User Manual

Board

Dual Channel Decoder H.264

HD/SD SDI/PAL/NTSC

2 Video + 4 Audio
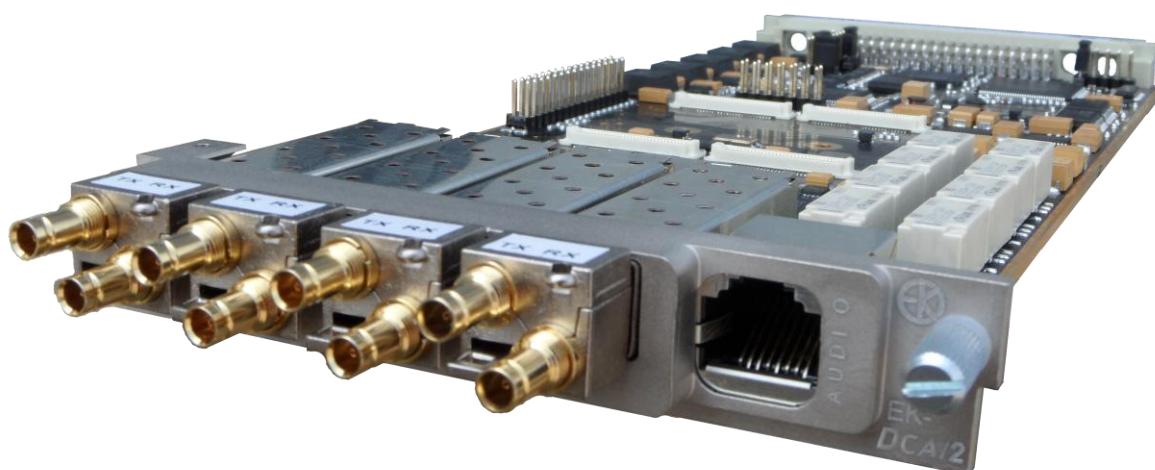
EK-DCA/2

Warning!

The socket utilized for the unit supply must have the appropriate ground conductor.

The connection of the unit , to a socket without the ground conductor, will make the whole equipment dangerous for people safety.

About the repairing of the units please refer to specialized personnel only .

Inside the devices there are voltages which could be dangerous to people.
Before opening the cover switch off the unit, disconnect the connection and the supply cables.

In case of electrical shock please follow the instructions of first aid listed on page 4

Substitute the fuses interrupted with others of the same type and voltage.

 The waste disposal of the devices must be executed in the respect of the enforced laws in the country uses.
Eurotek not assumed responsibility for waste disposal in contrast with enforced laws.

LIFE SUPPORT APPLICATIONS.
Eurotek's products are not designed for use as critical components in life support devices or system without the express written approval of the Eurotek S.r.l. As used herein.

- *Life support devices or system are devices or system which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.*
- *A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.*

The information given in this documentation could have variations without forewarning.

The firm Eurotek S.r.l. *does not give any guaranty about this documentation.*

The firm Eurotek S.r.l. *does not consider itself responsible for possible mistakes which could be found in this documentation.*

First aid: artificial breathing(mouth to mouth)

1	In case of electric shock you have to ensure the first aids to the patient, but to do this you have to consider two very important things: - **interrupt immediately the electric circuit;** - **if the circuit has not been interrupted, do not touch the patient with bare hands;** After doing this, without delay contact the nearest mobile unit of first aid and practice to the patient, in case of loss of consciousness, the breathing mouth to mouth as described below.	
2	Put the patient lying on his back with the arms parallel to the body, ensure that he does not have the breathing tracts obstructed (chewing-gum, dental prosthesis, etc.), otherwise set him free from foreign bodies. Kneel near the patient's head and putting a hand under his neck, incline as possible his/her head backwards.	
3	Going on with keeping the patient's head inclined with one hand, use the other one to occlude the nostrils, if you are going to practise the breathing through the oral cavity, or occlude the mouth if you want to do it through the nasal cavity. While doing this begin the auto-oxygenation, with deep breathing. Then practice the artificial breathing blowing in the chosen cavity beginning with ten expirations each minute to go on them with twelve and fifteen.	
4	During the breathing procedure you have to control that the patient's chest dilates, otherwise change cavity where to blow the air because the previous one could be obstructed.	
5	Do not ever stop the artificial breathing until the patient has recovered or the first aid unit has come.	

Revision History

Manual Revision	Software		Notes
A (05/11/2014)	DSP	10.26	
	FPGA S6	10.8	
	FGPA V6	2.36	
	RamDisk	1.0	
	HW	C.F	
B (05/11/2014)	DSP	10.26	Audio RJ-45 connections modified (chapter 3)
	FPGA S6	10.8	
	FGPA V6	2.36	
	RamDisk	1.0	
	HW	C.F	

05/11/2014   Arch. 4651   601-001012 Rev. B

Definitions

EK-MFR/x	EK-MFR/1 and EK-MFR/2
NA	Not Available
SFP	Small form-factor pluggable
TS	Transport Stream
SDI	Serial Digital Interface
SD	Standard Definition
HD	High Definition

1. GENERAL INTRODUCTION

The EK-DCA/2 card is a double audio/video decoder.

It contains two indipendent audio/video decoders, so it is able to decode up to 2 video and 4 audio.

This card must be used in a EK-MFR/x mainframe in order to configure it in the right way.

The input/output connectors (figure 1) are on the back of the board and basically you have:

- 4 SFP connectors with input/output capability used for transport stream (SFP1, SFP2) and SDI or analog video (in default configuration you have SFP3 for SDI video and SPF4 for analog video)
- 1 RJ-45 connector used for analog and AES3 audio
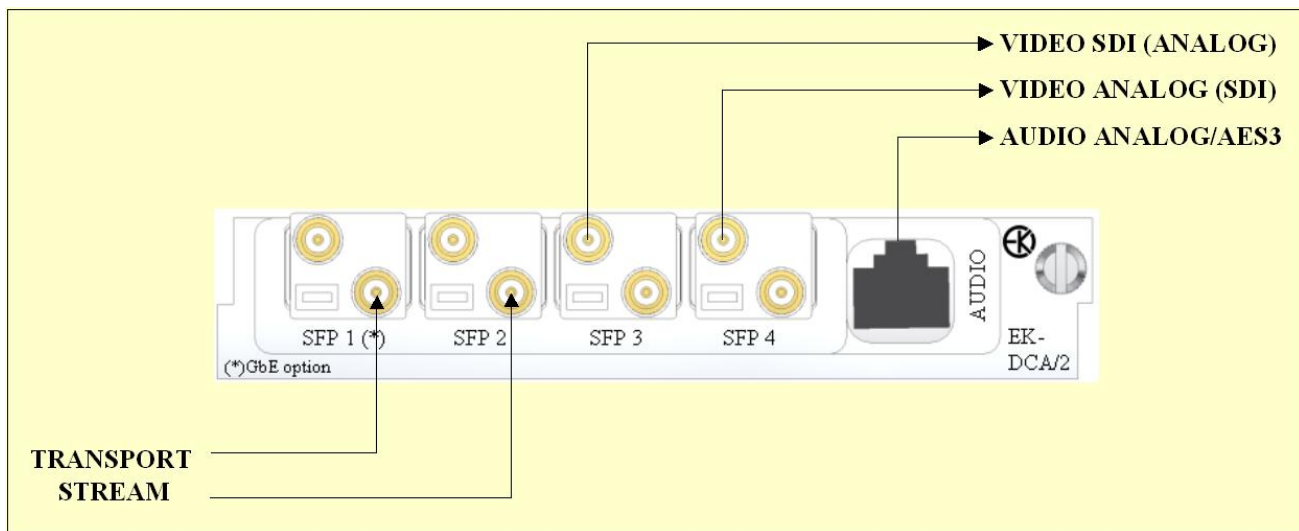
Figure 1 – EK-DCA/2 Input/Output connectors

