



Digital Modular Headend Bank

MR9200/MR9400

USER MANUAL

2015/05



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1. OVERVIEW

1.1 Characteristics

MR100 is a compact modular digital TV headend that includes professional MPEG-2 and MPEG-4 AVC/H.264 SD/HD IRD, MPEG-2 and MPEG-4 AVC/H.264 SD/HD Encoder/Transcoder, Re-Multiplexer, QAM/COFDM Trans-Modulator, Dual Channel Analog Modulator, DVB Scrambler and so on. Within a space saving 4Ux19" chassis, it provides 8 slots for any type of modules and redundant power supply units. With flexible solution and the high density, MR100 offers operators the advanced headend architectures in the marketplace for delivering analog and digital broadcast services to their subscribers. Coming with more new modules, MR100 is most suitable for future multiple network architectures: streaming and multiplexing of digital content over IP based networks and conversion of digital content for analog networks.

Main Feature

- DVB-S2/S, DVB-S, DVB-C, DVB-T2/T IRD modules with CI
- DVB-S/S2T/T2 to DVB-C QAM and DVB-T COFDM trans-modulator module
- MPEG-2, H.264 HD/SD encoder and trans-coder module
- 8 Way re-multiplexer module
- DVB Simulcrypt, BISS-1, BISS-E scrambler module
- Rich interface with ASI, IP, SDI, YPbPr, CVBS, XLR
- Web, SNMP Remote Controller handheld programmer unit local control
- 4RU 19" chassis compact modular design, supporting up to 8 modules
- Functional module hot-swappable
- Redundant power supply
- Intelligent cooling system with temperature
- Stand alone function of each module
- Cost-saving by backward compatible with new modules
- On site software update through IP

MR100MF Main Chassis

- Standard 4 RU chassis with 8 slots for functional modules and 2 slots for Power Supplies
- Hot-swappable power supply unit
- Intelligent cooling system with Temperature
- Wall mounted or Rack mounted
- Backward compatible with new modules
- Power Supply: AC 100V-260V, 50-60Hz
- Optional Build-in UPS with
- Dimension: L=340mm, W=483mm, H=178mm (4U)

MR100CU Handheld Programmer Unit

- 2 x 20 LCD display screen and 6-key keypad
- No external power or battery needed
- Easy and quick on site system configuration without PC
- Backward compatible with new modules
- Dimension 170 × 70 × 22 mm

MR9200P Series

Professional MPEG-2 SD IRD and Processor Module

- Multiple inputs DVB-S2/S/C/T, TS/IP and ASI
- SD MPEG-2 MP@ML digital Video decoding
- Flexible built-in re-multiplexing between ASI, Tuner and TS/IP Inputs
- 2x DVB-CI Slots, Multi Programs, BISS-1 and BISS-E decryption
- Dynamic PMT detection and automatic updating
- UDP, RTP Multicast / Unicast IP output, supports up to 32 independent channels
- PCM audio embedded in SDI output
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- RSSI, received Eb/No & BER monitoring
- On Site software update through IP

MR9400 Series

Professional Multi-format HD/SD IRD and Processor Module

- Multiple inputs DVB-T2/S2/S/C/T/T2, TS/IP and ASI
- Redundant inputs between Tuner, ASI and TS/IP
- SD/HD MPEG-2 and MPEG-4/H.264 digital Video decoding
- Digital Audio decoding and loop through via SDI, HDMI and AES-EBU
- Multiple Analog and Digital Outputs, ASI, CVBS, YPbPr, HDMI, SD/HD-SDI, TS/IP
- Flexible re-multiplexing between 2xASI, Tuner and TS/IP Inputs
- 2x DVB-CI Slots, Multi Programs, BISS 1 and BISS E decryption
- Dynamic PMT detection and automatic updating
- Support VBI TELETEXT, EBU/ DVB Subtitle, Closed Caption
- UDP/RTP & Unicast/Multicast SPTS and MPTS over IP I/O
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software
- PCM audio embedded in SDI output or PCM audio over HDMI
- PCM output on two AES/EBU output port
- On Site software update through IP
- RSSI, received Eb/No & BER monitoring

MR9200EC Series

Professional H.264 SD Encoder/Trans-coder Module

MR9400EC Series

Professional H.264 HD Encoder/Trans-coder Module

- Multiple video resolution including 1080i, 720p, 576i and 480i
- Multiple inputs HDMI, HD/SD-SDI, YPbPr, and CVBS for encoding
- ASI Input for Trans-coding
- Support 10/100M TS/IP SPTS and MPTS
- Built-in re-multiplexer for encoder loop
- Support VBR and CBR encoding mode
- Digital audio pass through for trans-coding
- Support 2 pairs of analog stereo audio encoding with optional extension board
- Remote Control and Supervision by SNMP, HTTP WEB and Proprietary HDMS software

1.2 Order Information

1.2.1 MR9200P Series

Interface	MR-xxxx-xx							
	MR9200P-S	MR9200P-S2	MR9200P-C	MR9200P-T	MR9200P-44S	MR9200P-44S2	MR9200P-44C	MR9200P-44T
Tuner	-S	-S2/S	-C	-T	-S	-S2/S	-C	-T
ASI Input	•	•	•	•	•	•	•	•
Common Interface	x2	x2	x2	x2	x2	x2	x2	x2
Built-in Re-mux	•	•	•	•	•	•	•	•
ASI Output	•	•	•	•	•	•	•	•
SDI	•	•	•	•	•	•	•	•
Audio L/R	•	•	•	•	•	•	•	•
CVBS	•	•	•	•	•	•	•	•
TS/IP (Max. 6 SPTS or MPTS output)	•	•	•	•				
TS/IP (Max. 32 SPTS or MPTS output)					•	•	•	•

1.2.2 MR9400P Series

Interface	MR-xxxx-xx							
	MR9400P-30S2	MR9400P-30C	MR9400P-30T	MR9400P-30T2	MR9400P-44S2	MR9400P-44C	MR9400P-44T	MR9400P-44T2
Tuner	-S2/S	-C	-T	-T2	-S2/S	-C	-T	-T2
ASI Input	•	•	•	•	•	•	•	•
Common Interface	x2	x2	x2	x2	x2	x2	x2	x2
Built-in Re-mux	•	•	•	•	•	•	•	•
ASI Output	x2	x2	x2	x2	x2	x2	x2	x2
HDMI	•	•	•	•	•	•	•	•
SDI	x2	x2	x2	x2	x2	x2	x2	x2
Y Pb Pr	•	•	•	•	•	•	•	•
Audio L/R	•	•	•	•	•	•	•	•
CVBS	•	•	•	•				
TS/IP (Max. 32 SPTS or MPTS output)					•	•	•	•

1.2.3 MR9400EC Series

Interface	Model	MR-xxxx-xx	
		MR9200EC	MR9400EC
HD-SDI Input			•
SD-SDI Input		•	
HDMI Input		•	•
Y Pb Pr		•	•
CVBS		•	•
ASI Input		•	•
Built-in Re-mux		•	•
ASI Output		x2	x2
TS/IP I/O		•	•

2. CONTROL WITH DISPLAY AND KEYPAD

2.1 MR9200EC

Main-Menu	Sub-Menu	Description
Input Setup	Input ASI Bit Rate	Input ASI Bit display
	Encoder Bit Rate	Encoder Bit display
	Video Input Format	Video Input Format display
Encoder Setup	Work Mode	Work Mode: Encode/Transcode
	Encode Start Out	Encode Start Out: Enter=Yes,Exit=No
	Video Setup	Video Rate Ctl: Cbr/Vbr Mode:
	Audio Setup	Audio1 Format: MPEG1 Layer2 Audio1 Bit Rate: 32/48/56/64/80/96/112/128/160/192/224/256/320/384 Audio1 Channel: Stereo/Mono Audio1 Level: 0~63 Audio1 Input Source: HDMI Audio/Composite2 Audio /Composite2 Audio /SDI Audio Audio1 SDI EMB:EMB1/EMB2/EMB3/EMB4 Audio2 Bit Rate: 32/64/128/192/256/384 Audio2 Channel: Stereo/Mono Audio2 Level: 0~63 Audio2 Input Source: HDMI Audio/Composite2 Audio /Composite2 Audio /SDI Audio Audio2 SDI EMB:EMB1/EMB2/EMB3/EMB4
	Encoder Bit Rate	Encoder Bit Rate:0~99999kB/S
	Advanced Setup	Output PMT PID: Setting range 32-8191
		Output Video PID: Setting range 32-8191
		Output Audio PID: Setting range 32-8191
		Output Program Num: Setting range 1-65535
		Output PCR PID: Setting range 32-8191
		PTS Time Set: Setting range 0-800.
		Output Service Name: Edit Output Service Name

