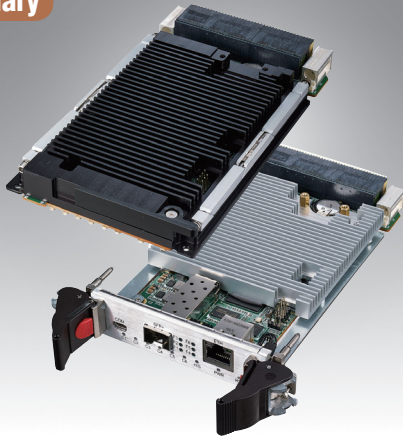


# MIC-6030

## 3U OpenVPX PCIe/ Ethernet hybrid switch

Preliminary



### Features

- OpenVPX MOD3-SWH-6F6U-16.4.1-2 profile compliant
- PCIe fabric interface switch
- 6 ports Gigabit layer 2 Ethernet switch with VLAN support
- Host to host communication over fabric interface
- Air and conduction cooled thermal solutions
- Advantech code based IPMI 2.0 compliant BMC
- Optional I/O for front panel access



### Introduction

The MIC-6030 is a ruggedized single-slot 3U OpenVPX switch providing high-speed, low-latency interconnects between VPX blades connected to PCI Express and Ethernet backplane fabrics. An ExpressLane™ PEX8733 PCIe Gen3 switch connects to six PCIe Gen3 x4 ports enabling non-transparent and transparent bridging of processor blades for highly flexible multi-host and legacy configurations.

A Marvell® Link Street® 88E6390X Ethernet layer 2 switch with VLAN support switches gigabit Ethernet traffic between VPX blades connected to the Ethernet fabric enabling a line-rate control plane.

When configured with optional Mellanox ConnectX®-4 Multi-Host™ Technology and drivers, the MIC-6030 enables high speed communication of up to 10Gbps bandwidth between up to 4 processor VPX blades VPX by transforming the PCIe bus into a programmable network interface, facilitating the development of data communication between boards and eliminating the need to program a more complex DMA interface.

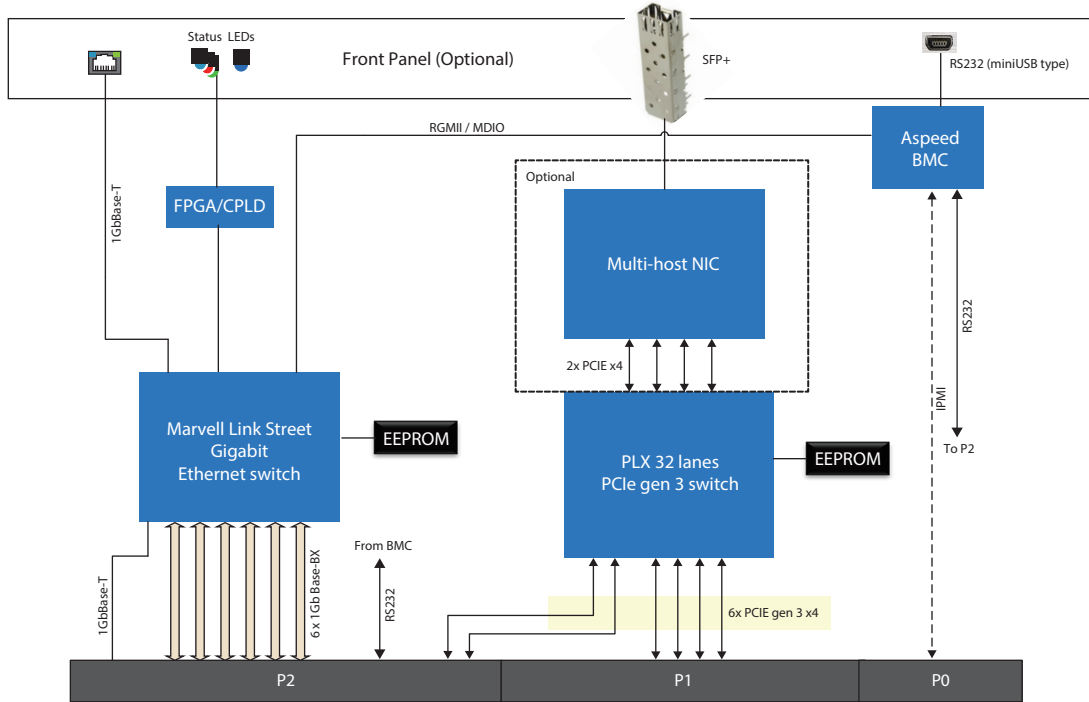
The onboard BMC firmware based on Advantech's IPMI core technology brings an advanced set of system management features and can be customized when unique features are required. Lightweight switch management is available via the BMC, supporting tagged and untagged VLANs, port-based VLAN, and port status reporting.

