

## An advanced digital satellite receiver for analog service conversion and basic cable operations.

The new DSR-4402X IRD from Motorola brings the latest technology advances from the recognized leader in satellite program delivery.

Building on the DigiCipher® II platform, the DSR-4402X IRD is affordable and easy to use. Start with the new packaging design that fits in a standard 19" relay rack and requires only a single rack unit of space. The DSR-4402X is designed to deliver outstanding video and audio performance in either DigiCipher II or DVB modes. This receiver can output either NTSC or PAL video formats, automatically matching the programmer's video format.

With a variable front-end and bypass capabilities, the DSR-4402X is ideally suited for network conversion from analog to digital. Full

VBI reinsertion on lines 10 - 22 for SID/AMOL I & II and NABTS is standard on the DSR-4402X. Now equipped with DVB-ASI, the DSR-4402X is ready to connect to the rest of your head-end equipment.



- MPEG-2 Main Level@Main Profile
- DigiCipher II and DVB modes of operation
- DigiCipher II *MegaPipe* Support
- Variable tuning from 4 MHz to 36 MHz
- Dolby® Digital and MPEG layer II audio processing
- VBI reinsertion SID/AMOL-II, NABTS and closed caption
- Stackable 1RU chassis design
- DigiCipher® II conditional access control
- Quick disconnect screw terminals for easy installation
- Bypass video and audio inputs
- DTMF cue tones for local ad insertion
- ASI output for easy connection to digital cable headend products



# DSR-4402X PROFESSIONAL SATELLITE RECEIVER SPECIFICATIONS

## L-BAND INPUT

Input Frequency.....	950 to 2150 MHz
Input Impedance.....	75Ω
Input Connectors.....	Two F-type
LNB Power Out F-Connector....	16V DC min/450 mA
Port to Port Isolation.....	40 db (minimum)

## DIGICIPHER II PROCESSING

Modulation Modes.....	OQPSK and QPSK
Symbol Rates.....	3.25, 4.88, 7.32, 9.76, 11.71, 14.63, 19.51, 29.27 Msps
Forward Error Correction.....	@ 3.25 to 14.63 Msps = 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8 @ 19.51 (split/combined) and 29.27 (split) Msps = 5/11, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8 @ 29.27 (combined) Msps = 5/11, 1/2, 3/5, 2/3, 3/4
Eb/No.....	4.0 db @ 19.5 Msps (FEC=3/4)

## DVB PROCESSING

Modulation Modes.....	QPSK
Symbol Rate Range.....	3.25 to 30 Msps
Forward Error Correction.....	1/2, 2/3, 3/4, 4/5, 7/8

## VIDEO

Frequency Response (NTSC).....	± 1.0 dB, 1 kHz - 4.2 MHz
Frequency Response (PAL).....	± 1.0 dB, 1 kHz - 5.5 MHz
Signal/Noise Ratio.....	57 dB min
Differential Gain.....	5% max
Differential Phase.....	5 deg. max
Output Impedance.....	75 Ω
Output Level.....	1.0 V p-p

## AUDIO

Outputs.....	2 stereo pairs or 4 mono
Output Level.....	± 16.0 dBm, ± 1.0 dB into 600 Ω balanced attenuator, adjustable (0 to -15 dB)
Frequency Response.....	± 1.3 dB, 20 Hz to 20 kHz
Total Harmonic Distortion.....	0.3% or better at 1 kHz
Signal/Noise Ratio.....	85 dB or better at 1 kHz
Isolation, L/R.....	80 dB at 1 kHz
Impedance.....	600 Ω
Connector.....	Quick disconnect screw terminals

## DATA

Isochronous Data Rate.....	19.2 kbps - 2.048 Mbps, 3.0, 4.5 and 9.0 Mbps
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## ASI OUTPUT

Format.....	Asynchronous Serial Interface
Transmission.....	Data Burst
Standard.....	CENELEC EN 50083-9
Connector.....	BNC

## CUE TONES

Signal Type.....	Differential output
Signal Level.....	(-)3 dBm minimum (600 Ω)/tone
Connector.....	Quick disconnect screw terminal

## ALARM CONTACT CLOSURE

Number of Closures.....	1
Type.....	Form C

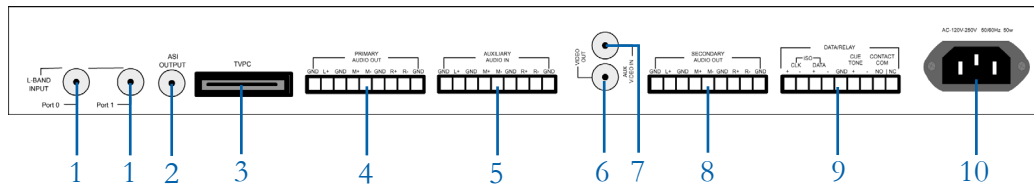
## PHYSICAL ENVIRONMENT

Operating Temperature.....	0° to 40° C
Humidity.....	95%, relative maximum
Dimensions.....	48 cm (W) x 46 cm (D) x 4.2 cm (H)
Weight.....	Approx. 5.0 kg
Power Input.....	90-250 VAC, 47-63 H, 25 W

## OTHER

Limited Warranty.....	One year
UL/TUV/CE.....	Listed/approved

# INPUTS/OUTPUTS



- |                          |                            |                               |
|--------------------------|----------------------------|-------------------------------|
| 1..... RF Input Ports    | 5..... Auxilliary Audio In | 9..... Data/Relay             |
| 2..... ASI Output        | 6..... Video Out           | 10..... Detachable Power Cord |
| 3..... TVPass® Card Slot | 7..... Aux Video In        |                               |
| 4..... Primary Audio Out | 8..... Secondary Audio Out |                               |

