RFT-8X7

DVB-S/S2/T/C to IP streamer
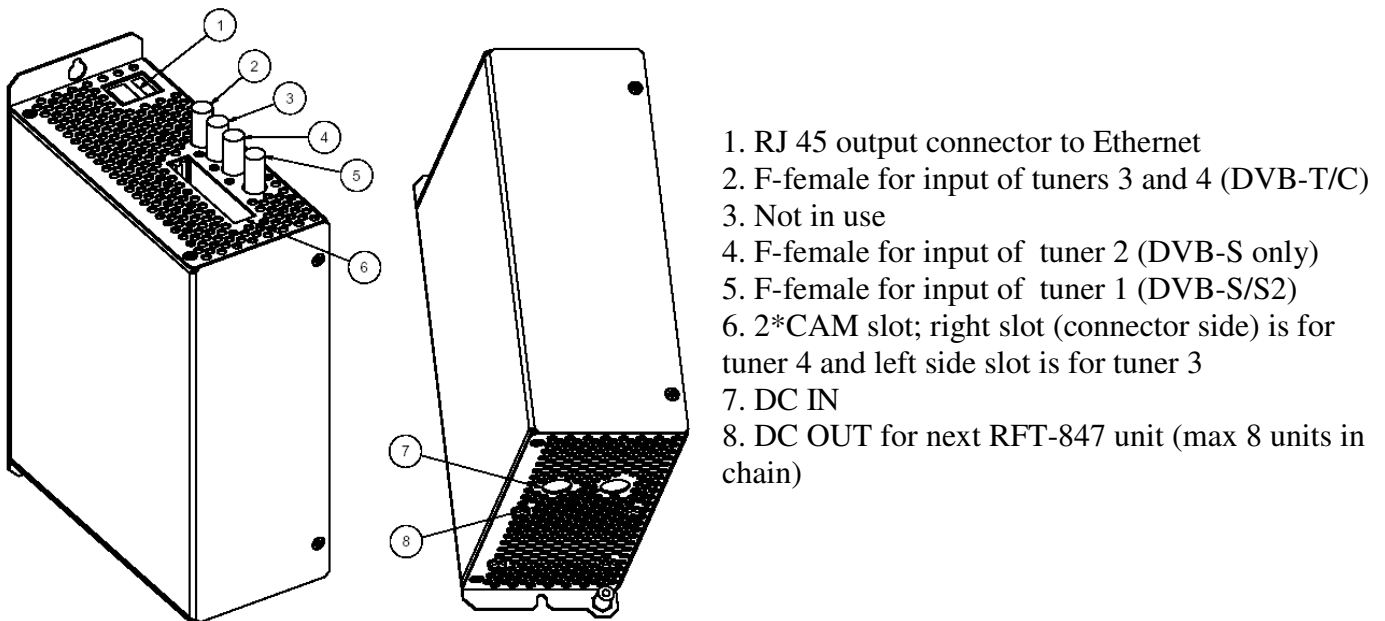
User Manual

1. Purpose of use

RFT-8X7 is HD compatible IP streamer designed for a processing two 8PSK/QPSK modulated satellite signals (DVB-S/S2) and two COFDM/QAM modulated signal to data broadcast (IP) connected to Ethernet.

With one RFT-8X7 unit can be transmitted 8 programs (max. average bit rate 5Mbit/s/program) when there are 8 or more simultaneous users (Multicast). When there are 7 or less simultaneous users, 40-50 SD programs (total bit rate 40 Mbit/s) can be transmitted (Unicast). The programs can be received with VLC Player, IP STB or Smart TV.

2. Installation

The connections are shown in Fig 1.

1. RJ 45 output connector to Ethernet
2. F-female for input of tuners 3 and 4 (DVB-T/C)
3. Not in use
4. F-female for input of tuner 2 (DVB-S only)
5. F-female for input of tuner 1 (DVB-S/S2)
6. 2*CAM slot; right slot (connector side) is for tuner 4 and left side slot is for tuner 3
7. DC IN
8. DC OUT for next RFT-847 unit (max 8 units in chain)

RFT-8X7 is mounted directly on the wall. Do not cover the air passage holes.

