TRANSPORT PRODUCTS

VSC8476

VITESSE

XAUI to XFI 10GE & 10GFC Transceiver

FEATURES:

- 10GbE and Fibre Channel Serial LAN Transceiver
- Fully Compliant per IEEE802.3ae and T11 10GFC
- XFI compliant 10.5 GbPs High-speed Front-end
- Enhanced IO for Long Reach Copper Interconnect
- 4 x 3.125 & 3.182 Gbps XAUI I/O
- XAUI I/O Programmability: Lane Swap, Bit Order Swap, Invert, Deskew, Amplitude, Emphasis and Equalization
- Multiple Loop back Modes and Built in Self Test capabilities
- JTAG Access Port
- 1.8V & 1.2V & 1.5V Supplies
- TTL-compatible (1.5V or 1.8V or 3.3V Supply)
- 1W (Typical) Power

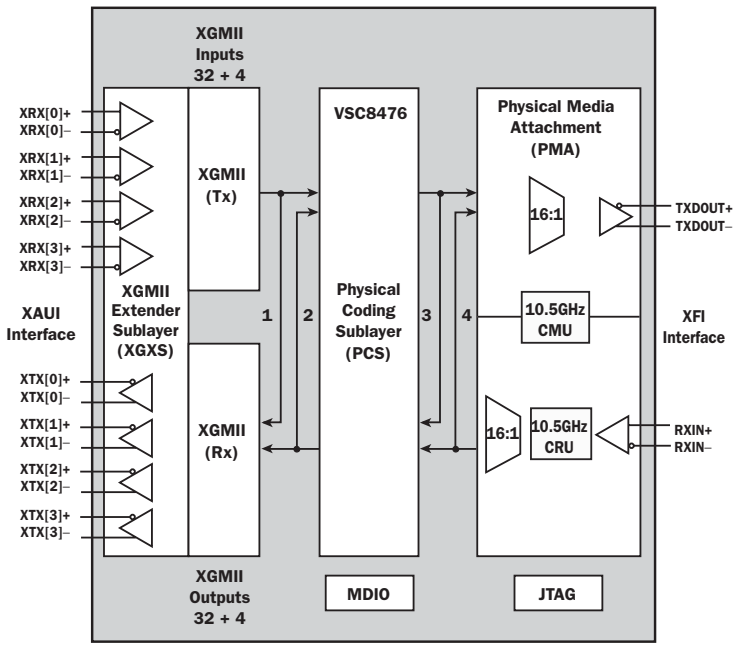
APPLICATIONS:

- 10 Gbps Ethernet Switches
- 10 Gbps Ethernet Routers
- 10 Gbps Ethernet Network Interface Cards
- 10 Gbps Fibre Channel Host Bus Adapters
- 10 Gbps Fibre Channel Switches

BENEFITS:

- Alternate High Speed Data Output with Emphasis for Copper Interconnect Applications
- Enhanced High Speed Input Equalization to Copper Interconnect Beyond the XFI Requirements
- 1mm Ball Pitch for Reduced Assembly Cost
- 1kV ESD on all Pins for Robust Performance in Assembly and End User Applications
- Lower Cost of Ownership with Low Power, 1W Typical, Allowing for Higher Density and Operating Without a Heat Sink in Most Applications
- Offering Multiple Loop Backs and Built in Self Test for Improved Test Capabilities and Reduced System Debug and Bring Up Time

BLOCK DIAGRAM:



