



AVAILABLE CFO PRODUCTS

Fibre optic video products, valid from 1st February 2022



TELESTE

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CFO FIBRE OPTICS VIDEO INTRODUCTION

Nearly two decades the traditional fibre optics operation has been the core technology in many security video systems. With a successful background in this field Teleste continues the tradition by it's well-know CFO product range. Still today the CFO platform is ready to challenge any video system requirement in the class of uncompressed real-time baseband video transmission.

V	Number of video channels
D	Number of data channels
A	Number of audio channels
C^c	Number of contact closure channels
E	Number of Ethernet Bridge channels
M_{int}	In-band configuration and management
SFP	Small form-factor pluggable transceiver
	One-way/uni-directional (Tx -> Rx)
	Two-way/bi-directional (Tx <-> Rx)

CFO WITH FIXED OPTICS

CFO First Mile Basic – 1-channel video multiplexers with fixed optics

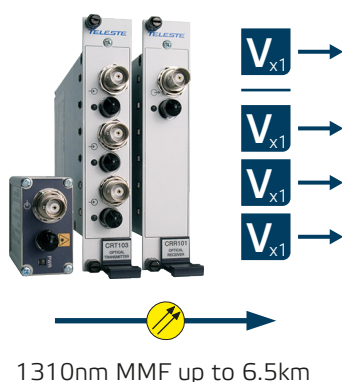
CFO First Mile Basic product range provides cost effective fibre optic video transmission. The CFO First Mile Basic product range consist of 1-channel video multiplexers either for “video only” type operation or operation supporting data and contact closure.

The product range includes mini size stand-alone video transmitter, cards for rack mount installation, module adapters

for stand-alone installation and all other necessary accessories.

Temperature hardened operation (-34...+74°C / -29...165°F).

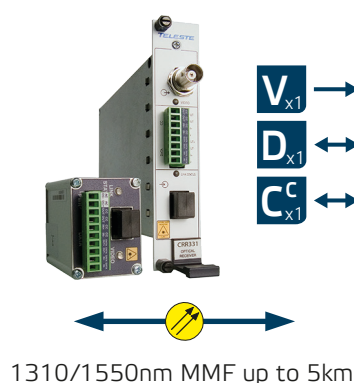
CFO First Mile basic products take advantage of the most appropriate technology for the application, with the success factors being reliability, performance and ease of installation.



CFO100 – 1 channel video only link for fixed camera applications

CFO100 series provides uncompressed digital transmission of one CVBS video channel over one **multimode** (1310nm) fibre for up to 6.5km. Available in stand-alone small size transmitter unit and 5HP wide rack mount transmitter/receiver card formats. CPT101 can be operate with 12 VDC and 24 VAC. 1/3 x ST optical connector.

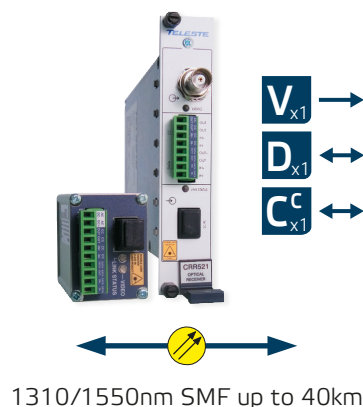
CPT101	1-channel small size video transmitter (DIN mounting kit optional, see CIK001)	stand-alone unit
CRT103	Triple channel video transmitter	5HP wide rack mount card
CRR101	1-channel video receiver	
CRR103	Triple channel video receiver	



CFO331 – 1 channel video link for PTZ camera applications

CFO331 series provides uncompressed digital transmission of one CVBS video channel with bi-directional data (1) and contact closure (1) channels over one **multimode** (1310/1550nm) fibre for up to 5km. Units configuration is done with DIP-switches. Available in stand-alone compact size transmitter unit and 5HP wide rack mount receiver card formats. CPT331 can be operate with 12 VDC and 24 VAC. 1 x SC optical connector.

CPT331	1-channel compact size video transmitter (DIN mounting kit optional, see CIK001)	stand-alone unit
CRR331	1-channel video receiver	5HP wide rack mount card



CFO521 – 1 channel video link for PTZ camera applications

CFO521 series provides uncompressed digital transmission of one CVBS video channel with bi-directional data (1) and contact closure (1) channels over one **single-mode** (1310/1550nm) fibre for up to 40km. Units configuration is done with DIP-switches. Available in stand-alone compact size transmitter unit and 5HP wide rack mount receiver card formats. CPT521 can be operate with 12 VDC and 24 VAC. 1 x SC optical connector.