Transcode Setup	Work Mode	Work Mode: Encode/Transcode
	Transcode Start Out	Transcode Start Out: Enter=Yes,Exit=No
	Video Setup	Video Rate Ctl: Cbr/Vbr Format:
	Audio Setup	Audio1 Format: MPEG1 Layer2/AC3/MPEG2 AAC Audio2 Format: MPEG1 Layer2/AC3/MPEG2 AAC EC Audio2 Bit Rate: 32/64/128/192/256/384 EC Audio2 Channel: Stereo/Mono EC Audio2 Level: 0~63 EC Audio2 Source: HDMI Audio/Composite1/ Composite2/SDI Audio EC SDI Audio2:EMB1/ EMB2/ EMB3/ EMB4
	Transcoder Bit Rate	Transcoder Bit Rate: 0~99999 Kb/s
	Advanced Setup	Output Program Number : Setting range 1-65535. Output PMT PID : Setting range 32-8191. Output PCR PID : Setting range 32-8191. Output Video PID : Setting range 32-8191. Output Audio1 PID : Setting range 32-8191. Output Audio2 PID : Setting range 32-8191. Output Audio3 PID : Setting range 32-8191. PTS Time Set: Setting range 0-800. Output Service Name:Edit Output Service Name.
	Input Video Format	
	Input Program List	Select Input Program
	Transcoder Audio PID1	Select from 00258/01281
	Transcoder Audio PID2	Select from 00258/01281
Output Setup	Out Channel	Out Channel Selection: Encoder Out/Mux Out/ASI Out
	Output Bit Rate	Output Bit Rate: 0~99999Kb/s
IP Board Setup(IP Out)	IP Board IP Address	IP Board Address: 1.0.0.1~223.255.255.254
	IP Board Net Mask	IP Board Net Mask: 1.0.0.1~223.255.255.254 and 0.0.0.0
	IP Board Gateway	IP Board Gateway: 1.0.0.1~223.255.255.254 and 224.0.0.0~239.255.255.255
	IP Board MAC Address	IP Board MAC Address
	Protocol	Protocol: UDP/RTP
	TS Pkts Per UDP	TS Pkts Per UDP: 1~7
	Time To Live	Time To Live: 1~255
	Type Of Service	Type Of Service: Min Delay/Max Reliability/Max Throughput/Min Monetary Cost/Normal
	Gate MAC Address	Gate MAC Address
	Multicast 1	Multicast IP Address: 224.0.0.0 ~ 239.255.255.255 * When using Unicast, the Multicast IP Address should be set as the IP address of the receiving device. Multicast UDP Port: 1~65535 Target MAC Address Mode: off/All pass/Filter/ Program List: H.264 Encoded
	Multicast 2	
	Multicast 3	
	Multicast 4	
	Multicast 5	
	Multicast 6	

IP Board Setup(IP In)	IP Board IP Address	IP Board Address: 1.0.0.1~223.255.255.254
	IP Board Net Mask	IP Board Net Mask: 1.0.0.1~223.255.255.254 and 0.0.0.0
	IP Board Gateway	IP Board Gateway: 1.0.0.1~223.255.255.254 and 224.0.0.0~239.255.255.255
	IP Board MAC Address	IP Board MAC Address
	Multicast Address	Multicast IP range: 224.0.0.0 ~ 239.255.255.255 * When using Unicast, the Multicast IP Address should be set as the IP address of the receiving device.
	Multicast UDP Port	Multicast UDP Port: 1~65535
	Protocol	Protocol: UDP/RTP
	Output Smoothing	Auto/Fixed rate/Disable
	TS Bit Rate	TS Bit Rate: 0~99999Kb/s
PID Processing	Program List	Encoder/ASI Input: Select Encoder or ASI Input Program
	Set TransportStream ID	Set TransportStream ID: 00008
	MUX Output Bit Rate	MUX Output Bit Rate: 0~99999 Kb/s
	MUX	MUX: Enter=Yes, Exit=No
System	Local Setup	IP Address: 1.0.0.1~223.255.255.254 Netmask: 1.0.0.1~223.255.255.254 and 0.0.0.0 Gateway: 1.0.0.1~223.255.255.254 and 224.0.0.0~239.255.255.255 MAC Address: Display MAC Address
	Remote Setting	Trap IP Address: 0.0.0.0~255.255.255.255
	Unit Name	Edit Unit name
	Software Version	Display main Software Version
	Extend Board Select	No Out Board/IP Out Board/IP In Board
	Factory Settings	Enter: Yes, Exit: No
	SN	Display serial number
	Composite Audio Boost	Enable/Disable
	Login ID	Edit Login ID
	Login Password	Edit Login Password

2.2 MR9400P

Main-Menu	Sub-Menu	Description
	Status	ASI: Display ASI input status TUNER: Display tuner input status IP IN: : Display IP input status
	DVB-S2	LNB Frequency: Input LNB frequency Satellite Frequency: Input downstream frequency of satellite Symbol Rate: Input symbol rate of satellite LNB Voltage: Off/13V/18 V LNB 22KHz: 22KHz or Off. DISQEC: Port A/Port B/Port C/Port D/DiSEQC OFF PLS Gold Code: 0~5000 Frequency Offset High: 5000KHz Frequency Offset Low: -5000KHz
	QAM	Constellation: 16/32/64/128/256QAM/64B/256B Frequency: Enter the frequency of the QAM signal in MHz. Symbol Rate: Edit the symbol rate to the proper value in KBaud.
	COFDM	Frequency: Input terrestrial frequency. Bandwidth: select bandwidth from 6Mhz, 7Mhz and 8Mhz.
	RSSI	Tuner Status: Display tuner status Strength Display: Display the strenth of tuner signal

	Ethernet	Stream IP Addr: 1.0.0.1~223.255.255.254 Stream Netmask: 1.0.0.1~223.255.255.254 and 0.0.0.0 Stream Gateway: 1.0.0.1~223.255.255.254 and 224.0.0.0~239.255.255.255 Stream Mac Address: Display MAC address Multicast IP Addr: Enter the IP address of the multicast stream for the transport stream over IP. Multicast UDP Port: Enter the UDP port number of the TS over IP stream. Protocol: UDP/RTP. Output Smoothing: - Auto: the bit rate is variable. - Disable: the unit let the TS pass by. - Fixed Rate: the bit rate is fixed. - TS Bit Rate: set the bit rate of the TS comes from the TS/ IP input. The setting is only valid when the output smoothing is configured as Fixed Rate.
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3. CONTROL WITH WEB SERVER

To control the unit via Web server, type in the unit IP address in the web browser. Default username and password are as following.

Username: root

Password: 12345

3.1 MR9400P Decoder Module

3.1.1 Status Menu

Digital TV Processor - 192.168.1.165 - Status

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div>Warning</div> <div>Video: No Input TS</div> <div>Audio: No Input TS</div> <div>PMT PID <input type="text" value="52"/></div> <div>Program Number <input type="text" value="1"/></div> <div>Audio PID <input type="text"/></div> <div>Video PID <input type="text"/></div>
	<div>Input Status</div> <div> <div>Display</div> <div> <input checked="" type="checkbox"/> ASI <input checked="" type="checkbox"/> Tuner <input checked="" type="checkbox"/> IP </div> </div> <div> <div>ASI</div> <div> Total Bit Rate (Mbps) <input type="text"/> Valid Bit Rate (Mbps) <input type="text"/> Packet Size (Bytes) <input type="text"/> </div> </div> <div> <div>Tuner</div> <div> Total Bit Rate (Mbps) <input type="text"/> Valid Bit Rate (Mbps) <input type="text"/> Strength (dBm) <input type="text"/> C/N (dB) <input type="text"/> Packet Size (Bytes) <input type="text"/> Eb/N0 (dB) <input type="text"/> BER (dB) <input type="text"/> Modulation <input type="text"/> FEC <input type="text"/> Guard Interval <input type="text"/> FFT <input type="text"/> </div> </div> <div> <div>IP</div> <div> Total Bit Rate (Mbps) <input type="text"/> Link Status <input type="text"/> Packet Size (Bytes) <input type="text"/> </div> </div>
	<div>Auto Refresh</div> <div>Frequency <input type="text" value="Every 20 seconds"/></div> <div><input type="button" value="Status Refresh"/></div>

Output Status

Video: Video status

PMT PID: PMT PID Display

Audio PID: Audio PID Display

Audio: Audio status

Program Number: Program Number Display

Video PID: Video PID Display

Input Status

ASI: ASI input status

Packet size: ASI input Packet size

Total Bitrate: Total bitrate of ASI input

Valid Bitrate: Valid bitrate of ASI input

Tuner: Tuner input status

Packet size: Tuner input Packet size

Strength: Tuner input intensity

BER: Bit error rate of tuner input

Modulation: Bit error rate of tuner input

Guard Interval: Guard Interval display

Total Bitrate: Total bitrate of Tuner input

Valid Bitrate: valid bitrate of tuner input

C/N: Carrier noise of tuner input

Eb/N0: Tuner input quality

FEC: FEC display

FFT: FFT display

IP: IP input status

Packet size: IP input Packet size

Total Bitrate: Total bitrate of IP input

Link Status: Link Status display

3.1.2 Tuner

Digital TV Processor - 192.168.1.165 - Tuner

Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div>COFDM Setting</div> <p>Frequency (MHz) <input type="text" value="666.000"/></p> <p>Band Width <input type="text" value="8 MHz"/></p> <p><input type="button" value="Apply"/> <input type="button" value="Cancel"/></p>
---	---

COFDM Setting

Frequency (MHz): Local channel frequency

Band Width: select from 6/7/8MHz

QPSK Setting

LNB Freq. (MHz): LNB Local Oscillator Frequency

SatFreq.(MHz): Satellite down link frequency

Symbol rate(KBaud): Set Symbol rate

LNB Voltage: Select from OFF/13V/18V

LNB 22KHz.: Select from OFF/22K

DisEqc: Select from DisEqc Off, Port A, Port B, Port C, Port D

3.1.3 CI

Digital TV Processor - 192.168.1.165 - CI

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div>CI</div> <div> <div> <div>Slot 1</div> <div>No Module</div> <div>Source</div> <div> <div>Max TS</div> <div>ASI Input</div> <div>Tuner</div> <div>IP</div> <div>Max TS</div> </div> </div> <div> <div>Slot 2</div> <div>No Module</div> </div> </div> <table border="1"> <thead> <tr> <th>Index</th> <th>Program</th> <th>Select</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <div> <div>Apply</div> <div>Cancel</div> </div>	Index	Program	Select			
Index	Program	Select					

Source : Select from Tuner, ASI Input, IP or MUX TS.