Advantech offers standard designs with either convection or conduction-cooling. A conduction-cooled heatsink ensures operation in harsher environments, providing a reliable solution for operation in extended temperatures, and where extreme shock and vibration requirements must be met. The MIC-6030 is compact, light and robust, meeting stringent size, weight, and power (SWAP) demands.

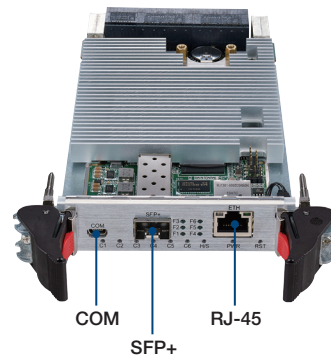
### Specifications

Data Plane	32 lanes PCIe Gen. 3 switch. 6 ports of PCIe x 4 to Data Plane Virtual Ethernet switch for host-to-host communication <sup>1</sup>	
Control Plane	Layer 2 unmanaged switch. Feature support: Switch setup and configuration display; Ethernet port status display; VLAN setup and display (Tag, untag VLAN, port based VLAN) I/O: 1x 10/100/1000Base-T to front panel; 1x 10/100/1000Base-T to backplane. 6 x 1000Base-BX to Control Plane	
IPMI	Advantech code based VPX IPMI 2.0 compliant BMC	
VPX Interface	P0	IPMB; Power: 12V only (default) or 5V only <sup>2</sup>
	P1	4 x PCIe x4
	P2	2 x PCIe x4; 6 x 1000Base-BX; 1 x 10/100/1000Base-T; RS-232
Front panel I/O ports (Available for air-cooled model only)	Ethernet	1 x RJ-45, 10/100/1000BASE-T
	COM	1 x miniUSB connector (BMC RS232 console redirection port)
	SPF+	10G (available on the multiple-host SKU only)
Operating System	Compatibility	Linux <sup>3</sup> and Windows 8.1, Windows 10, Windows Server 2012, Windows Server 2016
Power Requirement	SKU1	29 W total power envelope with multi-host NIC
Physical Characteristics	Dimensions (W x D)	160.00 x 100.00 mm (6.3" x 3.95"), 5HP (H)
	Weight	0.37 kg
Environment (POR)	Temperature	Operating: -40 ~ +85 °C Non-operating: -55 ~ +105 °C
	Humidity	95% @ 40 °C, non-condensing 95% @ 60 °C, non-condensing
	Operation Shock	VITA 47, OS2
	Vibration	VITA 47, V3
	Altitude	50,00ft above sea level 60,000ft, -40 °C above sea level
	VPX	OpenVPX (VITA 65), REDI (VITA 48)
Compliance	Safety	FCC class A, CE, RoHS
	EMC	FCC47 CFR Part15, Class A, CE Mark (EN55022/EN55024/EN300386)

## Block Diagram



Part Number	Front panel I/O Ethernet (RJ-45)	SFP+	COM	Status LED Control Plane	Fabric	Heatsink	Max. host <sup>4</sup>	Virtual Ethernet switch on
MIC-6030-A1A1E	Yes	--	Yes	Yes	Yes	Air cooled	1	--
MIC-6030-A1A2E	Yes	Yes	Yes	Yes	Yes	Air cooled	2	Yes
MIC-6030-A1C1E	--	--	--	Yes	--	Conduction cooled	1	--
MIC-6030-A1C2E	--	--	--	Yes	--	Conduction cooled	2	Yes



## Ordering Information\*\*

Model Number	Configuration
MIC-6030-A1A1E	Air cooled MIC-6030 supporting single host
MIC-6030-A1A2E	Air cooled MIC-6030 supporting dual hosts
MIC-6030-A1C1E	Conduction cooled MIC-6030 supporting single host
MIC-6030-A1C2E	Conduction MIC-6030 supporting dual hosts

<sup>1</sup> Only supported on the SKU's with multiple hosts

<sup>2</sup> Please contact the Advantech representative for the availability

<sup>3</sup> Please refer to Mellanox website for detailed distribution and kernel information

<sup>4</sup> Please contact the Advantech representative for the 4 hosts model availability

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