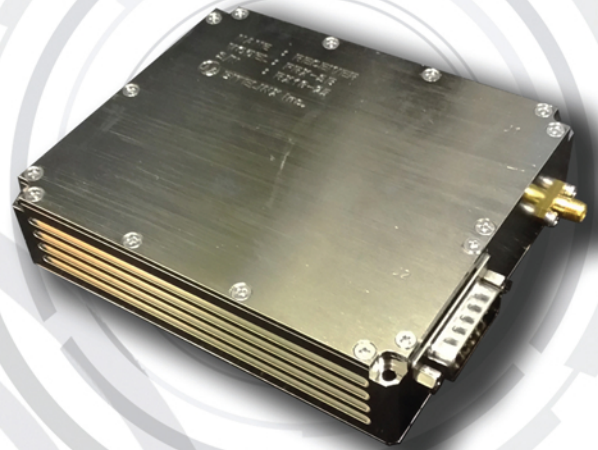




BRX-SB series- Digital Receiver

Features

- Full digital receiver
- 2200 to 2400MHz, 100kHz step
- 100kbps to 20Mbps
- IRIG-106 Tier I PCM/FM detection
- MSK, GMSK and GFSK detectable
- Optimal detection as an option
- Supplementary functions (BERT/De-randomizer)
- Easy configuration by the dedicated software



The BRX-SB series are S-band full-digital FM receivers used for telemetry. Besides the RF circuits, most functional blocks are built into the integrated processor while the analog parts are subject to minimal use. The receivers provide an optional coherent detection, up to 3dB superior to a conventional non-coherent detection. The other staple features include a BERT, a De-randomizer and a PCM Decoder. The software allows for easy access to all the features.

RF features

Users have a 200MHz tuning range within 2200MHz to 2400MHz in steps of 100kHz. The frequency stability is within $\pm 0.0002\%$. The input dynamic range is as wide as 90dB and the sensitivity is dependent on the data rate

Data rate

The receive data rate is adjustable between 100kbps and 20Mbps in steps of 1kbps. Users can choose the output digital interface, either RS422, TTL or the Ethernet, at the time of ordering. Two digital output ports are provided and each may be either data or clock by configuration.

FM detection

Basically the IRIG-106 Tier I waveform, PCM/FM, is the default. Depending on the application, users can select another from among MSK, GMSK and GFSK by reconfiguring the receiver. In addition to the conventional non-coherent detection, the receivers allow users to choose the optimal coherent detection as an option. Sensitive to synchronization, the optimal detection performs best with such precise digital transmitters as the BTX-S series.

Supplementary functions

Besides the key capability as a receiver including high performance AGC and AFC, the BRX-SB series has useful functions such as a BERT for quantification of link performance, the De-randomizer for energy dispersion and timing recovery, and the PCM Decoder covering a set of six codes specified in IRIG-106

Dedicated software

The GUI software allows users not only to easily configure the receiver according to the operational purpose but also to monitor the performance. It completes the SDR nature of the receivers.



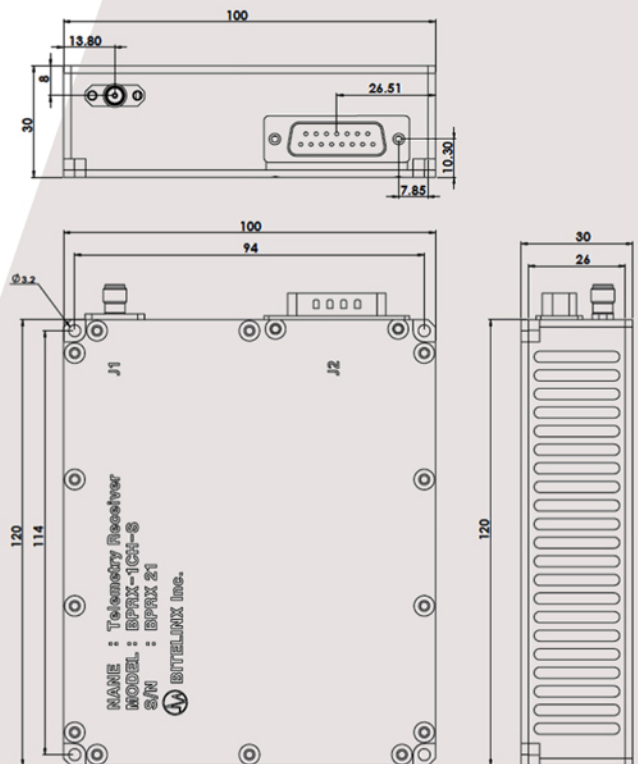
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Technical features

Frequency range	2,200 ~ 2,400MHz
Tuning step	100kHz
Frequency stability	±0.0002%
AFC	±250kHz max
VSWR	2.0 : 1 or less
Input dynamic range	90dB
RF sensitivity	Threshold
Data rate	0.1 ~20Mbps
IF filters	2/4/8MHz or bypass
Waveforms	PCM/FM, MSK, GMSK, GFSK
FM detection	Non-coherent detection & coherent optimal detection (option)
Supplementary	BERT, PCM codes (NRZ-L/M/S, BiO-L/M/S), De-randomizer(Order15), PRBS9/15
Input signals	RS232, RS422 or Ethernet
Impedance	50Ω
Interface	RF : SMA Digital : DSUB15
Primary power	28V±4VDC, 1A

Dimensions & weight

Dimensions	100 X 120 X 30mm ³
Weight	540g



Environmental specifications

Operating temperature	-20 ~+70°C
Storage temperature	-40 ~+85°C
Humidity	90%, non-condensing

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