The video output can be in SDI or analog format, with SD or HD resolution and it is decoded conforming to the ISO/IEC14496-10 (H.264/AVC) standard.

The audio output signal can be in SDI embedded, analog or AES3 format and it is decoded conforming to the MPEG-1 Layer 2 standard.

The input transport stream must be conform to ISO/IEC 13818-1 standard and it must be plugged in the SPF1 and SPF2 input connectors in ASI electrical format.

The transport stream can also come from another card (i.e. the EK-UNM/3 demodulator) through the mainframe's internal matrix. In this case you have not to use the external cable.

In figure 2 you can see the EK-DCA/2 block scheme.
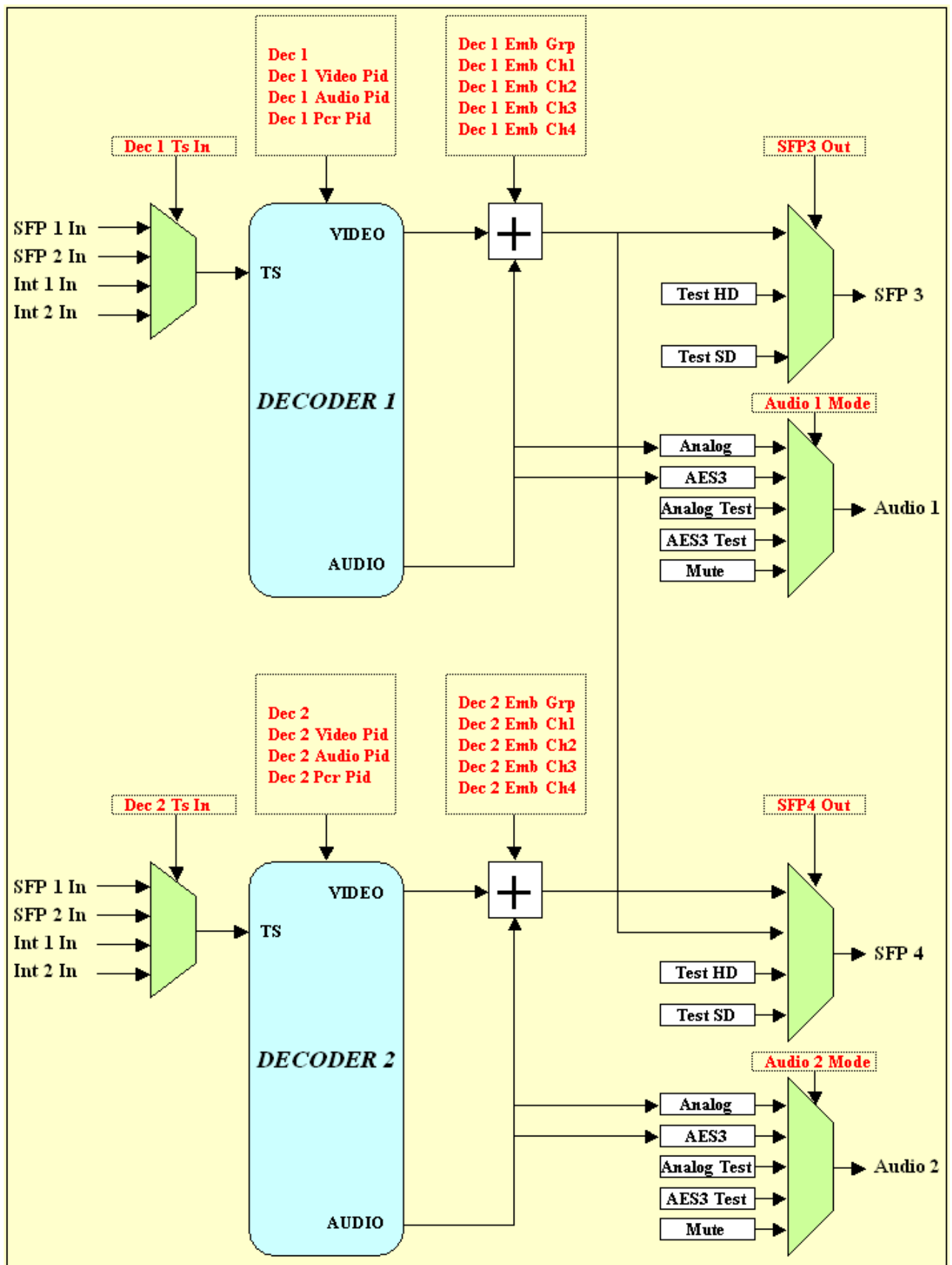
Figure 2 – EK-DCA/2 block scheme

In the EK-DCA/2 block scheme (figure 2) you have in red the card menu voices that you have to use in order to set the card functionality (see chapter 2).

In the figure 2 you can see:

- the decoder TS input selector that allows you to feed the decoder with the signal coming from the SFP1, the SFP2 or from the internal inputs (see 2.2.8, 2.3.8)
- the two H.264 video/ MPEG-1 layer 2 audio decoders
- The output selectors for the video connectors (SFP3,SFP4) that allow you to put out the video from the decoders or a test video signal (see 2.4.1,2.4.2)
- the output selectors for the audio connector (RJ-45) that allow you to put out the audio from the decoders in different formats (analor, AES3), a test audio signal or mute the output (see 2.4.3, 2.4.4)
- the audio embedder that allows you to embedd into the video output signal the decoded audio output on the selected group and channels (see 2.2.9÷2.2.13, 2.3.9÷2.3.13).

The EK-DCA/2 is a flexible and highly configurable system.
You can work with both SDI or analog video signal and SDI embedded, analog or AES3 audio signal.
The output audio embedder allow you to put the decoder audio on any of the 16 possible position for the audio embedded structure (see 2.2.9÷2.2.13, 2.3.9÷2.3.13).
The audio and video output signal are are locked to the selected PCR.

