



Matchmaster

For the Best

14MM-DTM4-R INSTRUCTION MANUAL



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1 GENERAL

1.1 Description

The 14MM-DTM4-R is an encoder modulator featuring 4 HDMI inputs with 2 x DVB-T RF outputs. Encoding using H.264 video codec, the DTM4-R automatically adjusts the compression rate to the available bandwidth based on the set modulation parameters. Featuring agile output channels, the DTM4-R is flexible and adaptable to use in any RF network.

1.2 Specifications

INPUT	
Input Channel	4
Input Connections	HDMI
Video System	480i/p, 576i/p, 720p, 1080i/p
RF OUTPUT	
Type	1 F-type output port for 2 carriers, 75 Ω
Frequency	DVB-T: 177-858 MHz
Output Level	95 dBuV
RF Level Adjustment	0 - -30dB
Attenuation step	1dB per step
MER	35dB Min.
MODULATION	
Video Resolution	1080p 25/30 Max
Video Compression	H.264 Baseline Profile Level4.0
Video Bit Rate	12Mbps Max
Audio Compression	MPEG-2/AAC
Audio Bit Rate	192Kbit/s
Editable Field	Service Name , Service ID, LCN, NIT Version, TS ID , Network Name, Network ID , Original Net ID, Country
DVB-T	
Standard	DVB-T (ETSI EN 300 744)
Carrier (OFDM Mode)	2K,8K
Guard Intervals	1/4, 1/8, 1/16, 1/32
Code Rate (FEC)	1/2, 2/3, 3/4, 5/6, 7/8
Constellations	16QAM, 64QAM, QPSK
Bandwidth	6MHz, 7MHz, 8MHz, 7-8MHz
MANAGEMENT / CONTROL	
Configuration	6 Local keys on Upper cover
Web Management	RJ-45 Ethernet port
GENERAL	
Display	LCD panel @ 2 x 16 characters (on front panel)
Power Supply	AC 100-240V 50/60Hz
Consumption	20 W
Languages	English
Dimensions	19"x12.5"x1.75"
Weight	2.8kg

*Specifications subject to change without prior notice.

2 INSTALLATION

2.1 What's in the Box

- 1x 14MM-DTM4-R Modulator
- 1x Power Cable

2.2 Connection

The 14MM-DTM4-R unit comes standard with HDMI inputs. Use a quality 75Ω coaxial cable with "F" connectors from the unit's RF OUT jack to the distribution system or directly to a television.

Connect the power cord to an appropriately rated AC power outlet.

Once connected to power, the device turns on and it takes about 20 seconds to be operational. Then the message "Initial Please wait" appears on the display. After 60 seconds the message "Status (Enter) & IP Address 192.*.*" on the display.

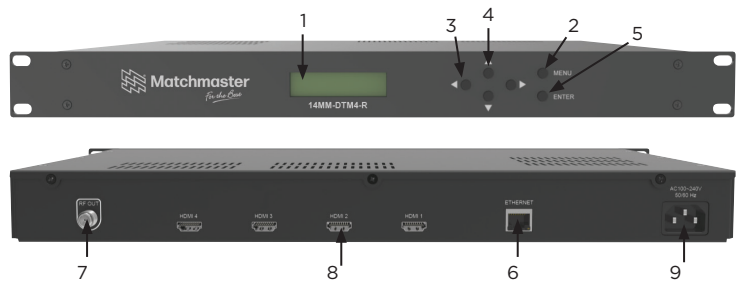
```
Status (Enter)
192.168.1.100
```

2.2.1 Device Programming and Setup

Connect an Ethernet cable directly (no Cross Over cable required) to the Ethernet Port on the rear panel of the modulator or connect the Ethernet cable to an Ethernet switch. Connect an Ethernet Cable to your PC.

