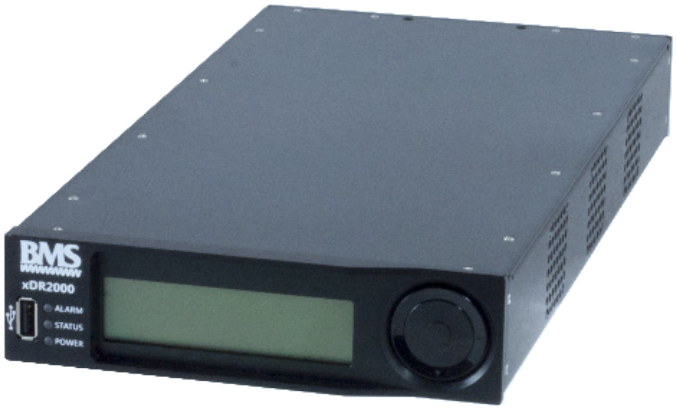
Broadcast Microwave Services, Inc.

xDR2000 Series

Two-Way Diversity COFDM Receiver



> Applications

- Live Broadcast
- Sports Production
- Studio Production
- Electronic News Gatherning

> Key Features

- UHF and SHF Inputs
- DVB-T COFDM
- HDMI, CVBS, SDI, and HD-SDI Outputs
- DVB-ASI In/Out
- 2-Way RF Diversity – FFT/MRC
- Dual Mode Decoding: HD/SD video, H.264 and MPEG2
- Genlock Input
- Auto-Adjusts to All Transmit Parameters (except frequency)
- Easy To Use Local Control Panel
- BTP Decryption for Privacy

> Options

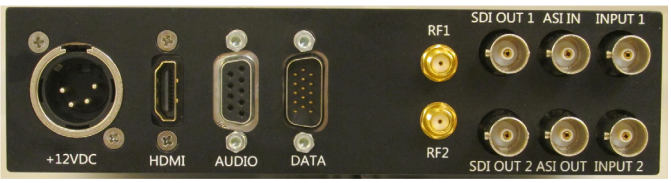
- AES 128/256 Decryption (BCrypt1 and BCrypt2)
- BISS-1, BISS-E
- WEBi Ethernet Control and Configuration

> Overview

The xDR2000 two-way diversity receiver is the smallest form factor product within the xDR Receiver Series. The receiver decodes both MPEG2 and H.264 compressed video using either a UHF or SHF input. The super high frequency (SHF) inputs support direct input from 2.0-2.6 GHz and 5.725-5.850 GHz. Supporting resolutions from 480i to 1080i/60, block down converters are available for the UHF inputs from 1.3 to 7.2 GHz (in bands). The unit automatically configures COFDM and decoder parameters to match the received signal.

The receiver comes ready to use as a stand-alone unit. The receiver is DC powered and requires an AC transformer for AC operation. A 19" rack mount kit with AC power supply is available. The HDMI output plugs directly into most popular monitors and DVRs. The unit also has CVBS, SDI, ASI and HD-SDI outputs.

Contact BMS sales to define application-specific requirements



> xDR2000 2-Way Diversity Receiver

> Technical Specifications

Frequency:	100-800 MHz (UHF) and 2.0-2.6 and 5.725-5.850 GHz (SHF)
Tuning Step Size:	250 KHz, 1 MHz (others available)
Frequency Stability:	± 2.5ppm
RF Inputs:	2 UHF, BNC(f), 2 SHF, SMA(f), each with selectable DC Bias (on/off)
Impedance:	UHF 75 ohm, SHF 50 ohm, 1.5:1 VSWR
SHF Threshold:	-95 dBm or better @ QPSK Typical
Decoding:	H.264 (MPEG4 Section 10/AVC) and MPEG2 (auto-selecting), (4:2:0, 4:2:2)
Video Outputs:	
HDMI	1.3, Type A with audio (no HDCP)
NTSC or PAL:	720 x 480 (NTSC), 720 x 576 (PAL) BNC(f)
SDI Outputs:	ANSI/SMPTE 259M and 292M: (SDI, HD-SDI) BNC(f)
	HD-SDI 720P 30, 50, 59.94, 60
	HD-SDI 1080i 25/50, 30/60, 59.94
	HD-SDI 1080i-psf 23.98, 24, 25, 29.97, 30
	HD-SDI 1080p 23.98, 24, 25, 29.97, 30
DVB-ASI Input/Output:	EN50083-9
Genlock Input:	Synchronizes to composite (analog) or tri-level (digital) signal
Demodulation Format:	COFDM (DVB-T) Receiver Auto-Detects all COFDM and Decoding Parameters
Carriers:	2k
Constellation:	QPSK, 16 QAM, 64 QAM
Code Rate:	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval:	1/32, 1/16, 1/8, 1/4
Bandwidth:	6 MHz, 7 MHz, and 8 MHz
Link Latency:	End-to-end latency as low as one frame, mode and transmitter dependent
Audio Decoding:	ISO/IEC 11172-1 (Layer I/II)
Audio Frequency Response:	40 Hz to 15 kHz +/- 1.0dB
Audio Output Analog:	2, balanced outputs, 600 ohm, short-protected
Audio Output HDMI:	HDMI video/audio, ver. 1.3 (no HDCP)
Audio Output SDI:	Embedded audio on SDI outputs
Audio Level Adjust:	± 6 dB via front panel adjustment
Decryption (standard):	BMS Transmission Privacy (BTP)
Decryption (optional):	AES 128 or 256 bit (FIPS PUB 197, BCrypt1 and BCrypt2), BISS-1, BISS-E
User Data:	RS232 Side channel up to 115.2kbps
Software Updates:	USB port on front panel
Remote Control:	Remote RS232 (external Ethernet control option available)
Local Control:	Local control panel with received signal strength (RSSI) and modulation error ratio (MER)
Configuration and Presets:	16 user presets uploaded from front panel USB port
Input Voltage Range:	+11 to +18 VDC and 100-240 VAC 50-60 Hz with supplied AC/DC transformer
DC Bias:	Provided by the receiver, 12/24VDC or off (selectable) @ 320mA per connector
Power Consumption:	Less than 20W. Mode dependent
Temperature Range:	–10° to +50°C
Storage:	–40° to +70°C
Humidity:	5 to 95% non-condensing
Size:	165mm x 320mm x 1 RU (6.5" x 12.6" x 1 RU) without connectors
Weight:	2.10 kg (4 lb. 10 oz.)

> Ordering Information

PART NUMBER	MODEL
8714788010	xDR2000, receiver with decoder
8714788100	xDR2000-DEC, professional decoder only, ASI input, no UHF/SHF inputs

ACCESSORIES	
4414848011	xDR2-RM, 19" Rack mount, 1RU, up to two xDR2 and power supply
7614848040	xDR2-PS, Universal AC input, 13.2 VDC output for up to two xDR2 units
8015049000	External Ethernet control and configuration through WEBi accessory

Contact the BMS Applications Center to discuss Block Down Converter options

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