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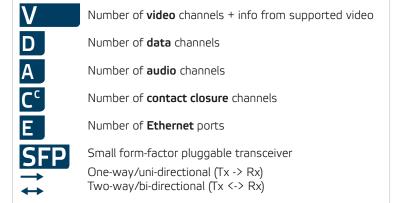
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MPX IP VIDEO NETWORKING INTRODUCTION

The MPX product family offers all the components needed in networked digital video systems for high performance video security system.

MPX is a common nominator for a product family consisting of various product series such as MCC, MPC, MPX, MES, XEW and TNW.

Each series is based on spezialized hardware product groups providing a fully managed and secured operation for a professional IP video network.



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MCC SERIES D1/4CIF 25/30FPS ENTRY LEVEL CODECS

MCC series – 1 channel stand-alone video encoder and decoder

MCC series encoders are

Onvir – compliant products.

MCC series is an entry level H.264 codec family for basic video transmission/networking systems. Stand-alone units are designed for dry indoor environments and have the operational temperature range of -10...+50°C / 14...122°F.

MCE301 are only for encoding and MDC301 is only for decoding purposes.

MCC series offers **H.264** and **MJPEG** video formats and has a dual streaming per video input (MCE301 supports 4 streams).

All units support SD resolution composite video as minimum. For High Definition

video operation specific models support HDMI and SDI digital interfacing.

All models have dual channel duplex audio, two serial data ports and I/O ports for sensor/alarm functions. The network interface is either 10/100Base-TX or 10/100/1000Base-TX with PoE PD ability.

Device management is based on WebUI with a possibility of a live video stream viewing and PTZ control. MCC series is **ONVIF** and **PSIA** compatible.





MCE301:



or



H.264, MJPEG



MCE301

PoE PD, 2 x audio, 2 x data, 2 x CC, HDMI & 3G/HD/SD-SDI support, 10/100/1000Base-Tx, quadruple streaming, universal mains adapter included.







MCD301:



or



H.264, MJPEG

MCD301 - 1 channel stand-alone HD/SD video decoder

MCD301

PoE PD, 2 x audio, 2 x data, 2 x CC, HDMI & 3G/HD/SD-SDI support, 10/100/1000Base-Tx, Quad viewing or multiple stream decoding in sequences, universal mains adapter included.

Note! EoL July 2021. Limited stock for spares, contact Teleste sales.



MPX SERIES D1/4CIF 25/30FPS VIDEO ENCODERS



MPC-E1 series – 1 channel stand-alone video encoder



The MPC-E1 stand-alone video encoder provides transmission of one (1) full frame rate video channel on D1/4CIF resolution, bi-directional EIA-RS232/422/485 data channels (2), high quality audio channels (2) and contact closure channel (1) over Fast Ethernet network.

MPC-E1 offers MPEG-4 and MJPEG video compression. **MPEG-2** is an option.

See available **SFP** options for MPX from page 8. Optical connector type is LC.

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

DIN rail mounting kits (MACO01 & MAC002) available as options. A +12 V supply voltage is provided by an optional CPS25x series power supply.











MPC-E1 – Electrical CAT5 network interface (RJ-45 connector)			
MPC-E1JC-FTRXXX-X-E1	MPEG-4/MJPEG, CC opto		
MPC-E1JC-FTRXXX-X-E2	60 x 130 x 130mm		
MPC-E1JD-FTRXXX-X-E1 MPEG-4/MJPEG, CC dry		60 X 130 X 130111111	
MPC-E1JD-FTRXXX-X-E2 MPEG-2/MPEG-4/MJPEG, CC dry			



MPC-EZ series – 2 channel stand-alone video encoder



The MPC-EZ stand-alone video encoder provides transmission of two (2) full frame rate video channels on D1/4CIF resolution, bi-directional EIA-RS232/422/485 data channels (2), high quality audio channels (2) and contact closure channels (2) over Fast Ethernet network.

MPC-EZ offers MPEG-4 and MJPEG video compression. MPEG-2 is an option.

See available **SFP** options for MPX from page 8. Optical connector type is LC.

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

DIN rail mounting kits (MACO01 & MAC002) available as options. A +12 V supply voltage is provided by an optional CPS25x series power supply.