In table 1 you can see the main characteristic of the EK-DCA/2.

Remember that in the standard configuration the EK-ENR/2 is supplied with:
- one electrical interface for SDI signal on the SFP3
- one electrical interface for Analog video signal (PAL/NTSC) on the SFP4

For the audio connections please contact Eurotek for RJ45-to-XLR solutions.

Video Output	
Number of input	2
Connector	SFP module COAXIAL DIN 1.0/2.3
Type	SDI / Analog
Format	720x576 50i 720x480 59.94i 1920x1080 50i 1920x1080 59.94i 1920x1080 60i 1920x1080 24p 1920x1080 23.98p
Video Decoding	
Number of decoder	2
Standard	ISO/IEC 14496-10 (H.264/AVC) High Profile
Pixel Format	4:2:0, 8-bit, YCbCr
Audio Output	
Number of output	Analog: 4 mono balanced AES3: 2 stereo balanced and isolated from ground SDI audio embedded: 2
Connector	RJ-45 for analog/AES3 SFP module COAXIAL DIN 1.0/2.3 for SDI audio embedded
Audio Encoding	
Number of decoder	2
Standard	MPEG-1 Layer2, 2-channel
Number of channel	4 (2 decoder*2channel/decoder=4 channel)
Input Transport Stream	
Type	MPEG2-TS conforming to ISO/IEC 13818-1
Climatic Condition	
Temperature	-5 ÷ +70 °C
Humidity	Max 90%
Altitude	3000 m 66KPa

Table 1 – EK-DCA/2 Technical Specification

2. BOARD MENU

The EK-DCA/2 card may be configured by means both the EK-MFR/x keyboard or the MST Eurotek Software Suite, a PC based application (in the latter case you have to connect the PC via Ethernet to the EK-MFR/x).

In both cases the configuration is based on a number of variables that you can modify and that allow you a deep control over the card features.

These variables make the "card menu" and they are summarized figure 3.
In this figure you can see that there are 5 main menus:

- **Status**: here are reported the "read only" variables that show the main status of the card. See chapter 2.1.
- **Decoder 1**: here you can find the "read only" variables that show you the decoder 1 status and the "read/write" variables that allows you to modify the decoder 1 functionality (ie enable/disable decoder, change the decoder pids). See chapter 2.2.
- **Decoder 2**: here you can find the "read only" variables that show you the decoder 2 status and the "read/write" variables that allows you to modify the decoder 2 functionality (ie enable/disable decoder, change the decoder pids). See chapter 2.3.
- **Set Output**: in this menu you can select which video send to the SFP output connector and which audio send to the RJ-45 output connector. See chapter 2.4.
- **Revision**: here are reported the software versions of the card. See chapter 2.5.

From the keyboard you can easily scroll through the menu by means the Up/Down and Enter/Esc buttons and change the values of the read/write variables with the same buttons.
From the MST software you can directly change the read/write variables writing the new value from the PC.
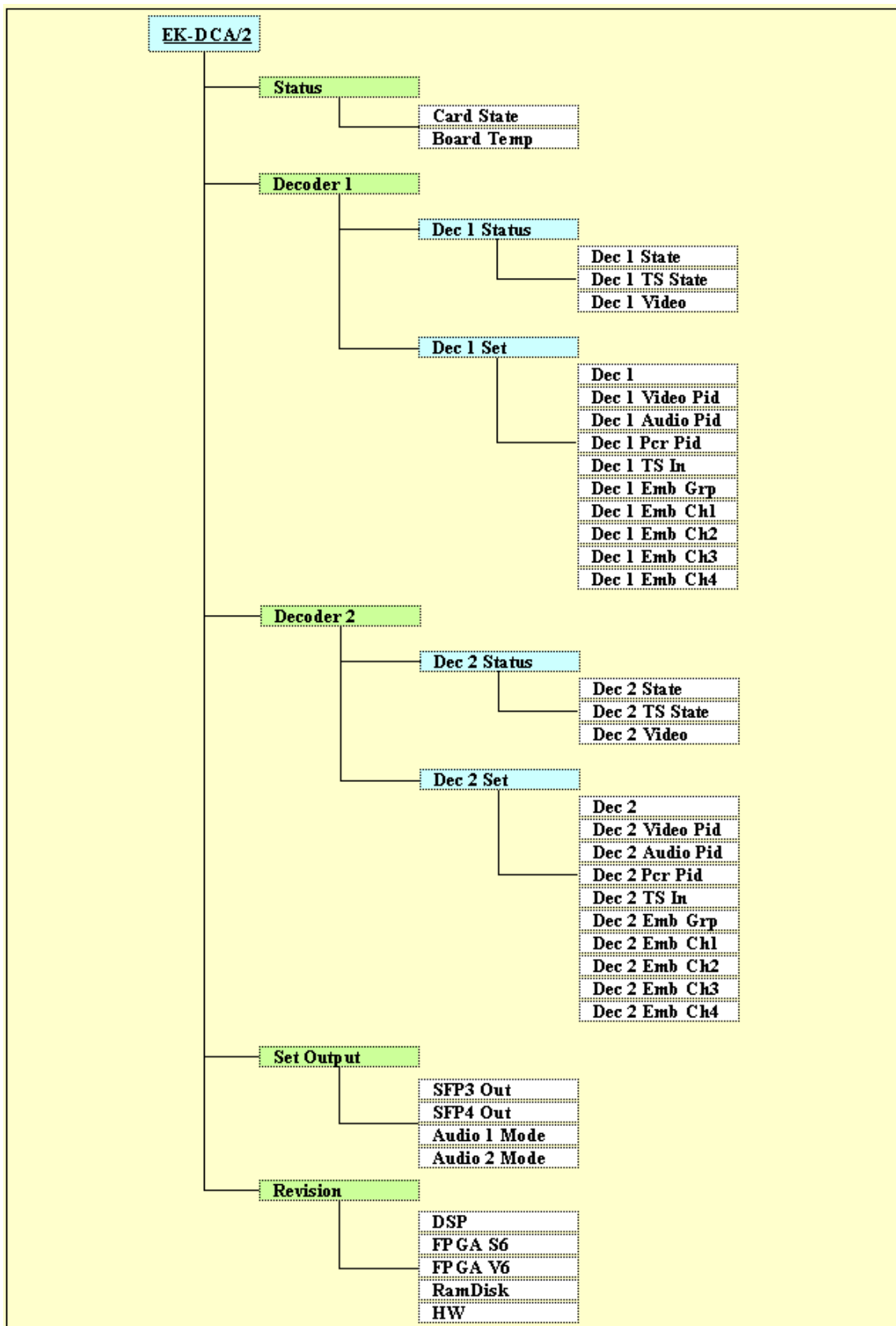
Figure 3 – EK-DCA/2 menu (on white background the variables)

2.1 STATUS MENU

In this menu are reported the "read only" variables that show you the state of the card.