CPT521	1-channel compact size video transmitter (DIN mounting kit optional, see CIK001)	stand-alone unit
CRR521	1-channel video receiver	5HP wide rack mount card

CFO WITH SFP OPTICS

CFO First Mile SFP – 1-ch, 4-ch and 8-ch video multiplexers with selectable SFP optics

CFO First Mile SFP product range provides cost effective fibre optic video transmission. The range consist of 1-ch, 4-ch and 8-ch video multiplexers either for “video only” type operation or operation supporting data, audio, contact closure and Ethernet. Units configuration is done by DIP switches.

Temperature hardened operation
(-34...+74°C / -29...165°F).

The fibre optics are based on pluggable SFP transceiver modules. Some ready-assembled units with a specific SFP are available as shown in the list below.

Also bare CFO devices without SFP optics are available if the SFP is ordered separately. For all available SFP models please refer to our selection of MSG series transceivers in page 6.



V_{x4}



S = 1310nm MMF up to 2km

M = 1310/1490nm SMF up to 20km

L = 1310/1550nm SMF up to 40km

CFO410 – 4 channel video only link for fixed camera applications

CFO410 series provides uncompressed and real-time digital transmission of four (4) composite video channels (2-channel for Y/C). Units are 5HP wide rack mount cards. CMT models are including a standalone mechanics CMA015 for the transmitter card.

CRT410	4-channel video transmitter without optics	SFP to be ordered separately
CRR410	4-channel video receiver without optics	
CMT410S	4-channel stand-alone video transmitter (incl. CMA015)	MMF SFP 2km 2 x LC
CRT410S	4-channel video transmitter	
CRR410S	4-channel video receiver	
CMT410M	4-channel stand-alone video transmitter (incl. CMA015)	SMF SFP 20km 1 x LC
CRT410M	4-channel video transmitter	
CRR410M	4-channel video receiver	
CMT410L	4-channel stand-alone video transmitter (incl. CMA015)	SMF SFP 40km 1 x LC
CRT410L	4-channel video transmitter	
CRR410L	4-channel video receiver	



V_{x8}



S = 1310nm MMF up to 2km

M = 1310/1490nm SMF up to 20km

L = 1310/1550nm SMF up to 40km

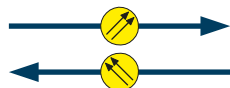
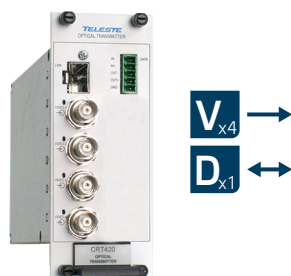
CFO810 – 8 channel video only link for fixed camera applications

CFO810 series provides uncompressed and real-time digital transmission of eight (8) composite video channels (4-channel for Y/C). Units are 10HP wide rack mount cards. CMT models are including a standalone mechanics CMA025 for the transmitter card.

CRT810	8-channel video transmitter without optics	SFP to be ordered separately
CRR810	8-channel video receiver without optics	
CMT810S	8-channel stand-alone video transmitter (incl. CMA025)	MMF SFP 2km 2 x LC
CRT810S	8-channel video transmitter	
CRR810S	8-channel video receiver	
CMT810M	8-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 20km 1 x LC
CRT810M	8-channel video transmitter	
CRR810M	8-channel video receiver	
CMT810L	8-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 40km 1 x LC
CRT810L	8-channel video transmitter	
CRR810L	8-channel video receiver	

CFO WITH SFP OPTICS

(Please see other fibre optic SFP transceiver options in page 6.)



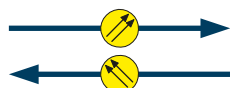
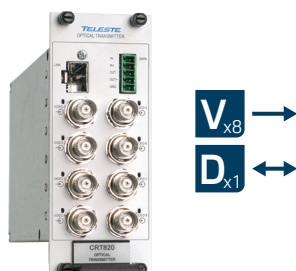
S = 1310/1310nm MMF up to 2km



M = 1310/1490nm SMF up to 20km



L = 1310/1550nm SMF up to 40km



S = 1310/1310nm MMF up to 2km



M = 1310/1490nm SMF up to 20km



L = 1310/1550nm SMF up to 40km

CFO420 – 4 channel video link for PTZ camera applications

CFO420 series provides uncompressed and real-time digital transmission of four (4) composite video channels (2-channel for Y/C) with one (1) configurable bi-directional RS-data channel. Units are 10HP wide rack mount cards. CMT models are including a standalone mechanics CMA025 for the transmitter card.

