EKSELANS BY ITS

USER MANUAL

CM 8S-IP

082294

Streamer with 4 inputs for 8 DVB-S/S2/S2X, 13/18V, 22KHz

V01

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INTRODUCTION:

Description:

4 input transmodulator - 8 DVB S/S2/S2X tuners, 13/18V, 22KHz, DiSEqC, Unicable (SATCR-DCSS). Multistream / BISS compatible. Up to 64 SPTS/MPTS IP STREAMS output. Programming from PC connected to the power supply. Integrated remote control from the FA 524 Key power supply.

Key features:

- OCTO module with 4 SAT inputs and 8 tuners.
- Independent control of each input 13/18V - 22KHz - DiSEqC (A/B/C/D)
- IP output 1000Mbps SPTS/MPTS in UDP/RTP format.
- Up to 64 streams output / 512 PIDs.
- SAP function.
- IGMP Query and IGMP Auto-Join.
- Programming through PC Software (CM Management) for Windows.
- Configuration cloning and reporting.
- On-site (FA 510 / CM PR) or remote (FA 524) management using CM Key.

Packaging Contents:

- 1x CM 8S-IP Module (082294)
- 1x Power cable (082123)
- 1x Mounting tab (251008)

CONNECTIONS AND INTERFACES:

1.-Signal input.

2.-Status LEDs. Input tuner status information.

3.- IP output up to 64 different output streams.

DIFFERENT output IPs are recommended for each Stream. The ports can be the same, but above 50000.

Example:

S. Id.	Name	CI	OUT(12/64 - 114/512 PIDS)
149	Antena 3		239.255.254.40:55555
151	laSexta		239.255.254.43:55555
153	neox		239.255.254.44:55555
154	nova		239.255.254.46:55555
188	FDF		239.255.254.57:55555
189	Divinity		239.255.254.41:55555
190	Telecinco HD		239.255.254.42:55555
191	Cuatro HD		239.255.254.49:55555
490	tdp HD		239.255.254.47:55555
493	24h HD		239.255.254.54:55555
494	La 1 HD		239.255.254.55:55555
498	La 2 HD		239.255.254.45:55555

1.-Ventilation board.

2.-Power connector for the case of using a single module with FA 55 power supply.

3.-Module power port and input data bus. (IN)

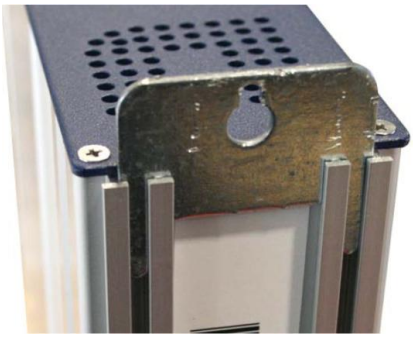
4.- Power port to the next module and output data bus. (OUT)

INSTALLATION AND CONNECTION:

General installation and connection:

1.- For installations of several modules (headend) or a single module, attach the transmodulator module to a wall chassis (CHM TR) or a rack chassis (CHR TR).

To do this, assemble the supplied metal part (COD: 251008) on the upper rear of the module as indicated in the image.



⚠ **Important note**: In the case of making a headend with several modules, always have the power supply to the **left** of the modules to be installed.

2.- Connect the power supply (FA 524) to the module, or connect it to the previous module using the supplied power cable.

The FA 55 power supply can also be used to power a single module.

3.- Connect the input signals to the transmodulator inputs.

⚠ **Important note**: Pay special attention to the type of entrance and the port. Follow the directions on the front.

4.- Install the "CM Management" software on the PC. It can be downloaded from the website www.ek.plus Software / CM Headers. Link

5.- To program the module, make any of the following connections:

5a.- Programming by PC – FA 524 via **USB.** Connect the FA 524 power supply to a PC using a USB (A) - USB (B) cable.

5b.- Programming by PC – FA 524 via **Ethernet**. Connect the source and PC via Ethernet cable, put them on the same LAN (the source comes with the address **192.168.0.222**).

If you need to connect from outside the LAN itself, you need to pre-activate the CM KEY passkey.

5c.- Programming by PC - CM PR via USB. Connect the module to the device using the power and data cable. Connect the PC to the CM PR using the USB cable.
6.- Execute the PC programming SW.
⚠ Important note: Connect the FA 524 power supply or the CM PR programming device and FA 55 power supply to the PC before running the software so that the PC driver detects it correctly.

Installing a multi-module headend:

If you want to install the module as one more element of a headend formed by other modules of the CM series, it is very important to follow the following instructions:

Connect the different modules in series using the power cable provided after the power supply, which must always be to the left of the header.