Signal from LNB is fed to F-female connectors 4 and 5. Tuner 1 (DVB-S/S2) is connected to connector 5 and tuner 2 (DVB-S only) is connected to connector 4.

Maximum total current of LNB connector is 250 mA.

Signal from antenna or cable network is connected to F-female connector (2). There are two DVB-T or DVB-C tuners connected to input connector 2.

Power supply unit is connected to the left side DC connector of RFT-8X7 at the bottom of unit (7). You can loop-through DC from the right side DC connector (8) to next unit with the DC cable. Maximum eight RFT-8X7 units in chain can be supplied with one power supply (RFP-804).

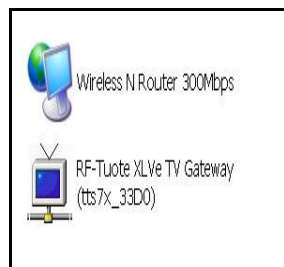Ethernet cable is connected to RJ 45 connector (1).

3. Setting up the system
This manual is only for main functions of RFT-8X7 unit. The other functions are purposed only for advanced users.

The system is programmed with PC via Web browser. There are two options.
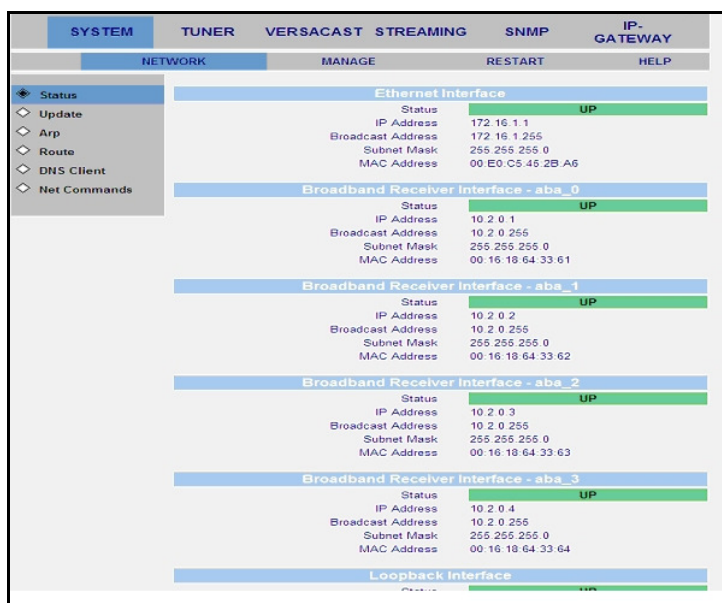**Option 1. Setting IP address with DHCP and accessing by using UpnP protocol**

1. Connect Ethernet cable from RFT-8X7 to the existing LAN with a router
2. RFT-8X7 is recognised automatically by router. In some routers power must be switched OFF and again ON
3. Go to Network Task and double click "Show icons for networked UpnP devices". Then you see that RFT-8X7 is connected network.
4.

5. Double click RFT-8X7 to get the web access.
6. When prompted for the login and password, then write "webadmin" for both. Then you see the main menu (see below).

Option 2. Setting RFT-8X7 via default IP address

1. Connect Ethernet cable from RJ 45 connector to computer.
2. The factory set IP address of each RFT-8X7 is 172.16.1.1 and subnet mask is 255.255.255.0.
3. Set the IP of PC to e.g 172.16.1.2 and sub net mask to 255.255.255.0.
4. Open the web browser like IE, Firefox, Opera etc…
5. Write to address field 172.16.1.1 and then enter.
6. Set log in and password "webadmin" for both. Then following screen displays.

This screen is the default entry to the HTML interface.
The menu structure is in three levels e.g SYSTEM→ NETWORK → Status. The selected option is highlighted.

4. DVB configuration

4.1 Satellite tuner

NOTE! Max. input Symbol Rate is 40 Msymb/s per transponder.