3 OPERATING INSTRUCTIONS

3.1 Description of controls and components



1	LCD Display	Configuration and system status
2	Key PAD / Home	Return to start menu.
3	Key PAD / Left & Right	Move Right / Left between menu / characters.
4	Key PAD / Upper & Down	Increase / Decrease value of the figure / field.
5	Key PAD / Enter	Select parameter / menu.
6	Ethernet Port	RJ-45
7	RF output	"F"-Female 75Ω
8	HDMI Input*4	HDMI IN
9	AC input	AC 100-240V / 50-60Hz

3.2 Accessing and configuring the device.

3.2.1 Beginning Setup

DEVICE Programming and Setup

1. Apply power.
2. Connect Audio / Video source

Connecting to the GUI Interface:

1. Connect an Ethernet cable directly to the Ethernet port on the rear panel of the modulator or connect the Ethernet cable to an Ethernet switch /router. Connect an Ethernet Cable to your PC.

2. Using a Windows-based PC, make sure your PC IPV4 address is set to the same subnet as the modulator so you can connect. Check IP address from front panel display.

```
Initial...
Please Wait...
```

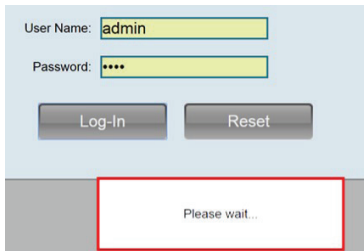
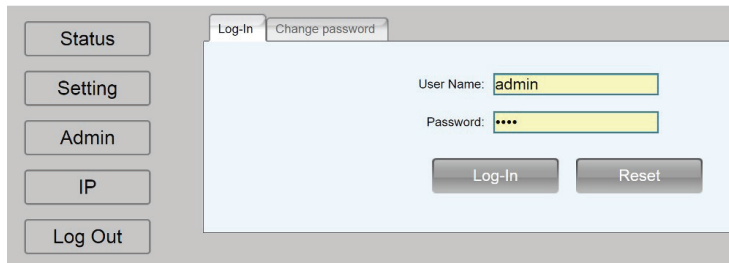
```
Status (Enter)
192.168.1.100
```

3. Open your web browser and key in the IP address.



3.2.2 Step 1: Login

Login Password:
Default User Name: admin
Default Password: 0000



3.2.3 Step 2: Status Tab

Overview page of encoder and modulation parameters are shown

RF No.	Frequency	Constellation	Guard Interval	Code Rate	FFT Carrier	Bandwidth	Attenuation
RF 1	CH29 536.5 MHz	64QAM	1/16	5/6	8K	7 MHz	00 dB
RF 2	CH31 550.5 MHz	64QAM	1/16	5/6	8K	7 MHz	00 dB

RF No.	Country	Original Net ID	Network ID	Network Name	TS ID	NIT Version
RF 1	AUSTRALIA	8234	12801	Private Network	128	0
RF 2	AUSTRALIA	8234	12802	Private Network	129	0

No.	Service Name	Service ID	LCN	ON/OFF	Video Output	Audio Output	Video Input	Input Video Type	Status
CH 1	CH1	1	1	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN	🟢
CH 2	CH2	2	2	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN	🟢
CH 3	CH3	3	3	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN	🟢
CH 4	CH4	4	4	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN	🟢

No.	PMT	Video PID	Audio PID
CH 1	37	32	33
CH 2	53	48	49
CH 3	69	64	65
CH 4	85	80	81

3.2.4 Step 3: Setting Tab

Use the Setting tab to set the RF Network setting, and Channel & Encode settings.

RF No.	Frequency	Constellation	Guard Interval	Code Rate	FFT Carrier	Bandwidth	Attenuation
RF 1	CH29 536.5 MHz	64QAM	1/16	5/6	8K	7 MHz	00 dB
RF 2	CH31 550.5 MHz	64QAM	1/16	5/6	8K	7 MHz	00 dB

RF No.	Country	Original Net ID	Network ID	Network Name	TS ID	NIT Version
RF 1	AUSTRALIA	8234	12801	Private Network	128	0
RF 2	AUSTRALIA	8234	12802	Private Network	129	0

No.	Service Name	Service ID	LCN	ON/OFF	Video Output	Audio Output	Video Input	Input Video Type
CH 1	CH1	1	1	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN
CH 2	CH2	2	2	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN
CH 3	CH3	3	3	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN
CH 4	CH4	4	4	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN

No.	PMT	Video PID	Audio PID
CH 1	37	32	33
CH 2	53	48	49
CH 3	69	64	65
CH 4	85	80	81

3.2.5 Step 4: Saving the configuration

Select "Apply" once all parameters are set.