Verify the consumption of the modules. Up to 5 modules can usually be connected to an FA 524 power supply. However, we recommend checking the consumption of the modules to be installed.

It is recommended that IC modules be placed next to the power supply.

PROGRAMMING SOFTWARE "CM Management":

The "CM Management" programming software allows you to program and manage all the modules of the CM header. The program is only available for Windows operating system (XP version, 7 and above). Once downloaded from the website www.ek.plus , Software / CM Header, run it having previously connected the PC to the USB port of the FA 524 or CM PR power supply. This will ensure that the driver detects the control panel.

Main screen:

The appearance of the main screen of the "CM Management" software is as follows:

Always check that you have the latest version of the WEBSITE software installed.

We can connect directly by USB or LAN.

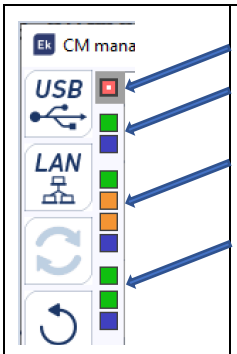
In the case of LAN, we will select the equipment and connect by pressing: supply.

- ID: We will enter the MAC of the corresponding power
- KEY: we will enter the CM Key, if there is one. If not "0".
- LOCAL IP: we will enter the local IP in the case of connecting by LAN from the same network.
- DESCRIPTION: description.

Using the "CM Management" software, all modules connected to the power supply can be managed and programmed. Here's what each of the main side options does to do:

	Connect to the modules via the power supply using the USB connector.
	Connect to the modules via the power supply using the LAN interface.
	Button to update Firmware of any of the cards. If there is a SW available, the corresponding card will be marked with a white triangle in the inner left corner. Double-clicking will change color to orange and the icon will change from gray to blue. Clicking on the icon will update the FW of all selected cards. It is recommended to update one by one by doing a **power RESET** at the end.
	Reset selected card. This feature is not available for all cards.
	This option allows you to load a previously saved programming configuration on your PC to the header. The configuration file will have a *.dtc extension.
	This option allows you to save a programming configuration of a headend on the PC, to be later loaded following the steps in the previous point. **THE DISTRIBUTION OF THE MODULES MUST BE IDENTICAL TO THAT OF THE *.dtc file**.
	Data-logger. It allows you to save the data of the different modules of the header in a single *.html file.
	Allows you to change the output of DVB-T (COFDM) modules to DVB-C (QAM). After the change, a **power RESET must be done**. Not active for this model.

The main screen of the "CM Management" allows you to easily identify the different modules connected to the power supply, as can be seen in the following screen:



Power supply and header manager (red).

Identification of a module with an input card (green) and an output card (blue).

Identification of a module with one input card (green), two ICs (orange), and one output card (blue).