Program column: Show the program name.

Select column: Select the channels which you want to descramble. Free means this channel can be received without CAM; Bypass means to skip this channel, this program will be still scrambled; Slot 1/Slot 2 means to descramble the program by CAM modules in different CI slots.

3.1.4 Decoder

3.1.4.1 Audio

Digital TV Processor - 192.168.1.165 - Audio

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div>Audio Video Decoder Play</div> <div>Audio Output</div> <div> <div>Audio Level</div> <div>99</div> </div> <div> <div>Audio Mode</div> <div>Stereo</div> </div> <div> <div>Audio Priority</div> <div>una 116/mpeg2</div> </div> <div>SDI Output</div> <div> <div>Embedded Audio</div> <div>ON</div> </div> <div> <div>Apply</div> <div>Cancel</div> </div>
--	---

Audio Output

Audio level: Audio level, ranging from 0-99.

Audio Mode: Select from Stereo, Left, Right and Mono

Audio language: Audio language

SDI Output

Embedded Audio: On/Off.

Digital TV Processor - 192.168.1.165 - Video

Style: White

The screenshot shows a web interface for a Digital TV Processor. On the left is a sidebar with navigation links: Status, Tuner, CI, Decoder, Output, BISS, Mux, TS over IP, and System. The 'Output' link is selected. The main content area has tabs for Audio, Video, and Decoder Play, with 'Video' selected. Under the 'Video' tab, there is a 'Video Output' section with the following settings:

Setting	Value
Video Standard	Auto
Screen	Auto
DVB Subtitle Language	Off
EBU Subtitle Language	Off
Subtitle Priority	DVB First
Fail Mode	Still Picture
Close Caption	OFF
VBI Mode (TTX/CC/WSS)	Disable
CVBS SUB PAL	PALEDDOH
CVBS SUB NTSC	NTSCM

At the bottom of the settings area are 'Apply' and 'Cancel' buttons.

3.1.4.2 Video

Video Output

Video Standard: Select from Auto/1920x1080i 30/1920x1080i 29.97/1920x1080i

25/1280x720p 60/1280x720p 59.97/1280x720p 50/720x480p

59.94/720x480p 60/720x480p 60/720x576p 50/720x576p 25/

Screen: Select from Auto, 4: 3 Full, 4: 3 Letterbox, 16: 9 Letterbox or 16: 9 Full.

DVB subtitle language: Choose DVB Subtitle language.

EBU subtitle language: Choose EBU Subtitle language.

Subtitle Priority: Select from DVB First or EBU First.

Fail Mode: Select from Black Screen, No Sync and Still Picture. VBI Mode: Off/On.

VBI option only controls Closed Caption over CVBS. To activate the CC over CVBS, enable the VBI option.

Close Caption: Off/On. This switch controls both CC on CVBS and SDI.

CVBS Sub PAL: select PAL mode, including PAL-B/D/G/H/I, PAL-N, PAL-N_C and SECAM.

CVBS Sub NTSC: select NTSC Mode, including NTSC-M, NTSC-M_J, NTSC-M_443

and PAL-M.

Note: the sub-menus VBI Mode, CVBS Sub PAL and CVBS Sub NTSC will only show up when the Closed Caption option is on.

3.1.4.3 Decoder Play

Digital TV Processor - 192.168.1.165 - Decoder

Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	Audio Video Decoder Play	
	Program Selection	
	Source	<input type="text" value="ASI Input"/>
	Current Program	<input type="text" value="1"/>
	Program List	<div>No Selected</div>
Mode		
Decoder Mode	<input type="text" value="Manual Selection"/>	
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>		

Program Selection

Source: Select from Tuner, ASI Input, IP, MUX TS, CI Descramble or BISS De-encrypted..

Program: Choose the program need to be played

Mode

Decoder Mode: Select from Manual Selection and First Service.

First Service means to select the program number automatically, normally the first program in the TS.

Manual Selection means to select the program manually.

3.1.5 Output

ASI1 Output

Source: Select from Tuner, ASI Input, IP, MUX TS, CI Descramble or BISS De-encrypted..

ASI2 Output

Source: Select from Tuner, ASI Input, IP, MUX TS, CI Descramble or BISS De-encrypted..

Digital TV Processor - 192.168.1.165 - Output

Style: White

Status		
Tuner		
CI		
Decoder		
Output	Output	
BISS		
Mux		
TS over IP		
System		
	ASI1 Output	
	Source	ASI Input
	ASI2 Output	
	Source	IP
	<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

3.1.6 BISS

BISS Mode: Select from OFF, Biss E or Biss 1.

Biss 1: Password is required for Biss 1 setup.

Biss E: ID and Key are required for Biss E setup.

Digital TV Processor - 192.168.1.165 - BISS Mode

Style: White

Status	BISS Mode BISS Program	
Tuner		
CI		
Decoder		
Output		
BISS	BISS Mode	
Mux		
TS over IP		
System		
	BISS Mode	Mode E
	Mode E	
	ID	*****
	Key	*****
	<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

3.1.7 MUX

Output Bit rate: Set output bit rate.

TS input: Program list from ASI input. User can click "Refresh" button to refresh the list

TS output: Select output program.

Digital TV Processor - 192.168.1.165 - Mux

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div style="text-align: center;">Mux</div> <div> <input checked="" type="checkbox"/> Mux Enable Out Bitrate(kbps) <input type="text" value="80000"/> </div> <div> TS ID <input type="text" value="1"/> Out Valid Bitrate(kbps) <input type="text" value="0"/> </div> <div> <div>Input TS (Sum: 0)</div> <div> ASI Tuner IP CI </div> </div> <div> <div>Output TS (Sum: 0)</div> <div> ASI Tuner IP CI </div> </div> <div> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </div>
--	--

3.1.8 IP Out

Digital TV Processor - 192.168.1.165 - IP Out

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System Backup	<div style="text-align: center;">IP Out</div> <div> Source Tuner </div> <div> TS Pkts Per UDP 7 </div> <div> Protocol UDP </div> <div> Time to Live <input type="text" value="255"/> (1-255) </div> <div> Type of Service Normal </div> <div> Stream IP Address <input type="text" value="30.10.80.168"/> </div> <div> Stream Netmask <input type="text" value="255.255.255.0"/> </div> <div> Stream Gateway <input type="text" value="10.10.40.1"/> </div> <div> Stream MAC Address <input type="text" value="00:0e:26:ff:5e:55"/> </div> <div> Gateway MAC Address <input type="text" value="ff:ff:ff:ff:ff:ff"/> </div> <div> Mode DVB <input type="button" value="Uni/Multicast Setup"/> </div> <div> <input type="button" value="Apply"/> <input type="button" value="Cancel"/> </div>
---	---

Source: TS/IP output signal source, select from: *Tuner, ASI, CI Descramble*.

TS Pkts Per UDP: Set how many TS packages will be encapsulated in one UDP package.

The valid range goes from 1 to 7.

Protocol: Select from *UDP* or *RTP*.

Time to Live: Set the number of the routers over which the TS over IP can be transmitted.

The valid range goes from 1 to 255.

Service type: Select from *Normal*, *Min Monetary Cost*, *Max Reliability*, *Max Throughput* and *Min Delay*.

Stream IP Address: IP address of TS/IP output signal source.

Stream Netmask: Subnet mask of TS/IP output signal source.

Stream Gateway: Gateway of TS/IP output signal source.

Stream MAC address: TS/IP output signal source Mac address.

Gateway Mac Address: Gateway MAC address.

Mode: Select from DVB and IPTV output

DVB Mode

TS which comes from the 'source' selected in previous step will be packed into IP Stream directly. It requires configuring the following parameters.

Multicast/unicast IP: Multicast or unicast IP address setting.

Target UDP port: Multicast UDP port number.

Target Mac address: Set the Mac address of PC at the receiving end in Unicast mode.

Digital TV Processor - 192.168.1.165 - DVB

Style: White ▼

<p><u>Status</u></p> <p><u>Tuner</u></p> <p><u>CI</u></p> <p><u>Decoder</u></p> <p><u>Output</u></p> <p><u>BISS</u></p> <p><u>Mux</u></p> <p><u>TS over IP</u></p> <p><u>System</u></p> <p><u>Backup</u></p>	<div style="background-color: #f0f0f0; text-align: center; padding: 2px; border: 1px solid #ccc;">DVB</div> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;">Uni/Multicast IP Address</div> <div style="width: 60%; border: 1px solid #ccc; padding: 2px;">238.1.1.1</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Uni/Multicast UDP Port</div> <div style="width: 60%; border: 1px solid #ccc; padding: 2px;">1234</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 40%;">Target MAC Address</div> <div style="width: 60%; border: 1px solid #ccc; padding: 2px;">00:00:12:34:22:55</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 40%;"> Apply Cancel </div> <div style="width: 60%; text-align: right;"> Close </div> </div>
--	--

IPTV Mode

TS which comes from the 'source' selected in previous step will be de-Muxed to several single programs, and each program is packed into one IP stream.