MPC-EZ – Electrical CAT5 network interface (RJ-45 connector)			
MPC-EZPI-FTRXXX-X-E1	MPEG-4/MJPEG, CC opto		
MPC-EZPI-FTRXXX-X-E2	00 120 120		
MPC-EZPJ-FTRXXX-X-E1	MPEG-4/MJPEG, CC dry	80 x 130 x 130mm	
MPC-EZPJ-FTRXXX-X-E2	MPEG-2/MPEG-4/MJPEG, CC dry		

MPX SERIES D1/4CIF 25/30FPS VIDEO ENCODERS/DECODERS

MPEG-4 **MJPEG**







MPX-E8 series - 4 (or 8) channel rack mount video encoder

The MPX-E8 video encoder provides transmission of **4 (four) full frame rate** video channels on D1/4CIF resolution or eight (8) full frame rate video channels on ½D1/2CIF resolution, bi-directional EIA-RS232/422/485 data channels (3), high quality audio channels (2) and complementary bridging Ethernet channel interface over Fast Ethernet network.

MPX-E8 offers MPEG-4 and MJPEG video compression. **MPEG-2** is an option.

See available **SFP** options for MPX from page 8. Optical connector type is LC. There are also more feature rich versions available equipped with eight (8) contact closure channels or four (4) contact closure channels and eight (8) audio channels.

Available in stand-alone 19" wide, 1U high units. Temperature hardened operation (-34...+74°C / -29...165°F).

A +12 V supply voltage is provided by an optional CPS25x series power supply.













MPX-E8 – Electrical CAT5 network interface (RJ-45 connector)				
MPX-E8C0-FTR-X-E1 MPEG-4/MJPEG		19" wide, 1U high		
MPX-E8 – Electrical CAT	5 model with 8 x CC			
MPX-E8CC-FTR-A-E1	MPEG-4/MJPEG, CC opto	19" wide, 1U high		
MPX-E8CC-FTR-B-E1	MPEG-4/MJPEG, CC dry	19 wide, 10 fligh		
MPX-E8 – Electrical CAT5 model with 8 x audio & 4 x CC				
MPX-E8CA-FTR-C-E1	MPEG-4/MJPEG, CC opto	19" wide, 1U high		
MPX-E8CA-FTR-D-E1	MPEG-4/MJPEG, CC dry	17 wide, 10 fligh		





MPX-D8 series – 8 channel rack mount video decoder



The MPX-D8 video decoder provides simultaneous reception and decoding of eight (8) full frame rate video channels on D1/4CIF resolution, bi-directional EIA-RS232/422/485 data channels (3), high quality audio channels (2) and complementary bridging Ethernet channel interface over Fast Ethernet network.

MPX-D8 supports MPEG-4, MJPEG and MPEG-2 video compression.

See available **SFP** options for MPX from page 8. Optical connector type is LC.

There are also more feature rich versions available equipped with four (4) contact closure channels and eight (8) audio channels or eight (8) contact closure channels.

Available in stand-alone 19" wide, 1U high units. Temperature hardened operation (-34...+74°C / -29...165°F).

A +12 V supply voltage is provided by an optional CPS25x series power supply.











MPX-D8 – Electrical CAT5 network interface (RJ-45 connector)			
MPX-D8C0-FTR-X-D1 MPEG-2/MPEG-4/MJPEG 19" wide, 1U high			
MPX-D8 – Electrical CAT5 model with 8 x audio & 4 x CC			
MPX-D8CC-FTR-A-D1 MPEG-2/MPEG-4/MJPEG, CC opto			
MPX-D8CC-FTR-B-D1	MPEG-2/MPEG-4/MJPEG, CC dry	19" wide, 1U high	

SPARE PARTS FOR LEGACY MPC/MPX OPTICAL MODELS





SFP transceivers for MPC/MPX series video encoders and decoders

The SFP (small form-factor pluggable) modules listed below can be used in conjunction with the MPC and MPX configurations shown in pages 7...13.

SFP wideband optics (1310 & 1550 nm) are feasible for temperature hardened operation (-40...+85°C / -40...+185°F). SFP transceivers can be ordered separately*.

SFP modules	s for	Fast Ethernet (Suitable for MPC)	MPX series, also MPC-SF	FE switches)
MSF111A F	' 51	MM 1310nm	12 dB, 2km / 1.2mi	
MSF214A F	52	SM 1310nm	19 dB, 30km / 18mi	2 x LC
MSF218A FI	L2	SM 1310nm	30 dB, 60km / 37mi	-40+85°C /
MSF224A F	53	SM 1550nm	19 dB, 20km / 12mi	-40+185ºF
MSF228A FI	L3	SM 1550nm	30 dB, 100km / 62mi	
MSF425A F	SA	SM BIDI Tx1310 / Rx1550nm	23 dB, 25km / 15mi	
MSF435A F	SB	SM BIDI Tx1550 / Rx1310nm	23 dB, 25km / 15mi	1 x LC -40+85°C /
MSF427A FI	LA	SM BIDI Tx1310 / Rx1550nm	29 dB, 60km / 37mi	-40+185°F
MSF437A FI	LB	SM BIDI Tx1550 / Rx1310nm	29 dB, 60km / 37mi	

