

DATASHEET



CRT1041M-C-02 **4-channel DVB-C modulator**

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1. Overview

CRT1041M-C-02 is a compact size 4-channel DVB-C modulator. Transport stream of four independent multiplexers come respectively to four DVB-ASI inputs of modulators. Two pairs of QAM modulated signals output as adjacent up-converted carriers. Central frequency of the first channel tunes in the range 48–850 MHz, and the other one is always shifted 8 MHz up. Modulation types of 16, 32, 64, 128 and 256QAM are supported. Set of 6.750, 6.875 and 7.000 Msps symbol rates are intended for 8 MHz channel spacing applications. Basically the device can be used in cable, MMDS or SMATV digital TV networks.

2. Features

- **4 DVB-ASI inputs.** EN 50083-9 compatible inputs to receive DVB transport streams from DVB multiplexers.
- **4 DVB-C modulators.** Four SPTS or MPTS are modulated independently with one of QAM modulation types in accordance with EN 300429.
- **RF Output.** Two adjacent QAM modulated signals are up-converted to the frequency band of 48-850 MHz.
- **Device control.** The device control is performed over WEB interface through 100Mbit Ethernet port.
- **AC 220V power supply.** 220V power supply is used for device reliable long time operation.
- **Compact size.** Compact (19", 1U) device size let you efficiently use the device as a component of your digital TV Head-End.
- **Application.** CATV, MMDS, SMATV.

3. General description

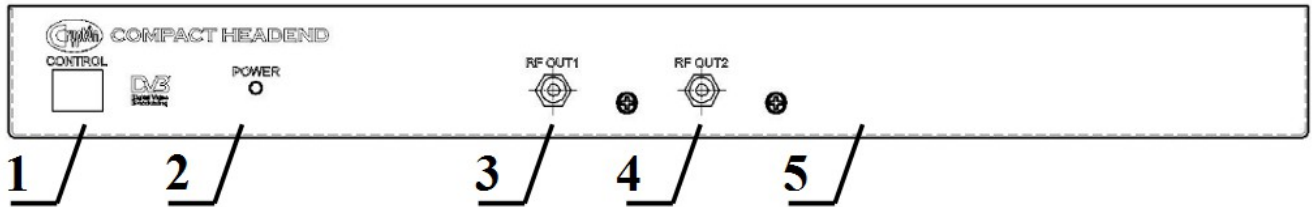


Fig. 1 Front panel.

Front panel description

1. 100 Mbit Ethernet control port;
2. Power LED;
3. RF output of the first modulator;
4. RF output of the second modulator;
5. Modulator front panel.