Channel Number: Select IPTV output channel number ranging from 1~6 (or 1~32).

Channel 0~5 (0~32): Select IP output channel to be configured.

Enable: Check this option to enable one channel.

Multicast/unicast IP: Set Multicast or Unicast IP address.

Target UDP port: Set Multicast UDP port

Target Mac Address: In Unicast Mode, Mac address of the TS reception device

TS input: Show program list of signal source.

IP output: Select the output program of each channel.

Digital TV Processor - 192.168.1.48 - IPTV

 Style: White

Status Tuner CI Output Decoder BISS Mux TS over IP System Backup	<div style="text-align: center;">IPTV</div> <div> <div> TS Input Tuner (Sum: 0) </div> <div> <div> <div></div> <div>Max Channel 1</div> <div>Switch off</div> </div> <div> Uni/Multicast IP Address 238.1.1.1 Uni/Multicast UDP Port 1234 Target Mac Address 00:00:12:34:22:55 <input type="checkbox"/> EIT <input type="checkbox"/> TDT/TOT </div> </div> <div> IP Output Tuner </div> <div> <div></div> <div></div> </div> </div> <div> <div>Apply</div> <div>Cancel</div> <div>Close</div> </div>
---	---

3.1.9 IP In

Digital TV Processor - 192.168.1.165 - IP In

 Style: White

Status Tuner CI Decoder Output BISS Mux TS over IP System	<div style="text-align: center;">IP In</div> <div> Uni/Multicast IP Address 238.1.1.1 Uni/Multicast UDP Port 1234 Stream IP Address 30.10.30.165 Stream Netmask 255.255.255.0 Stream Gateway 10.10.40.1 Stream MAC Address 00:0e:26:ff:5e:55 Protocol UDP Smoothing Auto </div> <div> <div>Apply</div> <div>Cancel</div> </div>
---	---

Multicast IP: Multicast IP address.

Multicast UDP port: Set Multicast UDP port number.

Stream IP address: IP address of TS/IP signal source.

Protocol: Network Protocol including *UDP* or *RTP*.

Stream Netmask: Subnet mask of TS/IP signal source.

Smoothing: Set Smoothing mode, including *Auto*, *Fixed rate*, *Disable*.

Stream Gateway: Gateway of TS/IP signal source.

Stream MAC address: Mac address of TS/IP signal source.

3.1.10 Backup

Main channel: select main channel from ASI or Tuner.

Backup channel: select backup channel from ASI or Tuner.

Main CH Unlock Time: set Main CH Unlock Time, ranging from 0 to 59 seconds. When signal of the main channel remains the disconnected status over this value, the unit will switch to the backup channel automatically.

Main CH Recover Time: set Main CH Recover Time, ranging from 0 to 59 seconds. When the signal of the main channel recovers and remains stable over this value, the unit will switch back to the main channel.

3.1.11 System

3.1.11.1 Device

Device Information

Unit Name: User can edit the unit name.

Serial Number: The serial number of the unit.

Optional Function

External Board Type: Select from No Exist/IP out/IP in/QAM out.

Mux Function: Enable/Disable

Filter Function: Select from Disable/Filter/Mux.

Digital TV Processor - 192.168.1.138 - Device

Style: White

	<u>Device</u>	<u>Version</u>	<u>Network</u>	<u>Login</u>
Status				
Tuner				
CI				
Decoder				
Output				
BISS				
Mux				
TS over IP				
System				
	Device Information			
	Unit Name	<input type="text" value="Digital TV Processor"/>		
	Serial Number	<input type="text" value="7a0961221351 88G"/>		
	Optional Function			
	External Board Type	<input type="text" value="100M Single Out"/>		
	Mux Function	<input type="text" value="Enable"/>		
	Backup Function	<input type="text" value="Disable"/>		
	<input type="button" value="Apply"/> <input type="button" value="Cancel"/>			<input type="button" value="Default"/> <input type="button" value="Reboot"/>

3.1.11.2 Version

Digital TV Processor - 192.168.1.138 - Version

Style: White

	<u>Device</u>	<u>Version</u>	<u>Network</u>	<u>Login</u>
Status				
Tuner				
CI				
Decoder				
Output				
BISS				
Mux				
TS over IP				
System				
	Version			
	Main Version	15PR000A	Web Version	0721
	Linux OS Version	29	FPGA Version	20
	ARM S/W Version	65	TS/IP Out NIOS	58
	Decoder Version	62	TS/IP Out FPGA	16

3.1.11.3 Network

Network

Target device

Device IP: IP address of current device.

Net mask: Network mask

Gateway: Gateway address

MAC Address

Alarm Setting

Trap IP Addr : IP address of SNMP target device.

NTP

NTP Server IP: Edit NTP Server IP.

NTP Interval(s): Edit NTP refreshing interval.

Time Zone: Select time zone.

Time

Date: Display current date.

Time: Display current time.

3.2 MR9200P/MR9400P Decoder Module

3.2.1 Status Menu

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.63 - Status

Output Status

Normal

Video: OK

Audio: OK

Input Status

ASI

Total Bitrate (Mbps)

Valid Bitrate (Mbps)

Packet Size (Bytes)

Tuner

Total Bitrate (Mbps)

Valid Bitrate (Mbps)

C/N (dB)

Eb/No (dB)

Strength (dBm)

Packet Size (Bytes)

BER (dB)

Frequency

Every 20 sec

Status Pull

Output Status

Video: Video status

Audio: Audio status

Input Status

ASI: ASI input status

Packet size: ASI input Packet size

Tuner: Tuner input status

Packet size: Tuner input Packet size

Total Bitrate: Total bitrate of ASI input

Valid Bitrate: Valid bitrate of ASI input

Total Bitrate: Total bitrate of Tuner input

Valid Bitrate: valid bitrate of tuner input

Strength: Tuner input intensity

C/N: Carrier noise of tuner input

BER: Bit error rate of tuner input

Eb/No: Tuner input quality

3.2.2 Input Menu

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.231 - Input

QPSK Setting

LNB Freq (MHz)	<input type="text" value="11300"/>
Sat Freq (MHz)	<input type="text" value="12640"/>
Symbol Rate (KBaud)	<input type="text" value="22000"/>
LNB Voltage	<input type="text" value="13V"/> ▼
LNB 22KHz	<input type="text" value="OFF"/> ▼
DisEqc	<input type="text" value="DisEqc OFF"/> ▼

LNB Freq.(MHz): LNB Local Oscillator Frequency

SatFreq.(MHz): Satellite down link frequency

Symbol rate(KBaud): Set Symbol rate

LNB Voltage: Select from OFF/13V/18V

LNB 22KHz.: Select from OFF/22K

DisEqc: Select from DisEqc Off, Port A, Port B, Port C, Port D

3.2.3 Output Menu

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.231 - ASI

[ASI](#)
[ASI2/SDI](#)
[Decoder Play](#)
[Decoder Config](#)

ASI Output

Source	<input type="text" value="Tuner"/> ▼
Packet Size(Byte)	<input type="text" value="Bypass"/> ▼

3.2.3.1 ASI Output

Source: Select from Tuner/ASI/CI scramble

Packet Size(Byte): Bypass/188

3.2.3.2 ASI2/SDI

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.231 - ASI2/SDI

[ASI](#) [ASI2/SDI](#) [Decoder Play](#) [Decoder Config](#)

ASI2/SDI Output

Mode ☐ ASI2 ☒ SDI

SDI

Audio DID ▼

Emb Audios ▼

ASI2/SDI Output

Mode: Select from ASI2/SDI

SDI

Audio DID: Select from Group1~4

Emb Audios: Select from None/One/Two/One&Two

3.2.3.3 Decoder Play

Source: Select from Tuner, ASI, CI Descramble, IP

Program: Choose the program need to be played

MR9200P - 192.168.1.231 - Decoder Play

[ASI](#) [ASI2/SDI](#) [Decoder Play](#) [Decoder Config](#)

Decoder Play

Source
 Program Playing
 Program List

3.2.3.4 Decoder Config

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.231 - Decoder Config

[ASI](#) [ASI2/SDI](#) [Decoder Play](#) [Decoder Config](#)

Biss Info

Biss Mode

Video Output

Video Standard
 Screen
 DVB Subtitle Lang
 EBU Subtitle Lang
 Subtitle Priority
 Fail Mode
 VBI Mode
 Close Caption

Audio Output

Audio Level (1-99)
 Audio Mode
 Audio Language

Video Output

Video Standard: Select from Auto, PAL, NTSC and SECAM.

Screen: Select from Auto, 4: 3 Full, 4: 3 Letterbox or 16: 9 Full.

DVB subtitle language: Choose DVB Subtitle language.

EBU subtitle language: Choose EBU Subtitle language.

Subtitle Priority: Select from DVB First or EBU First.

Fail Mode: Select from Black Screen, No Sync and Still Picture.

VBI Mode: Off/On

Close Caption: Off/On

Biss

Mode: Select from OFF, Biss E or Biss 1.

Biss 1 Setup: Password is required for Biss 1 setup.

Biss E Setup: ID and Password are required for Biss E setup.

Audio Output

Audio level: Audio level, ranging from 0-99.

Audio Mode: Select from Stereo, Left, Right and Mono

Audio language: Audio language

3.2.4 CI

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.63 - CI

CI

Slot 1 No Module

Slot 2 No Module

Source Tuner

Index	Program	Select
1	!! CCTV-3	Bypass ▼
2	!! CCTV-5	Bypass ▼
3	!! CCTV-6	Bypass ▼
4	!! CCTV-8	Bypass ▼
5	!! CCTV	Bypass ▼ Free
6	!! CCTV	Bypass ▼ Free
7	!! CCTV-9	Bypass ▼

Apply
Refresh
Cancel

Source : Select from Tuner or ASI.

