

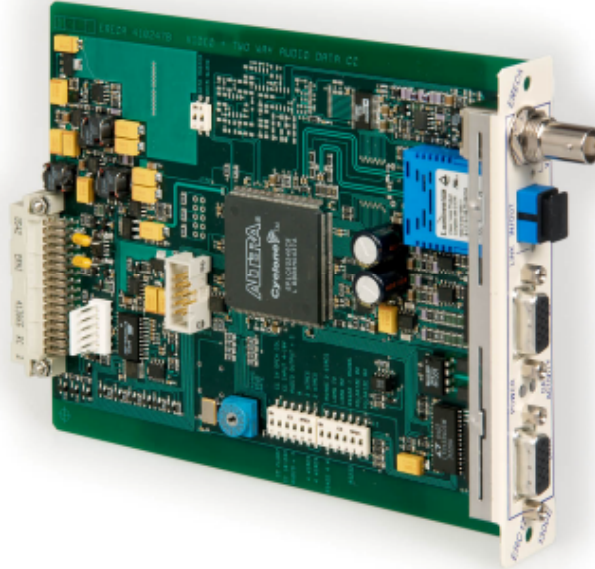
TECHNICAL SPECIFICATION ERC 1340

Date	Indice	Nature des modifications	Rédaction Nom/visa	Vérification Nom/visa	Approbation Nom/visa
19/05/2007	0	Première rédaction	BF		

CONTENT

1	FONCTION	3
1.1	PRINCIPLE	3
1.2	VIDEO TRANSMITTER ERC 1300	4
1.2.1	TRANSMITTER.....	4
1.2.2	RECEIVER OF VIDEO TRANSMITTER	4
1.3	VIDEO RECEIVER ERC 1300	4
1.3.1	RECEIVER.....	4
1.3.2	TRANSMITTER OF VIDEO RECEIVER	4
2	PRESENTATION	5
3	WIRING	6
3.1	VIDEO CHANNEL	6
3.2	AUDIO AND CONTACT CLOSURE connector	6
3.3	DATA connector	6
4	SPECIFICATIONS	7

1 FONCTION



1.1 PRINCIPLE

ERC 1300 is **digital** transmission system, unidirectional or bi-directional on singlemode or multimode fiber. So transmissible signal are digitized before sending and restitute on analog format after transmission.

Equipments transmit real time video (format PAL, NTSC or SECAM), and contact closure in the same direction.

2 Audio and Data (RS 232, RS 422 or RS 485) can be transmitting in both way bi-directionally.

ERC 1300 can supply in stand-alone module, ERC 17 family or in 19" 3U chassis.

Junctions are:

- Connector BNC, for video,
- Connector SUB D HD, 15 sockets for audio and CC,
- Connector SUB D HD, 15 sockets for data,
- Connector SC/PC optical fiber.

1.2 VIDEO TRANSMITTER ERC 1300

1.2.1 TRANSMITTER

An automatic gain control allows setting the input video level, to avoid analog to digital converter saturation. (video signal in accordance with CCIR 567 recommendation)

Video signal is amplified, aligned at the black level and digitized on 10 bits.

Audio signals are amplified and digitized on 24 bits.

RS 232, RS 422 or RS 485 is drowed by specialized circuitry.

Closure contact input is electrically isolated by opto-coupler.

Video, audio, data and CC are multiplexed.

10 bits word resultants, serialized and coded are applied to the optical transmitter.

Green leds on the front panel give module configuration, video, audio, channel and data type.

1.2.2 RECEIVER OF VIDEO TRANSMITTER

Video transmitter is equipped of audio and data receiver and the video receiver of audio and data transmitter.

RS 232, 422 or 485 data signals coming from video receiver ERC 1300 R are restored in accordance with setting of the equipments.