Some variables may generate alarms when they go out of the boundary (ie too high temperature).

These alarms are reported on the screen of the mainframe and in the log alarm file (you can read this file by means the MST Eurotek Software Suite).

Below are explained the Status menu variables.

2.1.1 Status → Card State

In this field you can see the status of the card.

Some of the voices in this field arise an alarm tha you can see:

- on the screen of the mainframe
- on the log alarm file (using the MST Eurotek Software Suite)

The voices on this field are reported in table 2.

Status → Card State	Alarm	Meaning
Fifo3 Full	Yes	Problem on SFP3 video output; please check the decoder pids
Fifo3 Empty	Yes	Problem on SFP3 video output; please check the decoder pids
Fifo4 Full	Yes	Problem on SFP4 video output; please check the decoder pids
Fifo4 Empty	Yes	Problem on SFP4 video output; please check the decoder pids
Sync Dec1	No	The last phase of decoder 1 configuration
Sync Dec2	No	The last phase of decoder 2 configuration

Table 2 – "Status → Card State" field

2.1.2 Status → Board Temp

In this field the board temperature in °C is reported (table 3).

Status → Board Temp	Alarm	Meaning
±xy.z	Yes	Board Temperature in °C Limits for alarm –20.0÷+70.0 °C

Table 3 – "Status → Board Temp" field

2.2 DECODER 1

In this menu the status and settings variables of the decoder 1 are reported.

2.2.1 Decoder 1 → Dec 1 Status → Dec 1 State

In this field the decoder 1 state is reported.

The possible voices in this field are reported in table 4.

Decoder 1 → Dec 1 Status → Dec1 State	Alarm	Meaning
Disabled	No	The decoder 1 is not configured
Boot	No	Problem during decoder 1 firmware booting
Start	No	Problem during decoder 1 configuration
Dec Warning	No	Generic problem on decoder 1
Dec av sync	No	Audio/Video not synchronized at the decoder 1 output
Configuration	No	The decoder 1 configuration is in progress
Ok	No	The decoder 1 is configurated without errors

Table 4 – "Decoder 1 → Dec 1 Status → Dec1 State" field

2.2.2 Decoder 1 → Dec 1 Status → Dec 1 TS State

In this field the state of the decoder 1 input TS is reported. See table 5.

Decoder 1 → Dec 1 Status → Dec1 TS State	Alarm	Meaning
Video PID	Yes	The decoder 1 input TS doesn't contain the selected video pid
Audio PID	Yes	The decoder 1 input TS doesn't contain the selected audio pid
Pcr PID	Yes	The decoder 1 input TS doesn't contain the selected pcr pid
xyz.k	No	The decoder 1 input TS bit rate in Mb/s. This is shown when • decoder 1 is disabled or • input bit rate < 0.5 Mb/s or • pids video/audio/pcr are present into decoder 1 input TS

Table 5 – " Decoder 1→ Dec 1 Status → Dec1 TS State" field

2.2.3 <u>Decoder 1 → Dec 1 Status → Dec 1 Video</u>

In this field the format of the decoded video 1 is reported. See table 6.

Decoder 1 → Dec 1 Status → Dec1 Video	Alarm	Meaning
720x576 50i 720x480 59.94i 1920x1080 50i 1920x1080 59.94i 1920x1080 60i 1920x1080 24p 1920x1080 23.98p	No	The video format of the decoded video 1. It is read from the incoming TS on the video packets with pid: Decoder 1 → Dec 1 Set → Dec 1 Video Pid
Not Def Format	No	Video format not recognized on video pid packets

Table 6 – " Decoder 1→ Dec 1 Status → Dec1 Video" field

2.2.4 Decoder 1 → Dec 1 Set → Dec 1

This field allows you to enable/disable the decoder 1 (table 7)

Decoder 1 → Dec 1 Set → Dec 1	Meaning
Enabled	The decoder 1 is enabled
Disabled	The decoder 1 is disabled

Table 7 – ” Decoder 1→ Dec 1 Set → Dec1” field

2.2.5 Decoder 1 → Dec 1 Set → Dec 1 Video Pid

This field allows you to set the decoder 1 video PID (see table 8).

Decoder 1 → Dec 1 Set → Dec 1 Video Pid	Meaning
32 ÷ 8190	The decoder 1 video PID

Table 8 – ” Decoder 1→ Dec 1 Set → Dec1 Video Pid” field

2.2.6 Decoder 1 → Dec 1 Set → Dec 1 Audio Pid

This field allows you to set the decoder 1 audio PID (see table 9).

Decoder 1 → Dec 1 Set → Dec 1 Audio Pid	Meaning
32 ÷ 8190	The decoder 1 audio PID

Table 9 – ” Decoder 1→ Dec 1 Set → Dec1 Audio Pid” field

2.2.7 Decoder 1 → Dec 1 Set → Dec 1 Pcr Pid

This field allows you to set the decoder 1 pcr PID (see table 10).

Decoder 1 → Dec 1 Set → Dec 1 Pcr Pid	Meaning
32 ÷ 8190	The decoder 1 pcr PID

Table 10 – ” Decoder 1→ Dec 1 Set → Dec1 Pcr Pid” field

2.2.8 Decoder 1 → Dec 1 Set → Dec 1 TS In

This field allows you to select from which source the decoder 1 input TS is taken (see table 11).

Decoder 1 → Dec 1 Set → Dec 1 TS In	Meaning
SFP1 In	The decoder 1 input TS is sourced from SFP1 input
SFP2 In	The decoder 1 input TS is sourced from SFP2 input
INT 1 In	The decoder 1 input TS is sourced from INT 1 input
INT 2 In	The decoder 1 input TS is sourced from INT 2 input

Table 11 – " Decoder 1 → Dec 1 Set → Dec1 TS In" field

The internal inputs "INT1 In" and "INT2 In" are connected to the EK-MFR/x bus and they take the TS arriving from any other card that can be plugged into the same EK-MFR/x and that can give an output TS on the internal bus.

Please refer to figure 4 for the routing possibility of the card.