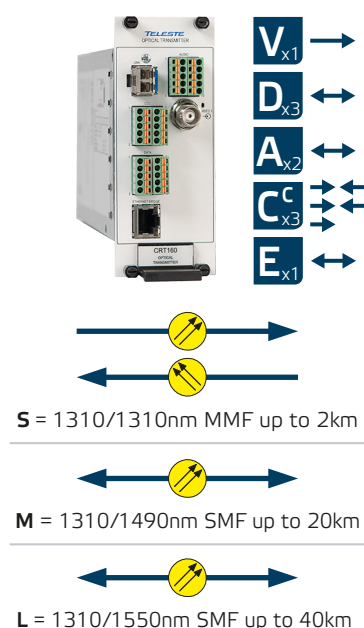
CRT420	4-channel video transmitter without optics	SFP to be ordered separately
CRR420	4-channel video receiver without optics	
CMT420S	4-channel stand-alone video transmitter (incl. CMA025)	MMF SFP 2km 2 x LC
CRT420S	4-channel video transmitter	
CRR420S	4-channel video receiver	
CMT420M	4-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 20km 1 x LC
CRT420M	4-channel video transmitter	
CRR420M	4-channel video receiver	
CMT420L	4-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 40km 1 x LC
CRT420L	4-channel video transmitter	
CRR420L	4-channel video receiver	

CFO820 – 8 channel video link for PTZ camera applications

CFO820 series provides uncompressed and real-time digital transmission of eight (8) composite video channels (4-channel for Y/C) with one (1) configurable bi-directional RS-data channel. Units are 10HP wide rack mount cards. CMT models are including a standalone mechanics CMA025 for the transmitter card.

CRT820	8-channel video transmitter without optics	SFP to be ordered separately
CRR820	8-channel video receiver without optics	
CMT820S	8-channel stand-alone video transmitter (incl. CMA025)	MMF SFP 2km 2 x LC
CRT820S	8-channel video transmitter	
CRR820S	8-channel video receiver	
CMT820M	8-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 20km 1 x LC
CRT820M	8-channel video transmitter	
CRR820M	8-channel video receiver	
CMT820L	8-channel stand-alone video transmitter (incl. CMA025)	SMF SFP 40km 1 x LC
CRT820L	8-channel video transmitter	
CRR820L	8-channel video receiver	

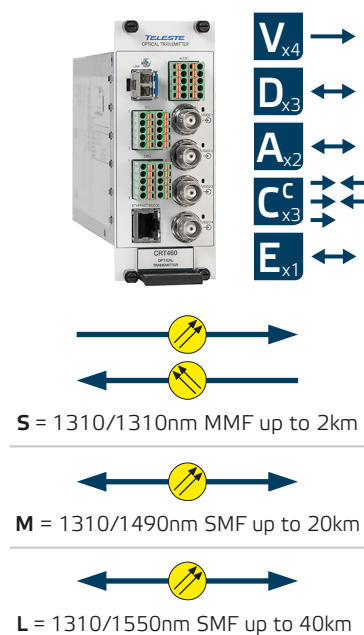
CFO WITH SFP OPTICS



CFO160 – 1 channel video link for extended PTZ camera applications

CFO160 series provides uncompressed and real-time digital transmission of one (1) CVBS video channel with three (3) configurable bi-directional RS-data channels, two (2) audio, contact closures (3 out/2 in) and one Fast Ethernet channel over optical fibre. Ethernet Bridge interface is 10/100Base-Tx, full 100Mbps thruput. Units are 10HP wide rack mount cards. CMT models are including a standalone mechanics CMA025 for the transmitter card.

CRT160	1-channel video transmitter without optics	SFP to be ordered separately
CRR160	1-channel video receiver without optics	
CMT160S	1-channel stand-alone video transmitter (incl. CMA025)	MMF SFP 2km 2 x LC
CRT160S	1-channel video transmitter	
CRR160S	1-channel video receiver	SMF SFP 20km 1 x LC
CMT160M	1-channel stand-alone video transmitter (incl. CMA025)	
CRT160M	1-channel video transmitter	SMF SFP 40km 1 x LC
CRR160M	1-channel video receiver	
CMT160L	1-channel stand-alone video transmitter (incl. CMA015)	
CRT160L	1-channel video transmitter	
CRR160L	1-channel video receiver	



CFO460 – 4 channel video link for extended PTZ camera applications

CFO460 series provides uncompressed and real-time digital transmission of four (4) CVBS video channel (2-ch for Y/C) with three (3) configurable bi-directional RS-data channels, two (2) audio, contact closures (3 out/2 in) and one Fast Ethernet channel over optical fibre. Ethernet Bridge interface is 10/100Base-Tx, full 100Mbps thruput. Units are 10HP wide rack mount cards. CMT models are including a standalone mechanics CMA025 for the transmitter card.

