

# MODULAR EXTENSIBLE INPUT/OUTPUT (M-XIO) CONNECTORS AND CABLE ASSEMBLIES FOR OCP DC-MHS

Internal Cabled and Interconnect Solutions

TE Connectivity (TE) has rich experience in designing high-speed and high-power connectors and cable assemblies that enable us to expand our product portfolio to offers connectors compliant with the SFF-TA-1033 specification and the OCP (Open Computer Project) DC-MHS (Data Center - Modular Hardware System) M-XIO base specification.

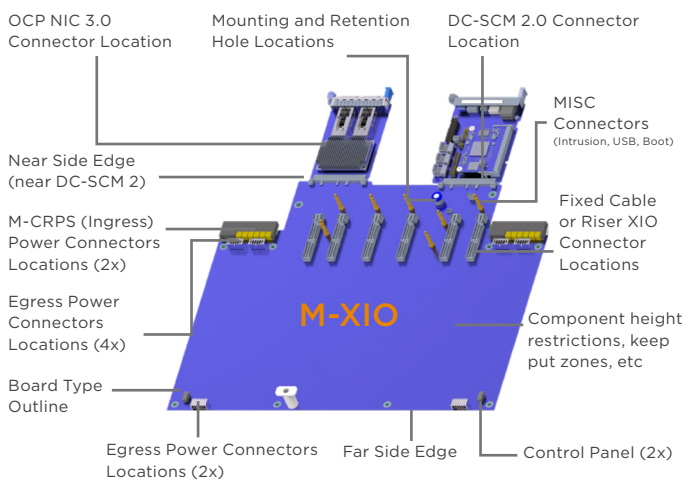
These M-XIO connectors integrating high speed signal and power (55A/660 watts) into one connector, provide a hybrid solution for both card edge PCB and cable solutions for different utilizations, and OCP DC-MHS provides a way to achieve server modularity.

## INDUSTRY STANDARDS

- SNIA/SFF industry standard SFF-TA-1033
- OCP DC-MHS M-XIO base specification
- M-XIO connectors are based on MCIO connectors which can be used as the standard internal cabling for PCIe Gen5/6.

## OCP DC-MHS

### M-FLW Spec Scope Overview



\*Source from [Server/DC-MHS - OpenComputer](#)

## TARGET APPLICATIONS

- Server and storage device
- Board-to-cable and board riser expansion

## PRODUCT FEATURES

- 0.6mm contact pitch surface mount technology (SMT) combination connector
- Supports 85Ω impedance applications.
- A combination form factor which includes two sets of 74 MCIO connector type pins, 12 sideband pins and 4 power pins
- PCIe Gen5 (32 GT/s NRZ) performance with a path to PCIe Gen6 (64 GT/s PAM4)
- Support card-edge PCB and cable assembly
- Multi-sourced with robust ecosystem

## POWER CAPABILITY

- Support 21A (252 watts) Power
- High power version support 34A (408 watts) and 55A (660 watts)

## CABLE ASSEMBLY OPTIONS

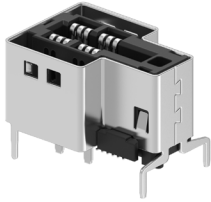
- M-XIO-to-cabled CEM for PCIe AIC (Add In Card)
- M-XIO-to-OCP NIC3.0 (4C+) for networking
- M-XIO-to-cabled EDSFF for storage
- M-XIO power cable assembly



## PLATFORMING AND SCALABILITY

- Flexible pinout arrangement allows for mix of differential signal pairs and low speed single-ended sidebands
- Scalable platform in power only/x8/x16 increments
  - Connector: 16p (power), 90p (x8+power), 164p (x16+power)
  - Plug: Straight, reverse straight, right angle, reverse right angle

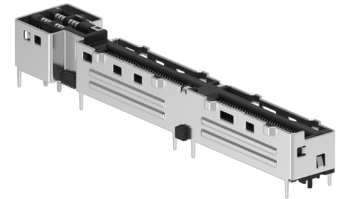
TE's M-XIO interconnect solution consists of:



