

QAM Digital Entertainment Receiver

DSR-470



○ Features & Benefits

- Facilitates the Economic Deployment of a Digital Tier Using QAM Technology
- Works in Conjunction with Blonder Tongue Transcoders
- Both Analog & Digital Tuners Built In For Seamless Viewing
- Integrated Branded Program Guide Ensures Customer Viewing Enjoyment & Loyalty

Installing a digital program has never been easier with the DSR-470 and Blonder Tongue Transcoders.

The Motorola DSR-470 is a consumer receiver that allows Cable Operators who cannot readily upgrade to digital cable to offer digital programming to tenants with a unique satellite delivery method. Satellite-friendly, digital QPSK modulated signals are converted to cable-friendly, digital QAM modulated signals by the Blonder Tongue Transcoder headend equipment. When combined with analog cable signals and existing cable wiring, this new system provides viewers instant access to over 200 program channels of digital and analog programming over a single coaxial cable without hanging satellite dishes at each subscribers home.

To facilitate this type of digital cable system, the DSR-470 decoder accepts program signals, authorization and control commands like a satellite receiver, but it's installed at the end of the coaxial cable system, Equipped with both a digital QAM (Quadrature Amplitude Modulation) and analog tuner, the DSR-470 offers a wide range of viewing options, the combined offerings of analog cable and digital satellite, to each subscribers location. In addition, Motorola has developed a unified digital/analog on-screen program guide so that the viewer can seamlessly scan all available channels. Cable operators also have the ability of branding the on-screen guide with their logo or name.

Digital

Specifications and Ordering Information are located on the following page.

QAM Digital Entertainment Receiver

DSR-470

○ Specifications

Cable Input

Input Frequency: 54 to 860 MHz
Input Impedance: 75 W
Analog Input Level: 0 to (+)15 dBmV

Digital Input Level:
(-)18 to (-)5 dBmV (64 QAM)
(-)12 to (-)5 dBmV (256 QAM)

Noise Figure @ 10 dBm Input: <10 dBm

Digital Processing

Demodulation: 64 and 256 QAM

Symbol Rates:
5.056941 (64 QAM) 4.966862 and
5.360537(256 QAM)

Cable Video (Response)

Frequency Response:
(+)1.58 to (-)1.94 dB, 0.5 to 3.0 MHz
(+)1.58 to (-)2.98 dB, @ 3.58 MHz

Differential Gain: 8.0% p-p maximum

Differential Phase: 8.0° p-p maximum

S/N: 49 dB minimum @ 6 dBmV
(unified weighing 100 kHz to 4.2 MHz)

DIGICIPHER® II Composite Video

Outline Level:
1.0 V p-p ± 10% sync tip to reference white

Frequency Response (NTSC):
± 1.0 dB1 kHz to 4.2 MHz

C-L Delay Inequality: ± 50 nsec

Diff Gain: 5.0% p-p max (10-90% APL)

Diff Phase: p-p max (10-90% APL)

Luminance SNR: 57 dB

VHF Output

Impedance: 75 W

Channel: Channel 3 and 4

Level, Video:
66 dBuV ± 3 dB from VHF modulator

Audio: Mono, SAP (menu selected)

Video

Output Level: 1 V p-p into 75W
De-emphasis: 525 line CCIR Rec. 405.1

Audio

Modes:
Digital stereo (stereo or surround),
S/PDIF for AC-3 where available,
analog stereo (BTSC) cable audio (analog)
Frequency Response: ±3.0 dB, 50 Hz to 10 kHz
Harmonic Distortion: 2.0% maximum @ 1 kHz

DIGICIPHER® II Audio (Analog)

Number of Stereo Outputs: 2
Impedance: 110 W Maximum
Output Level: 5.66 V p-p ± 10% into 2k W
Load with 0 dBFS Digital Input
Frequency Response:
1.0 DB p-p, 20 Hz to 20 kHz
THD:
0.3% Maximum from 20 Hz to 20 kHz
Referenced to (+)10 dBm Encoder

SNR: 85 dB Minimum
Stereo Channel Isolation:
60 dB Minimum Asynchronous Data

Data Rate:
1200, 2400, 4800, 9600 and 19200 bps

Format: Asynchronous 10 bit Characters
Transmitted LSB First

Mode: Simplex

Interface:
RS-232 Voltages and Impedance Levels

Connector: Mini Phone High Speed Data

Data Rate: 29.27 Mbps ± 20 ppm

Format: AMI Encoded with 8% Minimum
Transition Density

Multiplex: MPEG-2 compatible

Signal Level:
0.5 V p-p ± 20% AC Coupled into
a 110 ohm

Connector: DB-9 Modem Reportback Interface

Standard: Bell 212A

Data Rate: 1200 baud

Connector: RJ-11 Telco Plug-in Remote Control

Operational Range:
35 feet; ±22.5° from Center (horizontal axis)
±13.0° from center (vertical axis)

Physical/Environmental

Temperature: 0° - 40°C (Ambient)

Humidity: 95% Relative

Dimensions:
13.6"(W) x 2.5"(H) x 15"(D)

Weight.: Approx 11 lbs

Power Input:
115V ± 10% AC, 60 Hz (nominal),
25 W (maximum)

Regulatory Compliance:
UL listed, CSA Certified

Other

Remote: 2 x AA Batteries

Limited Warranty: One year

○ Ordering Information

Model	Stock No.	Description
DSR-470	5899	Consumer QAM Set Top - Integrated Receiver Decoder DigiCipher II
DSR-471	5891	Consumer QAM Set Top - Integrated Receiver Decoder (Canada) DigiCipher II