

## JANTEQ SURVEILLANCE SERIES DIGITAL VIDEO COFDM RECEIVER

“The Brick Receiver” SHDRX-XXX, is a compact professional four channel diversity digital microwave receiver used to demodulate COFDM signals in the frequency range 1.7- 8.5 GHz. The Receiver is compatible with the standards for 2K DVB-T (Digital Video Broadcast-Terrestrial) and will decode MPEG-2 and H.264.

The Receiver front end has been designed to survive in the harshest of RF environments. This is achieved by using multiple IFs with narrow band tracking filters and LNA, Mixer combinations that withstands strong In-band interfering signals.

The front panel uses a high resolution, high brightness, AMOLED screen in conjunction with tactile switches, navigation wheel and stereo speakers to set operator monitoring and receiver control at a new level.

The rear panel has a variety of signal formats that are available on two assignable BNC connectors, a HDMI socket and various audio jacks. Streaming Video is available from the RJ45 IP connection.

Finally the Receiver is constructed in an attractive, ruggedized machined aluminum housing.



### Key Features to be found in this Radio

- Multiband capability: Available in L, S, LS, LSC or X bands.
- DVB-T bandwidths of 5, 6, 7 & 8 normal and 1.25 & 2.5MHz optional.
- HD H264 Main & Baseline, 4:2:0. HD MPEG2 Main & Baseline, 4:2:2 with Low Latency.
- Four antenna proprietary diversity system.
- Excellent RF performance in a hostile RF environment. Front end over load, adjacent channel rejection and spurious signal rejection.
- In built video color monitor and audio monitoring speakers.
- HDMI output for use with high quality consumer monitors.
- Choice of monitoring outputs with assignable BNC outputs. Down scaling of HD to SD composite for local monitoring.
- On Screen Display for video overlay with spectrum analysis on monitoring outputs.
- Administrator configurable menus with pin.
- SD card recording of HD/SD transport stream up to eight hours.
- Decryption AES, 128, 192 or 256Bit.
- User Data up to 1 Mbits 232, RS 485.
- Remote control via, RS 232, USB or IP.
- Video over IP RTP/UDP source & sink. RTSP server SMPTE 20121 COP-3 FEC.

# 'Brick' Receiver [SHDRX-XXX] Technical Specifications.

## RF SECTION:

Frequency Range:  
 Dual Band ..... 1.7 to 1.9 GHz, 2.2 to 2.4GHz.  
 Triple Band ..... 1.7 to 1.9, 2.2 to 2.4 & 4.4 to 5 GHz.  
 X Band ..... 8100-8500MHz  
 RF/IF Frequency stability: ..... ± 2.5ppm  
 Tuning step size: ..... 100/125/250 kHz,  
 RF Input impedance: ..... 50 Ohms, < 1.5 :1 VSWR  
 Maximum Input power ..... Input in band: -10dBm, Regrowth >30dBc  
 Maximum Non destructive I/P ..... +17dBm.  
 IF Bandwidth ..... 5MHz, 6MHz, 7MHz, 8MHz  
 Optional ..... 1.25 & 2.5MHz  
 IF Linearity IM3: ..... >50 dB over entire input signal range  
 Threshold: ..... -92 dBm @ 8MHz, QPSK, 1/2FEC, 1/32

## Demodulation Decoder Section:

COFDM: ..... EN300-744 DVB-T  
 Constellation: ..... QPSK, 16QAM, 64QAM  
 Code Rate: ..... 1/2, 2/3, 3/4, 5/6, 7/8  
 Guard Interval: ..... 1/32, 1/16, 1/8, 1/4.  
 Deencryption: ..... AES 128/256  
 Spectrum Inversion: ..... Automatic detection  
 BER ..... >10-8 input level>-90dBm QPSK 8 MHz

## MPEG-2 VIDEO Decoder Section:

Compression Standard ..... ISO 13818-1, ISO 13818-2 MPEG-2  
 Profiles: ..... MP@HL, 422P@ML, MP@H14L  
 GOP Support: ..... I, IP, IPB.  
 System Latency: ..... <120ms ( Encoder & Decoder )

## H.264 Main Profile Long GOP:

Compression Standard ..... ITU-T Rec. H.264 (03/2005).  
 Profiles ..... Base line and Main. 4:2:0.