In this figure you can see the EK-MFR/x interconnection matrix that allows you to route the TSs between the cards (up to 6 cards, card 1 and card 2 in the figure) plugged into the frame without using external cables.
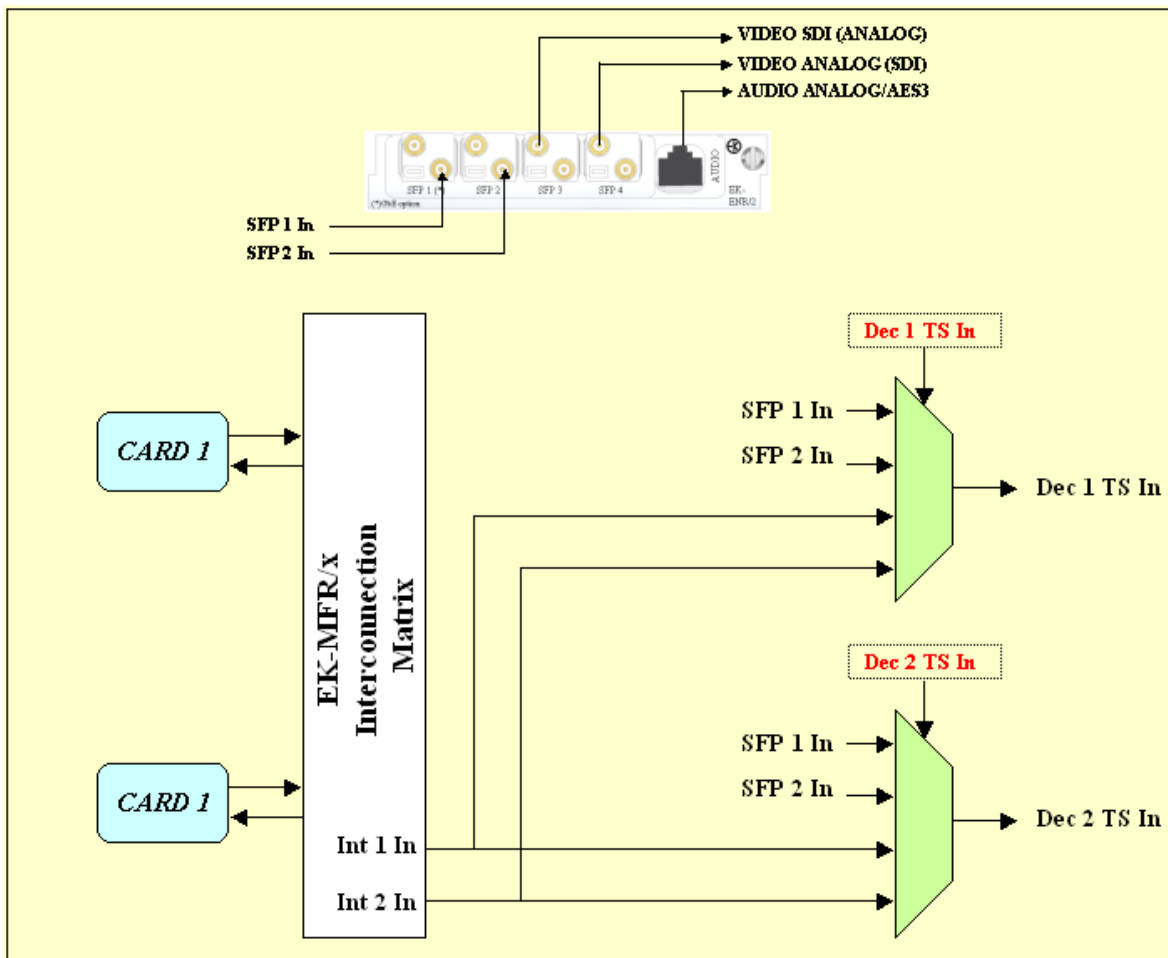

Figure 4 – The input signals

2.2.9 Decoder 1 → Dec 1 Set → Dec 1 Emb Grp

As you can see in figure 5, the audio embedded in the SDI video signal carries up to 16 audio channel, divided in 4 groups with 4 channels for each group.

The two decoder output audio channel may be put on two of this 16 available audio "spaces".

You have to choose an audio group and inside this group the 2 channels where put the two decoder 1 audio output. In figure 5, for example, the channels 2 and 3 inside the audio group 1 have been choosen for putting the decoder 1 audio output.
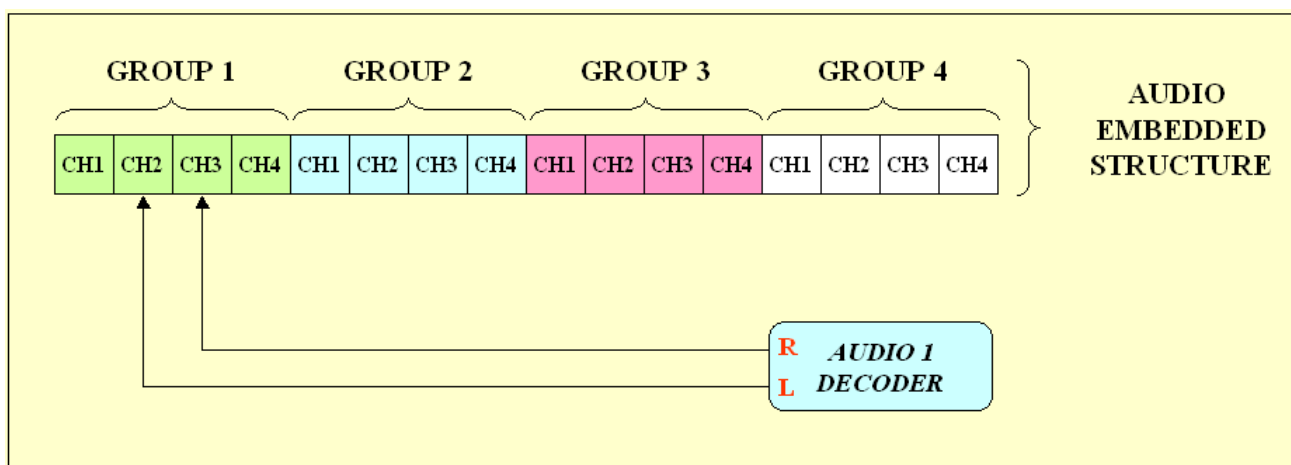
Figure 5 – Audio embedded structure

The "Decoder 1→Dec 1 Set→Dec 1 Emb Grp" field allows you to select the audio group in the SDI audio embedded signal (see table 12).

Decoder 1 → Dec 1 Set → Dec 1 Emb Grp	Meaning
GROUP1, GROUP2, GROUP3, GROUP4	Selects the audio group where put the decoder 1 audio output

Table 12 – " Decoder 1→Dec 1 Set→Dec 1 Emb Grp" field

2.2.10 Decoder 1 → Dec 1 Set → Dec 1 Emb Ch1

This field allows you to select which decoder 1 audio output channel put on the channel 1 of the selected group in the audio embedded structure (see table 13 and figure 5).

Decoder 1 → Dec 1 Set → Dec 1 Emb Ch1	Meaning
Dec Ch R	The dec1 right channel is put on embedded ch1
Dec Ch L	The dec1 left channel is put on embedded ch1
Mute	The embedded ch1 is muted

Table 13 – " Decoder 1→Dec 1 Set→Dec 1 Emb Ch1" field

2.2.11 Decoder 1 → Dec 1 Set → Dec 1 Emb Ch2

This field allows you to select which decoder 1 audio output channel put on the channel 2 of the selected group in the audio embedded structure (see table 14 and figure 5).