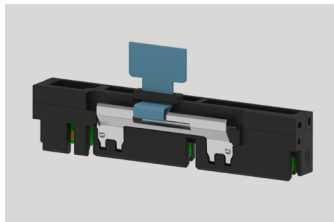
VERTICAL 21A  
POWER CONNECTOR



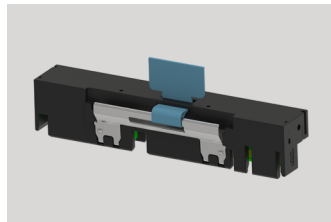
VERTICAL COMBO X8+21A  
POWER CONNECTOR



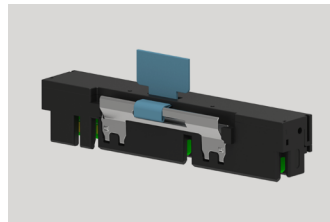
VERTICAL COMBO X16+ 21A  
POWER CONNECTOR



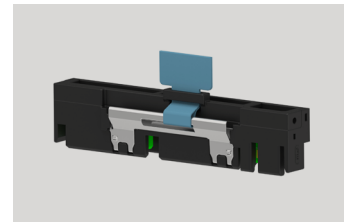
STRAIGHT COMBO  
X16+21A POWER PLUG



REVERSE STRAIGHT  
COMBO X16+21A  
POWER PLUG



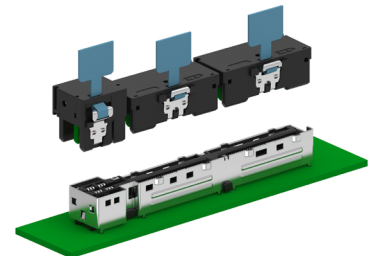
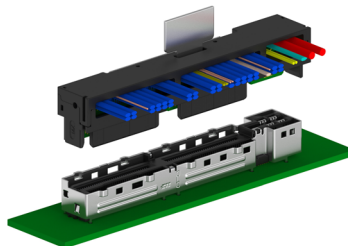
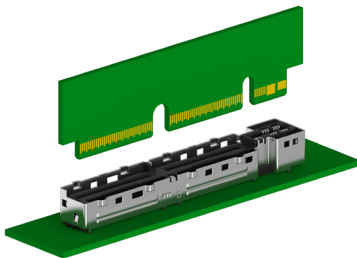
RIGHT ANGLE COMBO  
X16+21A POWER PLUG



REVERSE RIGHT ANGLE  
COMBO X16+21A  
POWER PLUG

## CABLE INTEROPERABILITY

- Combo + Power AIC Application
- Combo + Power Right Angle Cable Application
- Separate a Power Cable and Right Angle 74 pins Cable application



# PART NUMBER DETAILS

## Connectors

Part Description	TE Part Numbers		
	16 Position	90 Positions	164 Positions
With Anti-Slant	-	2448565-1	2430438-1
Without Anti-Slant	2457376-1	2448565-9	2430438-9

## Cable Assemblies

Part Description	Data Rate	Impedance	Bulk Cable	TE Part Numbers					
				16 Position		90 Positions		164 Positions	
				0.5 Meter	1 Meter	0.5 Meter	1 Meter	0.5 Meter	1 Meter
Straight Cable Plug	32G	85 Ohm	Discrete Pairs	2475379-1	2475379-2	2475380-1	2475380-2	2475381-1	2475381-2
Right Angle Cable Plug	32G	85 Ohm	Discrete Pairs	2475382-1	2475382-2	2475383-1	2475383-2	2475384-1	2475384-2
Straight to CEM Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	-	-	2475386-1	2475386-2
Straight to EDSFF Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	2475406-1	2475406-2	-	-
Straight to OCP NIC Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	-	-	2475387-1	2475387-2
Right Angle to CEM Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	-	-	2475389-1	2475389-2
Right Angle to EDSFF Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	2475407-1	2475407-2	-	-
Right Angle to OCP NIC Cable Plug	32G	85 Ohm	Discrete Pairs	-	-	-	-	2475391-1	2475391-2

Contact your TE representative about custom cable assembly configurations.

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