


HIGHLIGHTS

- **9.6kbps to 8Mbps receiver**
- **DVB-S Viterbi and Reed Solomon**
- **L Band 950 to 2150MHz**
- **Operates below 1Msps**
- **Full M&C**
- **“Fibre Quality Performance”**
- **High Reliability**
- **Operating Parameters held in NV RAM**

OPTIONAL FEATURES:

- **Intelsat Viterbi only**
- **PCI Interface**
- **RS422 Interface “D” connector**

Applications

Advantech’s SBR 8192 Data Broadcast Receiver card is typically used for distribution of financial and security information, Internet and Intranet, multimedia, web access and mirror site refresh, audio and video broadcast, general voice and data requirements.

Overview

The SBR 8192 receiver card combines advanced DSP design with hardware efficient implementation to provide an optimal combination of performance, flexibility, reliability and cost. The combination of a PCI format card, standard connector access to M&C and data plus optional PCI interface enables a wide range of mounting and integration options to be considered. These include both PC and standard case configurations.

The side range of data rates available in the SBR 8192 enables low data rate services to be offered to minimise start up costs, while maintaining excellent growth paths or higher data rate requirements such as multimedia and video.

Overview cont.

The wide L Band input (950 to 2150MHz) minimises the number of LNB’s required for full satellite coverage. Complete coverage of all Ku Band satellite systems can be achieved with just two LNB’s.

The standard receiver can operate either with 1/2, 3/4, and 7/8 rate DVB Viterbi error correction and for exceptional BER performance. The operator can activate the built in DVB compliant concatenated Reed Solomon error correction. Intelsat Viterbi only operation at 1/2, 3/4 and 7/8 rate can be specified as an option.

| DEMODULATOR SPECIFICATIONS | | | |
|--|--|-----------------|-----------------|
| Frequency Range | 950 MHz to 2,150 MHz / 1 kHz steps | | |
| Nominal Receive Level | -45 dBm $-10\log(2048/R)$, where R is data rate in kbps | | |
| Input AGC Range | ± 20 dB | | |
| Maximum Input Power Level | -25 dBm, assuming flat distribution of unwanted signals in band | | |
| Input Impedance/Return Loss/IF Connector | 75 Ω / 9 dB minimum/ Type F, female | | |
| Carrier Acquisition Range/AFC Range | Programmable up to ± 2 MHz, in 500 Hz steps | | |
| Tuning | 950 to 2050MHz, resolution better than 1khz | | |
| Sync Loss | Negligible loss of sync at 3.0dB Eb/No (4.0dB 1/2 rate Viterbi FEC) | | |
| Carrier Acquisition Time | 1 second for 8.192 kbps search range of ± 150 khz | | |
| Re-acquisition | 1 second, with 95% probability, following short-term outage | | |
| Clock Acquisition Range | ± 100 ppm | | |
| Configuration | Via RS232 M&C port or the PCI interface—recalled following power-up | | |
| Modulation Format | QPSK / BPSK | | |
| Data rates | 64 to 812kbps QPSK, 9.6 to 1024kbps BPSK with suitable PLL LNB | | |
| Self Test | On power-up | | |
| FEC | 1/2, 3/4 or 7/8 rate Constraint Length 7 DVB Viterbi decoding or 1/2, 3/4 and 7/8 rate DVB compliant concatenated error correction | | |
| Pointing Voltage | 0 to 5VDC Analogue Voltage Output proportional to receiver power | | |
| Data Output Port | RS422 DCE, clock sourced by demodulator, card mounted "D" connection optionally via PCI interface | | |
| Eb/No Performance | <u>1/2 Rate</u> | <u>3/4 Rate</u> | <u>7/8 Rate</u> |
| Viterbi @ 10^{-4} | 4.1 dB | 5.3 dB | 6.4 dB |
| Viterbi with Reed Solomon Option @ 10^{-4} BER | 3.2 dB | 4.0 dB | 5.3 dB |
| Viterbi @ 10^{-7} BER | 5.8 dB | 7.3 dB | 8.4 dB |
| Viterbi with Reed Solomon Option @ 10^{-7} BER | 3.6 dB | 4.6 dB | 5.8 dB |
| Viterbi @ 10^{-9} BER | 6.7 dB | 8.2 dB | 9.3 dB |
| Viterbi with Reed Solomon Option @ 10^{-9} BER | 3.8 dB | 4.7 dB | 6.0 dB |
| GENERAL SPECIFICATIONS | | | |
| Remote Monitor and Control | RS-232 card mounted 9 pin "D" type, 9600 baud, no parity, 8 data bits, 1 stop bit and optional via PCI interface | | |
| PHYSICAL | | | |
| Temperature Range | 0 to 50°C -25 to 85°C | Operating | Non-operating |
| Humidity | | | |
| Altitude | | | |
| LND Power | | | |
| Dimensions | | | |
| OPTIONS | | | |
| Intelsat Viterbi FEC | Ad Intelsat compliant Viterbi FEC at 1/2, 3/4 and 7/8 rates | | |
| CERTIFICATION | | | |
| European | ETS 300-763 & EN60950 | | |
| USA | FCC part 15, Subpart B Class A | | |

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