



SATSTREAM

21551 DVB BROADCAST QUALITY RECEIVER



FEATURES

- Moderate speed data and/or MPEG CD Quality Audio
- Selectable packet rate for required audio quality
- Software configuration via serial port or downlink
- Flexible bandwidth allocation between audio and data
- Industry standard DVB MPEG transport stream
- Alarm output signals for modulator output faults
- Selective addressing to units, groups, regions or all
- Full L band range 950 – 2150 MHz for C/Ku reception

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
- Frequency agile test receiver

DESCRIPTION

The Satstream 21551 features state of the art design for flexibility and reliability in a variety of satellite receiver roles. While designed primarily for efficient distribution of broadcast quality audio, it may also be used as a moderate speed data only receiver. It provides both high quality audio (at various selectable bandwidths and compression settings) as well as simultaneous low to moderate speed data. The user has considerable flexibility in allocation of the available bandwidth.

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

The data channel may be used for global 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, as well as relay contact outputs for cueing purposes. A switch-mode universal AC power supply is provided.

EMERGENCY ALERT - OPTION Z

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 10000 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. For mission critical EAS applications, an SCPC direct satellite link is recommended since it can be implemented without reliance upon telcom networks or other terrestrial infrastructure that could fail in the event of disaster.



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SPECIFICATIONS

Input Frequency Range	950 – 2150 MHz
Input Sensitivity	-65 dbm – 25 dbm @ typical 28 Mbaud transponder
Input Impedance	75 ohm – F59 style connector
LNB Output Voltage	+18 volts at up to 250 milliamperes
Modulation	QPSK—DVB standard MPEG transport stream
Forward Error Correction	DVB standard Viterbi (rates $\frac{1}{2}$, $\frac{3}{4}$ and others) Reed Solomon (normally 204/188 or 146/130)
MPEG Data Rates	Selectable rates from 32000 to 320000 bits per second
Data Channel Rates	Selectable rates from 9600 to 230400 bits per second
Maximum Total Data Rate	400000 bits per second including MPEG, data, and AUX audio
Audio Output (Option M)	Two 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 (Option V or Z)	Single channel voice grade audio, unbalanced out
Control/Supervisory Serial Port	DB9 RS232 Configurable rates 2400-57600 bps
Auxiliary Serial Data Port	DB9 RS232 or RS485 Configurable rates 2400-230400 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
Dimensions	Standard 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 21551

E:	Ethernet LAN Interface	Supervisory and control port
K:	Optional Relay Outputs	4 or 8 relay contact outputs (SPDT Form C)
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