Program column: Show the program name.

Select column: Select the channels which you want to descramble. Free means this channel can be received without CAM; Bypass means to skip this channel, this program will be still scrambled; Slot 1/Slot 2 means to descramble the program by CAM modules in different CI slots.

3.2.5 IP Out

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.63 - IP In/Out

IP Out

Source

TS Pkts Per UDP

Protocol

Time to Live

(1-255)

Type of Service

Stream IP Address

...

Stream Netmask

...

Stream Gateway

...

Stream MAC Address

:::::

Gateway MAC Address

:::::

Mode

Source: TS/IP output signal source, select from: *Tuner, ASI, CI Descramble*.

TS Pkts Per UDP: Set how many TS packages will be encapsulated in one UDP package. The valid range goes from 1 to 7.

Protocol: Select from *UDP* or *RTP*.

Time to Live: Set the number of the routers over which the TS over IP can be transmitted. The valid range goes from 1 to 255.

Service type: Select from *Normal, Min Monetary Cost, Max Reliability, Max Throughput* and *Min Delay*.

Stream IP Address: IP address of TS/IP output signal source.

Stream Netmask: Subnet mask of TS/IP output signal source.

Stream Gateway: Gateway of TS/IP output signal source.

Stream MAC address: TS/IP output signal source Mac address.

Gateway Mac Address: Gateway MAC address.

Mode : Select from DVB and IPTV output

DVB Mode

TS which comes from the 'source' selected in previous step will be packed into IP Stream directly. It requires configuring the following parameters.

Multicast/unicast IP: Multicast or unicast IP address setting.

Target UDP port: Multicast UDP port number.

Target Mac address: Set the Mac address of PC at the receiving end in Unicast mode.

IPTV Mode

TS which comes from the 'source' selected in previous step will be de-Muxed to several single programs, and each program is packed into one IP stream.

Channel Number: Select IPTV output channel number ranging from 1~6(or 1~32).

Channel 0~5(0~32): Select IP output channel to be configured.

Enable: Check this option to enable one channel.

Multicast/unicast IP: Set Multicast or Unicast IP address.

Target UDP port: Set Multicast UDP port

Target Mac Address: In Unicast Mode, Mac address of the TS reception device

TS input: Show program list of signal source.

IP output: Select the output program of each channel.

3.2.6 IP In

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.63 - IP In/Out

IP In

Multicast IP Address	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Multicast UDP Port	<input type="text" value="3000"/>
Stream IP Address	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="50"/> . <input type="text" value="59"/>
Stream Netmask	<input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/>
Stream Gateway	<input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="50"/> . <input type="text" value="254"/>
Stream MAC Address	<input type="text" value="00:0e:26:ff:3d:64"/>
Protocol	<input type="text" value="UDP"/>
Smoothing	<input type="text" value="Auto"/>
TS Bit Rate(Kbps)	<input type="text" value="38000"/>

Multicast IP: Multicast IP address.

Multicast UDP port: Set Multicast UDP port number.

Stream IP: IP address of TS/IP signal source.

Protocol: Network Protocol including *UDP* or *RTP*.

Stream Netmask: Subnet mask of TS/IP signal source.

Smoothing: Set Smoothing mode, including *Auto*, *Fixed rate*, *Disable*.

Stream Gateway: Gateway of TS/IP signal source.

TS Bit Rate: Input Bit rate.

Stream MAC address: Mac address of TS/IP signal source.

3.2.7 System

Device Info

Unit Name: User can edit the unit name.

Serial Number: The serial number of the unit.

[Status](#) [Input](#) [Output](#) [CI](#) [IP In/Out](#) [System](#)

MR9200P - 192.168.1.63 - System

Device Info

Unit Name

Serial Number 00000000

Version

Main Version	14PR0017	WEB Version	0103
Linux OS Version	05	ARM S/W Version	37
Decoder Version	61	FPGA Version	44
TS/IP Out NIOS	58	TS/IP Out FPGA	1a

Network

Target Device

IP Address

Subnet Mask

Gateway

Mac Address 00:0e:26:ff:3d:63

Alarm Setting

Trap IP Address

Optional Function

External Board Type

Filter Function

Machine Type

Input Type

Stream MAC Address 00:0e:26:ff:3d:64

Watch Dog Switch

Version

Main Version

WEB Version

Linux OS Version

ARM S/W Version

Decoder Version

FPGA Version

TS/IP Out NIOS

TS/IP Out FPGA

Network

Target device

IP Address: IP address of current device.

Subnet mask: Network mask

Gateway: Gateway address

Alarm Setting

Trap IP Addr : IP address of SNMP target device.

Optional Function

External Board Type: Select from No Exist/IP out/IP in/QAM out.

Filter Function: Select from Disable/Filter/Mux.

Machine Type

Input Type: Select from None/DVB-S/DVB-S2/DVB-T/DVB-C/DS3/auto.

Stream MAC Address: MAC address of the IP board.

Watch Dog Switch: Enable/Disable.

3.3 MR9400EC Encoder Module

3.3.1 Status

Status	Encoder/Transcoder	IP In/Out	Output	Mux	System
MR9400C r - 192.168.1.47 - Status					
Input Status					
IP	Valid Bit Rate (Mb/s)	<input type="text"/>	Total Bit Rate (Mb/s)	<input type="text"/>	
	Video Input Format	<input type="text" value="unknown Format"/>			
Output Status					
Encoder	Valid Bit Rate (Mb/s)	<input type="text" value="00.0000"/>	Total Bit Rate (Mb/s)	<input type="text" value="00.0000"/>	
Frequency <input type="text" value="Every 20 sec"/> <input type="button" value="Status Pull"/>					

Input Status

IP: IP input status

Total Bitrate: Total bitrate of ASI input

Video Input Format: Display format

Valid Bitrate: Valid bitrate of ASI input

Output Status

Encoder: Encoder output status

Total Bitrate: Total bitrate of encoder output

Valid Bitrate: valid bitrate of encoder output

3.3.2 Encoder

[Status](#) [Encoder/Transcoder](#) [IP In/Out](#) [Output](#) [Mux](#) [System](#)

MR9400EC r - 192.168.1.47 - Encoder

Work Mode ☒ Encoder ☐ Transcoder

Encoder Bit Rate

Video Information

Video Input Source Video Rate Ctrl

Video Bit Rate(Kb/s) Video Format

Aspect Ratio

Audio Information

Audio1 Input Source Audio1 Channel

Audio1 Format Audio1 Bit Rate

Audio1 SDI AES Audio1 Level

Audio2 SDI AES Audio2 Level

Audio2 Input Source Audio2 Channel

Audio2 Bit Rate

Output

Output Video PID Output Audio1 PID

Output PMT PID Output PCR PID

PTS Time Set Encode Audio2 PID

Output Program Number

Select Encoder in Work Mode.

Video Info

Video Input Source: Select from Composite Video, SDI Video, HDMI Video, YPbPr Video.

Video Rate Ctrl : Select from CBR, VBR.

Video Bit Rate (Kb/s): Ranging from 0~19999 Kb/s.

Video Mode: 1920x1080i_29.97/1920x1080i_25/1440x1080i_29.97/1440x1080i_25/1280x720p_59.94/1280x720p_50/720x480i_29.97/720x576i_25 Video Aspect Ratio: Select from 4:3, 16:9

Audio Info

Audio1 Input Source: Select from SDI Audio, Composite1 Audio, Composite2 Audio, HDMI Audio, AES1 Audio, AES2 Audio.

Audio1 Format: Select from MPEG1 Layer2.

Audio1 Channel: Select from Stereo, Single Channel.

Audio1 Bitrate(Kb/s): Select from 56kbps, 64kbps, 80kbps, 96kbps,

112kbps, 128kbps, 160kbps, 192kbps, 224kbps, 256kbps,
320kbps, 384kbps.

Audio1 SDI AES: Select from EMB1, EMB2, EMB3, EMB4.

Audio1 Level: Select from Ranging from 0~63.

Note: the bitrate 56kbps, 64kbps, 80kbps, 96kbps are only available at Single Channel mode. 224kbps, 256kbps, 320kbps, 384kbps are only available at Stereo Mode.

Audio2 Input Source: Select from SDI Audio, Composite1 Audio, Composite2 Audio, HDMI Audio,

AES1 Audio, AES2 Audio. Audio2 Channel: Select from Stereo, Single Channel.

Audio2 Bitrate(Kb/s): Select from 32kbps, 64kbps, 128kbps, 192kbps, 256kbps, 384kbps.

Audio2 SDI AES: Select from EMB1, EMB2, EMB3, EMB4.

Audio2 Level: Select from Ranging from 0~63.

Note: the bitrate 32kbps is only available at Single Channel mode. 256kbps, 384kbps are only available at Stereo Mode.

Output

Output Program Number: Setting range 1-65535.

Output PMT PID: Setting range 101-8190.

Output PCR PID: Setting range 101-8190.

Output Video PID: Setting range 101-8190.

Output Audio1 PID: Setting range 101-8190.

Encode Audio2 PID: Setting range 101-8190.

PTS Time Set: Edit PTS Time.

3.3.3 Transcoder

Select Transcoder in Work Mode.

