time
- Low Cost
- Light Weight for mobile

Features:

- Tx Data Rates up to 1 Mbps Burst to 2 & 5 Mbps
- Rx Data Rates up to 13.8 & 22 Mbps
- 5% Roll-Off Factor
- UPC & ACM/Power Boost
- Network or Standalone Mode
- Web GUI with Traffic Statistic
- L-3 Satellite Router
- Internet Access Point with DHCP
- Automatic Beam Switching
- Multicasting
- Traffic Filtering
- Bandwidth On Demand
- Automatic Tx Level Control

SkySwitch® **Mini** router is a portable unit. Designed for wide range applications from remote office to access Internet and data center, or integrated in a manpack for mobile communications.



The advanced modem design features bandwidth saving 5% roll-off factor with options to support higher block rate and is more power efficient. SkySwitch® **Mini** features on-demand SCPC/MCPC/BOD carrier and supports **PSMA (Packet Switching Multiple Access)**. Extended Bandwidth-on-Demand allows the modem to change MODCOD on the fly for both high and low rate transmission. Automatic Level Control (ALC) in network mode makes the terminal easy to install and operate. UPC, ACM, and Power Boost can compensate rain fade with no penalty to data capacity in most cases.

It delivers the same high channel efficiency and performance as all other SkySwitch® smart terminals. The Mini terminal transmits wide data rates from 8 kbps to 1024 kbps or burst to 2/5 Mbps for peak traffic, while receiving up to 13,824 Kbps in TPC (or optional 22/40 Mbps in LDPC) for broadband connection. When the smart terminal operates in **Network Mode**, it functions as a single channel VSAT IP router in star network. Optional **Standalone Mode** is for fixed point-to-point IP connection as an SCPC satellite router.

The Mini is a Layer-3 router with a high performance single channel VSAT modem and Gb Ethernet ports. SkySwitch® **Mini** terminals can be bridged to support Layer-2 network and VLAN in order to be compatible with legacy VSAT implementation. Both dynamic and static routes (up to 32) can be configured locally or globally over the network that provides seamless connection to external IP networks.



Each remote site has its own dedicated single channel carrier in SkySwitch® network. Each smart terminal validates its connectivity and traffic before the traffic is sent over satellite. The single channel carrier uses 30% - 50% less bandwidth than TDMA carrier with same data throughput with zero framing overhead for multiplexing. It uses smaller antenna and BUC than TDMA carrier because it only requires power for a single site

SkySwitch® Mini Terminal Specifications

Service Applications

- High speed up to 40Mbps throughput FL and 5 Mbps RL— 2 way services with Payload Compression

Access Methodology

- On-Demand Composite TDM Outbound Carrier using Packet Switch Multiple Access (PSMA)
- Contention Access Slotted Aloha Inbound (CSC-IB) to initiate DAMA activation
- SCPC / MCPC Inbound Carrier for IP traffic services Adaptive Bandwidth-On-Demand (ABOD) streamlining Inbound traffic to reduce Carrier rate with adaptability to match real time IP traffic demands

IP Features and Routing Function

- Intranet/Internet, Multicast, TCP Acceleration
- RTP Header and Payload Compression
- Layer 3 Routing or L-2 Bridging with VLAN,-tagging
- QoS & DSCP(TOS) Priority; TCP UDP RIP ARP DHCP ICMP IGMP Telnet PPP FTP HTTP SMTP SNMP OpenA-MIP

Mechanical & Environmental

- RJ-45, 10/100/1000 Base T Ethernet Interface
- Power, AC IEC-320 Interface 115-230 VAC 47-63 Hz, 60 watts, or 24VDC, 2.5A
- Dimensions: 23 x 182 x 200 mm Desktop Unit
- Weight: 0.82 Kg
- Operational: 0 to +45 degrees Centigrade
- Humidity: Up to 95 % non-condensing
- Storage: -30 to +70 degrees Centigrade

traffic. SkySwitch® **Mini** with PSMA technology delivers fast acquisition and short latency for real-time applications.

Outbound Carrier

- Proprietary TDM with PSMA, or SCPC/MCPC; UPC
- BPSK/QPSK/8PSK/16QAM
- Turbo Product Code FEC, 0.72, 0.79, 0.87 Rates, Approx.
- Carrier Data Rate 8 to 1,024 Kbps, Burst up to 2 or 5 Mbps
- 1.05, 1.10, 1.20 or 1.30 Symbol Rate Carrier Spacing Options

Inbound Carrier

- Shared Slotted Aloha at 24/48 Kbps for initial network entry, DAMA, ALC, ACM, & Power Boost
- On-Demand SCPC / MCPC with BOD for IP traffic
- BPSK/QPSK/8PSK/16QAM/32QAM
- Turbo Product Code FEC, 0.72, 0.79, 0.87 Rates, Approx.
- Carrier Data Rate: 8 Kbps to 13.8 or optional 22/40 Mbps
- Inbound Carrier rate adaptability to match actual site traffic Real Time Demand, 1.05, 1.10, 1.20 or 1.30 Symbol Rate Carrier Spacing Options

ODU Interface

- Transmit: 950-2150 MHz L-band 1Hz step & 2.5KHz soft step; +24 VDC @ 2.7A and 10 MHz Reference @ 5 dBm, Type F(f) Coaxial connector, 75 ohms, Level: -45 to 0 dBm in 0.5 dB steps
- Receive: 950-2150 MHz L-band with 1Hz step & 2.5KHz soft step; +24 VDC @ 0.3A and 10 MHz Reference @ 5 dBm, Type F(f) Coaxial connector, 75 ohms, Level: -75 to -35 dBm desired carrier

Certification

- 47 CFR FCC Part 15, Subpart B; , CE EN 55022 Class A, Industry Canada ICES-003, EN 61000-3-2, EN-61000-3-3, EN 55024

Options

- SA: StandAlone
- HR1/HR2: High Rate, RX LDPC Up to 22/40 Mbps; TX TPC
- LC: LDPC RX and TX

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