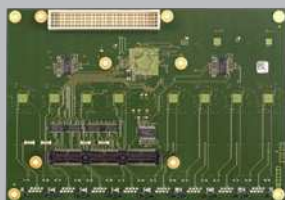


EXP-ISO-COM8/ETH8

EPIC Express Octal Serial Interface Add-On board /
EPIC Express Octal Ethernet Interface Add-On board



EXP-ISO-COM8



EXP-ETH8



Features

EXP-ISO-COM8

- 8 independent serial ports, RS-232/422/485, Galvanically isolated
- 4 Mb/s maximum (RS-422/RS-485), 460 Kb/s maximum (RS-232)
- 128 byte FIFOs
- Single lane PCI Express, DMA/bus mastering for all UARTs
- 40°C to +85°C support (optional)

EXP-ETH8

- 8 independent Gigabit Ethernet ports
- 10/100/1000 Mb/s, Full duplex at all speeds
- Configurable Rx and Tx FIFOs
- PCI Express x8 interface
- PCI Express base spec 1.1 compliant
- 40°C to +85°C support (optional)

Specifications (EXP-ISO-COM8)

Core System

Controller	PLX OXPCIe958
PCI Express	PCI Express to octal serial port Single lane with integrated SerDes PCI Express base spec 1.1 compliant PCI Power Management 1.2 compliant MSI/MSI-X compatible DMA/bus mastering facility ASPM (L0S, L1) Link power management

Power

Supply Current	0.5 A maximum
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Ethernet

Serial	8x RS-232/RS422/RS485
Transmission Speed	RS-422/RS485: 4 Mb/s max. RS-232: 460Kb/s max.
RS-485 Termination	Integrated termination resistors Selectable with jumper
Serial Ports	High-performance Oxford Semiconductor 950 UARTs 128-byte deep transmit/receive FIFOs 9, 8, 7, 6 & 5- bit data framing Flexible clock prescaler from 1 to 31.875 Automated in-band, Xon/Xoff flow control Automated hardware flow control Advanced FIFO fill management Programmable RS-485 turn-around delay 16C450 through 16C950 software compatibility

Mechanical and Environmental (both products)

Operating Temperature	Standard: 0°C to +60°C Industrial: -20°C to +60°C Extended: -40°C to +85°C (optional)
Board Format	115 x 165 mm (4.528" x 6.496")
Status LED	Yes, power indicator

Operating Systems (both products)

Standard Support	Windows 7, Windows XP, XP Embedded, Linux
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Specifications (EXP-ETH8)

Core System

Controller	8x Intel® 82574L PCI Express x1 based GBIT Ethernet Controller
PCI Express Switch	PLX PEX8618
PCI Express	64-bit address master support Programmable host memory receive buffers (256 bytes to 16 KB) Intelligent interrupt generation Descriptor ring management hardware for transmit and receive Message Signaled Interrupts (MSI and MSI-X) Configurable receive and transmit data FIFO, programmable in 1 KB increments

Power

Supply Current	2.2A @ 5V; 3.3V @3.3V
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Ethernet