Transcode Out Bitrate

Encode Out Bitrate(Kb/s): Ranging 0~999999Kb/s.

Audio Info

Audio1 Format: Select from MPEG1 Layer2, AC3, MPEG2 AAC.

Audio2 Format: Select from MPEG1 Layer2, AC3, MPEG2 AAC.

Audio2 Input Source: Select from SDI Audio, Composite1 Audio, Composite2 Audio, HDMI Audio, AES1 Audio, AES2 Audio.

Audio2 Channel: Select from Stereo, Single Channel.

Audio2 Bitrate(Kb/s): Select from 32kbps, 64kbps, 128kbps, 192kbps, 256kbps, 384kbps.

Audio2 SDI AES: Select from EMB1, EMB2, EMB3, EMB4.

Audio2 Level: Ranging from 0~63.

Note: the bitrate 32kbps is only available at Single Channel mode. 256kbps, 384kbps are only available at Stereo Mode.

Status Encoder/Transcoder IP In/Out Output Mux System

MR9400 r - 192.168.1.47 - Transcoder

Work Mode ☐ Encoder ☒ Transcoder

Transcoder Bit Rate

Video Information

Video Rate Ctrl Video Format
Video Bit Rate(kb/s) Aspect Ratio

Audio Information

Audio1 Format Audio2 Format
Encode Audio2 Level Encode Audio2 AES
Encode Audio2 Source Audio2 Channel
Encode Audio2 Bit Rate

Transcoder Program

Transcoder Audio1 PID Input Program
Transcoder Audio2 PID Input Video Format

Output

Output Video PID Output Audio1 PID
Output PMT PID Output PCR PID
PTS Time Set Output Audio2 PID
Output Program Number Encode Audio2 PID

Video Info

Video Rate Ctl: Select from CBR, VBR.

Video Bit Rate(Kb/s): Ranging from 0 to 19999 Kb/s.

Video Mode: Select from 720*480 60i, 720*576 50i, 1280*720 50p, 1280*720 60p, 1920*1080 50i, 1920*1080 60i, 1440*1080 50i and 1440*1080 60i.

Video Aspect Ratio: Select from 4:3, 16:9

Transcoder Program

Video Mode: Select from 720*480 60i, 720*576 50i, 1280*720 50p, 1280*720 60p, 1920*1080 50i, 1920*1080 60i, 1440*1080 50i and 1440*1080 60i.

Input Program: Select from Program selection.

Transcoder Audio1 PID: Select from Audio PID selection.

Transcoder Audio2 PID: Select from Audio PID selection.

Output

Output Program Number: Setting range 1-65535.

Output PMT PID: Setting range 101-8190.

Output PCR PID: Setting range 101-8190.

Output Video PID: Setting range 101-8190.

Output Audio1 PID: Setting range 101-8190.

Encode Audio2 PID: Setting range 101-8190.

PTS Time Set: Edit PTS Time.

3.3.4 IP In

Status	Encoder/Transcoder	IP In/Out	Output	Mux	System
MR9400EC r - 192.168.1.47 - IP In/Out					
IP Input					
Multicast IP Address	<input type="text" value="238.69.70.1"/>				
Multicast UDP Port	<input type="text" value="1234"/>				
Stream IP Address	<input type="text" value="10.10.70.55"/>				
Stream Netmask	<input type="text" value="255.255.255.0"/>				
Stream Gateway	<input type="text" value="10.10.70.1"/>				
Stream MAC Address	<input type="text" value="00:06:f4:1f:8e:13"/>				
Protocol	<input type="text" value="UDP"/>				
Smoothing	<input type="text" value="Auto"/>				
TS Bit Rate(Kb/s)	<input type="text" value="99999"/>				
<input type="button" value="Apply"/> <input type="button" value="Refresh"/> <input type="button" value="Cancel"/>					

Multicast IP: Multicast IP address.

Multicast UDP port: Set Multicast UDP port number.

Stream IP: IP address of TS/IP signal source.

Protocol: Network Protocol including UDP or RTP.

Stream Netmask: Subnet mask of TS/IP signal source.

Smoothing: Select from Auto, Fixed rate, Disable.

Stream Gateway: Gateway of TS/IP signal source.

TS Bit Rate: Edit Input Bit rate.

Stream MAC address: Mac address of TS/IP signal source.

3.3.5 IP Out

[Status](#) [Encoder/Transcoder](#) [IP In/Out](#) [Output](#) [Mux](#) [System](#)

MR9400EC r - 192.168.1.47 - IP In/Out

IP Output

Protocol

TS Pkts Per UDP

Time To Live

Type of Service

Stream IP Address

Stream Netmask

Stream Gateway

Stream MAC Address

Gateway MAC Address

Multicast

TS Pkts Per UDP: Ranging from 1 to 7.

Protocol: UDP or RTP.

Time to Live: Ranging from 1 to 255.

Service type: Normal, Min Monetary Cost, Max Reliability, Max Throughput and Min Delay.

Extend Board IP: IP address of TS/IP output signal source.

Extend Board Subnet mask: Subnet mask of TS/IP output signal source.

Extend Board Gateway: Gateway of TS/IP output signal source.

Extend Board MAC address: TS/IP output signal source Mac address.

Gateway Mac Address: Gateway MAC address. If the target device is in the same network segment, set the Gateway Mac Address to FF: FF: FF: FF: FF: FF.

Multicast Setup

Filter Switch

Off, All pass. Off means to block all the programs in the TS, when selected the IP output list will be empty. All Pass means to pass all the programs.

Multicast/unicast IP

Set Multicast or Unicast IP address.

Multicast UDP port

Set Multicast UDP port

Target Mac Address

Mac address of the TS reception device.

TS input

Show program list of signal source.

IP output

Select the output program of each channel.

In Multicast Setting, the unit can save up to 6 Multicast profiles, which are shown on the right side of menu. Select

3.3.6 Output

Out Channel Setting: Select from Encoder Out, Mux Out and ASI Out.

3.3.7 Mux

Output Bit rate: Set output bit rate.

TS ID: Set TS ID.

Service Name: Set Service name.

TS input: Program list from ASI input. User can click “Refresh” button to refresh the list

TS output: Select output program.

[Status](#) [Encoder/Transcoder](#) [IP In/Out](#) [Output](#) [Mux](#) [System](#)

MR9400EC r - 192.168.1.47 - Mux

Mux

Out Bit Rate(kb/s) TS ID

Service Name

TS Input

Input TS (Sum: 1)

Encoder

TS Output

Output TS (Sum: 1)

Encoder

☐ H264 Encoded

3.3.8 System

Device Info

Unit Name: User can edit the unit name.

Serial Number: The serial number of the unit.

Version

Main Version

Encoder Version

FPGA Version

WEB Version

Network

Target device

IP Address: IP address of current device.

Subnet mask: Network mask

Gateway: Gateway address

MAC Address: Display MAC address

Alarm Setting

Trap IP Addr : IP address of SNMP target device.

External Board

Type: Select from No Exist/IP out/IP in/QAM out.

Status	Encoder/Transcoder	IP In/Out	Output	Mux	System
MR9400EC r - 192.168.1.47 - System					
Device Information					
Unit Name		MR9400EC			
Serial Number		9906001350001			
Version					
MAIN Version		15f 0004 F			
FPGA Version		17.08.02			
Encoder Version		04			
Web Version		050E			
Network					
Target Device					
Device IP		192.168.01.47			
Subnet Mask		255.255.255.0			
Gateway		192.168.01.1			
MAC Address		00:06:f4:1f:8e:12			
Alarm Setting					
Trap IP Address		10.10.10.25			
Extend Board					
Select		IP In Board			

4. TECHNICAL SPECIFICATION

4.1 MR9200P Series

Tuner Input

DVB-S/S2 Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female for loop through output
75Ω	
Input Frequency Range	950 ~ 2150MHz
Input Level	-25 ~ -65dBm
Symbol Rates	DVB-S QPSK: 5~45MS/s; DVB-S2 8PSK 10 ~ 31MS/s
Roll-off Factor	DVB-S QPSK: 0.35; DVB-S2 8PSK: 0.35, 0.25, 0.2
FEC Code Rate	DVB-S2 8PSK: 2/3, 3/4, 3/5, 5/6, 8/9, 9/10

LNB Polarization	DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
LNB Band Switching Tone	0, 13V, 18V selectable
	0/22KHz selectable

DVB-S Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rates	2~45MS/s
Roll-off Factor	0.35
Puncture Rates	1/2, 2/3, 3/4, 5/6, 7/8
LNB Polarization	0, 13V, 18V selectable
LNB Band Switching Tone	0/22KHz selectable

DVB-C Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
Input Frequency Range	48 ~ 860MHz
Symbol Rates	1 ~ 7MS/s (ITU J.83 Annex A)
Constellation	64/128/256 QAM
Input Level	-15 ~ 15dBmV
Bandwidth	6/7/8MHz
Input Return Loss	7dB (typ.)