1.3 VIDEO RECEIVER ERC 1300

1.3.1 RECEIVER

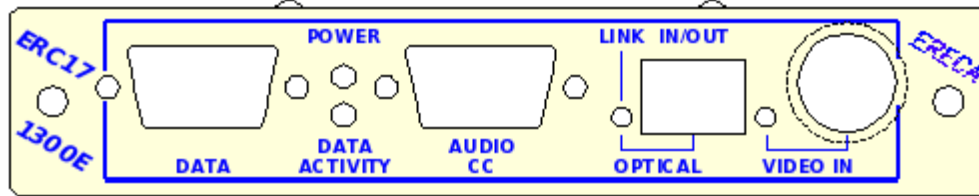
The received optical signal is converted as electrical signal, which is de-serialized and de-multiplexed to be restoring to each application video, audio and data.

1.3.2 TRANSMITTER OF VIDEO RECEIVER

Audio and data signal are treated in accordance with configuration of the module (RS 232, 422 or 485). They are multiplexed and coded to be transmitted to the video transmitter ERC 1300 E.

2 Presentation

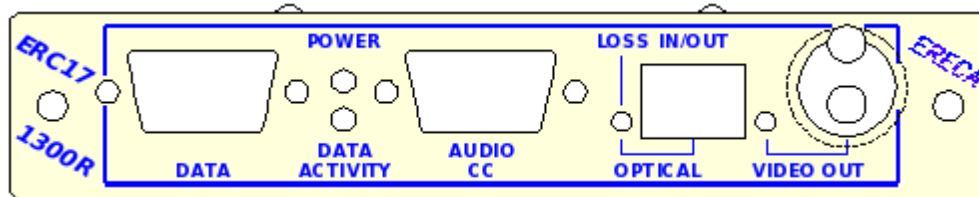
Front panel of the video transmitter module



Description

- 1 video input.
- 1 green LED for video presence.
- 1 input/output SC/PC connector for optical;
- 1 green LED "LINK" indicates optical synchronization between modules.
- 2 input/outputs on SUB D 15 HD socket connector on "AUDIO CC".
- 1 input/output for CC on SUB D 15 HD sockets connector on "AUDIO CC".
- 1 green LED "DATA ACTIVITY" for the data traffic detection on serial link.
- 1 green LED "POWER" that indicates internal voltage for the module are corrects.
- 1 serial data link RS 232, 422 or 485 on the SUB D 15 HD socket connector "DATA".

Front panel of the video receiver module



Description

- 1 video output.
- 1 green LED for video presence.
- 1 input/output SC/PC connector for optical;
- 1 red LED "LOSS" indicates optical synchronization troubles between modules.
- 2 input/outputs on SUB D 15 HD socket connector on "AUDIO CC".
- 1 input/output for CC on SUB D 15 HD sockets connector on "AUDIO CC".
- 1 green LED "DATA ACTIVITY" for the data traffic detection on serial link.
- 1 green LED "POWER" that indicates internal voltage for the module are corrects.
- 1 serial data link RS 232, 422 or 485 on the SUB D 15 HD socket connector "DATA".

3 WIRING

3.1 VIDEO CHANNEL

Input and output video connector are 75 ohms BNC socket

3.2 AUDIO AND CONTACT CLOSURE connector

Audio and CC access is grouped on a SUB D 15 HD sockets.
Audio interface are symmetric type but are able to support asymmetric signal.
IN/OUT audio level is + 6 dBm symmetric.

Socket N°	Type IN / OUT	Description
1	OUT	+5V 22 ohms
2	OUT	AUDIO 2+ output
3	OUT	AUDIO 1+ output
4	IN	AUDIO 2+ input
5	IN	AUDIO 1+ input
6		GND
7	OUT	AUDIO 2- output
8	OUT	AUDIO 1- output
9	IN	AUDIO 2- input
10	IN	AUDIO 1- input
11	IN	CC - input
12	IN	CC+ input
13	OUT	Relay Working
14	OUT	Relay Common
15	OUT	Relay Stand by

3.3 DATA connector

Audio and CC access is grouped on a SUB D 15 HD sockets.
Audio interface are symmetric type but are able to support asymmetric signal.
IN/OUT audio level is + 6 dBm symmetric.