CRT460	1-channel video transmitter without optics	SFP to be ordered separately
CRR460	1-channel video receiver without optics	
CMT460S	1-channel stand-alone video transmitter (incl. CMA025)	MMF SFP 2km 2 x LC
CRT460S	1-channel video transmitter	
CRR460S	1-channel video receiver	SMF SFP 20km 1 x LC
CMT460M	1-channel stand-alone video transmitter (incl. CMA025)	
CRT460M	1-channel video transmitter	SMF SFP 40km 1 x LC
CRR460M	1-channel video receiver	
CMT460L	1-channel stand-alone video transmitter (incl. CMA015)	
CRT460L	1-channel video transmitter	
CRR460L	1-channel video receiver	

CFO WITH SFP OPTICS



CRG101 media converter.

CRG100/101 – Single channel media converters

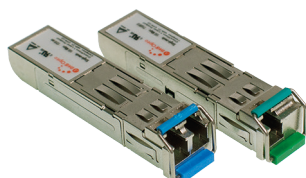
CRG100 and CRG101 media converters are designed to convert Gigabit level copper/ electrical Ethernet for fibre optic transmission, or vice versa. These units are compatible with MSG series SFP transceivers to meet various fibre cabling requirements.

The unmanaged CRG100 model supports 1000Base-T operation only. The managed CRG101 model with WebUI and SNMP support is compatible with 10/100/1000Base-T interface and has a dual speed support on the SFP port (100/1000Base-F). Standalone installation is available with CMA015 module adapter.

CRG100	Unmanaged media converter, 1000Base-TX only	SFP to be ordered separately from the MSG series	SFP wide rack mount card
CRG101	Managed media converter, 10/100/1000Base-TX	SFP to be ordered separately from the MSF or MSG series	

SFP TRANSCEIVER MODULES FOR CFO

SFP transceivers for CFO SFP series video links

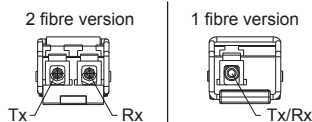
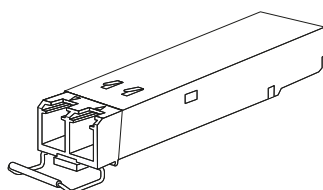


The SFP (small form-factor pluggable) transceiver modules listed below can be used in conjunction with the **CFO First Mile SFP** video modems.

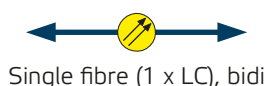
For most typical applications the desired product configurations or combinations are available as ready-defined ordering codes.

For spare part use or alternative self-made combinations the SFPs are also available as individual product items as shown below. SFP transceivers can be ordered separately.

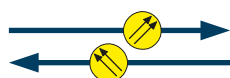
Most of the SFP models are feasible for temperature hardened operation (-40...+85°C / -40...+185°F).

SFP CFO First Mile SFP
1000Base-Tx/Fx


2 x LC = dual fibre,
1 x LC = single fibre.



Single fibre (1 x LC), bidi



Dual fibre (2 x LC), 2-way

Available SFP transceiver types for Gigabit Ethernet.

SFP modules for Gigabit Ethernet (Suitable for CFO SFP series)