DVB-T Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
Input Frequency Range	174 ~ 230MHz (VHF); 470 ~ 860MHz (UHF)
Input Level	-20 ~ -70dBm
Constellation	QPSK, 16-QAM, 64-QAM
Carrier bandwidth	6/7/8 MHz
FTT Mode	2K/8K
Guard Interval	1/4, 1/8, 1/16, 1/32
FEC Code Rate	1/2, 2/3, 3/4, 5/6, 7/8

ASI Input

Connector	1 x BNC Female, 75Ω
Standard	DVB-ASI, EN50083-9

Input Bit Rates	≤ 100Mb/s
Package Length	188 or 204 Bytes

TS over IP (for MR9200P series)

Connector Type	1 × RJ45, 10/100M for TS/IP
Useful bit rate	70Mb/s for 10/100M
Protocol	UDP / RTP, Multicast / Unicast, IGMPv2, ARP

TS Processing

TS Input Management	Remux and demux between Tuner, ASI and TS/IP Inputs
TS Output Management	Remux and demux for 2 mirror ASI outputs
Service and PID management	Remux, filtering and remapping
PSI/SI	PSI/SI table regeneration, NIT and SDT edition, LCN Edition and Re-generation
Descrambler	DVB Common Scrambling Algorithm (CSA)
Common Interface CAMs	Double PCMCIA slots, compatible with major CA in the market

ASI Output

Connector Type	2 x BNC Female, 75Ω (one connector is shared with SDI output)
Standard	DVB-ASI, EN50083-9
Output Bit Rates	≤ 99Mb/s

Digital Video Processing

Video Standard	MPEG-2(MP@ ML)
SDI Video Resolution	576i x 25, 480i x 29.97
Video Bit Rate	< 80Mb/s

SD-SDI Output

Connector Type	1 x BNC Female, 75Ω (share with one of the two ASI outputs)
Serial Interface	SMPTE 259M, 270 Mb/s (10bit)
Level	800mV p-p
Audio Embedded	Yes

Digital Audio Processing

Number of Outputs	1 pair of stereo audio output (1 Audio PID is decoded)
-------------------	--

Analog Video Output

CVBS Connector	1 x 2.5mm phone jack (with phone jack to RCA adaptor)
Video Standard	NTSC, PAL, and SECAM

Analog Audio Output

Connector Type	1 x 2.5mm phone jack for CVBS and stereo audio
Number of Outputs	1 pair of stereo audio

Control & Monitoring

Connector Type	1× RJ45, 10/100M, for equipment IP Control
Remote Control	SNMP, HTTP Web, Proprietary HDMS Network System

Management Software

Local Control	Handheld Programmer Unit
Software Upgrade	FTP loader

4.2 MR9400P Series

Tuner Input

DVB-S/S2 Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
Input Frequency Range	950 ~ 2150MHz
Input Level	-25 ~ -65dBm
Symbol Rate	5 ~ 45MS/s for QPSK 10 ~ 31MS/s for 8PSK
Rolling-off Factor	DVB-S QPSK: 0.35 DVB-S2 8PSK: 0.35, 0.25, 0.2
Punctured Rates	DVB-S QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10 DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
LNB Polarization	0, 13V, 18V selectable
LNB Band Switching Tone	0/22KHz selectable
DiSEqC	DiSEqC 1.0

DVB-C Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
----------------	--

Input frequency	48~860MHz
Input level	45 ~ 75dBuV
Symbol rate	1 ~ 7MS/s (ITU J.83 Annex A)
Constellation	64/128/256QAM
Bandwidth	6/7/8MHz
Input return loss	7dB (typ.)

DVB-T/T2 Tuner Input

Connector Type	1 x F type female 75Ω for Input, 1 x F type female 75Ω for loop through output
Input frequency	104~862MHz (VHF/UHF)
Input level	-20 ~ -70dBm (Quasi Error Free, QEF)
Constellation	DVB-T: QPSK/16-QAM/64-QAM DVB-T2: QPSK, 16QAM, 64QAM, 256QAM
Bandwidth	6MHz/7MHz/8MHz
FFT mode	DVB-T: 2K/8K DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
Guard interval	DVB-T: 1/4, 1/8, 1/16, 1/32 DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128
FEC code rate	DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6
Input return loss	7dB (typ.)

ASI Input

Connector Type	2 × BNC Female, 75Ω
Standard	DVB-ASI, EN50083-9
Input Bit Rates	≤ 100Mb/s
Package Length	188 or 204 Bytes
TS Processing	Re-multiplexing of 2 ASI Inputs

TS over IP

Connector Type	1 × RJ45, 10/100M for TS/IP
Useful bit rate	70Mb/s for 10/100M
Protocol	UDP / RTP, Multicast / Unicast, IGMPv2, ARP

TS Processing

TS Input Management	Remux and demux between Tuner, ASI and TS/IP Inputs
TS Output Management	Remux and demux for 2 independent ASI outputs

Service and PID management
PSI/SI

Descrambler
BISS Mode
Common Interface

Remux, filtering and remapping
PSI/SI table regeneration, NIT and SDT edition, LCN
Edition and Re-generation
DVB Common Scrambling Algorithm (CSA)
BISS-1, BISS-E
Double PCMCIA slots, compatible with major CA
CAMs in the market

ASI Output

Connector Type
Standard
TS Processing

2 x BNC Female, 75Ω
DVB-ASI, EN50083-9
2 Independent TS Re-multiplexing from tuner, TS/IP
and 2 ASI inputs

HDMI Output

Standard HDMI
Video Resolution

1x HDMI 1.3 interface (partial)
1080i x 30, 1080i x 29.97, 1080i x 25, 720p x 60,
720p x 59.94, 720p x 50, 480p x 60, 576p x 50,
576i x 25, 480i x 29.97

Audio Embedded

Digital Audio Loop Through

Digital Video Processing

Video Standard

MPEG-2(MP@ ML for SD, MP@HL for HD)
MPEG 4/H.264 AVC Part 10 (MP@L3 for SD, HP@
L4.1 for HD)

SDI Video Resolution

1080i x 30, 1080i x 29.97, 1080i x 25, 720p x 60
720p x 59.94, 720p x 50, 576i x 25, 480i x 29.97

Video Bit Rate

< 80Mb/s

SD-SDI Output

Connector Type
Serial Interface
Level

2 x SD-SDI outputs in mirror, BNC Female, 75Ω
SMPTE 259M, 270 Mb/s (10bit)
800mV p-p

HD-SDI Output

Connector Type
Serial Interface
Level

2 HD-SDI outputs in mirror, BNC Female, 75Ω
SMPTE 292M, 1.485 Gbit/s (10bit)
800mV p-p

Digital Audio Processing

Number of Outputs 2 pairs of audio outputs (2 Audio PIDs are decoded)

Analog Video Output

YPbPr Connector 1 x 2.5mm phone jack, 75Ω (with phone jack to RCA adaptor)

CVBS Connector 1 x 2.5mm phone jack, 75Ω (with phone jack to RCA adaptor)

Video Standard NTSC, PAL, and SECAM

YPbPr Resolution 1080i x 30, 1080i x 29.97, 1080i x 25, 720p x 60, 720p x 59.94, 720p x 50, 480p x 60, 576p x 50, 576i x 25, 480i x 29.97

Signal Level 1.0 Vp-p±5%

Frequency Response < ±1 dB at 5.5 MHz

Chroma-Luma Delay < ±30 ns

Field Time Distortion < 2%

Line Time Distortion < 1%

Short Time distortion < 2%

Differential Gain < 4%

Differential Phase < 2°

Signal to Noise Ratio > 55 dB (luminance weighted)

Analog Audio Output

Connector type 1 x 2.5mm phone jack, 75Ω (with phone jack to RCA adaptor)

Output mode Left, Right, Dual Mono, Stereo

Number of Outputs 2 pairs of audio outputs (2 Audio PIDs are decoded)

Baseband Data Output

Subtitle DVB/EBU

VBI Teletext, WSS, VFD, VPS

Closed Caption EIA 608, EIA 708, EIA 608-to-708

Redundancy

Redundancy Port between Tuner, 2 x ASI inputs and TS/IP

Switching Condition TS Sync Loss

Switching Mode Main, Spare

Control & Monitoring

Connector Type	1×RJ45, 10/100M, for equipment IP Control
Remote Control	SNMP, HTTP Web, Proprietary HDMS Network System Management Software
Local Control	Handheld Programmer Unit
Equipment Upgrade	FTP loader

4.3 MR9400EC Series**Video Compression**

Video Resolution	1080i (1920/1440 x 1080) @25Hz, 29.97Hz, 30Hz: SMPTE274M (for 1500EC only) 720p (1280x720) @50Hz, 59.94Hz, 60Hz: SMPTE296M (for 1500EC only) 480i (720x480) @29.97Hz: SMPTE125M 576i (720x576) @25Hz: ITU-R BT.656-4
Compression Standard	H.264, High Profile Level 4.0
Video Encoding bit rate	2Mb/s-20Mb/s

Audio Compression

Audio Input	Embedded Audio, Analog audio
Audio Channels	1 pair of stereo
Sampling rate	48KHz
Audio compression bit rate	16~256Kb/s

Audio/Video Input Interface

Analog Audio	1 x 2.5mm phone jack, Stereo L/ R (with phone jack to RCA adaptor)
Analog CVBS	1 x 2.5mm phone jack (with phone jack to RCA adaptor)
HD-SDI	1 x BNC Female, 75Ω (for 1500EC)
SD-SDI	1 x BNC Female, 75Ω (for 1400EC)
YPbPr	2.5mm phone jack port
HDMI	1 x HDMI 1.3 interface