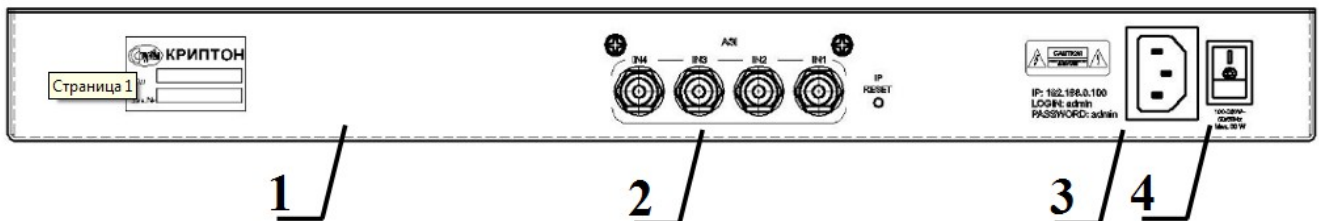


Fig. 2 Rear panel

Rear panel description

1. Modulator rear panel;
2. 4 DVB-ASI QAM modulator inputs;
3. Power socket 220V;
4. Power switch;

4. Functional block diagram

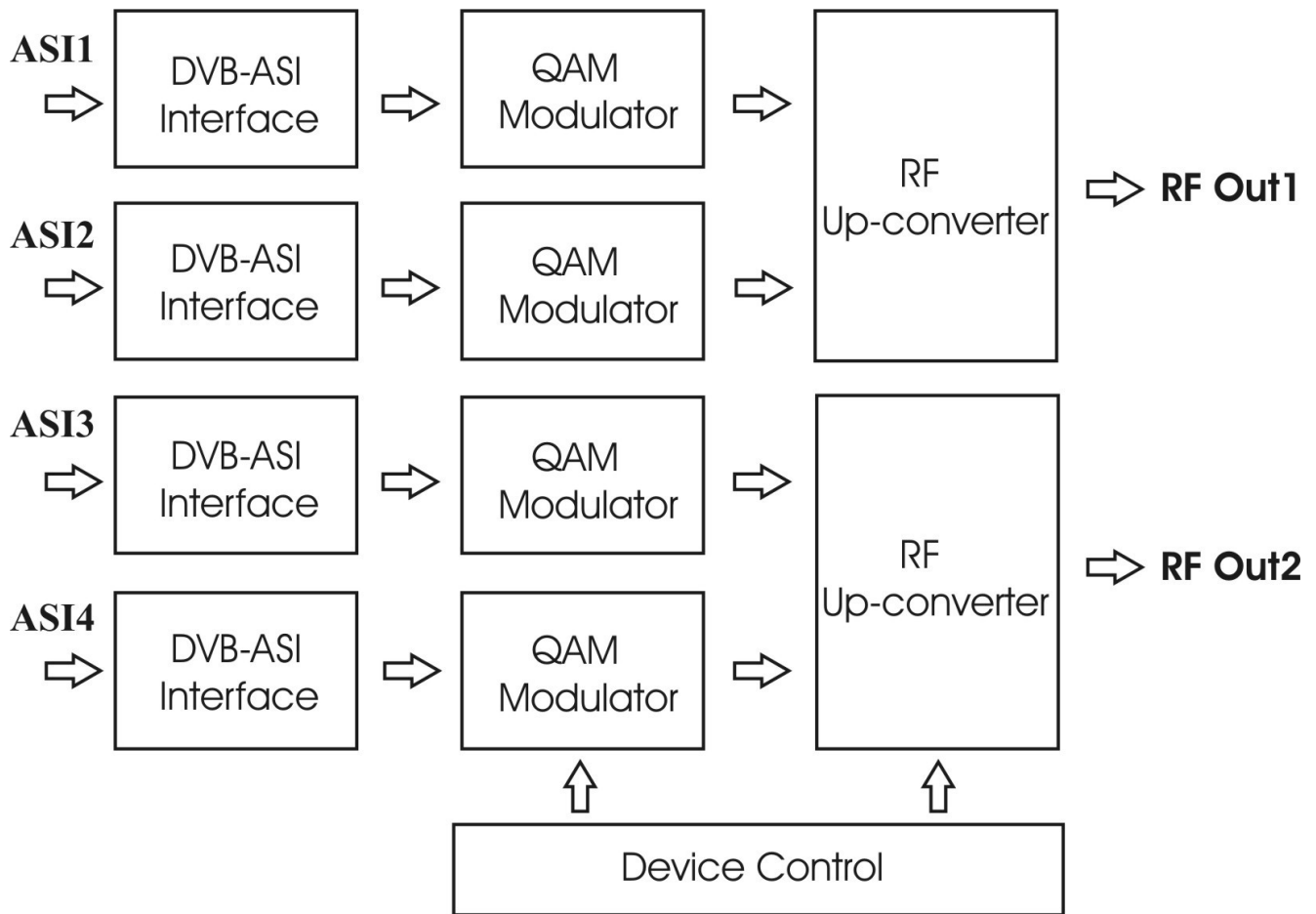


Fig. 3. Functional block diagram of CRT1041M-C-02

Functional blocks description.

DVB-ASI Interface. DVB-ASI interface is used in the device to receive DVB multiplexed transport stream.

QAM Modulator. QAM modulator converts input transport stream into DVB-C compatible radio signal.

RF Up-converter. RF Up-converter shifts two adjacent carrier QAM modulated signal to the user defined carrier within 48-850 MHz.

Device Control. WEB interface is used for device configuration.

5. Technical specification

DVB-ASI Input	
Number of channels	4
Specification	EN 50083-9
Input impedance	75 Ohm
Connector type	IEC 169-8, BNC-type
Operation modes	Byte/packet, 188/204 (auto detect)
Maximum input bit rate	213 Mbps(packet), 72Mbps(byte)
DVB-C Modulator	
Number of RF outputs	2
Number of QAM modulated channels	4 (Each RF output provides up to 2 adjacent QAM modulated channels)
Adjacent channel carrier shift	8 MHz
Specification	EN 300429
SR	6.750, 6.875, 7.000 Msps
QAM modulation type	16, 32, 64, 128, 256
MER, 256QAM	40 dB
Spurious and harmonics	-50 dBc
Output attenuator	0 – 31 dB, step 1dB
Up-converter	
Frequency range	48 – 850MHz
Output power	110±2 dBuV
Output impedance	75 Ohm
Connector type	IEC F-type

6. Device control over WEB

6.1 Authentication page



CryptOn CRT1041M-C-02
Language English

Login to the device

User name

Password

Login


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After RESET the device with “IP Reset” button you can enter the WEB interface with default factory settings:

IP address	192.168.0.100
Login	admin
Password	admin



6.2 Modulator configuration page

**CRT1041M-C-02**

[Modulator parameters](#) | [Config](#) | [Help](#) | [Logout](#) | Language English

Modulator 1	Modulator 2
Frequency, kHz <input type="text" value="100000"/>	Frequency, kHz <input type="text" value="116000"/>
Symbol Rate, kSps <input type="text" value="6750"/>	Symbol Rate, kSps <input type="text" value="6750"/>
Modulation Type <input type="text" value="QAM16"/>	Modulation Type <input type="text" value="QAM16"/>
Attenuator, dB <input type="text" value="0"/> ▲▼	Attenuator, dB <input type="text" value="0"/> ▲▼
First channel <input type="checkbox"/>	First channel <input type="checkbox"/>
Second channel <input type="checkbox"/>	Second channel <input type="checkbox"/>