MSG101B	MM 850nm	8.5 dB, 1km / 0.6mi	2 x LC -40...+85°C / -40...+185°F
MSG111A	MM 1310nm	10 dB, 2km / 1.2mi *	
MSG211A	SM 1310nm	10.5 dB, 10km / 6mi	
MSG214A	SM 1310nm	20 dB, 30km / 18mi	
MSG222A	SM 1550nm	12 dB, 30km / 18mi	
MSG224A	SM 1550nm	20 dB, 50km / 31mi	
MSG226A	SM 1550nm	24 dB, 70km / 43mi	
MSG228B	SM 1550nm	30 dB, 110km / 68mi	1 x LC -40...+85°C / -40...+185°F
MSG321A	MM BD Tx1310 / Rx1550nm	10 dB, 550m / 1804ft	
MSG331A	MM BD Tx1550 / Rx1310nm	10 dB, 550m / 1804ft	
MSG422A	SM BD Tx1310 / Rx1550nm	12 dB, 10km / 6mi	
MSG432A	SM BD Tx1550 / Rx1310nm	12 dB, 10km / 6mi	
MSG424A	SM BD Tx1310 / Rx1550nm	20 dB, 40km / 24mi	
MSG434A	SM BD Tx1550 / Rx1310nm	20 dB, 40km / 24mi	
MSG443A	SM BD Tx1310 / Rx1490nm	15 dB, 20km / 12mi	1 x SC/PC -40...+85°C / -40...+185°F
MSG453A	SM BD Tx1490 / Rx1310nm	15 dB, 20km / 12mi	
MSG422A SC	SM BD Tx1310 / Rx1550nm	12 dB, 10km / 6mi	
MSG432A SC	SM BD Tx1550 / Rx1310nm	12 dB, 10km / 6mi	

* 1km / 0.6mi for 50/125µm fibre.

CFO ACCESSORIES

CFO accessories

The perfect combination of accessories makes installation easier for you. Teleste offers a range of accessories that perfectly complement one to another.

This gives you the opportunity to assemble systems that perfectly reflect your individual needs.



CSR216 Installation frame with CPS384 power supply and CCP042 cover plate.



CPS384 Power supply unit.

Rack installation accessories

The CFO family of products all utilise the same rack installation mechanics, installation frame and power supply (PSU) systems which allow mixing of single channel, multichannel, single-mode and multimode fibre applications in the same system. This provides a very flexible and reliable approach to fulfill all of your optical fibre video transmission requirements.

CSR216	Installation frame, 19" 3U	front loading, PSU at rear	16 x 5HP CFO modules and 1 x 4HP control / alarm card
CSR316		rear loading, PSU at front	
CP5384	Power supply for CSR216/316, without power cord		230 VAC & 115 VAC (selectable), 130 W
CP5390	Power supply for CSR216/316, DC cable included		-48 VDC 102W
CPC221	Angled power cord for CP5384 power supply		EU plug, 2m
CPC222			UK plug, 2m
CPC223			US plug, 2m
CSR299	CSR216 installation frame package, single power supply		CSR216, CP5384, CCP004, CCP042, CPC221
CSR299 UK			CSR216, CP5384, CCP004, CCP042, CPC222
CSR399	CSR316 installation frame package, single power supply		CSR316, CP5384, CCP004, CCP042, CPC221
CSR399 UK			CSR316, CP5384, CCP004, CCP042, CPC222
CSR300	CSR216 installation frame package, dual power supply		CSR216, 2 x CP5384, CCP004, 2 x CPC221
CSR300 UK			CSR216, 2 x CP5384, CCP004, 2 x CPC222
CSR400	CSR316 installation frame package, dual power supply		CSR316, 2 x CP5384, CCP004, 2 x CPC221
CSR400 UK			CSR316, 2 x CP5384, CCP004, 2 x CPC222
CSR420	CSR216 installation frame with DIN rails for 2 x MPS120 power supply		2 x CIK120

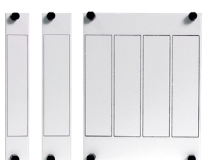
CFO ACCESSORIES



MPS120 power supply for CSR420 installation frame.



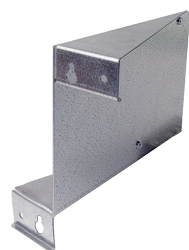
CVU014 Ventilation frame.



CCP004, 005 and 020 cover plates.



CMA015, CMA025 & CMA035 module adapters.



CIK002 rear mounting plate.

Rack installation accessories

MPS120	Power supply for CSR420, without power cord	230 VAC & 115 VAC (selectable), 120 W
CIK110	Din rail kit for CSR rack, MPS120 power supply mount	Power supply depth 40mm
CIK120		Power supply depth 68mm
CPC521		EU plug, 2m
CPC522	IEC lockable power cord for MPS120 power supply unit	UK plug, 2m
CPC523		US plug, 2m
CCP004-5	4HP wide cover plate (1 alarm/controller card slot)	Bundle of 5 pcs
CCP005-5	5HP wide cover plate (1 slot)	
CCP020-3	20HP wide cover plate (4 slots)	Bundle of 3 pcs
CCP042	42HP wide cover plate (1 CPS384/390 slot)	1 pcs
CVU014	Ventilation frame / cable management shelf	1U 19"
CRA002	Installation shelf for 2 x CMA0x5 adapters, CMA screws included	2U 19"

Stand-alone installation accessories

The CFO family of products all utilise the same rack installation mechanics, installation frame and power supply systems which allow mixing of one channel, multichannel, single-mode and multimode fibre applications in the same system. This provides a very flexible and reliable approach to fulfill all of your optical fibre video transmission requirements.