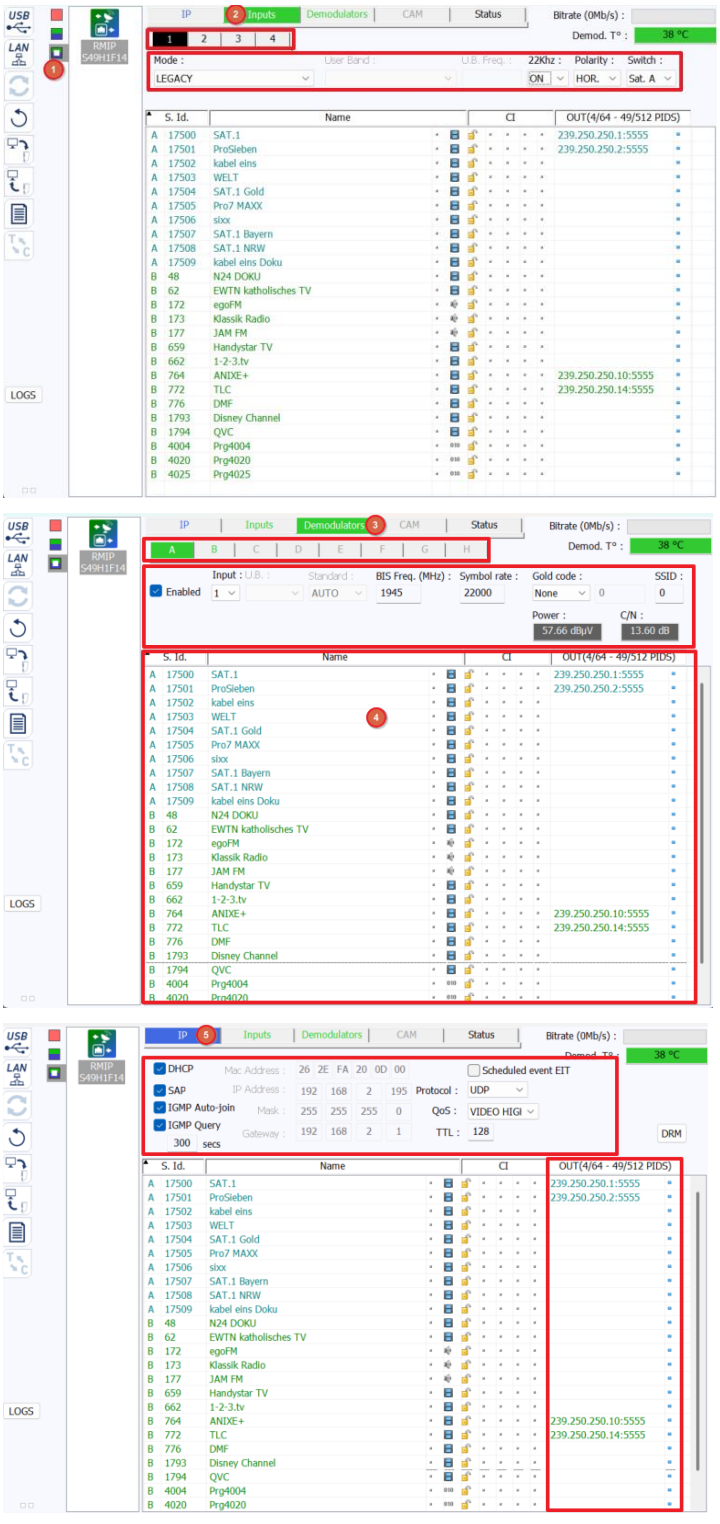
Identification of a module with two input cards (green) and one exit card (blue).

In this case we would have a power supply and three modules, each with its different internal cards.

By clicking on the corresponding module we will enter its specific configuration menu.

Never open the CM MANAGEMENT program twice, it will give you configuration problems.

CM 8S-IP module configuration:



1. Selected module.

2. We configure "Inputs" according to the type of LNB (if it is "normal" we put LEGACY).

3. We set up the "Demodulators".

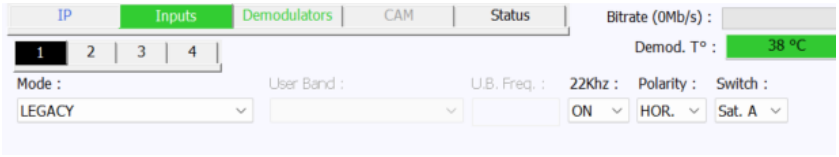
4. Pool of programs available in the configured inputs and outputs.

5. IP exit card. Only the selected services will appear. IP:port will be added as needed.

Entry Card:

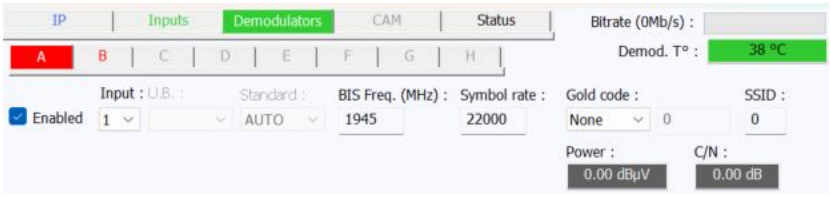
This part of the menu will set up the input card. To configure this card we will have to program two parts:

1. Inputs:



- Input number: Each number symbolizes an entry from 1 to 4.
- Mode: This is the type of LNB, we usually set up LEGACY. The parameter is only modified if the LNB is dCSS or SatCR.
    - User BAND: This option is enabled only when the module is configured in dCSS (Digital Channel Stacking Switch) or SatCR (Satellite Channel Router) mode. It allows you to select the specific user band that will be used for communication with the LNB (Low Noise Block) in systems that support multiple users or devices connected to the same antenna.
    - USB Freq: This option is enabled only when the module is configured in dCSS (Digital Channel Stacking Switch) or SatCR (Satellite Channel Router) mode It allows you to configure the specific USB frequency that will be used for communication with the LNB in these advanced systems. This is crucial to ensure that each user or device receives the correct signal without interference.
- User Band:
- 22Khz: ON for high frequencies OFF for low frequencies.
- Polarity: HOR. - SEE. Select the horizontal or vertical polarity.
- Switch: in case we have a DiSEqC multiswitch we will select between A, B, C, or D. If there is no DiSEqC multiswitch, the selected value will not influence

