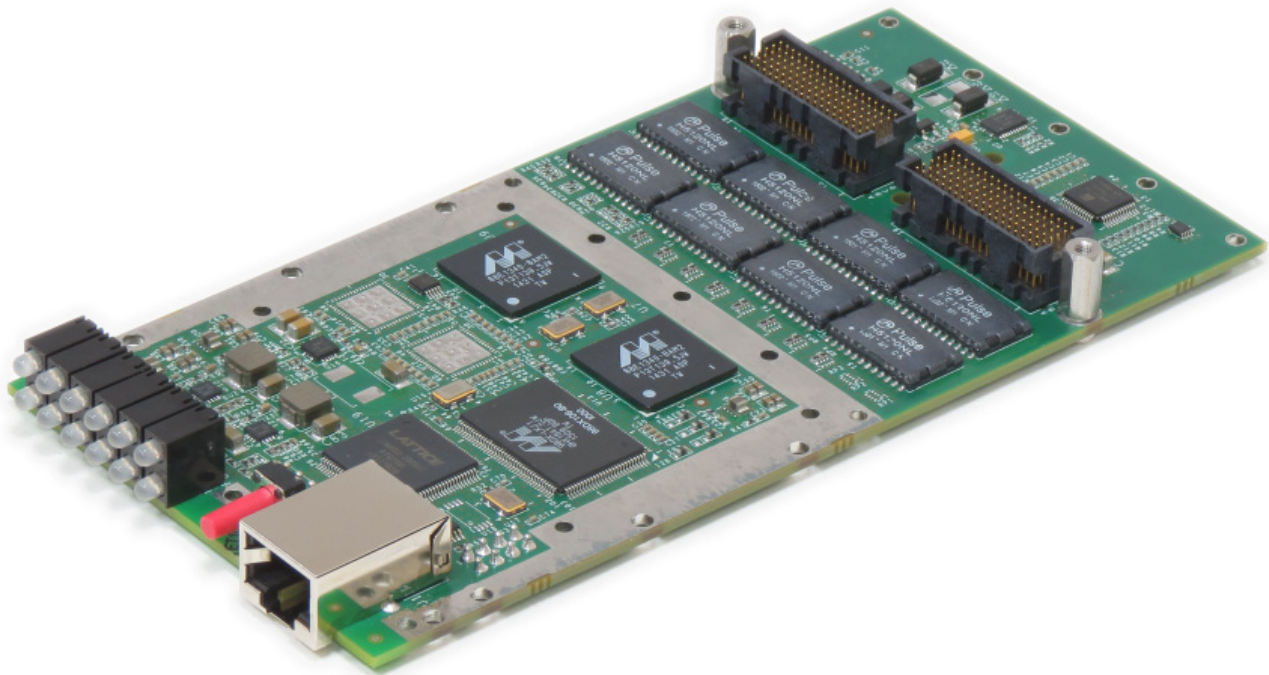


M640

XMC Unmanaged GbE Switch



Embedded Computing
without Compromise



- Rugged Single-Width XMC Unmanaged Gigabit Ethernet Switch
- Multiple Port Configuration Options
 - ▶ Up to 10 Ports
 - ▶ 1000Base-BX/KX and 1000Base-T Port Options
 - ▶ Front Panel 1000Base-T Port in Air-Cooled Version
- Unmanaged, No User Configuration Required
- Full Wire-Speed Non-Blocking Forwarding
- Conduction and Air-Cooled Versions
- Vibration and Shock Resistant



M640

XMC Unmanaged GbE Switch



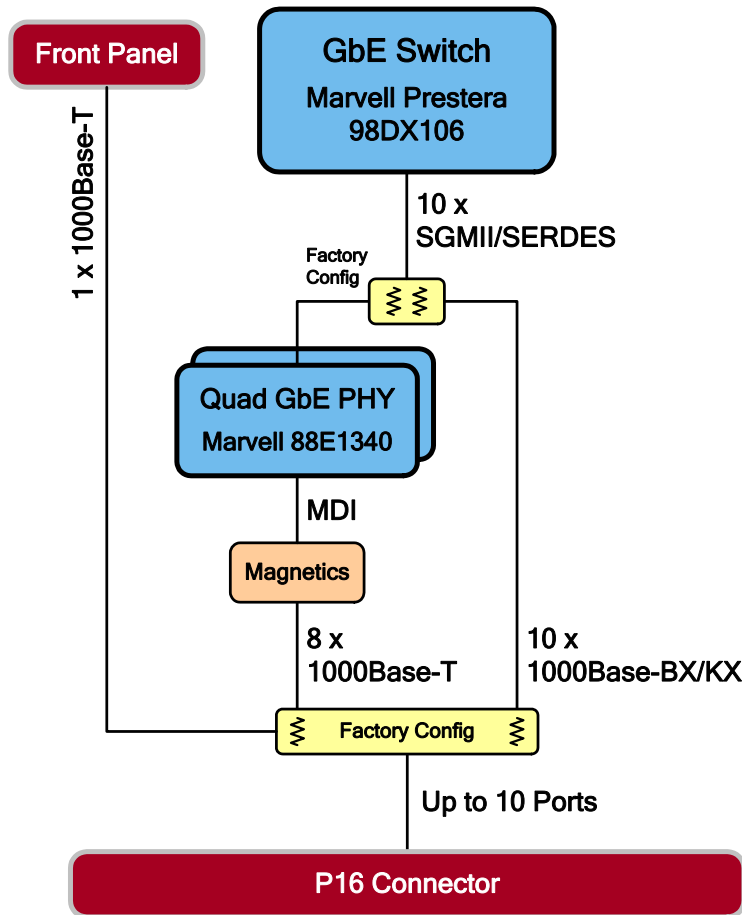
Embedded Computing
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Aitech's M640 is a high-performance XMC Unmanaged Gigabit Ethernet Switch for embedded and harsh environment applications.

