

# DSR-4410MD

## Satellite Multiplex Decrypter



## PRODUCT OVERVIEW

The ARRIS DSR-4410MD is a powerful digital headend product, capable of simultaneous decryption of up to 64 services. With advanced modulation support, the DSR-4410MD can output a full transport multiplex with both MPEG-2 and/or MPEG-4 services at an information rate of up to 160 Mbps.

The ARRIS DSR-4410MD comes equipped with industry-standard interfaces, such as dual ASI outputs, that enable seamless connection to head-end equipment. The DSR-4410MD also accommodates the current trend for distributing MPEG-2 transport streams over Gigabit Ethernet interfaces throughout digital headends.

Packaged in a 1RU chassis, the DSR-4410MD offers local monitoring of a single service and the ability to step through the authorization and encryption state of each service. In the event of a transport stream fault, or loss of authorization for any of the provided services, the DSR-4410MD will trigger an alarm indication for the user.

## KEY FEATURES

- DigiCipher® II conditional access control
- Concurrent decryption of up to 64 services, each service may include video, multiple audio channels and data
- Stackable 1RU chassis design
- Dual L-Band input ports
- Supports both C-band and Ku-band
- Advanced modulation support for 8PSK Turbo and DVB-S2
- ASI Input
- Dual ASI and Gig-E transport output with selectable rates
- 10/100 Base T Ethernet port for SNMP monitoring and control
- IP datacasting output
- Outputs NTSC video and analog audio for local monitoring
- Form-C relay for fault signaling
- Background software download capabilities

## SPECIFICATIONS

### L-Band Input

Input Signal Level	(-)65 dBm to (-)25 dBm
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Input Frequency	950 - 2150 MHz
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Input Impedance	75 $\Omega$
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Input Connectors	Two (2) F-type
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LNB Power Out	16V DC min/450 mA
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### Digital Processing

Modulation Modes	OQPSK, QPSK, 8PSK turbocodes, and DVB-S2
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Symbol Rates	3.25 to 29.27 Msps (QPSK), 1 to 30 Msps (8PSK turbocodes), 5 to 30 Msps (DVB-S2)
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### FEC Rates

QPSK	1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 7/8 (@3.25 to 29.27 Msps) 5/11 (@ 19.51 and 29.27 Msps)
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DVB-S2 8PSK	3/5, 2/3, 5/6, 8/9, 9/10
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8PSK Turbocodes	2/3 (1.9), 3/4 (2.05), 3/4 (2.11), 3/4 (2.19), 5/6 (2.30), 8/9 (2.40)
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Eb/No	4.0 db @ 19.5 Msps (FEC=3/4)
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### Composite Video Output

Frequency Response (NTSC)	$\pm 0.75$ dB, p-p, 1 kHz – 4.2 MHz
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Frequency Response (PAL)	$\pm 0.9$ dB, p-p, 1 kHz – 5.5 MHz
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Signal/Noise Ratio	57 dB (min)
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Differential Gain	4.0 deg. p-p (max)
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Difference Phase	1.5 deg. (max)
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Output Impedance	75 $\Omega$
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Output Level	1.0 V p-p $\pm 10\%$
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## SPECIFICATIONS (CONTINUED)

## Audio Output

Output	Two stereo pair or two mono
Output Level	$\pm 18.0$ dBu, $\pm 1.0$ dB into 600 $\Omega$ balanced load, adjustable (0 to -15 dB)
Frequency Response	$\pm 1.3$ dB, 20 Hz to 20 kHz
Total Harmonic Distortion	0.25% or better at 1kHz
Signal/Noise Ratio	85 dB or better at 1 kHz Isolation, L/R: 80 dB at 1 kHz
Isolation, L/R	80 dB at 1 kHz
Audio Impedance	600 $\Omega$ load
Connector	Quick disconnect screw terminal

## Data Output

Ethernet 10/100 Base T	RJ-45 (1)
Gig-E 10/100/1000 Base T	RJ-45 (1)

## GigE Output

Connector	RJ-45
Format	10/100/1000BaseT
Transport Stream Data Rates	27 Mbps, 54 Mbps, 81 Mbps and 160 Mbps Decryption
Number of Services	Up to 64 independently encrypted services

## ASI Interface

Format	Asynchronous Serial Interface
Transport Stream Data Rates	27 Mbps, 54 Mbps, 81 Mbps and 160 Mbps Decryption
Standard	CENELEC EN 50083-9
Connectors	BNC (two out, one in)

## Alarm Relay

Form C	Quick disconnect screw terminal
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## Cue Tones

Signal Type	Differential output
Signal Level	0 dBm, $\pm 3$ dB (600 $\Omega$ )/tone
Connector	Quick disconnect terminal

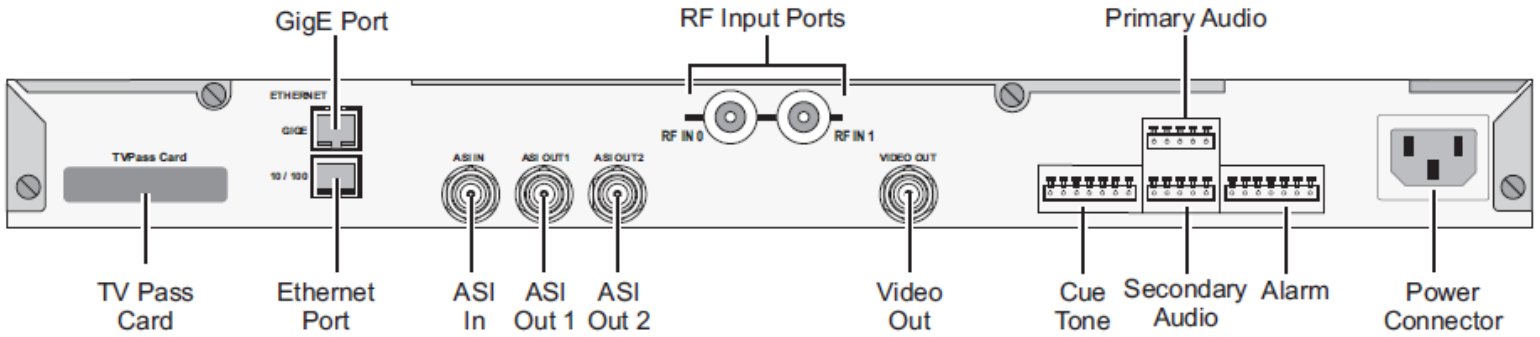
## Physical

Width	18.9 in (48cm)
Depth	18.11" (46cm)
Height	1.65 in (4.2cm)
Weight	11 lb (5.0kg) approx
Power Input	95-240 VAC, 47-63Hz, 40 W max
Operating Temperature	0° to 40°C ambient
Humidity	95% relative maximum

## Other

Limited Warranty	One year
Compliance	UL listed/approved, FCC part 15

DSR-4440 REAR PANEL



MODEL AND ORDERING INFORMATION

Model Name	Part Number	Description
DSR-4410MD	532618-001-00	Satellite Multiplex Decrypter

## CUSTOMER CARE

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656