



### Applications

HD-SDI  
Digital Signage  
HD/SD Cable Receivers  
HD/SD Satellite Receivers  
HD/SD Media Sources



### Sales Support

Need help integrating HDTV localcasting for your application? Our Sales Support staff will be happy to work with you, providing expert integration assistance and a complete systems proposal.

### Tech Support

Need tech help? Give us a call. Our tech support staff are experts in the integration industry. We research solutions in the proposal stage, advise on programming requirements, and resolve installation issues.

Our job is to make our solutions work seamlessly with your system, performing as promised.

### Related Products

232-ATSC+ Tuner  
Display Express Systems

CR QMOD™ technology is opening the door to new HDTV applications. Innovative in design and value, QMOD™ HDTV Modulators enable cost-effective distribution of digital signage and HD subscriber sources using existing broadband coax cabling in sports, retail and entertainment facilities, corporate offices, colleges, schools and worship centers.

- Create your own on-site HDTV broadband distribution system using a variety of digital signage, HD, SD, and AV sources
- Distribute digital signage, satellite, cable, and media as HD digital cable channels over existing broadband wiring
- View HD sources at any destination using HDTV displays or tuners

### QMOD-SDI HD-SDI Modulator

- HD/SD-SDI auto-syncs video input with embedded audio
- HD Component, and S-Video/Composite video inputs
- Switchable between SDI, Component, and video

### QMOD-HDSC HDTV Scaler Modulator

- In-stream scaler for RGBHV/Component inputs from 480p to 1080p
- Auto-senses resolution, then zoom, shrink, and position to fit
- Scales video to 1080i/720p
- Converts PAL HD video to NTSC
- Buffered RGBHV Out for monitoring RGB input

### QMOD-HD HDTV Modulator

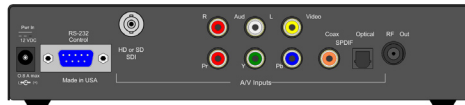
- HD RGBHV, Component, and S-Video/Composite video inputs  
Switchable between RGBHV/Component and composite video

### Shared Features

- Employs pro-grade HD encoding by NTT that minimizes artifacts for motion video and signage "tickers"
- Merges audio with video from stereo, digital optical and coax inputs
- RGBHV and Component share RGB wiring, Component can be fed from HD15
- Switches via GPI inputs to present EAS AV broadcasts
- Creates an HD 720p/1080i or SD 480p/480i MPEG2 stream with MPEG1 stereo audio for broadcast
- Delivers a fully agile QAM 64/256 digital cable channel 2-135
- Amplifies for distribution over an on-site broadband cable system with adjustable output level to 29 dBmV
- Sets up with front-panel buttons and easy to use menus, including inputs, encoding, channel, and RF options
- Fast processing - starts up in less than 4 seconds
- Integrates with RS-232 control and feedback with simple ASCII commands
- Saves power and rack space using efficient design, fan-free cooling, and compact enclosure
- Mounts in optional 1RU single (RK1) or dual (RK2, RK2EZ) 19" rack kits



# QMOD HDTV Modulator



QMOD-SDI Back Panel



QMOD-HDSC Back Panel



QMOD-HD Back Panel

## Specifications

Feature	QMOD-SDI	QMOD-HDSC	QMOD-HD
<b>Application</b>	HD/SD-SDI Video	Digital Signage/PAL Video	HD Analog Media
<b>HD Video</b>	SDI: Female BNC (1080i/720p/480i), auto-sync Embedded SDi audio, selectable for 1+2, 3+4, 5+6, 7+8	RGBHV/Component In: RGBHV DB-15 female, auto-sync 480p to 1080p. Check crwww.com for resolution list. RGB Out: DB-15 female	RGB In: RGBHV DB-15 female (1080i/720p/480p/480i), 59.94/29.97 Hz, not intended for VGA operation.
<b>Power</b>	0.8 A maximum	1.1 A Maximum	0.7 A Maximum
<b>Includes</b>	PS12-1.0 switching power supply, 1A 12 VDC	PS12-1.5 switching power supply, 1.5A 12 VDC	PS12-1.0 switching power supply, 1A 12 VDC
<b>Shared Features</b>			
<b>Physical</b>	8.5" [216mm] wide x 1.73" [62mm] height (1RU) x 6.0" [153mm] deep 1.5 lbs [0.68kg] +32° to 122° F operating temperature, convection cooled Rack mounting for one or two units side-by-side (RK1, RK2)		
<b>Encoding</b>	MPEG2 Profile:MP@HL for HD, MP@ML for SD 1080i, 720p, 480p resolution, depending on input Video Encoding bitrate 18 or 25 Mbps MPEG1, Layer 2 audio Latency 330ms 720p, 660 ms 1080i		
<b>Modulation</b>	Switchable 64/256 QAM, J83 Annex B, Interleaving Modes (128,1) MER 38 dB typical FCC Class B, ROHS, meets California standards		
<b>Front</b>	Power button Setup, Select and directional buttons for menu setup Menu LCD, 2 lines of 20 blue characters each		
<b>Back</b>			
<b>Power</b>	2.1mm coaxial jack (inside center conductor positive) 11.5 to 13.5 VDC, 12 VDC typical		
<b>Control</b>	DB-9 male, RS-232 data link to control system 300 to 19,200 baud (9600 default), 8 data bits, no parity, 1 stop bit 2 GPI contacts on pins trigger EAS		
<b>Analog Video</b>	RGBHV: HD-15, QMOD-HD1080i/720p 29.97/ 59.94 Hz, QMOD-HDSC up to 1920 x 1080 Component: RCA Y, Pb, Pr (1080i/720p/480p) , 59.94/29.97 Hz S-Video: Y(Composite), C (Blue Pb) 480p, 29.97 Hz Composite Video: 480i, 29.97 Hz (not operational in QMOD-HDSC)		
<b>Audio</b>	Digital SPDIF: Coax and Toslink optical output, PCM 48K sample rate Analog L and R: 2 stereo RCA female jacks Inputs assignable to video inputs		
<b>EAS</b>	GPI inputs switch AV to composite video and assigned audio		
<b>RF</b>	'F', female, 75 ohm impedance Agile, channels 2-135 (48-860 MHz), standard, HRC, or IRC spacing 6 MHz bandwidth fits any open channel without interference to adjacent channels 1 KHz resolution, +/- 30 ppm accuracy, +/- 35 ppm stability 29 dBmV typical output power, attenuated in 5 steps, approx 4 dB		
<b>Options</b>	RK1 Single Rack Kit , RK1-AC Single Rack Kit with accessory shelf RK2 Dual Rack Kit, RK2 EZ Dual Rack Kit		

### Warranty

All CR products feature a full two-year warranty.