ASI Input

Connector Type	1 x BNC Female, 75Ω
Input bit rate	≤ 100Mb/s
Packet Mode	Byte

Packet Length 188/204 Bytes

TS Processing

TS Input Management Remux and demux between ASI input and the SPTS encoded

TS Output Management Remux and demux for mirror ASI outputs

Service and PID management Remux, filtering and remapping

PSI/SI PSI/SI table regeneration, NIT and SDT edition

TS over IP

Connector Type 1 × RJ45, 10/100M for TS/IP

Useful bit rate 70Mb/s for 10/100M

Protocol UDP / RTP, Multicast / Unicast, IGMPv2, ARP

Source Built-in Re-mux, ASI input, Encoder

ASI Output Interface

Connector Type 2 x BNC Female, 75Ω

Output bit rate ≤ 99Mb/s

Packet Length 188 / 204 Bytes

Signal Level 800mVpp±10%

Control & Monitoring

Connector Type 1×RJ45, 10/100M, for equipment IP Control

Remote Control SNMP, HTTP Web, Proprietary HDMS network

Management Software

Local Control Handheld Programmer Unit

Software Upgrade FTP loader

5. DEFAULT DEVICE PARAMETERS ON DELIVERY

5.1 MR9400P

Main-Menu	Sub-Menu	Default
	Status	
Inputs	DVB-S2	LNB Freq: 5150MHz Satellite Freq: 4000MHz Symbol Rate: 26850KBaud LNB Voltage: Off LNB 22KHz: Off DiSEQC: DiSEQC OFF PLS Gold Code: 0 Frequency Offset High: 5000KHz Frequency Offset Low: -5000KHz
	QAM	Constellation: 64 Frequency: 5000MHz Symbol Rate: 6875KBaud
	COFDM	Frequency: 794Mhz Bandwidth: 6Mhz
	RSSI	
	Ethernet	Stream IP Addr: 10.10.10.10 Stream Network: 255.255.255.0 Stream Gateway: 10.10.10.1 Protocol: UDP Output Smoothing: Auto Multicast IP: 238.1.1.1 Multicast UDP port:3000 TS Bit Rate: 38000Kbps
Outputs	BISS Menu	Biss Mode: OFF Biss Source: ASI Input
	CI	CI Source: Tuner
	Decoder	Source: ASI Input Program: Sid=0 Video Standard: Auto Screen: Auto -DVB subtitle language: eng -EBU subtitle language: eng

		-Subtitle Priority: DVB First -Fail Mode: Black Screen -VBI Mode: Disable -Close Caption: Off -CVBS Sub PAL: PAL-B/D/G/H/I -CVBS Sub NTSC: NTSC-M Audio Level: 99 Audio Mode: Stereo Audio Priority:eng 0/ unknown Mode: Manual Selection
	ASI1/2	ASI Input
	SDI	Embedded Audios: On Closed Caption Mode: Auto
	Mux	Mux Switch: Off Bit Rate: 50000Kb/s TS ID: 1
	Ethernet	Stream IP Addr: 10.10.10.10 Stream Network: 255.255.255.0 Stream Gateway: 10.10.10.1 Gateway Mac address: ff:ff:ff:ff:ff:ff Protocol: UDP TS Pkts Per UDP: 7 Time to live: 255 Type Of Service: Normal Source: ASI Input Mode: DVB Max Channels: 6 Multicast IP Address (DVB mode): 225.1.1.1 Multicast IP Address (IPTV mode): 238.1.1.1 Multicast UDP Port (DVB mode): 3000 Multicast UDP Port (IPTV mode): 1234 Target MAC Address: 00:00:12:34:22:56 Switch: On
	HTTP Login	username: root password: 12345

5.2 MR9200P

Main-Menu	Sub-Menu	Default
<i>Inputs</i>	<i>Status</i>	
	QPSK	LNB Freq: 5150MHz Satellite Freq: 4000MHz Symbol Rate: 26850KBaud LNB Voltage: Off LNB 22KHz: Off DiSEQC: DiSEQC OFF
	COFDM	Frequency: 794Mhz Bandwidth: 6Mhz
	QAM	Constellation: 64 Frequency: 5000MHz Symbol Rate: 6875KBaud
	RSSI	
	Ethernet	Stream IP Addr: 10.10.10.10 Stream Network: 255.255.255.0 Stream Gateway: 10.10.10.1 Protocol: UDP Output Smoothing: Auto Multicast IP: 238.1.1.1 Multicast UDP port: 3000 TS Bit Rate: 38000Kbps
<i>Outputs</i>	<i>Status</i>	
	CI	CI Source: ASI Input
	Decoder	Video Standard: Auto Screen: 4:3 Full Subtitle Priority: DVB first Fail Mode: Black Screen VBI Mode: Enable Audio Level: 49. Audio Mode: Stereo Biss Mode: OFF
	ASI	ASI Source: TUNER ASI Package Length: Bypass
	ASI2/SDI	SDI

	Mux	Mux Switch: Off Bit Rate:50000Kb/s TS ID: 1
	Filter	Bit Rate:50000Kb/s
	Ethernet	Stream IP Addr: 10.10.10.10 Stream Network: 255.255.255.0 Stream Gateway: 10.10.10.1 Gateway Mac address: ff:ff:ff:ff:ff:ff Protocol: UDP TS Pkts Per UDP: 7 Time to live: 255 Type Of Service: Normal Source: Tuner Mode: IPTV Max Channels: 6 Multicast IP Address(DVB mode): 225.1.1.1 Multicast IP Address(IPTV mode): 238.1.1.1 Multicast UDP Port(DVB mode):3000 Multicast UDP Port(IPTV mode):1234 Target MAC Address: 00:00:12:34:22:56 Switch: On
<i>System</i>	Local Setup	IP Address: 10.10.70.48 Net Mask: 255.255.255.0 Gateway: 10.10.70.1
	Trap IP Addr	10.10.70.66
	Unit Name	MR9200P
	Properties	
	Factory Settings	
	Optional Functions	
	Machine Type	
	HTTP Login	username: root password: 12345

5.3 MR9400EC

Main-Menu	Sub-Menu	Default
<i>Input Setup</i>	Input ASI Bit Rate	
	Encoder Bit Rate	
	Video Input Format	
<i>Encoder Setup</i>	Work Mode	Encode
	Encode Start Out	
	Video Setup	Video Rate Ctl: Cbr Mode: 720x576i_25 Video Bit Rate: 6000Kb/s Aspect Ratio: 4:3 Video Input Source: SDI Video
	Audio Setup	Audio1 Format: MPEG1 Layer2 Audio1 Bit Rate: 128 Audio1 Channel: Stereo Audio1 Level: 63 Audio1 Input Source: SDI Audio Audio1 SDI EMB:EMB1 Audio2 Bit Rate: 192 Audio2 Channel: Stereo Audio2 Level: 63 Audio2 Input Source: SDI Audio Audio2 SDI EMB:EMB2
	Encoder Bit Rate	8000Kb/s
	Advanced Setup	05378 05376 05377 00768 08078 500 H264 Encoded
<i>Transcoder Setup</i>	Work Mode	Encode
	Transcode Start Out	
	Video Setup	Video Rate Ctl: Cbr Format: 720x576i x 25 Video Bit Rate: 6000Kb/s Aspect Ratio: 4:3

<i>Transcoder Setup</i>	Audio Setup	Audio1 Format: MPEG1 Layer2 Audio2 Format: MPEG1 Layer2 EC Audio2 Bit Rate: 192K EC Audio2 Channel: Stereo EC Audio2 Level: 63 EC Audio2 Source: SDI EC SDI Audio2: EMB2
	Transcode Bit Rate	8000kb/s
	Advanced Setup	Output Program Number : 00768 Output PMT PID : 05378 Output PCR PID : 08078 Output Video PID : 05376 Output Audio1 PID : 05377 Output Audio2 PID : 05379 Output Audio3 PID : 08191 Output Service Name: H264 Encoded: PTS Time Set: 500
	Input Video Format	720x576i x 25
	Input Program List	
	Transcoder Audio PID1	01281
	Transcoder Audio PID2	00258
<i>Output Setup</i>	Out Channel	Encoder Out
	Output Bit Rate	14000Kb/s
<i>IP Board Setup (IP Out)</i>	IP Board IP Address	10.10.70.56
	IP Board Net Mask	255.255.255.0
	IP Board Gateway	10.10.70.1
	IP Board MAC Address	
	Protocol UDP	
	TS Pkts Per UDP	7
	Time To Live	002
	Type Of Service	Min Delay
	Gate MAC Address	
	Multicast 1	Multicast IP Address: 238.69.70.1
	Multicast 2	Multicast UDP Port: 01234
	Multicast 3	Program List: H.264 Encoded
	Multicast 4	Mode: All pass

<i>IP Board Setup (IP Out)</i>	Multicast 5	Program List: H.264 Encoded
	Multicast 6	
<i>IP Board Setup (IP In)</i>	IP Board IP Address	10.10.70.56
	IP Board Net Mask	255.255.255.0
	IP Board Gateway	10.10.70.1
	IP Board MAC Address	
	Multicast Address	238.69.70.1
	Multicast UDP Port	01234
	Protocol UDP	
	Output Smoothing	Auto
	TS Bit Rate	30000Kb/s
<i>PID Processing</i>	Program List	Encoder
	Set TransportStream ID	00008
	MUX Output Bit Rate	10000Kb/s
	MUX	
<i>System</i>	Local Setup	IP Address: 10.10.70.48 Net Mask: 255.255.255.0 Gateway: 10.10.70.1
	Remote Setting	10.10.70.25
	Unit Name	MR9400EC
	Software Version	
	Extend Board Select	No Out Board
	Factory Settings	
	SN	
	Composite Audio Boost	Disable
	Login ID	root
	Login Password	12345


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