To set satellite tuner parameters go to TUNER → Update

Select Tuner 1 (DVB-S/S2) and set correct parameters. Then press "Update", The "Status" screen displays.

NOTE!   1. Note a dot (.) when frequency is entered in GHz.
            2. When DVB-S2 (HD) programs are received, tick firstly "DVBS2" Mode" and then "Apply".

Check that signal and data are locked and signal strenght is acceptaple . The acceptable range (green beam) is 22…88% (-70… -25 dBm). Yellow beam means that signal range is out of acceptaple range.

Note! The beam "meter" is only directive. Go to STREAMING/PROGRAMS/Update and check if channels are in the list.

When settings are ready, go to TUNER→ MANAGE and select Save Session.

IMPORTANT! Save Session must be selected for each tuner separately.

Tuner 2 (DVB-S only) settings are made similar way.

4.2 DVB-T/C tuner

Select Tuner 3 to set parameters of terrestrial or cable signal.

Set the correct parameters and press "Update". The "Status" screen displays.

Note! The frequency is entered in kHz.

Check that signal and data are locked and signal strenght is acceptaple . The acceptable range (green beam) is 22…88% (40 – 55 dBuV) . Yellow beam means that signal range is out of acceptaple range.

Note! The beam "meter" is only directive. Go to STREAMING/PROGRAMS/Update and check is channels are in the list.

When settings are ready, go to TUNER→ MANAGE and select Save Session.

Tuner 4 settings are made similar way.

5. Streaming to network

After tuning the the transponders/multiplexes you must select the programs you want to stream to network.

When there are 8 or more users, then following settings are recommended.

Set a tick to " Display only favorite channels" and "Enable IGMB OnDemand streaming".

Then stream is transmitted only when requested from any of IP device. When there are less than 8 users set tick to " Disable OnDemand Streaming.

Select STREAMING/PROGRAMS/Update. The list of all available programs is shown on the display.

Go to STREAMING/MANAGE/Default Language to enable Subtitles. Then press "Submit".

Select "Full SPTS" if you want to transmit all Audio/Subtitling languages or a specific language.

When there are maximum 7 IP devices in the network, then users can receive simultaneously any of selected programs (up to 50 programs/ total bit rate 40Mbit/s). Do not press "Start" button of any programs.

When there are more than 8 or more IP devices in the network, maximum 8 programs (max bit rate 40 Mbit/s) can be selected with "Start" button. Then the system is set to stream only those 8 selected programs to the network.

Note! When max. 8 programs are streamed, then ticks must be removed from "F-column" to prevent overload.

When "Start" is pressed, the field is greylighted. "Action" button becomes blue and reads "Stop".

To stop streaming, press "Stop".

If only one RFT-8X7 unit is installed, then it is not necessary to change default IP addresses.

When several RFT-8X7 units are installed, then the router will select the proper IP addresses for eac unit. The Port setting can be same in both cases.

Select "Status" to see "Streaming status" .

4. Technical specification

8PSK/QPSK INPUT

Number of tuners	1* DVB-S, 1* DVB-S/S2
Input frequency range	950 - 2150 MHz
Input level	-70 … -25 dBm
Waveform	8PSK, QPSK (SCPC, MCPC)
Symbol rate	4-40 MS/s
FEC decoder	Automatic
CI slot	1 (option)

COFDM/QAM INPUT

Number of tuners	2
Standard	DVB-T, ETS 300 744
Modulation	COFDM
Input level	40-55 dBuV
Bandwidth	6 MHz, 7 MHz or 8 MHz
Constellations	Automatic
Quard Interval	Automatic

IP OUTPUT

Encapsulation	SPTS
Transport protocl	UDP/TCP/IP
Max output bit rate	40 Mbit/s
Power consumption	16VDC/1,1A
Output connector	RJ 45
Dimensions	71mm*214mm*149mm

This symbol on the product or on its packing means that within the European Union the product must be taken to separate collection at the product-end-of life.

Do not dispose of these products as unsorted municipal waste.

Fore more information about where you can drop off your waste equipment for recycling, please contact your local city office, your house disposal service or the shop where you purchased the product.