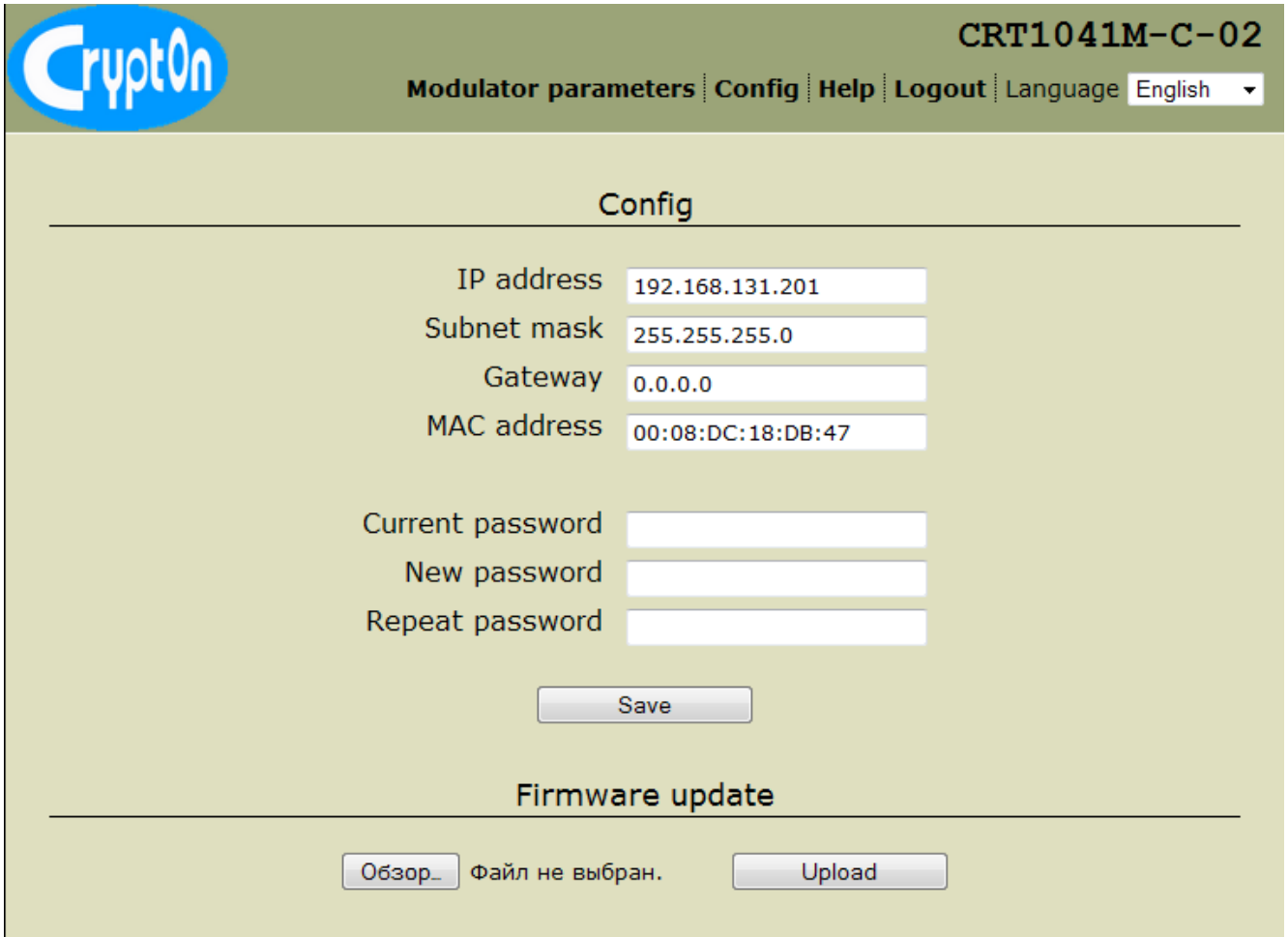
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ver. 1.1.1.3

Modulator Output1 and Modulator Output2 settings can be made on the upper page.

6.3 WEB interface configuration page



CryptOn CRT1041M-C-02

Modulator parameters | **Config** | Help | Logout | Language English ▾

Config

IP address

Subnet mask

Gateway

MAC address

Current password

New password

Repeat password

Firmware update

Файл не выбран.

Use this page to adapt the device network interface to the requirements of your network environment.

7. Ordering information

Model	RF Band	Options
CRT1041M-C-02	48 – 850 MHz	-

8. Abbreviations

DVB	-	Digital Video Broadcasting
DTV	-	Digital Television
QAM	-	Quadrature Amplitude Modulation
SMATV	-	Satellite Master Antenna Television
CATV	-	Cable Television
MMDS	-	Multichannel Multipoint Distribution System
SR	-	Symbol Rate