## VIDEO FORMAT STANDARDS:

1080p 30, 29.97, 25, 24, 23.98.  
 1080PsF 30, 29.97, 25, 24, 23.98.  
 1080i 60, 59.94, 50.  
 720p 60, 59.94, 50, 30, 29.97, 25.  
 NTSC and PAL.

## VIDEO OUTPUTS SECTION:

Video Output Formats: ..... 2 BNC 75R output A & B, can select from list below  
 Analog Video Output:  
 Analog Composite: ..... 75 Ohms 1Vp-p NTSC/PAL 525/625Lines  
 Frequency Response: ..... 0.5 dB (10 Hz to 5MHz)  
 Digital Video Output:  
 Digital Video Output Signals: ..... HD-SDI, SD-SDI  
 Digital Video Signal-to-Noise: ..... >65 dB  
 Composite Output Level ..... 75 Ohms 1Vp-p, NTSC/PAL  
 HD/SD- SDI Output: ..... SMPTE 292 / 259M (1.5Gb/s – 270Mb/s)  
 Test Pattern Generator ..... Internal SD/HD SMPTE test bar generator  
 DBV-ASI Signal ..... per SMPTE 299

BNC A	BNC B
SD/HD SDI or ASI out.	SDSDI or ASI In.
Composite Video out	Composite Video out
	Composite Video in.
	ASI out
	Genlock. (Optional)

Composite video monitor down converted from HD with selectable OSD. HDMI Monitoring output available. Extra Composite video and dual channel Audio available on 3.5mm jack. Output signals has a choice of, SMPTE bars, Blue or Black Field or Freeze Frame when the signal is lost.

## AUDIO SECTION:

Audio Output: ..... 1 stereo pairs  
 Decoding Scheme: ..... MPEG-1 Layer 1 & Layer ISO 13818-3  
 (AAC, PCM and Nicam Optional)  
 Embedded SDI support.  
 Audio Bit Rate: ..... 128kbit/sec – 384kbit/sec  
 Sample Rate: ..... 48kHz  
 Frequency Response: ..... 20Hz – 20kHz: +/- 1dB  
 Audio THD: ..... 0.1% (@ 1kHz +8dBm)  
 Signal/Noise: ..... > 68dB (@ 1 KHz, +8dBm)  
 Gain: ..... gain adjust, +/- 6dB in 1dB increments  
 Max line output level: ..... +18dBm  
 Output impedance: ..... Analog line: 1.5K Ohm, unbalanced  
 Tone Generator: ..... Internal 400Hz/1KHz tone generator.

## POWER:

DC Input Range: ..... 10 to 28 Volts DC  
 Protection ..... Under voltage and reverse polarity.  
 Input Power ..... 24 Watts Max.

## USER DATA CHANNEL:

RS 422 OUTPUT: ..... Transparent data pipe up to 1 M bit/s or on IP.

## REMOTE CONTROL:

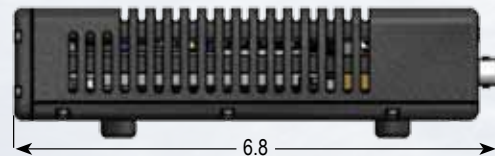
The Remote Control can be accessed through three different rear panel connectors. The DB9 RS232, USB 'B' or the Ethernet RJ45 connector.

## CONTROL PANEL:

Display ..... Hi Res. 1.9 inch Color AMOLED for confidence video, spectrum display or status.  
 Indication: ..... Power, Demodulator Lock, Decoder Lock, Encryption Lock.  
 Presets: ..... One hundred user defined presets.  
 Menu ..... Sensor wheel encoder with Escape, Enter and a short cut button for Presets.

## Physical Characteristics:

Dimensions: ..... 6" (153mm)W x 6.8"(172)L x 1.6"(41)H  
 Weight: ..... 2.1 lbs (950g)  
 Temperature:  
 Operating: ..... -10 to +50° C  
 Storage: ..... -50 to +90 C  
 Relative Humidity: ..... 5 to 95% non-condensing



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