Socket N°	Type IN / OUT	Description
1		GND
2	IN	RS232 : RX
3	IN or IN/OUT	RS422 : RX- or RS485 : A-
4	OUT or IN/OUT	RS422 : TX- or RS485 : A-
5		Do not use
6	IN	RS232 : signal of control n°1 (RTS, DTR, ...)
7	OUT	RS232 : TX
8	IN or IN/OUT	RS422 : RX+ or RS485 : A+
9	OUT or IN/OUT	RS422 : TX+ or RS485 : A+
10		Do not use
11	OUT	RS232 : signal of control n°1 (RTS, DTR, ...)
12	IN	RS232 : signal of control n°2 (RTS, DTR, ...)
13	OUT	RS232 : signal of control n°2 (RTS, DTR, ...)
14		Do not use
15		Do not use

4 SPECIFICATIONS

Mechanical

For stand alone housing ERC 17 family

Optical

Wavelength (nm)	1310/1550
Number of fiber per link	1
Transmitter optical Pw (dBm) (typical)	-10
Receiver dynamic (dBm) (typical)	0 to - 32
Optical dynamic range	19 to 29 dB
Optical connector	SC/PC
Indicator	Optical Synchro

Video

Channel number : 1
Input level : 1 volt (+/- 3 dB)
Input impedance : 75 Ω
Video type : PAL, NTSC, SECAM
Connector : BNC

Video specification

Bandwidth : 5,8 MHz
Differential gain (max.) : 2%
Differential phase (max.) : 2°
Group delay : < 10 ns
S/N ratio CCIR 567 : > 67 dB
Display : LED green video presence

Contact Closure

Number : 1 in each direction
Input : + 4 to + 24 V floating (optical isolation), contact command.
Output : 1 relay (I < 100mA and V < 100V on resistive load)
Connectors Input - Output : SUB D 15 HD, sockets (idem audio)

Audio

Maximal in/output level : +6 dBm (symmetric)
Distortion : < 0,1%
Input impedance : 600 Ohms
Bandwidth at + / - 1 dB : 25 Hz to 18 kHz
S/N Weighted at 1000 Hz : > 75 dB
Output impedance : < 22 Ohms (symmetric)
Connectors Input - Output : SUB D 15 HD, sockets

Data

Link number : 1
Protocol : RS 232, RS 422 or RS 485, asynchronous
Signal RS 232 : Rx, Tx, RTS, CTS, DTR and DSR
Signal RS 422 : Rx, Tx, RTS, and CTS
Signal RS 485 (2 or 4 wires) : Rx, Tx, RTS, and CTS
Max. Speed : 230 Kbauds (RX, TX)
Connector In/Output : SUB D High density 15 female contacts

Environmental

Operating temperature : - 20 to + 70 ° C
Storage temperature : - 30 to + 80° C
Humidity : 95 % non-condensing

In accordance with Europeans C.E. standards:

EN 50081-1 EN 50081-2
EN 50082-1 EN 50082-2
EN 550022

1. CERTIFICAT OF CONFORMANCE « EC »

DECLARATION DE CONFORMITE " CE "

ERECA sa

**75 rue d'Orgemont
95210 SAINT GRATIEN**

Déclarons que la famille des produits **ERC 1300** satisfait aux dispositions des Directives du Conseil:

n° 89/336/CEE du 3 mai 1989 modifiée par les directives 92/31/CEE
du 5 mai 1992, et n° 93/68/CEE du 22 juillet 1993.

n° 73/23/CEE du 19 février 1973 modifiée par la Directive n° 93/68/CEE
du 22 juillet 1993.

et est conforme aux normes suivantes:

EN 50081-1
EN 50081-2
EN 50082-1
EN 50082-2
EN 55022

Le produit peut recevoir la marque "**CE**" en date du 10/11/2002

SAINT GRATIEN le 10 novembre 2006
Le service Assurance Qualité