CMA015		For 1 x 5HP wide card
CMA025	Module adapter for stand-alone wall mounting	For 1 x 10HP wide card (or 2 x 5HP)
CMA035		For 1 x 15HP wide card (or 3 x 5HP)
CIK001	DIN rail mounting kit for CPT101/321/331 /521/541	Including angled-BNC adapter for video
CIK002	Rear mounting kit	For CMA025/035 module adapters
CPS251	12V mains adapter for CMA, EUR	230 VAC – 12 VDC / 2.1A
CPS252	12V mains adapter for CMA, UK	230 VAC – 12 VDC / 2.1A
CPS253	12V mains adapter for CMA, USA	115 VAC – 12 VDC / 2.1A
MAC008	Wall mount for CPS series mains adapters	Includes wall bracket only

LEGACY CFO PRODUCTS (for spare part use only)



The legacy CFO offering for basic 1310 nm systems is mainly targeted to support existing operational systems and installations. Please consult with Teleste sales for more information on project pricing and delivery lead times.

All new projects are recommended to utilise new design generation CFO devices listed on pages 2-6.

CFO First Mile Basic – 1-ch, 4-ch and 8-ch video links with fixed optics

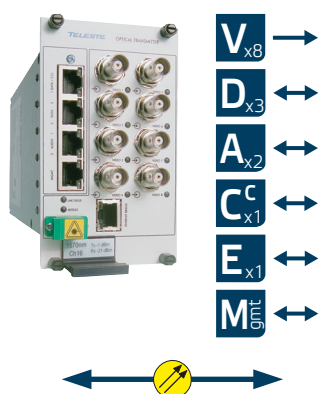
Depending on the model, the CFO First Mile Basic product range provides uncompressed digital transmission of one (1), four (4) or eight (8) CVBS channels with bi-directional data (3), audio (2), contact closure (1) channels and one 10/100Base-Tx Ethernet

Bridge over optical fibre. Units configuration is done via a hyperterminal/telnet interface (CLI & SNMP).

Temperature hardened operation (-34...+74°C / -29...165°F).

CMT161	1-channel stand-alone video transmitter (incl. CMA025)	SMF 60km 1310/1310nm 1 x SC/APC 8°
CRT161	1-channel video transmitter	
CRR161	1-channel video receiver	
CMT461	4-channel stand-alone video transmitter (incl. CMA025)	SMF 50km 1310/1310nm 1 x SC/APC 8°
CRT461	4-channel video transmitter	
CRR461	4-channel video receiver	
CMT861	8-channel stand-alone video transmitter (incl. CMA035)	SMF 50km 1310/1310nm 1 x SC/APC 8°
CRT861	8-channel video transmitter	
CRR861	8-channel video receiver	

LEGACY CFO PRODUCTS (for spare part use only)



The legacy CFO OPX offering for optically multiplexed CWDM systems is mainly targeted to support existing operational systems and installations. Please consult with Teleste sales for more information on project pricing and delivery lead times.

CFO OPX – CWDM optical multiplexing

CFO OPX product range is supporting optical multiplexing technology. All optical components are based CWDM (Coarse Wavelength Division Multiplexing) standards and specifications. CFO OPX system enables transmission of 72+ simultaneous video channels with

bidirectional data, audio, contact closure and 10/100Base-Tx Ethernet over one shared singlemode fibre.

Note! Alias code (column 2) can be used as reference for the long-configuration code (column 1).

CEV – 8 channel video modems for PTZ camera applications

The **CEV** series 8 channel video modems are for PTZ camera applications.

The CWDM optics are wavelength specific and configured at factory. Device management is via a hyperterminal/telnet interface (CLI & SNMP). SC/APC 8° optical connector. Temperature hardened operation (-34...+74°C / -29...165°F).