Decoder 1 → Dec 1 Set → Dec 1 Emb Ch2	Meaning
Dec Ch R	The dec1 right channel is put on embedded ch2
Dec Ch L	The dec1 left channel is put on embedded ch2
Mute	The embedded ch2 is muted

Table 14 – " Decoder 1→Dec 1 Set→Dec 1 Emb Ch2" field

2.2.12 Decoder 1 → Dec 1 Set → Dec 1 Emb Ch3

This field allows you to select which decoder 1 audio output channel put on the channel 3 of the selected group in the audio embedded structure (see table 15 and figure 5).

Decoder 1 → Dec 1 Set → Dec 1 Emb Ch3	Meaning
Dec Ch R	The dec1 right channel is put on embedded ch3
Dec Ch L	The dec1 left channel is put on embedded ch3
Mute	The embedded ch3 is muted

Table 15 – " Decoder 1→Dec 1 Set→Dec 1 Emb Ch3" field

2.2.13 Decoder 1 → Dec 1 Set → Dec 1 Emb Ch4

This field allows you to select which decoder 1 audio output channel put on the channel 4 of the selected group in the audio embedded structure (see table 16 and figure 5).

Decoder 1 → Dec 1 Set → Dec 1 Emb Ch4	Meaning
Dec Ch R	The dec1 right channel is put on embedded ch4
Dec Ch L	The dec1 left channel is put on embedded ch4
Mute	The embedded ch4 is muted

Table 16 – " Decoder 1→Dec 1 Set→Dec 1 Emb Ch4" field

2.3 DECODER 2

In this menu the status and settings variables of the decoder 2 are reported.

2.3.1 Decoder 2 → Dec 2 Status → Dec 2 State

In this field the decoder 2 state is reported.

The possible voices in this field are reported in table 17.

Decoder 2 → Dec 2 Status → Dec2 State	Alarm	Meaning
Disabled	No	The decoder 2 is not configured
Boot	No	Problem during decoder 2 firmware booting
Start	No	Problem during decoder 2 configuration
Dec Warning	No	Generic problem on decoder 2
Dec av sync	No	Audio/Video not synchronized at the decoder 2 output
Configuration	No	The decoder 2 configuration is in progress
Ok	No	The decoder 2 is configurated without errors

Table 17 – "Decoder 2 → Dec 2 Status → Dec2 State" field

2.3.2 Decoder 2 → Dec 2 Status → Dec 2 TS State

In this field the state of the decoder 2 input TS is reported. See table 18.

Decoder 2 → Dec 2 Status → Dec2 TS State	Alarm	Meaning
Video PID	Yes	The decoder 2 input TS doesn't contain the selected video pid
Audio PID	Yes	The decoder 2 input TS doesn't contain the selected audio pid
Pcr PID	Yes	The decoder 2 input TS doesn't contain the selected pcr pid
xyz.k	No	The decoder 2 input TS bit rate in Mb/s. This is shown when - decoder 2 is disabled or - input bit rate < 0.5 Mb/s or - pids video/audio/pcr are present into decoder 2 input TS

Table 18 – " Decoder 2→ Dec 2 Status → Dec2 TS State" field

2.3.3 Decoder 2 → Dec 2 Status → Dec 2 Video

In this field the format of the decoded video 2 is reported. See table 19.

Decoder 2 → Dec 2 Status → Dec2 Video	Alarm	Meaning
720x576 50i 720x480 59.94i 1920x1080 50i 1920x1080 59.94i 1920x1080 60i 1920x1080 24p 1920x1080 23.98p	No	The video format of the decoded video 2. It is read from the incoming TS on the video packets with pid: Decoder 2 → Dec 2 Set → Dec 2 Video Pid
Not Def Format	No	Video format not recognized on video pid packets

Table 19 – " Decoder 2→ Dec 2 Status → Dec2 Video" field

2.3.4 <u>Decoder 2 → Dec 2 Set → Dec 2</u>

This field allows you to enable/disable the decoder 2 (table 20)

Decoder 2 → Dec 2 Set → Dec 2	Meaning
Enabled	The decoder 2 is enabled
Disabled	The decoder 2 is disabled

Table 20 – " Decoder 2→ Dec 2 Set → Dec2" field

2.3.5 <u>Decoder 2 → Dec 2 Set → Dec 2 Video Pid</u>

This field allows you to set the decoder 2 video PID (see table 21).

Decoder 2 → Dec 2 Set → Dec 2 Video Pid	Meaning
32 ÷ 8190	The decoder 2 video PID

Table 21 – " Decoder 2→ Dec 2 Set → Dec2 Video Pid" field

2.3.6 <u>Decoder 2 → Dec 2 Set → Dec 2 Audio Pid</u>

This field allows you to set the decoder 2 audio PID (see table 22).

Decoder 2 → Dec 2 Set → Dec 2 Audio Pid	Meaning
32 ÷ 8190	The decoder 2 audio PID

Table 22 – " Decoder 1→ Dec 1 Set → Dec1 Audio Pid" field

2.3.7 <u>Decoder 2 → Dec 2 Set → Dec 2 Pcr Pid</u>

This field allows you to set the decoder 2 pcr PID (see table 23).

Decoder 2 → Dec 2 Set → Dec 2 Pcr Pid	Meaning
32 ÷ 8190	The decoder 2 pcr PID

Table 23 – " Decoder 1→ Dec 1 Set → Dec1 Pcr Pid" field

2.3.8 Decoder 2 → Dec 2 Set → Dec 2 TS In

This field allows you to select from which source the decoder 2 input TS is taken (see table 24).

Decoder 2 → Dec 2 Set → Dec 2 TS In	Meaning
SFP1 In	The decoder 2 input TS is sourced from SFP1 input
SFP2 In	The decoder 2 input TS is sourced from SFP2 input
INT 1 In	The decoder 2 input TS is sourced from INT 1 input
INT 2 In	The decoder 2 input TS is sourced from INT 2 input

Table 24 – " Decoder 2 → Dec 2 Set → Dec2 TS In" field

The internal inputs "INT1 In" and "INT2 In" are connected to the EK-MFR/x bus and they take the TS arriving from any other card that can be plugged into the same EK-MFR/x and that can give an output TS on the internal bus.

Please refer to figure 6 for the routing possibility of the card.