2. Demodulators:

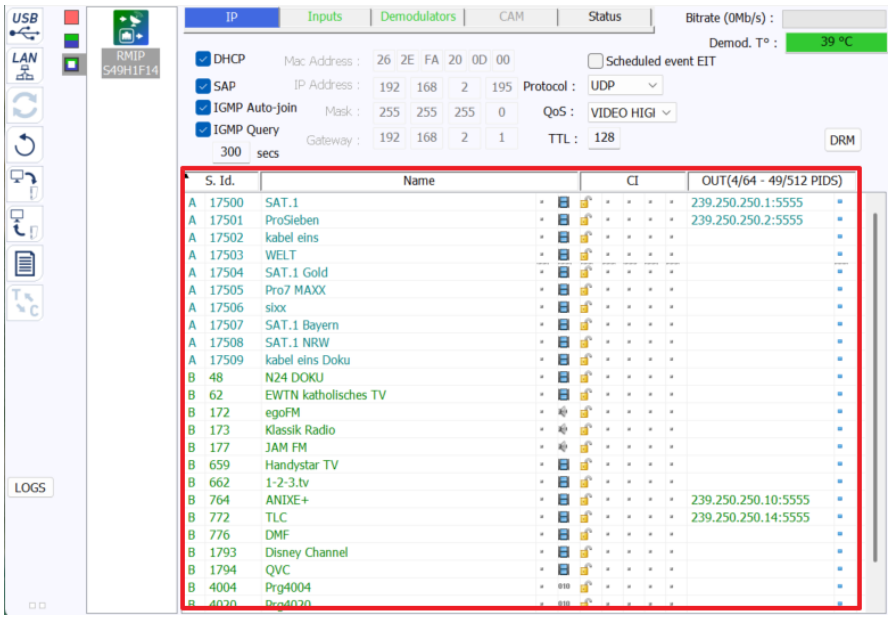


- Enable: We enable or disable the filter. If it is not used or the services have problems, it is advisable to disable it.
- Input: Input that the filter uses to tune the service.
- BIS Freq. (MHz): CENTRAL frequency of the MUX to be tuned in MHz.
- Symbol rate: Symbol rate of the MUX we want to tune into.
- Gold code (PLS): Gold code of the MUX we want to tune into. We only modify if we use in Multistream. It can be GOLD or ROOT.

- Gold / Root code: The space to enter the code is enabled once the type of service has been selected.
- SSID: SSID of the MUX we want to tune into. Multistream only.

- Power: Input power at the selected frequency. (dBuV)
- C/N: Input quality at the selected frequency. (dB).

Program Pool:



In this table will be listed all the channels, services, that correspond to the selected inputs. From here, you select the services you want to assign to each outbound IP. Each service is assigned to the input tuner from which it has been tuned.

- **S.I.D.:** S.I.D. (Service Information Descriptor) assigned at origin to said service.
- **Name:** Name assigned to the service at source. A symbol then appears indicating whether the service is TV or Radio, and whether it is encrypted or free-to-air. The name of the service is not editable/modifiable.
    - **Type of service:**
        - Video: .
        - Radio: .
- **CI:** This module does not have a CI card.
    - **BISS KEY** : Indicates whether the service is blocked or open.
- **OUT:** Here the IP of the services we want to have will be put at the exit.

Exit card:

This part of the menu will set up the exit card.

<table>
<tr>
<td>
</td>
<td>MAC Address: MAC address of the module.

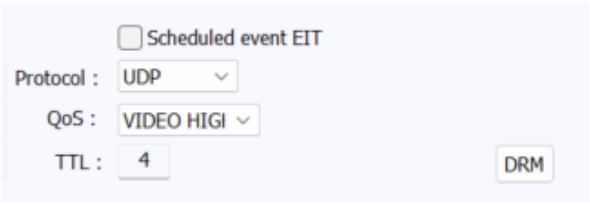
IP Address, mask y gateway:

IP address, subnet mask, and gateway that can be set for the module.

DHCP: In case the protocol for automatic obtaining of network parameters is activated, the rest of the IP values will be disabled.

SAP: Service Anouncement Protocol. Activate this option if we want the network devices to find the services available on the network.

IGMP Query: Enables or disables the Querier. Activate only in the event that there is no Querier on the network. The range of the Queries can be configured in seconds.

