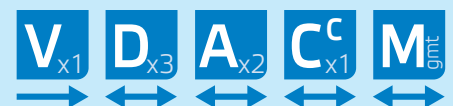


One channel video link with duplex data, audio and contact closure

CFO First Mile series consist of fibre optic modems which provide a high quality and lossless video transmission for variety of CCTV applications over multimode fibre.



CFO121 link offers a zero delay video transmission together with three bi-directional data, two audio and one contact closure signals over one multimode fibre.

High quality 10-bit video image can be transmitted over distances up to 3,5 km depending on the type of multimode fibre in use.

The application area covers for the transmission from camera to monitoring centre as well as the first part of a total video network from camera to collection point for multi-channel video transmission or video networking.

CFO121 is available in three different sizes. CRT/CRR121 units are used for standard 19" CSR rack installations, as well as for stand-alone installations

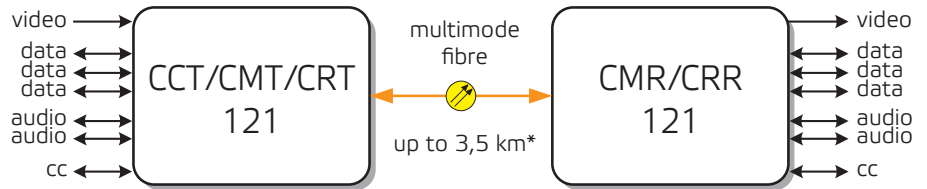
with a CMA wall mount adapter. Special model variants CMT/CMR121 and CCT121 are compact size stand-alone units offering same functionality but yet in a smaller footprint.

Standard CFO121 units are compatible with all CFO system mechanics, and as with all CFO platform products, units meet all international EMC and environmental requirements.

Features

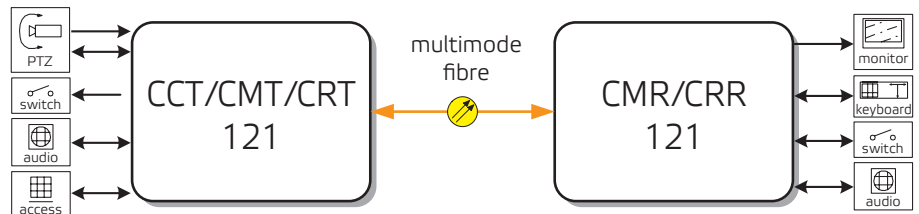
- High performance uncompressed zero delay digital video transmission, SNR 70 dB typical, 12 bit video sampling
- One CVBS (PAL/NTSC) video channel
- 3 x bi-directional data interfaces, compatible with EIA232/422/485
- User data rate up to 160 kbps / channel
- 2 x bi-directional audio, support unbalanced wiring
- 1 x bi-directional contact closure
- Transmission on one multimode fibre up to 3,5 km
- In-band configuration and management
- Card format applicable both for rack mount and stand-alone installations
- Available also in a compact-size design for e.g. camera housing installations
- Feasible for temperature hardened operation (-34... +74 °C)

Block diagram



*) The typical bandwidth limited optical transmission distance is 3,5 km for 62.5/125 µm fibre

Application example



Technical specifications (Typical values unless otherwise stated)

Optical (video + data)			Data		
Output wavelength	1310 nm		Number of channels	3	bi-directional
Output power	-3 dBm	50/125 µm fibre	Data 1 format	RS232	fixed
	+1 dBm	62.5/125 µm fibre	Data 2 & 3 formats	RS232/422/485	selectable
Input sensitivity	-18 dBm		Data rate	0...160 kbps	
Optical (return data)			Oversampling rate	1.6 MHz	
Output wavelength	850 nm		Dwelltime setting	50...10000 µs	RS485
Output power	-3 dBm	50/125 µm fibre	Contact Closure		
	+1 dBm	62.5/125 µm fibre	Number of channels	1	bi-directional
Input sensitivity	-18 dBm		Input	dry contact	
Video			Output	24V / 1A (relay)	max
Number of channels	1	uni-directional	Switching frequency	5 Hz	
Standard	PAL/NTSC	CVBS	Management		
Level	1 Vpp		CLI	RS232	
Impedance	75 ohm		General		
Sampling resolution	12 bit		Supply voltage	10.5...14 V DC	regulated
Sampling rate	16 MHz		Current consumption (max)	600 mA	12 V
Bandwidth	5.5 MHz	-1 dB	Dimensions (H x W x D)		
	6.5 MHz	-3 dB	CRT/CRR121	3U ● 10HP ● 190 mm	without connectors
C/L gain inequality	3 %		CMT/CMR121	133 ● 54,2 ● 88 mm	without connectors
C/L delay inequality	60 ns		CCT121	115.5 ● 50.5 ● 85 mm	without connectors
Differential gain	< 2 %		Weight	0.5 kg	
Differential phase	< 2 °		Connectors		
S/N ratio	70 dB		Video	BNC female	
Audio			Data/audio/cc/mgmt	RJ-45 female	
Number of channels	2 bi-directional	unbalanced or 1 x balanced and 1 x unbalanced	Optical	ST	
Sampling frequency	62.5 kHz		Operating temperature	-34...+74 °C	temperature hardened
Sampling resolution	16 bits		Storage temperature	-40...+80 °C	
Input impedance	10k ohm	Ch L can be configured to 600 ohm	Humidity	0...95 %	non condensing
Output impedance	1k ohm		EMC compatibility	EN55022-B, EN50130-4, CE	
Nominal level	+0 dBV		Notes		
Clipping level	+12 dBV		Class 1 Laser Product		
Frequency response	1 dB 0.02...20 kHz	ref. 1 kHz			
S/N ratio	64 dBqp	CCIR weighted			