MAXLINEAR

High-Speed Interconnect Products

PAM4 DSPs, TIAs and Drivers Enable Next-Gen Fiber-Optic Modules

DATA CENTER CONNECTIVITY PRODUCTS

100G Snowmass DSPs (16nm)	
MxL93515	100G DSP
MxL93516	100G DSP with EA-EML driver
400G PAM4 Telluride DSPs (16nm)	
MXL93542	400G DSP with EA-EML driver
MxL93543	400G DSP
400G/800G PAM4 Keystone DSPs (5nm)	
MxL93642	400G DSP with Integrated driver
MxL93643	400G DSP
MxL93682	800G DSP with Integrated driver
MxL93683	800G DSP

DSP FUNCTIONALITY INCLUDES:

- Line-side Tx digital pre-distortion (DPD)
- Transmit pre-emphasis (TX FIR)
- Continuous Time Linear Equalizer (CTLE)
- Receiver feed forward equalization (FFE)
- Decision feedback equalization (DFE)

BENEFITS OF NEW KEYSTONE DSPs:

- Support 106G/lane electrical and optical I/O
- Enable sub-8W 400G and sub-15W 800G optical modules
- Integrated driver with single-ended and differential options for both EML and SiPH optical interfaces
- 12mmx12mm package suitable for QSFP-DD800 and OSFP optical modules

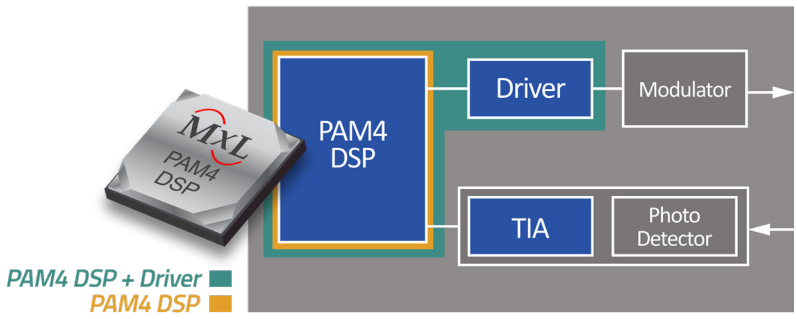
OPTICAL METRO LONG HAUL PRODUCTS

Drivers	
MxL9234	32GBd Quad Linear Modulator Driver
Transimpedance Amplifiers	
MxL9101	28Gbps Quad Limiting TIA
MxL9105	32Gbps Dual Linear Coherent TIA
MxL9109	28Gbps Quad Limiting TIA
MxL9142	45GBd Dual Linear Coherent TIA

MaxLinear products accelerate network deployments for next-generation data centers, service providers and AI/ML applications

MaxLinear is a leading provider of High-Speed Interconnect ICs that enable next generation fiber-optic modules for data center, metro, and long-haul transport networks. We build highly integrated semiconductor SoCs that move big data around the world at ever increasing speeds.

MaxLinear provides a full range of PAM4 DSPs for applications ranging from 100G to 800G, supporting 53G/lane and 106G/lane options on both the host and line side interfaces for data center connectivity. Our transimpedance amplifiers (TIAs) and drivers enable coherent long-haul and metro fiber optic solutions that allows cloud and service providers to increase bandwidth over distances in excess of 1000km.



Wired Infrastructure

Optical and wireline communication network solutions that enable 400Gbps optical interconnects and bring 10Gbit to the home

High-Speed Interconnect Products

Data Center Connectivity Products

PAM4 DSPs

Family	Module Capacity	Module Type	Electrical Interface	Optical Interface	Package Size	Applications
Snowmass	100G	QSFP28	4x25G NRZ	1x100G PAM4	7mm x 8.5mm	▪ 100G-DR/FR/LR ▪ QSFP28 optical modules ▪ SFP-DD optical modules ▪ DSFP optical modules
	100G	SFP-DD, DSFP	2x50G PAM4	1x100G PAM4		
Telluride	400G	QSFP-DD, OSFP	8x50G	4x100G	12mm x 15mm	▪ 400G-DR4/FR4/LR4 ▪ QSFP-DD optical modules ▪ OSFP optical modules
Keystone	400G	QSFP-DD, OSFP	8x50G	8x50G	12mm x 12mm	▪ 400G: DR4/FR4/LR4 ▪ 800G: PSM8,DR8, 2xFR4,2xLR4 ▪ AEC ▪ QSFP-DD, OSFP ▪ QSFP112, QSFP-DD800
	400G	QSFP-DD, OSFP	8x50G	4x100G		
	400G	QSFP112	4x100G	4x100G		
	800G	QSFP-DD800, OSFP	8x100G	8x100G		

TIA

Products	Description
MxL9124	28GBd Quad Linear TIA

Optical Metro/Long Haul Products

Drivers

Products	Description
MxL9234	32GBd Quad Linear Modulator Driver

TIAs

Products	Description
MxL9101	Quad-Channel 28Gbps Limiting TIA
MxL9105	32GBd Dual Linear Coherent TIA
MxL9109	Quad-Channel 28Gbps Limiting TIA
MxL9142	45GBd Dual Linear Coherent TIA

For additional product information,
visit www.maxlinear.com/infrastructure/hsi

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