In this figure you can see the EK-MFR/x interconnection matrix that allows you to route the TSs between the cards (up to 6 cards, card 1 and card 2 in the figure) plugged into the frame without using external cables.
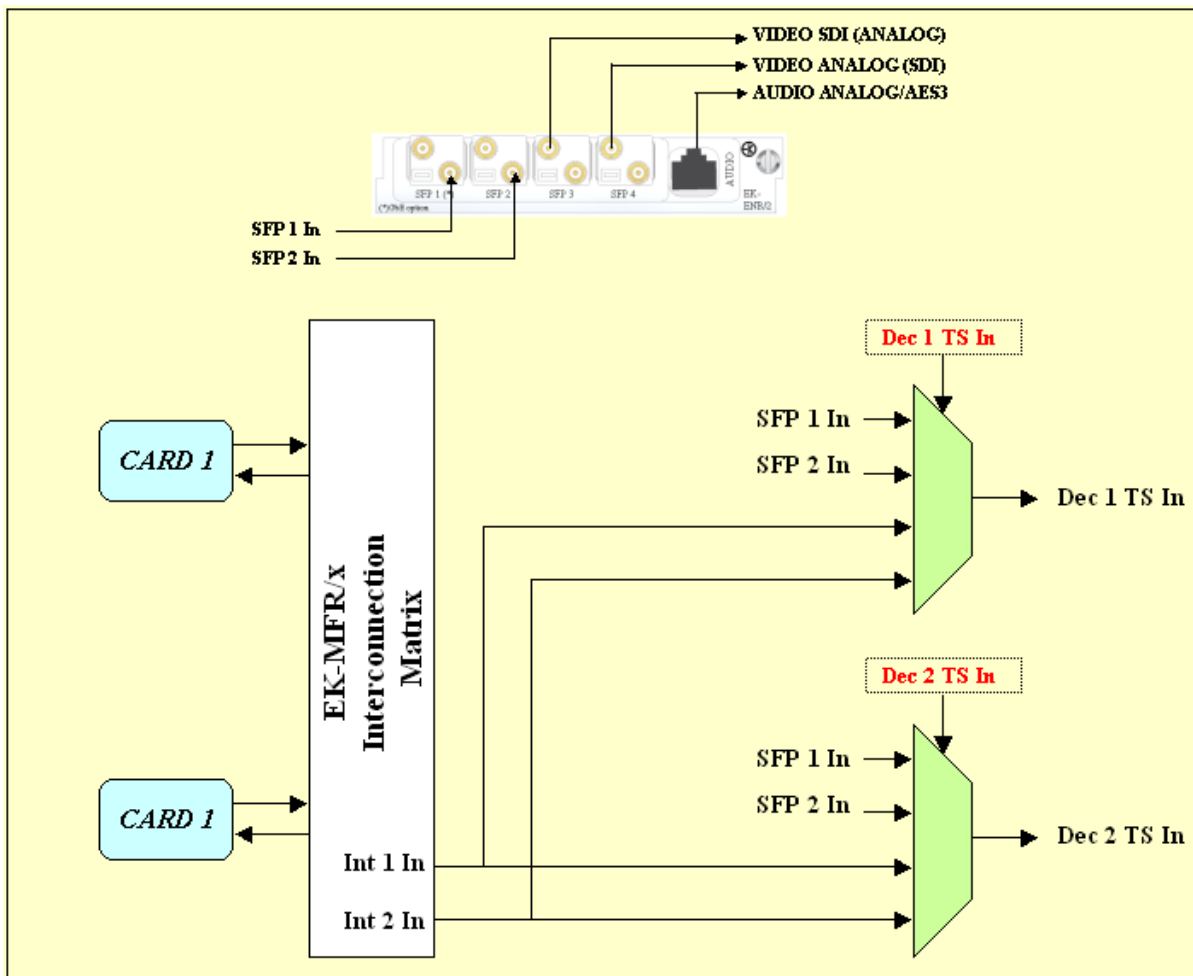

Figure 6 – The input signals

2.3.9 Decoder 2 → Dec 2 Set → Dec 2 Emb Grp

As you can see in figure 7, the audio embedded in the SDI video signal carries up to 16 audio channel, divided in 4 groups with 4 channels for each group.

The two decoder output audio channel may be put on two of this 16 available audio "spaces".

You have to choose an audio group and inside this group the 2 channels where put the two decoder 2 audio output. In figure 7, for example, the channels 2 and 3 inside the audio group 1 have been choosen for putting the decoder 2 audio output.
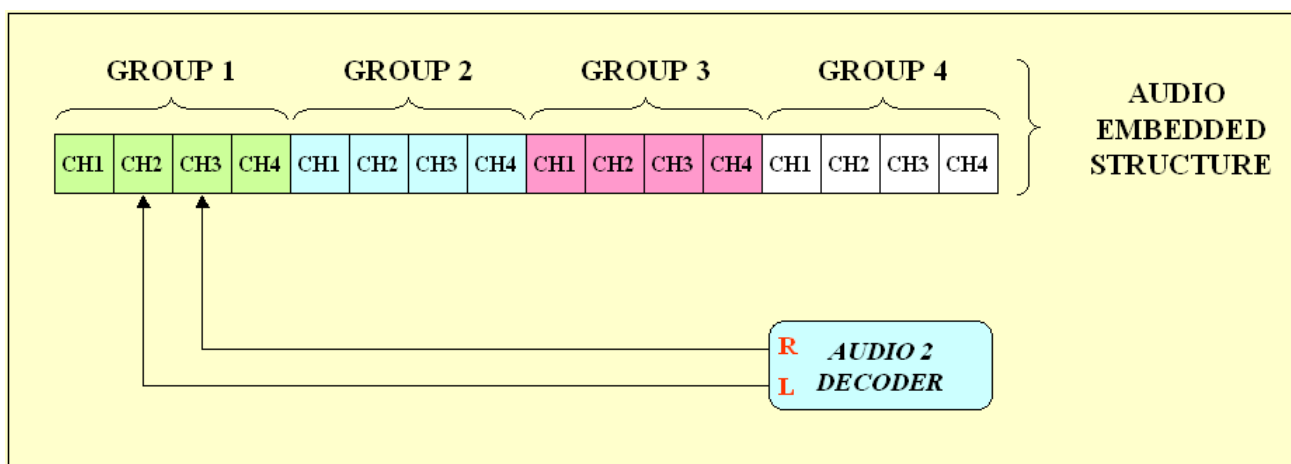

Figure 7 – Audio embedded structure

The "Decoder 2→Dec 2 Set→Dec 2 Emb Grp" field allows you to select the audio group in the SDI audio embedded signal (see table 25).

Decoder 2 → Dec 2 Set → Dec 2 Emb Grp	Meaning
GROUP1, GROUP2, GROUP3, GROUP4	Selects the audio group where put the decoder 2 audio output

Table 25 – " Decoder 2→Dec 2 Set→Dec 2 Emb Grp" field

2.3.10 Decoder 2 → Dec 2 Set → Dec 2 Emb Ch1

This field allows you to select which decoder 2 audio output channel put on the channel 1 of the selected group in the audio embedded structure (see table 26 and figure 7).