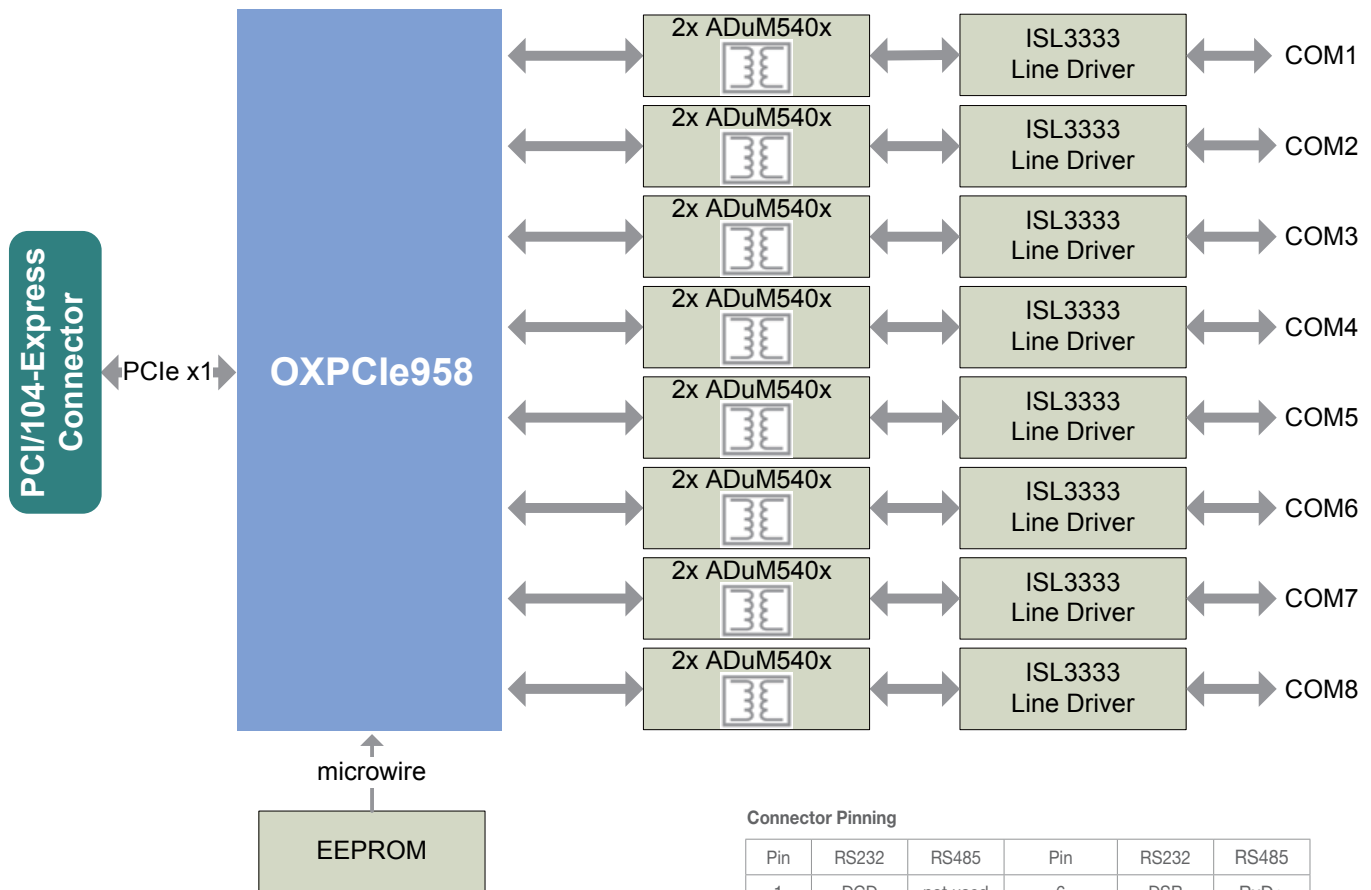
MAC	Flow Control Support compliant with the 802.3X VLAN support 802.1Q compliant MAC Address filters Statistics MAC loopback
PHY	Compliant with 802.3 802.3u 802.3ab 802.3ab auto negotiation support Full duplex at 10/100/1000 Mb/s Half duplex at 10/100 Mb/s Auto MDI, MDI-X crossover
Ethernet Features	TCP segmentation capability Support up to 256 KB TCP segmentation (TSO v.2) Fragmented UDP checksum offload for packet reassemble IPv4 and IPv6 checksum offload support Split header support Receive Side Scaling (RSS) with two hardware receive queues 9 KB jumbo frame support 40 KB packet buffer size

Controller Features

Manageability	NC-SI for remote management core SMBus advanced pass through interface
Low Power	Magic Packet* wake-up enable with unique MAC address ACPI register set and power down functionality supporting D0 and D3 states Full wake up support (APM and ACPI 2.0) Smart power down at S0 no link and Sx no link LAN disable function

Functional Diagram

EXP-ISO-COM8



Connector Pinning

Pin	RS232	RS485	Pin	RS232	RS485
1	DCD	not used	6	DSR	RxD+
2	RxD	RxD-	7	RTS	TxD+
3	TxD	TxD-	8	CTS	not used
4	DTR	not used	9	RI	not used
5	ISOGND	ISOGND	Shield/10	not used	not used