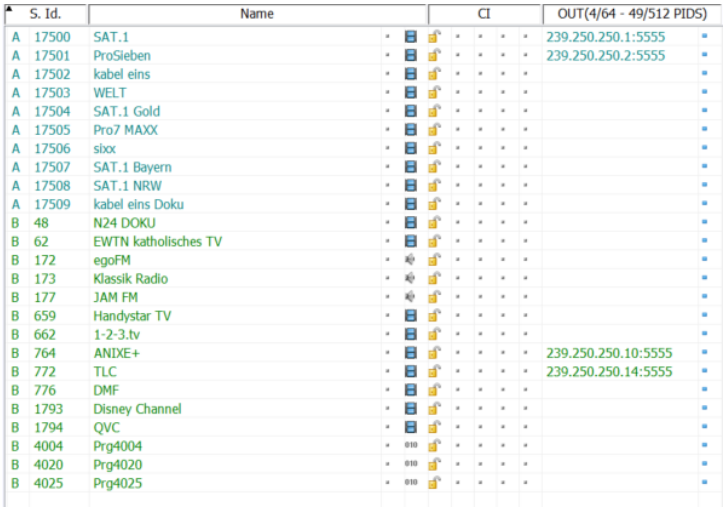
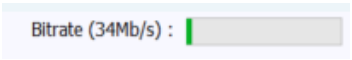
IGMP Auto-Join: Enables or disables AUTO JOIN.</td>
</tr>
<tr>
<td> 
</td>
<td>Protocol: It is possible to choose the desired internet protocol for streaming the streams:

• UDP is the recommended protocol for streaming as it takes up less bandwidth.

• RTP offers additional signaling and is more convenient for real-time transmissions.

QoS: Quality of service. It allows you to choose the treatment that IP packets will receive when passing through different routers on the network.

TTL: Time To Live: A numerical value that indicates the maximum number of routers that an IP packet can traverse. By default it is set at 128.</td>
</tr>
</table>

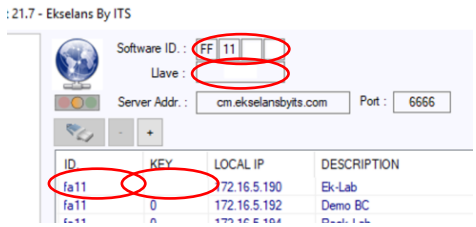
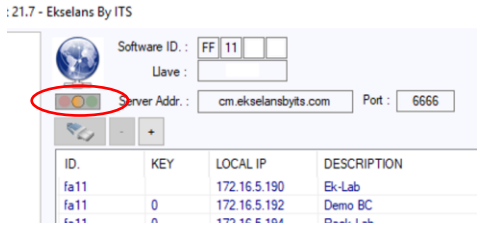
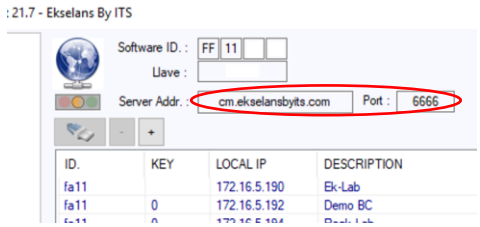
	DRM: In the event that DRM is required, you can select one of the available ones: Samsung Link or LG Pro-Idiom. **Scheduled event EIT:** If the check is not selected, only pass the *EPG present/following*. If selected, the scheduled EPG will pass.
	All the selected services are listed on the entry cards. Each one will be associated with an IP address and a port. **We recommend**, for example: **239.255.255.1** and the different ports, for example: **50001, etc.** **It is recommended that the IPs be different for each stream, and the port above 50000, but they can be the same.**
	**B.W.:** The image shows the total output bit rate of all the services added.

Remote management of the headend:

The CM header can be managed remotely. This function is integrated into the FA 524 power supply and each of the headend modules. To do this, you must have a CM KEY (code 082015).

Each CM KEY is associated with **a single power supply** and will only allow you to remotely manage that source. The installer will provide the Power Supply identifier to ITS Partner when requesting the CM KEY.

Each installation company, in any case, will have a unique Software ID and a Key that will be supplied together with the CM KEY.

	**Software ID:** Identifier of the Installer/Installation Company. **Key:** Identifier of the Installer/Installation Company. **ID:** Power Supply Identifier (MAC). **KEY:** CM KEY supplied.
	**Red:** No internet connection. **Orange:** Internet and server connection. **Green:** Connection established against the headend modules.
	Address and port of the data server that makes remote connection possible. It comes configured by default. DO NOT MODIFY.

Specifications

To see the technical data sheet of the equipment, click on the following link:

CM 8S-IP - Ekselans by ITS

CE Certificate

To view the CE certificate of the equipment, click on the following link:

CM 8S-IP - Ekselans by ITS