CEV Bidirectional – 8 channel video modems for PTZ camera applications:

CEV-A-A8TB-C11A-AA-B	CRT861-C11	8-ch Tx	CWDM 1470nm, -1dBm	15HP wide rack mount card
CEV-A-A8TB-C12A-AB-B	CRT861-C12	8-ch Tx	CWDM 1490nm, -1dBm	
CEV-A-A8TB-C13A-AC-B	CRT861-C13	8-ch Tx	CWDM 1510nm, -1dBm	
CEV-A-A8TB-C14A-AD-B	CRT861-C14	8-ch Tx	CWDM 1530nm, -1dBm	
CEV-A-A8TB-C15A-AE-B	CRT861-C15	8-ch Tx	CWDM 1550nm, -1dBm	
CEV-A-A8TB-C16A-AF-B	CRT861-C16	8-ch Tx	CWDM 1570nm, -1dBm	
CEV-A-A8TB-C17A-AG-B	CRT861-C17	8-ch Tx	CWDM 1590nm, -1dBm	
CEV-A-A8TB-C18A-AH-B	CRT861-C18	8-ch Tx	CWDM 1610nm, -1dBm	
CEV-A-A8RD-C11A-AA-B	CRR861-C11	8-ch Rx	CWDM 1470nm, -21dBm	15HP wide rack mount card
CEV-A-A8RD-C12A-AB-B	CRR861-C12	8-ch Rx	CWDM 1490nm, -21dBm	
CEV-A-A8RD-C13A-AC-B	CRR861-C13	8-ch Rx	CWDM 1510nm, -21dBm	
CEV-A-A8RD-C14A-AD-B	CRR861-C14	8-ch Rx	CWDM 1530nm, -21dBm	
CEV-A-A8RD-C15A-AE-B	CRR861-C15	8-ch Rx	CWDM 1550nm, -21dBm	
CEV-A-A8RD-C16A-AF-B	CRR861-C16	8-ch Rx	CWDM 1570nm, -21dBm	
CEV-A-A8RD-C17A-AG-B	CRR861-C17	8-ch Rx	CWDM 1590nm, -21dBm	
CEV-A-A8RD-C18A-AH-B	CRR861-C18	8-ch Rx	CWDM 1610nm, -21dBm	

ACCESSORIES FOR **LEGACY CFO** PRODUCTS

COM-A-H-G1A-X optical switch

Optical switch – 1 x 2 type non-latching switch

Optical switches are used to re-direct the optical transmission streams in case of link loss as for example. The optical bandpass of the unit covers all common **CWDM** wavelengths and supports the **1310nm** window as well. Naturally fully bi-directional optical operation is allowed.

The optical switch can be configured to operate in case of system power loss or to have remotely controlled switching by means of an external I/O control. Optical

switching capability also enables a possibility to implement a ring type fibre network topology.

Temperature hardened operation (-34...+74°C / -29...165°F).
SC/APC 8° optical connectors.

Units are 10HP wide rack mount cards. Stand-alone (SA) installation is provided with CMA025 series module adapter.

COM-A-H-G1A-X	1 x 2 type non-latching switch for single-mode fibre	10HP wide rack mount card
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COM – Optical accessories

The COM series optical passive modules can enable a network topology in which one or more wavelengths can be added, dropped, combined, extracted or splitted on demand at specific locations along the CWDM trunk. All COM models are equipped with SC/APC 8° high reflection loss optical connectors. Units do not require any supply voltage.

The technology enables flexible and intelligent planning and provisioning of optical services while at the same time simplifies the deployment and maintenance of an optical network.

Note! Alias code (column 2) can be used as reference for the long-configuration code (column 1).



Add/Drop unit.

Add/Drop – CWDM single channel add/drop units

The single channel CWDM add/drop version of COM has been designed to support bi-directional add-and-drop operation. There are eight different variants available covering the ITU CWDM channels C11...C18. The bypass between common ports includes the 1310nm optical window as well. Operating temperature -10...+70°C / 14...158°F.

COM-A-A-11A-X	OPXAD-C11	1 channel add/drop, ch11 (1471nm)	5HP wide rack mount card
COM-A-A-12A-X	OPXAD-C12	1 channel add/drop, ch12 (1491nm)	
COM-A-A-13A-X	OPXAD-C13	1 channel add/drop, ch13 (1511nm)	
COM-A-A-14A-X	OPXAD-C14	1 channel add/drop, ch14 (1531nm)	
COM-A-A-15A-X	OPXAD-C15	1 channel add/drop, ch15 (1551nm)	
COM-A-A-16A-X	OPXAD-C16	1 channel add/drop, ch16 (1571nm)	
COM-A-A-17A-X	OPXAD-C17	1 channel add/drop, ch17 (1591nm)	
COM-A-A-18A-X	OPXAD-C18	1 channel add/drop, ch18 (1611nm)	

ACCESSORIES FOR **LEGACY CFO** PRODUCTS

Mux/demux units.