 $^{^{\}star}$ Alias code (column 2) is used for option class definition when creating MPX configuration

SPARE PARTS FOR LEGACY MPH OPTICAL MODELS





SFP transceivers for MPH series video encoders

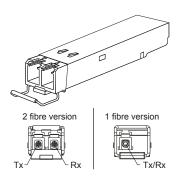
The SFP (small form-factor pluggable) modules listed below can be used in conjunction with the MPH encoders.

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

SFP modules for Fast Ethernet (Suitable only for MPH100/400 series)				
MIF111D MM 1310nm, SGMII 11 dB, 2km / 1.2mi 2 x LC -10+70°C / +14+158				
MIF111E	MM 1310nm, SGMII	11 dB, 2km / 1.2mi	2 x LC	
MIF214E	SM 1310nm, SGMII	16 dB, 30km / 18mi *	-35+75°C / -31+167°F	

Note! This range of Fast Ethernet SFPs are compatible only for MPH100/400 series, due to specific internal SGMII interface.





 $2 \times LC = dual fibre,$ 1 x LC = single fibre.

SFP modules for Gigabit Ethernet (Suitable for MPH100/200/400 series)				
MSG010C	CAT5 1000Base-T		RJ-45 female 0+70°C / +32+158°F	
MSG020C	CAT5 10/100/1000Base-T	100m / 328ft		
MSG101B	MM 850nm	8.5 dB, 1km / 0.6mi		
MSG111A	MM 1310nm	10 dB, 2km / 1.2mi *		
MSG211A	SM 1310nm	10.5 dB, 10km / 6mi		
MSG214A	SM 1310nm	20 dB, 30km / 18mi	2 x LC	
MSG222A	SM 1550nm	12 dB, 30km / 18mi	-40+85°C / -40+185°F	
MSG224A	SM 1550nm	20 dB, 50km / 31mi		
MSG226A	SM 1550nm	24 dB, 70km / 43mi		
MSG228B	SM 1550nm	30 dB, 110km / 68mi		
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	1 x LC	
MSG424A	SM BD Tx1310 / Rx1550nm	20 dB, 40km / 24mi	-40+85°C / -40+185°F	
MSG434A	SM BD Tx1550 / Rx1310nm	20 dB, 40km / 24mi		
MSG443A	SM BD Tx1310 / Rx1490nm	15 dB, 20km / 12mi		
MSG453A	SM BD Tx1490 / Rx1310nm	15 dB, 20km / 12mi		
MSG422A SC	SM BD Tx1310 / Rx1550nm	12 dB, 10km / 6mi	1 x SC/PC	
MSG432A SC	SM BD Tx1550 / Rx1310nm	12 dB, 10km / 6mi	-40+85°C / -40+185°F	

^{* 1}km / 0.6mi for $50/125\mu m$ fibre

MES SERIES MANAGED ETHERNET SWITCHES

MES106:

Local ports (10/100 TX)



SFP Uplink ports (100/1000 FX)

MES110 & 210:

Local ports (10/100 TX) $\mathbf{E}_{\mathbf{x}8}^{\mathsf{TX}}$







MES series – 6 and 10 port Ethernet switches

MES series is line of managed Ethernet switches for video networking applications. The electrical local Fast Ethernet ports support full wire speed. Switches have two Uplink ports to cater either FE or GigE level SFP transceiver modules.

Cabling installations are made easy with the MDI/MDIX, auto-polarity and automode supported 10/100Base-TX local ports. The Uplink interfaces, either one or two, support 100Base-FX or 1000Base-TX/FX SFPs (auto-recognition).

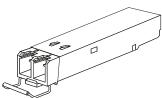
MES switches have support for features such as IGMP snooping, multiple VLAN features, QoS and security functions and a high network resiliency based on STP/RSTP/FRNT protocols. Versatile management is covered by WebUI

(HTTP or HTTPS) and SNMP. In addition the MES series offers also a router version with L2/L3-switching capability.

Available in a robust and compact standalone units. Temperature hardened for -40...+70°C / -40...+158°F operation. Very low power consumption, no active cooling required. Superior EMC and mechanical characteristics to meet harsh industrial, transportation and rail environments.

