



SATSTREAM

21501 MPEG SATELLITE RECEIVER



FEATURES

- Moderate speed data and/or MPEG CD Quality Audio
- Versions are available for SCPC and FM Subcarrier
- Software configuration via serial port or downlink
- Flexible bandwidth allocation between audio and data
- QPSK modulation with Viterbi error correction
- Alarm output signals for modulator output faults
- Selective addressing to units, groups, regions or all

APPLICATIONS

- High quality audio distribution for networks
- Automated broadcast station control and cueing
- Low to moderate speed data for news feeds
- Corporate data distribution networks
- Selective distribution of news to enable clients
- Background music systems with local insertion
- Downlink of Internet feed to remote locations

DESCRIPTION

The Satstream 21501 has been designed for flexibility in a variety of satellite receiver roles. It provides both high quality audio (at selectable bandwidths and compression settings) as well as moderate speed data. The user has a considerable amount of flexibility in allocation of available bandwidth.

In broadcast audio applications, control outputs allow for insertion of local programs. Switching between program sources can be scheduled externally or within the receiver.

The data channel may be used for global (all receivers) distribution or data packets may be directed to specific receivers selected by group code, region code, or by individual serial number. Each receiver may be enabled to receive 1 or more of up to 8192 streams (such as news wires). A loss-of-signal output may be used to automatically switch over to a backup receiver, alternate antenna or program source.

The Satstream 21501 is available in an L band SCPC version as well as an optional FM subcarrier version. The 1 RU Rack Mount version is standard, however a smaller footprint desktop version is also available. The modulator includes a switch-mode universal AC power supply.

EMERGENCY ALERT - OPTION Z

SCPC FM FSK is a simple and time proven technology that does not need to rely on complex terrestrial infrastructure making it ideal for mission critical communications that must work faultlessly in time of disaster. The EAS option provides additional features that allow the receiver to act as a repeater for EAS notifications. All segments of the standard EAS broadcast are digitized and packeted at the uplink modulator.

Approximately 5000 bits per second of the data stream are dedicated to the EAS broadcast when it is enabled. At the receiver the incoming EAS packets are interpreted. Precision frequency Alert Tones and FSK data are locally synthesized in the receiver. EAS audio is inserted in the audio output stream in accordance with the timing captured at the uplink modulator. By regenerating all tones and voice messages locally, distortion and possible corruption of the data is minimized. A push to talk output is available to activate dispatch systems automatically. A loss-of-signal alert output is also provided. When not carrying an active EAS message, the available bandwidth may be used to transmit other data—text or graphics.



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SPECIFICATIONS

Output Frequency Range

SCPC Version (Option A)	50.00 – 90.00 MHz
SCPC Version (Option B)	950 – 1450 MHz (Standard L Band)
SCPC Version (Option B1)	950 – 1750 MHz (Extended L Band)
Subcarrier Version (Option F)	100 KHz – 8.995 MHz
Subcarrier L Band Tuner (Option L)	950 – 1450 Mhz
Frequency Resolution—all inputs	1 KHz

Modulation

QPSK

Forward Error CorrectionViterbi $\frac{1}{2}$ or $\frac{3}{4}$ K = 7**MPEG Data Rates**

Selectable rates from 32000 to 320000 bits per second

Maximum total data rate

375000 bits per second including MPEG, data, and AUX audio

Audio OutputTwo channels balanced 600 ohm, digital level adjust
Accepts 20 Hz – 20 KHz at higher data rates**Audio Dynamic Range**

Greater than 85 dB

Auxiliary Audio Output

Single channel voice grade audio, unbalanced out

Control/Supervisory Serial Port

DB9 RS232 Configurable rates 1200-19200 bps

Auxiliary Serial Data Port

DB9 RS232 or RS485 Configurable rates 2400-250000 bps

Relay Contact Closure Port

4 or 8 SPDT (Form C) isolated relay contacts (DB25)

Power Requirements

90-260 VAC 48-63 Hz less than 30 VA

DimensionsStandard rack mount: 1RU 19" Rack
19" wide x 1.75" high x 7.0" deep (48.26 x 4.45 x 17.8 cm)Option T: Desktop Version
7.6" wide x 1.95" high x 7.0" deep (19.3 x 4.95 x 17.8 cm)

DESCRIPTION OF OPTIONS FOR MODEL 21501

A:	SCPC Output Frequency	50.00 – 90.00 MHz
B:	SCPC Output Frequency	950 – 1450 MHz (standard)
B1:	SCPC Output Frequency	950 – 1750 MHz
C:	FM Subcarrier Output Freq.	100 KHz – 8.995 MHz
E:	Ethernet LAN Interface	Supervisory and control port
L:	L Band Tuner for Video Subcarrier	950 – 1450 MHz (Direct LNB reception of subcarriers)
M:	MPEG Audio output	Monaural or Stereo analog output
N:	Selective Addressing	Data channel selective addressing
P:	Telephone Modem	Supervisory and control port including SMTP
R:	Remote Programming	Remote or downlink programming control
S:	LCD Status Display	Display and keypad for local manual setup
T:	Desktop Package	Desktop instead of normal rack mount configuration
V:	Voice Grade Audio	Compressed voice grade channel input
Z:	EAS Repeater	Provide locally synthesized EAS audio channel