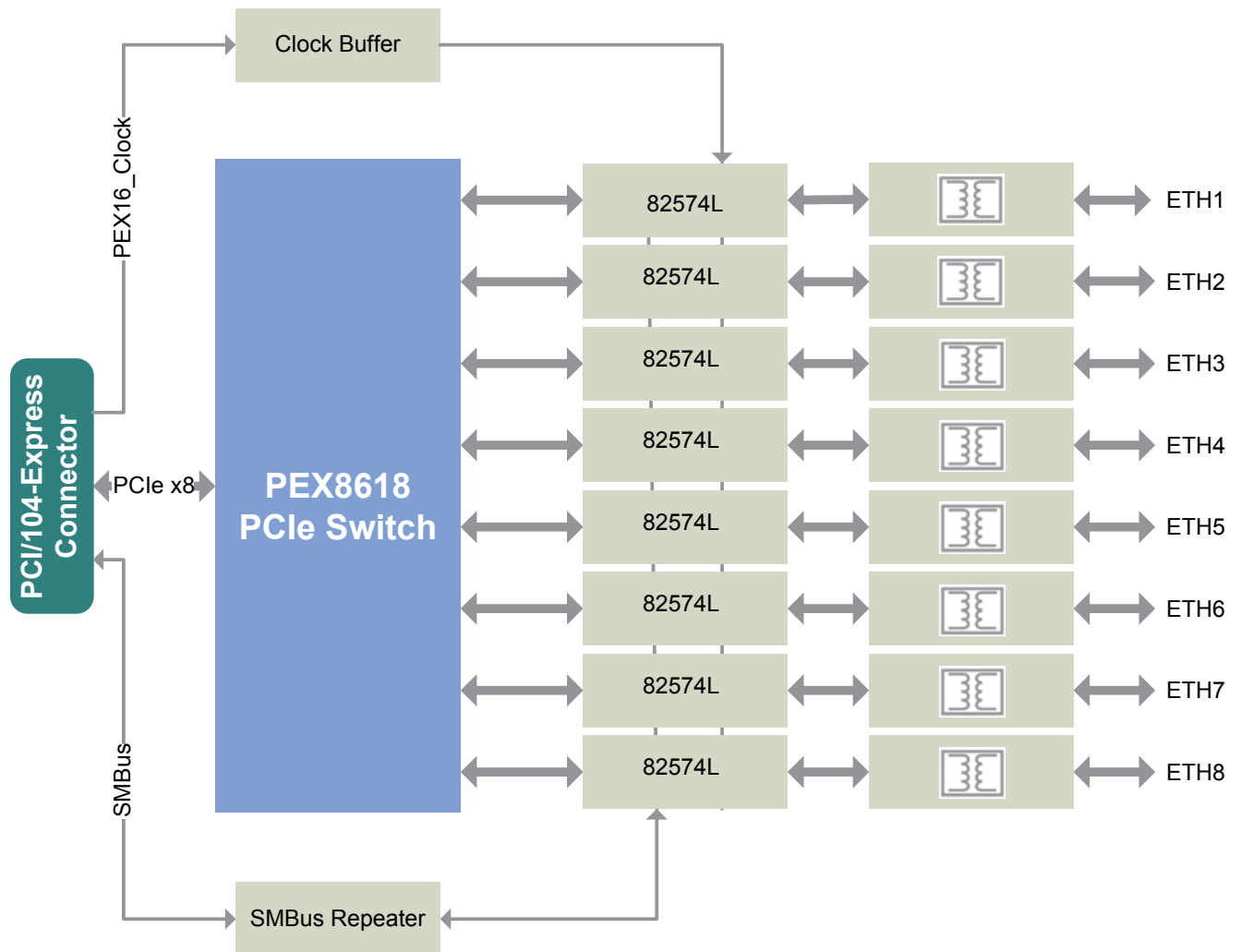
Ordering Information

Modules

Model Number	Description/Configuration
714-0002-10	EPIC-Express, Add-On card, 8x COM, 0°C to +60°C
814-0002-10	EPIC-Express, Add-On card, 8x COM, -20°C to +60°C
914-0002-10	EPIC-Express, Add-On card, 8x COM, -40°C to +85°C
862-0007-10	Cable, IDC10 (2.54mm) to DSUB9 (COM)

Functional Diagram

EXP-ETH8



Ordering Information

Modules

Model Number	Description/Configuration
714-0004-10	EPIC-Express, Add-On card, 8x ETH, 0°C to +60°C
814-0004-10	EPIC-Express, Add-On card, 8x ETH, -20°C to +60°C
914-0004-10	EPIC-Express, Add-On card, 8x ETH, -40°C to +85°C