Changes made to an individual setup tab require the installer to select "Apply" to save any changes.

No.	Service Name	Service ID	LCN	ON/OFF	Video Output	Audio Output	Video Input	Input Video Type
CH 1	CH1	1	1	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN
CH 2	CH2	2	2	ON	H.264	AAC	HDMI	NO SIGNAL IN
CH 3	CH3	3	3	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN
CH 4	CH4	4	4	ON	H.264	MPEG-2	HDMI	NO SIGNAL IN

3.2.6 Step 5: IP Configuration Tab

Use the IP tab to configure the device's IP address, Subnet Mask & Gateway. You can set the address configuration to use DHCP if preferred.

Connection Mode	IP Address	Mask	Gateway
Static	192.168.1.100	255.255.255.0	192.168.1.1

3.2.7 Step 6: Save IP Configuration

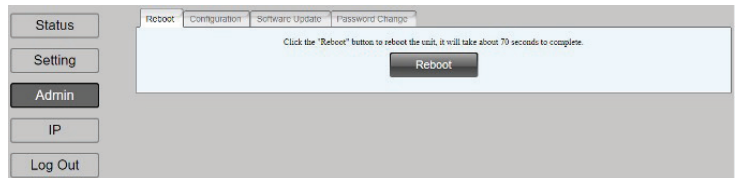
Select "Apply" once all parameters are set.

Connection Mode	IP Address	Mask	Gateway
Static	192.168.1.100	255.255.255.0	192.168.1.1

Apply Reset

3.2.8 Step 7: Administration

Use the Admin tab to access the device's Reboot, Configuration, Software Update and Password Change functions



Administration Page Functions	Actions
Reboot	Reboot device. All unsaved settings will be lost.
Configuration	Users can upload a file with pre-saved configuration settings to device.
Software update	Upload a saved firmware file
Password Change	Create and save new password for GUI

To upload a configuration file- simply click "Choose File" then locate the file you want to upload. Click "Upload" to install the configuration files. This function is helpful to the installer when installing a large number of encoders in a single system.

4 MENU TREE

DVB-T Setting	NO	Layer 1	Value	Layer 2
Network Edit	1	RFX Country	Other	AUSTALIA, CROATIA, CZECH, DENMARK, ESTONIA, FINLAND, FRANCE, IRELAND, ITALY, LATVIA, NETHERLANDS, NEW ZEALAND, NROWAY, POLAND, PORTUGAL, SLOVAK, SWEDEN, UK, Other
	2	RFX ONID	8350	1-65535
	3	RFX Network ID	13057	1-65535
	4	RFX Network Name	Private Network	
	5	RFX TS ID	128	RJ-45
	6	RFX NIT Version	0	0-31
CH&Enc Edit	1	CHX Service Name	CH 1	
	2	CHX Service ID	1	1 - 65535
	3	CHX LCN	1	1 - 1023
	4	CHX ON/OFF	ON	ON,OFF
	5	CHX Video Output	H.264	
	6	CHX Audio Output	MPEG-2	MPEG-2/AAC
	7	CHX Video Input	HDMI	
	8	CHX Input Video	No SIGNAL IN	
	9	CHX Status	Running	
	10	CHX PMT	37	
	11	CHX Video PID	32	
	12	CHX Audio PID	33	
RF Edit	1	RFX Frequency	178.75MHz	177.00 MHz - 858.00 MHz
	2	RFX Constellation	64QAM	
	3	RFX Guard Inter.	1/32	
	4	RFX Code Rate	7/8	
	5	RFX FFT Carrier	8K	
	6	RFX Bandwidth	8 MHz	6, 7, 8, 7 - 8 MHz
	7	RFX Attenuation	00 dB	00 - -30 dB
Load Default	1	Connection Mode	Static	Static, DHCP
	2	IP Address	192.168.0.01.100	
	3	Mask	255.255.255.000	
	4	Gateway	192.168.0.01.001	
Change Password	1	Load Default? Yes No		
	1	New Password	0000	