Mux/Demux – CWDM multiplexer/demultiplexer units

The four channel and eight channel CWDM mux/demux products have been designed for 4 or 8 wavelength operation (ITU CWDM channels C11...18). With four channel units the other part of CWDM spectrum can by-pass the unit providing a possibility to use this unit also for four channel add/drop topologies. A parallel operation with a legacy system is enabled by using a dedicated tap port for 1310nm bybassing. Temperature hardened operation (-40...+85°C / -40...185°F)

COM-A-B-21A-X	OPXMUX-A	Four channel mux/demux, ch 11/12/13/14 (+ ch 15-18 + 1310nm)	5HP wide rack mount card
COM-A-B-25A-X	OPXMUX-B	Four channel mux/demux, ch 15/16/17/18 (+ ch 11-14 + 1310nm)	
COM-A-C-51A-X	OPXMUX-C	Eight channel mux/demux, ch 11/12/13/14/15/16/17/18 (+ 1310nm)	10HP wide rack mount card



Splitter and WDM units.

Splitters & WDM – Optical splitter and wavelength division multiplexing units

A typical optical splitter has a split ratio of 50/50 and supports the 1310nm and 1550nm (CWDM) optical operation. Splitters for any other split ratio are available upon request.

There are two different variants available for the optical wavelength division multiplexing (WDM). The 1310/1550nm variant is for combining standard wideband optical signals in the second and third optical window into a single fibre. The 1310/CWDM variant has been designed for combining an existing legacy 1310nm system with CWDM based optical system (ch11...ch18). Operation temperature -34...+74°C / -29...165°F (1310/1550nm) / -5...+65°C / 23...149°F (1310nm/CWDM).

COM-A-D-00A-X	OPXSPLT-A	Optical splitter, 50/50%, 1270...1350 & 1470...1610nm	5HP wide rack mount card
COM-A-F-F1A-X	OPXWDM-A	WDM 1310/1550, 1295...1325 / 1535...1565nm	
COM-A-F-F2A-X	OPXWDM-B	WDM 1310/CWDM, 1260...1360 / 1460...1620nm	

CFO APPLICATIONS

CFO160 & 460

1 or 4 x SD video in
3 x RS data, duplex
2 x Audio, 2-way
2/3 x CC I/O
1 x Ethernet Bridge

Video
transmitter

Depending on SFP:
MMF up to 2 km
SMF up to 110 km
Single LC or dual LC

Video
receiver

1 or 4 x SD video out
3 x RS data, duplex
2 x Audio, 2-way
2/3 x CC I/O
1 x Ethernet Bridge

CFO420 & 820

4 or 8 x SD video in
1 x RS data, duplex

Video
transmitter

Depending on SFP:
MMF up to 2 km
SMF up to 110 km
Single LC or dual LC

Video
receiver

4 or 8 x SD video out
1 x RS data, duplex

CFO410 & 810

4 or 8 x SD video in

Video
transmitter

Depending on SFP:
MMF up to 2 km
SMF up to 110 km
Single LC or dual LC

Video
receiver

4 or 8 x SD video out

CFO100

1 x SD video in

Video
transmitter

Fixed optics:
MMF up to 6 km
Single ST

Video
receiver

1 x SD video out

CFO331 & 521

1 x SD video in
1 x RS data, duplex
1 x CC I/O

Video
transmitter

Depending on fixed optics:
MMF up to 5 km
SMF up to 40 km
Single SC/PC

Video
receiver

1 x SD video out
1 x RS data, duplex
1 x CC I/O

CFO161, 461 & 861

1, 4 or 8 x SD video in
3 x RS data, duplex
2 x Audio, 2-way
1 x CC I/O, 2-way
1 x Ethernet Bridge
Managed, CLI, SNMP

Video
transmitter

Depending on fixed optics:
SMF up to 40 km
Single SC/APC or dual LC

Video
receiver

1, 4 or 8 x SD video out
3 x RS data, duplex
2 x Audio, 2-way
1 x CC I/O, 2-way
1 x Ethernet Bridge
Managed, CLI, SNMP

NOTES

[illegible]



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