Gigabit Ethernet switching is performed by the Marvell Prestera® 98DX106. The switch is unmanaged and does not require any user configuration.

The M640 provides up to ten Ethernet ports, each of which is factory configured as 1000Base-T or 1000Base-BX/KX.

1000Base-BX/KX ports support both backplane applications and external SFP modules. 1000Base-T ports support 10/100/1000 Mbps operation and are implemented with Marvell 88E1340 PHY devices and on-board magnetics modules.



I/O

I/O Variant ⁽¹⁾	Cooling	P16 I/O		Front Panel I/O
		1000Base-BX/KX	1000Base-T	1000Base-T
1	Conduction	10	–	–
	Air	9	–	1
2	Conduction	6	2	–
	Air	6	2	1
3	Conduction	–	8	–
	Air	–	7	1

Notes: (1) M640 I/O Variants offer different Ethernet port interfaces/quantities via factory configuration (options are specified when ordering the M640 and are not user configurable); additional Ethernet port configuration options may be available per customer request, contact an Aitech representative for more information

M640

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Ethernet Switch Features

- Marvell Prestera® 98DX106 Ethernet switch device
- Unmanaged, no user configuration required
- Full wire-speed non-blocking forwarding
- Jumbo Frame support (up to 9 kB)
- 1 Mbit on-chip buffer memory
- 8k entries forwarding database
- Base-T auto-negotiation and auto cross-over (MDI/MDI-X)
- Full and half-duplex operation
- Port Status Indicator LEDs
- Additional Features available by Factory Configuration (contact an Aitech representative for information)
 - 802.1Q VLAN
 - QoS
 - Mirroring
 - Loopback

Front Panel⁽¹⁾

I/O	One 1000Base-T port via RJ45 connector
Pushbuttons	Reset pushbutton
Indicator LEDs	Board status, power supply status, and Ethernet port link status

Notes: (1) Included only in air-cooled versions of the M640

Mechanical

	Form Factor & Dimensions	Weight
Air-Cooled	Single-Width XMC per ANSI/VITA 42.0	< 250 g (0.55 lbs)
Conduction-Cooled	Single-Width XMC per ANSI/VITA 42.0	< 200 g (0.44 lbs)

Power

Power Supply Option ⁽¹⁾	Current	Power ⁽²⁾
VPWR (Universal +5V/+12V)	1.2A (+5V) or 0.5A (+12V)	6W
+3.3V	1.8A	6W

Notes: (1) M640 is powered by a single XMC site power supply (+3.3V or Universal VPWR) per factory configuration option specified when ordering the M640
(2) Total power consumption with all Ethernet ports active

Environmental

Specs per VITA 47	Air-Cooled			Conduction-Cooled	
	Commercial	Rugged	Military	Rugged	Military
Operating Temp.	AC1 (0 to +55°C) ⁽²⁾	AC3 (-40 to +70°C) ⁽²⁾	AC4 (-40 to +85°C) ^(1,2)	CC3 (-40 to +70°C) ⁽³⁾	CC4 (-40 to +85°C) ^(1,3)
Non-Operating Temp.	C1 (-40 to +85°C)	C3 (-50 to +100°C)	C4 (-55 to +125°C)	C3 (-50 to +100°C)	C4 (-55 to +125°C)
Vibration	V1	V2	V2	V3	V3
Operating Shock	OS1	OS1	OS1	OS2	OS2
Altitude	15,000 ft.	35,000 ft.	70,000 ft.	35,000 ft.	70,000 ft.
Relative Humidity⁽⁴⁾	0 - 90%				
Conformal Coating	N/A				
	Acrylic (Silicone and Urethane Optional)				

Notes: (1) -55°C available, contact an Aitech representative for more information (3) Operating card edge temperature
(2) Operating ambient air temperature (with sufficient airflow) (4) Non-condensing

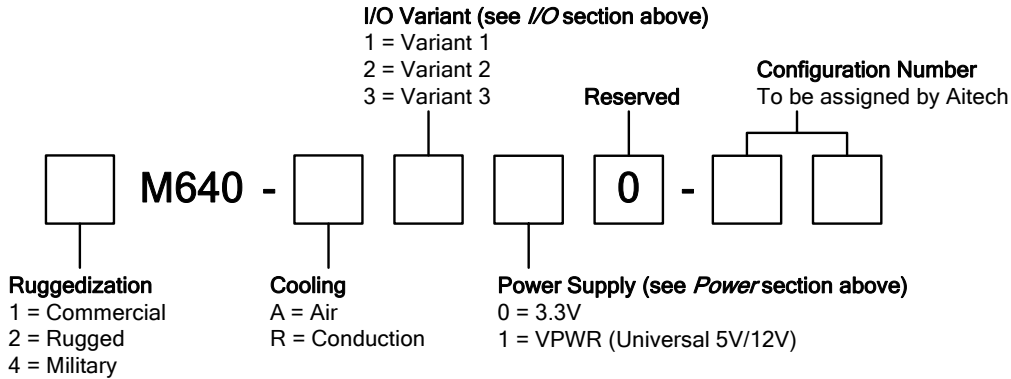
M640

XMC Unmanaged GbE Switch



Embedded Computing
without Compromise

Ordering Information



Example: 4M640-R200-00

Contact Aitech

Contact your Aitech sales representative for additional product information, and for inquiries regarding customized configurations of the M640 and additional software support.



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