

SATSTREAM 21531

NARROWBAND QPSK RECEIVER

A narrow bandwidth QPSK satellite data receiver for low speed data and voice grade audio and control



FEATURES

- Voice grade audio and serial data capabilities
- Selective addressing: unit, group, region, all
- Narrow band bandwidth for reduced satellite costs
- Software controlled setup of frequency and features
- Flexible bandwidth allocation between voice and data
- Need not rely on terrestrial networks or infrastructure
- Optional Emergency Alert System capabilities
- SCPC or FM Subcarrier using QPSK modulation

DESCRIPTION

The SatStream 21531 SCPC QPSK Receiver accepts L band signals directly from a C or Ku band high stability PLL LNB. It provides reliable low speed data or voice grade communications with minimum occupied satellite transponder bandwidth that results in lower satellite bandwidth charges. Data rates supported range from 2400 to 12000 bits per second with bandwidths of 10 to 30 KHz. The receiver is configurable via a serial port. Configuration is stored in non-volatile memory.

The selective addressing feature allows voice and/or data to be directed to specific individual units, units of a common group or region ID code or to all units. In the absence of active voice channel usage, the full bandwidth of the system becomes available for data. Relay contact closure outputs may be used for remote control applications including selection of alternate program sources.

A standard 1 RU Rack Mount version is standard, a smaller footprint desktop version is also available. The receiver includes a universal AC power supply.

APPLICATIONS

- News and weather text distribution
- Low resolution graphics distributio
- Selective distribution of news wires
- Low cost backhaul audio circuits
- Emergency notification systems
- Remote control systems
- Remote pager or sign controller
- Highway information system audio feed

EMERGENCY ALERT- OPTION Z

SCPC QPSK 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 packetized 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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SATSTREAM SPECIFICATIONS

Input Frequency Range	50.00 – 90.00 MHz (transceiver IF)
SCPC Version (Option A)	950 – 1450 MHz (standard L band)
SCPC Version (Option B)	950 – 1750 MHz (extended L band)
SCPC Version (Option B1)	Low phase noise PLL LNB is required
Recommended SCPC LNB	100 KHz – 8.995 MHz
Subcarrier Version (Option F)	950 – 1450 MHz
Subcarrier L Band tuner (Opt L)	1 KHz or better
Frequency resolution – all inputs	SCPC: better than 3 parts per million
Tuning accuracy (uncorrected)	AFC correction for up to 100 KHz LNB offset
Modulation	Shaped QPSK for minimized bandwidth on transponder Pseudo random scrambled signal for energy dispersal
Forward Error Correction	Viterbi ½ or ¾ or none
Audio Data Rates (Option V or Z)	Selectable 2400, 3200, 4000, 4800, 7200, 9600 bps
Audio Output (Option V or Z)	Voice grade output, unbalance low impedance
Control/Supervisory Serial Port	DB9 RS232 Configurable rates 1200-19200 bps
Auxiliary Serial Data Port	DB9 RS232 or RS485 Configurable rates 1200-19200 bps
Relay Contact Closure Port	4 SPST (Form A) isolated relay contacts
Power requirements	90-260 VAC 48-63 Hz less than 30 VA
Environmental requirements	0 – 50 C, 5-95% relative humidity, maximum altitude 3500 meters
Dimensions	Standard rack mount: 1RU 19" Rack 19" wide x 1.75" high by 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 MOEDL 21531		
A:	SCPC Input Frequency	50.00 – 90.00 MHz
B:	SCPC input Frequency	950 – 1450 MHz
B1:	SCPC input Frequency	950 – 1750 MHz
C:	FM Subcarrier Input Freq	100 KHz – 8.995 MHz
E:	Ethernet LAN interface	Supervisory and control port
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	An additional compressed voice grade channel
Z:	EAS Repeater	Provides local EAS audio output channel

