



# SatLink 1000

## VSAT Indoor Unit



The SatLink 1000 is the leading DVB-RCS certified VSAT Indoor Unit, with support for DVB-S2 and DVB-S forward links. Optimized for IP networking its cost-effective design, packaging, and easy operation make it ideal for Internet access services to consumers and small businesses. Yet it has the advanced QoS, traffic acceleration, VPNs and other value-added software features required for carrier-class interactive data, voice, and video conferencing, plus multicast IP applications. Users connect via Ethernet. The SatLink 1000 supports various antennas options, plus BUCs/LNBs in C, Ku, Ka and EHF bands, including STM's own Ku Band transceivers.

The SatLink 1000 VSAT Indoor Unit is a member of a family of SatLink products and systems from STM enabling scalable, high-availability DVB-RCS networks optimized for Internet Protocol (IP) communications, including: VSATs, turnkey hub systems, hub components, and value-added options for advanced data, voice and video networking via satellite. STM is the technology and market leader in DVB-RCS satellite networks delivering superior performance for telecom service providers, ISPs, governments and enterprises around the world. STM also offers teleport services, installation and integration services, plus total managed network services.



## Features & Benefits

### • Cost-Effective, High-Volume VSAT

SatLink 1000 delivers the price-performance for mass-market broadband Internet access service.

### • DVB-S2 and DVB-S Support on Rx

Forward links using DVB-S2 deliver maximum bandwidth efficiency and information rates.

### • Bandwidth Efficiency at Many Levels

Efficient, high-speed QPSK modulation, header compression, section packing and intelligent capacity request algorithms enable efficient high-bandwidth applications; consumes only 64 bps when idle, 0 bps in "auto-sleep" mode.

### • Comprehensive IP Networking Features

SatLink delivers TCP and HTTP acceleration, VPN, NAT, and VLAN options, plus a built-in DHCP server and both unicast and multicast IP routing.

### • Advanced QoS for Data, Voice, Video

Bandwidth-on-demand QoS groups enable delay sensitive interactive traffic for all media and signaling concurrently with bulk data, without dedicated bandwidth per VSAT, plus optional packet filtering.

### • Simple, Consumer-Friendly Operation

Engineered for plug & play operation and simple enough for self-installation, the SatLink 1000 handles updates and management via the satellite.

### • Adaptive Rain Fade Mitigation on Tx

Channels with higher link margin are selected automatically by the hub during rain fades.

### • Traffic Engineering for Large Networks

Carriers, ISPs and others gain control over bandwidth resources in large networks using SatLink VSAT Groups for traffic engineering. Networks with 10,000's of VSATs are supported.

### • BUCs up to 3 Watts with Power Control

Internal power for BUCs up to 3 Watts; automatic power control from the hub simplifies installation and optimizes operation and bandwidth use.

### • Fanless, Compact Consumer Packaging

The SatLink 1000's compact size, fanless operation, external power supply, and vertical mounting option makes it ideal for office desktop and residential environments.

# SatLink 1000 VSAT Indoor Unit



## Specifications

### Capacity

**Throughput:** Up to 12 Mbps of IP packets at 1500 bytes (varies with IP software features enabled)

### IP QoS and Bandwidth-on-Demand

**Traffic Classification:** May use combination of 802.1p, DSCP, Protocol Type, IP Source Address, IP Destination Address, TCP/UDP Source Port or Destination Port

**QoS Treatment:** Three QoS groups with multiple priority queues included; option for 7 QoS groups with filtering.

**Capacity Requests:** CRA, RDBC, VDBC, and AVDBC, in combination (and FCA)

### IP Packet Encapsulation & Compression

**Format:** (Tx & Rx) DVB-RCS standard MPEG2 MPE with section packing, without regard to packet boundaries per EN 301 192 & ISO 13818-1; or ATM encap. (Tx only)

**Header Compression:** Removes up to 23 bytes (on Tx), 17 bytes on (Rx), on each MPEG encapsulated pack-

### IP Routing and IP Stack Support

**Routing:** Unicast and Multicast IP

**Protocols:** IP, UDP, TCP, ARP, ICMP, IGMP, DHCP Server, DNS Cache, Telnet, SNMPv2c

**Advanced Options:** TCP Acceleration, HTTP Acceleration (URL pre-fetch & Web Cache), NAT, GRE Tunnels, VLANs

### Management Interfaces

**Local:** RS-232 CLI

**Remote:** Telnet, SNMP v2c, Web GUI

**Software Upgrade:** Local, TFTP or multicast via satellite

### Compliance

**CE:** Fully compliant with R&TTE Directive

**DVB-RCS:** ETSI EN 301 790; SatLabs

**DVB-S / S2:** ETSI EN 300 421 / EN 302 307

**International:** Country specific certifications

### Receive (DVB-S2 and DVB-S)

**Modulation:** QPSK (DVB-S/S2), 8PSK (DVB-S2)

**Symbol Rates:** 1 - 30 Msps (DVB-S2); 1 - 45 Msps (DVB-S)

**FEC Rates:** 1/2, 2/3, 3/4, 5/6, 7/8 (RS-Viterbi)

1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (LDPC+BCH)

**Roll-off Factor:** 20%, 25%, or 35%

**Input Frequency:** 950-2150 MHz

**Input Level:** -65 dBm to -20 dBm

**LNB Control:** 22 kHz or 13/18 VDC signaling

### Transmit (DVB-RCS)

**Modulation:** QPSK

**Symbol Rates:** 125 Ksps to 3 Msps

**FEC Rates:** 1/2, 2/3, 3/4, 4/5, 6/7 (Turbo Codes)

**Output Frequency:** 950 to 1450 MHz

**Output Level:** -35 dBm to 0 dBm

**BUC Control:** Extended DiSEqC™

**Frequency Hopping:** Slow

### Physical Interfaces

**Serial Port:** RS-232, DB-9 (local management)

**Ethernet:** 10/100Tx Mbps auto-detect, RJ-45

**Tx (BUC) Interface:** F-type 75 Ohm; 24 VDC at up to 1.2A, plus 10 MHz reference

**Rx (LNB) Interface:** F-type 75 Ohm; LNB Power 13 or 18 VDC, 300 mA maximum

**DC Power Input:** 24 VDC (from external power supply)

**Front LEDs:** Power, Error, Tx, Rx, Ethernet Link/Activity

### Electrical, Environmental & Physical

**Power Supply:** 110-240 VAC, 50-60 Hz, external (incl'd)  
**Power Consumption:** 8 W (IDU only); 30 W @ P1dB with SatLink 4033 2W transceiver

**Operating Temperature:** 0 to 45 °C

**Storage Temperature:** -20 to 85 °C

**Humidity:** 20% to 90% non-condensing

**Size:** 33 x 22 x 3.5 cm

**Weight:** 954 grams

[www.stmi.com](http://www.stmi.com)

STM Group, Inc. | 2 Faraday | Irvine, CA 92618, USA | T +1 949 273 6800 | FAX +1 949 273 6020  
STM Norway AS | Vollsveien 21 | 1366 Lysaker, Norway | T +47 6753 5337 | FAX +47 6753 5335



All specifications and features subject to change without notice. SatLink and the STM logo are a registered trademarks of STM Group, Inc. The DVB logo is a trademark of the DVB Project ([www.dvb.org](http://www.dvb.org)). SatLabs logo is a trademark of SatLabs ([www.satlabs.org](http://www.satlabs.org)). DiSEqC is a trademark of Eutelsat.

Document #104192; Revision H - 071008