Enterprise | Access | Metro | Core

VSC8476

XAUI to XFI 10GE & 10GFC Transceiver

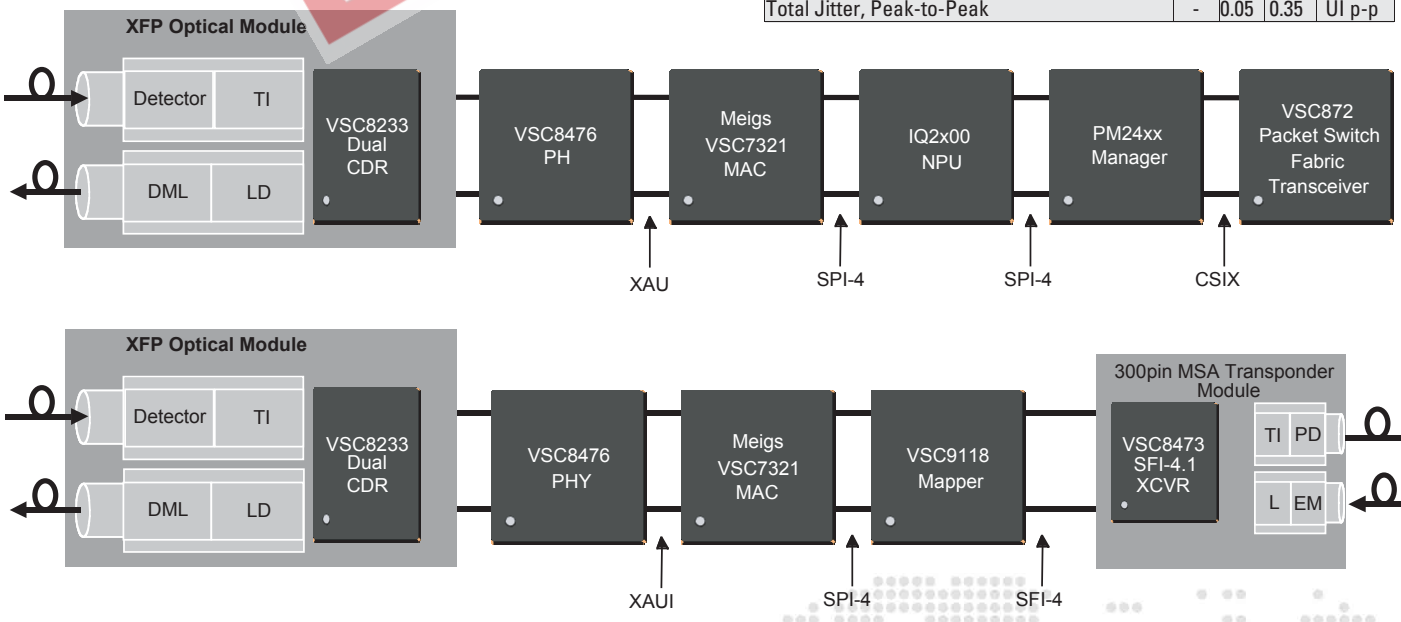
GENERAL DESCRIPTION:

The VSC8476 is a 10Gb Ethernet and 10Gb Fibre Channel Serial Transceiver that has a 10-Gigabit Attachment Unit Interface (XAUI) I/O, 8B/10B Encoder/Decoders, 64B/66B encoder/decoder, gearboxing function, 16:1 mux/demux and high speed I/O. The VSC8476 also offers an additional data output with programmable pre-emphasis to enable longer links for copper. With these functions the VSC8476 implements the IEEE 802.3ae and T11 10GFC XGMII Extender Sub-layer (XGXS), Physical Coding Sub layer (PCS), and Physical Medium Attachment (PMA). The VSC8476 supports both the 10.3Gb/s and the 10.5 Gbps as defined by IEE802.3ae and T11 10GFC respectively. The device operates using both 1.2V and 1.8V supplies for optimal power, dissipating a typical power of only 1 Watt. The VSC8476 is available in a 17mm x 17mm 256 ball package with 1mm ball pitch.

SPECIFICATIONS:

		Min	Typ	Max	Units
Total Power		-	1	-	W
1.8V Supply Voltage		1	1.8	1.89	V
1.8V Supply Current		-	25	-	A
1.2V Supply Voltage		1.14	1.2	1.26	V
1.2V Supply Current		-	800	-	A
TTL IO Supply Voltage		2.97	3.3	3.63	V
		1.71	1.8	1.89	V
		1.42	1.5	1.58	V
TTL IO Supply Current		--	3	-	A
Temperature (Min Ambient; Max Case)		-40	-	85	oC
XFI 10 Gbps Data Input					
Differential Input Swing		110	-	1050	mV
Total Jitter Tolerance, Peak-to-Peak		0.65	-	-	UI(p-p)
XAUI 3 Gbps Data Inputs					
Differential Input Amplitude		150	-	2000	mVp-p
Total Jitter Tolerance, Peak-to-Peak		0.65	-	-	UI p-p
XFI 10 Gbps Data Output					
Differential Output Swing		360	-	770	mV
Rise and Fall Time		24	35	-	ps
Total Jitter, Peak-to-Peak		-	0.07	0.3	UI (p-p)
XAUI 3 Gbps Data Outputs					
Differential Output Swing	Full Swing	800	-	1300	mVp-p
	Half Swing	500	-	1000	mVp-p
Total Jitter, Peak-to-Peak		-	0.05	0.35	UI p-p

APPLICATION DIAGRAM:



For more information on Vitesse Products visit the Vitesse web site at www.vitesse.com or contact Vitesse Sales at (800) VITESSE or sales@vitesse.com

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