Decoder 2 → Dec 2 Set → Dec 2 Emb Ch1	Meaning
Dec Ch R	The dec2 right channel is put on embedded ch1
Dec Ch L	The dec2 left channel is put on embedded ch1
Mute	The embedded ch1 is muted

Table 26 – " Decoder 2→Dec 2 Set→Dec 2 Emb Ch1" field

2.3.11 Decoder 2 → Dec 2 Set → Dec 2 Emb Ch2

This field allows you to select which decoder 2 audio output channel put on the channel 2 of the selected group in the audio embedded structure (see table 27 and figure 7).

Decoder 2 → Dec 2 Set → Dec 2 Emb Ch2	Meaning
Dec Ch R	The dec2 right channel is put on embedded ch2
Dec Ch L	The dec2 left channel is put on embedded ch2
Mute	The embedded ch2 is muted

Table 27 – ¨ Decoder 2→Dec 2 Set→Dec 2 Emb Ch2" field

2.3.12 Decoder 2 → Dec 2 Set → Dec 2 Emb Ch3

This field allows you to select which decoder 2 audio output channel put on the channel 3 of the selected group in the audio embedded structure (see table 28 and figure 7).

Decoder 2 → Dec 2 Set → Dec 2 Emb Ch3	Meaning
Dec Ch R	The dec2 right channel is put on embedded ch3
Dec Ch L	The dec2 left channel is put on embedded ch3
Mute	The embedded ch3 is muted

Table 28 – ¨ Decoder 2→Dec 2 Set→Dec 2 Emb Ch3" field

2.3.13 Decoder 2 → Dec 2 Set → Dec 2 Emb Ch4

This field allows you to select which decoder 2 audio output channel put on the channel 4 of the selected group in the audio embedded structure (see table 29 and figure 7).

Decoder 2 → Dec 2 Set → Dec 2 Emb Ch4	Meaning
Dec Ch R	The dec2 right channel is put on embedded ch4
Dec Ch L	The dec2 left channel is put on embedded ch4
Mute	The embedded ch4 is muted

Table 29 – ¨ Decoder 2→Dec 2 Set→Dec 2 Emb Ch1" field

2.4 SET OUTPUT

In this menu you can select which video send to the SFP output connector and which audio send to the RJ-45 output connector.

2.4.1 Set Output → SFP3 Out

In this field you can select which video send to the SFP3 output connector (see figure 2).

The possible voices in this field are reported in table 30.

Set Output → SFP3 Out	Meaning
Decoder 1	The decoder 1 video output is put on the SFP3
Test HD	A test signal • 1920x1080 50i that change every 5 seconds is put on the SFP3
Test SD	A test signal • 720x576 50i is put on the SFP3

Table 30 – "Set Output → SFP3 Out" field

2.4.2 Set Output → SFP4 Out

In this field you can select which video sent to the SFP4 output connector (see figure 2).

The possible voices in this field are reported in table 31.

Set Output → SFP3 Out	Meaning
Decoder 1	The decoder 1 video output is put on the SFP4
Decoder 2	The decoder 2 video output is put on the SFP4
Test HD	A test signal • 1920x1080 50i that change every 5 seconds is put on the SFP4
Test SD	A test signal • 720x576 50i is put on the SFP4

Table 31 – "Set Output → SFP4 Out" field

2.4.3 Set Output → Audio 1 Mode

In this field you can select which audio sent to the RJ-45 audio output 1 connector (see figure 2).

The possible voices in this field are reported in table 32.

Set Output → Audio 1 Mode	Meaning
Analog Dec1	The decoder 1 audio output is put on the RJ-45 analog output 1
AES3 Dec1	The decoder 1 audio output is put on the RJ-45 AES3 output 1
Analog Test	An 1 KHz audio tone is put on the RJ-45 analog output 1
AES3 Test	An 1 KHz audio tone is put on the RJ-45 AES3 output 1
Mute	The audio output 1 on RJ-45 is muted

Table 32 – "Set Output → Audio 1 Mode" field

2.4.4 Set Output → Audio 2 Mode

In this field you can select which audio sent to the RJ-45 audio output 2 connector (see figure 2).

The possible voices in this field are reported in table 33.

Set Output → Audio 2 Mode	Meaning
Analog Dec2	The decoder 2 audio output is put on the RJ-45 analog output 2
AES3 Dec2	The decoder 1 audio output is put on the RJ-45 AES3 output 2
Analog Test	An 1 KHz audio tone is put on the RJ-45 analog output 2
AES3 Test	An 1 KHz audio tone is put on the RJ-45 AES3 output 2
Mute	The audio output 2 on RJ-45 is muted

Table 33 – "Set Output → Audio 2 Mode" field

2.5 REVISION MENU

In this menu are reported the software revisions loaded on the card.

2.4.1 Revision → DSP
This field reports the revision loaded on the microcontroller present on the board (see table 34).

Revision → DSP	Meaning
10.026	Microcontroller software revision

Table 34 – "Revision → DSP" field

2.4.2 Revision → FPGA S6
This field reports the revision loaded on the first FPGA present on the board (see table 35).

Revision → FPGA S6	Meaning
10.008	First FPGA software revision

Table 35 – "Revision → FPGA S6" field

2.4.3 Revision → FPGA V6
This field reports the revision loaded on the second FPGA present on the board (see table 36).

Revision → FPGA V6	Meaning
2.036	Second FPGA software revision

Table 36 – "Revision → FPGA V6" field

2.4.4 Revision → RamDisk
This field reports the revision of a custom software possibly present on the board (see table 37).

Revision → RamDisk	Meaning
1.0	Custom card software revision

Table 37 – "Revision → RamDisk" field

2.4.5 Revision → HW
This field reports the revision hardware revision of the board (see table 38).

Revision → HW	Meaning
C.F	Card Hardware revision

Table 38 – "Revision → HW" field

3. AUDIO RJ-45 CONNECTIONS

In the table 39 you can see the audio RJ-45 connector pin out.

The output audio signals are all balanced.

For the audio connections please contact Eurotek for RJ45-to-XLR solutions.

RJ-45 PIN	Analog audio	AES audio
1	AUDIO 2 LEFT N	
2	AUDIO 2 LEFT P	
3	AUDIO 2 RIGHT N	AUDIO 2 AES N
4	AUDIO 1 LEFT N	AUDIO 1 AES N
5	AUDIO 1 LEFT P	AUDIO 1 AES P
6	AUDIO 2 RIGHT P	AUDIO 2 AES P
7	AUDIO 1 RIGHT N	
8	AUDIO 1 RIGHT P	
9	SHIELD GND	SHIELD GND
10	SHIELD GND	SHIELD GND

Table 39 – RJ-45 connector pin out

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