Default installation support to DIN rails. A wall mount kit available as option (MAC007). Dual supply voltage input (redundant) for 24 VDC. Optional mains adapter CPS45x can be used for typical installations. An industrial graded PSU is available on request.









 $2 \times LC = dual fibre,$ $1 \times LC = single fibre.$

MES106/110 – Managed layer 2 ethernet switch, SFPs not included			
MES106	6-port managed L2 switch	Local FE (4), Uplink FE/GE (2)	
MES110	10-port managed L2 switch	Local FE (8), Uplink FE/GE (2)	

MES210 - N	Managed layer 3 ethernet switch/route	er, SFPs not included
MES210	10-port managed L3 switch/router	Local FE (8), Uplink FE/GE (2)

Fast Ethernet SFP transceivers for MES Ethernet switch				
MWF111A	MM 1310nm	12 dB , 2km / 1.2mi		
MWF214A	SM 1310nm	19 dB , 30km / 18mi	2 x LC	
MWF218A	SM 1310nm	30 dB , 60km / 37mi	-40+85°C / -40+185°F	
MWF228A	SM 1550nm	30 dB , 100km / 62mi		
MWF321A	MM BIDI Tx1310 / Rx1550nm	18 dB , 2km / 1.2mi		
MWF331A	MM BIDI Tx1550 / Rx1310nm	18 dB , 2km / 1.2mi	1 x LC -40+85°C / -40+185°F	
MWF424A	SM BIDI Tx1310 / Rx1550nm	18 dB , 20km / 12mi		
MWF434A	SM BIDI Tx1550 / Rx1310nm	18 dB , 20km / 12mi		



Gigabit SFP transceivers for MES Ethernet switch				
MWG010C	Electrical 1000Base-T	100m / 328ft	RJ-45 female 0+70°C / +32+158°F	
MWG111A	MM 1310nm	10 dB, 2km / 1.2mi		
MWG211A	SM 1310nm	10.5 dB, 10km / 6mi	2 x LC -40+85°C / -40+185°F	
MWG224A	SM 1550nm	20 dB, 50km / 31mi		
MWG443A	SM BIDI Tx1310 / Rx1490nm	15 dB, 20km / 12mi	1 x LC -40+85ºC / -40+185ºF	
MWG453A	SM BIDI Tx1490 / Rx1310nm	15 dB, 20km / 12mi		
MWG426A	SM BIDI Tx1310 / Rx1550nm	25 dB, 60km / 37mi		
MWG436A	SM BIDI Tx1550 / Rx1310nm	22 dB, 60km / 37mi		
MWG465A	SM BIDI Tx1510 / Rx1570nm	22 dB, 80km / 49mi		
MWG475A	SM BIDI Tx1570 / Rx1510nm	22 dB, 80km / 49mi		

POWER OVER ETHERNET (POE) ETHERNET SWITCHES

XEW series – 10 port managed Power over Ethernet (Ultra PoE) switch



XEW610:







XEW610 is a managed layer-2 Gigabit Ethernet switch with Ultra PoE capability. The switch has 8 FE electrical local ports and 2 GbE uplink ports for 100 or 1000 Mbps SFP transceivers.

The total PoE power budget is 240 W. Any electrical port is capable of providing max 60 W, lower PoE levels are as with 802.3 af/at standards.

XEW610 is temperature hardened for -40...+75°C / -40...+167°F operation. Housing protection class is IP30, DIN rail mounting is supported. Operational supply voltage is 52...57 VDC with dual input.

XEW610 – Managed layer-2 PoE switch, SFPs not included

XEW610	10-port managed L2 PoE switch	Local FE (8 x TX), Uplink FE or GbE (2 x SFP)
	'	(

TNW series – EN50155 approved managed Power over Ethernet (PoE) switch



The total power budget is 61,6 W. Max power on a single port is 30 W as with 802.3af/at standards.

TNW553x is a managed layer-2 Gigabit

Ethernet PoE switch designed for rail rolling stock systems. The switch has

9 FE ports and 3 GbE uplink ports, all

ports are with M12 connectors.

TNW553x is EN50155 hardened for -40...+70°C / -40...+158°F operation. Housing protection class is IP67. Nominal supply voltages are 24 & 36 VDC (model L) and 48 to 110 VDC (model H).

