Product Information – CFO432

Four Channel Video Link

CFO First Mile products are high speed rate digital fibre optic modems for a variety of CCTV applications.

CFO product family video modems are typically used in point-to-point fibre optic transmission systems. The optical operation on CFO432 is based on multimode fibre operation over 2 fibres (TX and RX separated). The core operation is on lossless real-time standard definition baseband video transmission.

CFO432 modems support multiple serial data needs such as e.g. PTZ and access control. The dual audio channels are suitable for any PA needs but are fit for broadcast purposes as well.

Above all the CFO modems can make a step closer to meet today´s networking requirements by containing a built-in Fast Ethernet Bridge. The Ethernet capability offers an easy migration path e.g. for IP cameras, edge recording or any IP device on remote CCTV camera locations.

CFO video modems are manageable over TCP/IP connection or locally via a serial port. Units are open to any 3rd party network management system via SNMP.

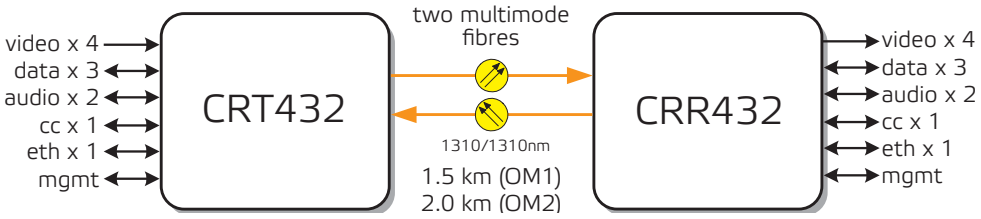
CFO video modems are temperature hardened and well-suited for industrial and high-end security monitoring systems. Stand-alone units mounted into CMA adaptors can be equipped with optional CLP line protectors providing a surge/transient protection as well a common mode interference filtering.

Indoor installations are supported by standard 19" racks with AC/DC and/or DC/DC power supplies (optional redundancy). All CFO units follow a mix-and-match fashion and can share the common installation base.

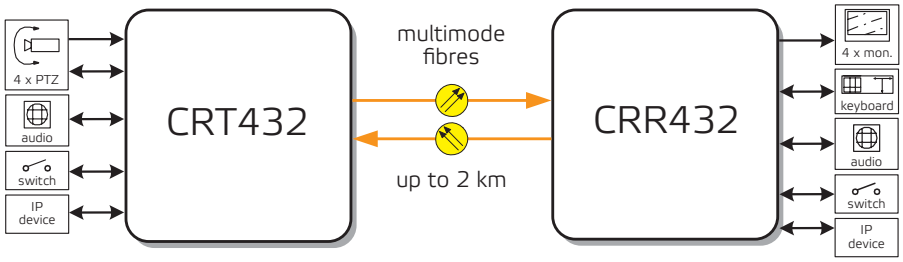
Features

- High performance uncompressed real time digital video transmission, SNR 67 dB typical, 10 bit video sampling
- Four CVBS (PAL/NTSC) or two Y/C video channels
- 1 x 10/100Base-Tx Ethernet
- Autonegotion, FD or HD selectable
- 3 x bi-directional data interfaces, compatible with RS232/422/485
- User data rate up to 230 kbps / channel
- 2 x bi-directional audio, supports unbalanced or balanced wiring
- 1 x bi-directional contact closure
- In-band configuration and management
- Card format applicable both for rack mount and stand-alone installations
- Mechanically compact and ruggedised
- EMC and environmental conformance
- CE approved

Block diagram



Application example



Technical specifications *(Typical values unless otherwise stated)*

Optical		
Wavelength [1]	1310 nm 1310 nm	forward return
Range [2]	1.5 km 2.0 km	OM1 (62.5/125 µm) OM2 (50/125 µm)
Video		
Number of channels	4	uni-directional
Standard	PAL/NTSC or Y/C	CVBS
Input and output signal levels	1 Vp-p	
Input overload level	1.5 Vp-p	DC component
Impedance	75 ohm	
Sampling	10 bits / 15.55 MHz	
Bandwidth	6.5 MHz	- 3 dB
C/L gain inequality	3 %	
C/L delay inequality	40 ns	max
Differential gain	2 %	max
Differential phase	2º	max
S/N ratio	67 dB	unified, weighted
Data		
Number of channels	3	bi-directional
Data 1 & 2 format	RS232/422/485	selectable
Data 3 format	RS232	fixed
Data rate	0...230 kbps	all channels
Dwelltime setting	50...65500 µs	RS485 2-wire
Audio		
Number of channels	2 bi-directional	unbalanced / balanced
Sampling frequency	60.5 kHz	
Sampling resolution	16 bits	
Input impedance	600/10k ohm	selectable
Output impedance	10 ohm	
Nominal level	0 dBm	
Clipping level	+20 dBm	
Frequency response	0.02...20 kHz	- 3 dB, ref. 1 kHz
S/N ratio	70 dBqp	CCIR weighted

Contact Closure		
Number of channels	1	bi-directional
Input	dry contact	open/close, max loop R 120 ohm
Output	relay	max 30 V/1A switching
Data rate	5 Hz	max
Ethernet Bridge		
Number of ports	1	bi-directional
Port type	10/100Base-TX	configurable
Compliant	IEEE802.3, IEEE802.3U	
Management		
Command Line Interface	RS-232 and/or TCP/IP terminal	
SNMP	v2, MIB-II, remote via network	
General		
Supply voltage	10.5...14 V DC	regulated
Current consumption (max)	750 mA	steady state
Dimensions (H x W x D)	3U x 10HP x 190 mm	without CMA
Weight	0.8 kg	
Connectors		
Video	BNC female	
Data/audio/cc/mgmt/Ethernet	RJ-45 female	
Optical	duplex LC/UPC	
Environmental		
Operating temperature	-34...+74 ºC	
Storage temperature	-34...+74 ºC	
Humidity	0...95 %	non condensing
EMC compatibility	EN61000-6-4, EN50130-4, CE FCC CFR 47 Part 15 (subpart B, class A)	

Notes

[1] Class 1M operation.

[2] Transmission distance may be limited by fibre type (bandwidth) and possible other physical variables on the cable infrastructure.

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