TNW553L/H:





Uplink ports (1000 TX)

TNW series – Managed rail-approved layer-2 PoE switch		
TNW553L	12-port managed L2 PoE switch, low voltage	Local FE (9 x TX), Uplink GbE (3 x TX)
TNW553H	12-port managed L2 PoE switch, high voltage	Local FE (9 x TX), Uplink GbE (3 x TX)

MPX-U SERIES FHD/HD/D1/4CIF 25/30FPS VIDEO DECODERS













MPU-D1 series – universal 1 channel stand-alone video decoder

The MPU-D1 stand-alone video decoder provides, depending on the model, simultaneous reception and decoding of one (1) full frame rate video channel on HDMI at 1080p resolution or analogue CVBS output at D1/4CIF resolution, over Gigabit Ethernet network.

MPC-D1 supports H.264, H.265, MPEG-4, MJPEG and MPEG-2 video compression.

Bidirectional EIA-RS232/422/485 data channel (1) and contact closure channels (4/4) are available as factory option.

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

A +12 V supply voltage is provided by an optional CPS25x series power supply.

MPU-D1 – Electrical CAT5 network interface (RJ-45 connector)				
MPU-D1X-01	H.264/H.265/MPEG-2/MPEG-4/MJPEG, HDMI			
MPU-D1X-01-NTSC	H.264/H.265/MPEG-2/MPEG-4/MJPEG, HDMI/NTSC	89 x 171 x 215mm		
MPU-D1X-01-PAL	H.264/H.265/MPEG-2/MPEG-4/MJPEG, HDMI/PAL	21311111		

MPX ACCESSORIES

Accessories for MPH, MPC, MPX, MES and MCC units

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.



MSR419 Installation frame for MPH400 devices.



MPS12x Power supply for MSR419 installation frame.



CVU014 Ventilation frame.



CPS25x power supply.

Rack installation accessories (for MPH400 series)		
MSR416	19" 3U installation frame, front loading, PSU at rear	For 16 x MPH400 series modules
MPS120	Power supply for MSR416	230VAC / 120W, without mains cable
MPS121		230VAC / 120W, EU mains cable (CPC521)
MPS122		230VAC / 120W, UK mains cable (CPC522)
MPS123		115VAC / 120W, US mains cable (CPC523)
CPC521	Lockable IEC power cord for MPS12x power supply	EU plug, 2m
CPC522		UK plug, 2m
CPC523	,	US plug, 2m
MCP401	Cover plate for MCD41C	To cover one unit wide slot
MCP404	Cover plate for MSR416	To cover four unit wide slot
CVU014	Passive ventilation frame	19" 1U, cable management shelf

MPX ACCESSORIES

Accessories for MPH, MPC, MPX, MES and MCC units



MACO01 DIN rail mounting kit for MPC rear assembly.



MACO03 DIN rail mounting kit for MPH100 rear assembly.

Stand-alone installation accessories (for MPH, MPC, MPX, MCC & MES series)			
MAC001	DIN rail mounting kit for MPC rear assembly		
MAC002	DIN rail mounting kit for MPC side assembly		
MAC003*	DIN rail mounting kit for MPH100 rear assembly		
MAC004*	DIN rail mounting kit for MPH100 side assembly	includes mounting plate and screws	
MAC005*	DIN rail mounting kit for MPH200 rear assembly		
MAC006*	DIN rail mounting kit for MPH200 side assembly		
MAC007	Wall mounting kit for MES rear assembly	includes mounting plate only	
MAC008	Wall mount for CPS series mains adapters	includes wall bracket only	
MRC0124*	Rack shelf for two MCC104 units	19" 1RU, rear panel cables included	
MRC0122	Rack shelf for two MCC101 or MCC201 units	17 TNO, Teal patiet cables ilicituded	
MRC0122H	Rack shelf for two MCC101 or MCC201 units	19" 1RU, without cables	
CPS250		230VAC 12V/2.1A**, without mains cable	
CPS251	12VDC power supply for	230VAC 12V/2.1A**, EU mains cable (CPC521)	
CPS252	MPC/MPX/MPH units	230VAC 12V/2.1A**, UK mains cable (CPC522)	
CPS253		115VAC 12V/2.1A**, US mains cable (CPC523)	
CPS450		115/230VAC 24VDC/1A*** without mains cable	
CPS451	24VDC power supply for	230VAC 24V/1A***, EU mains cable (CPC521)	
CPS452	MES ethernet switches	230VAC 24V/1A***, UK mains cable (CPC522)	
CPS453		115VAC 24V/1A***, US mains cable (CPC523)	

^{*} Note! These items are in rampdown mode, EoL statement to follow in 2022

10 MPX ACCESSORIES

^{** +74°}C / +165°F

^{*** +60°}C / +140°F



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P5P MPX Available IP video networking products, February 2022

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