



Artilux is a deep tech company that focuses on realizing high-speed optical communication devices. With its own developed IP and collaboration with TSMC, Artilux is able to provide stable and high quality solutions for its customers.

Artilux Connect Series provides solutions featuring high performance with competitive cost for various optical connectivity applications. Its product portfolios cover 10-100G datacenter/5G links and consumer usages.



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10G EML Driver

ATLX-2109A (5x5 QFN32 with CDR)
ATLX-2109B (4x4 QFN32 with CDR)
ATLX-2106A (5x5 QFN32 without CDR)
ATLX-2106B (4x4 QFN32 without CDR)

Applications

- XFP & SFP+ 10GBase -ER/ZR Optical Transceivers
- XFP DWDM Optical Transceiver

10G DML Driver

ATLX-1109A (5x5 QFN32 with CDR)
ATLX-1106A (5x5 QFN32 without CDR)

Applications

- XFP & SFP+ 10GBase -LR Optical Transceivers
- XFP & SFP+ long-reach 8.5Gbps Fibre Channel Transceivers

ATLX-2109A/B Features

- CDR with reference-free operation and integrated EAM/EML laser driver
- Support 8Gbps to 11.3Gbps data-rate signal 2.5Gbps to 8Gbps with auto-bypass
- Dual 3.3V supplies (+5%/-5% for 3.3V only) 1.5V to be provided by fixed regulator output
- ATLX-2109 + TOSA Power: 954mW typical at 80mA bias and 1.8Vppse modulation
- Integrated limiting amplifier with sensitivity less than 8mV
- I²C digital interface for external micro-controller
- Detection of loss of Tx input data and CDR lock, optional squelch when no input data or CDR not locked
- Programmable input equalization and output pre-emphasis
- Case operation: -40 °C to +100 °C
- Pb-free / RoHS-compliant

ATLX-1109A Features

- CDR with reference-free operation
- Support 8Gbps to 11.3Gbps data-rate signal 2.5Gbps to 8Gbps with auto-bypass
- Dual 3.3V supplies (+5%/-5% for 3.3V only) 1.5V to be provided by fixed regulator output
- Power dissipation: 958mW typical 45/45mA bias/mod
- Integrated limiting amplifier with sensitivity less than 10mV
- I²C digital interface for external micro-controller
- Detection of loss of Tx input data and CDR lock, optional squelch when no input data or CDR not locked
- Programmable input equalization and output pre-emphasis
- Case operation: -40 °C to +100 °C
- Pb-free / RoHS-compliant

Optical Solutions Tx & Rx IC/PPD
10G 25G 40G 100G HDMI 2.1



10G SR IC

ATLX-T1X10N & ATLX-R1X10N

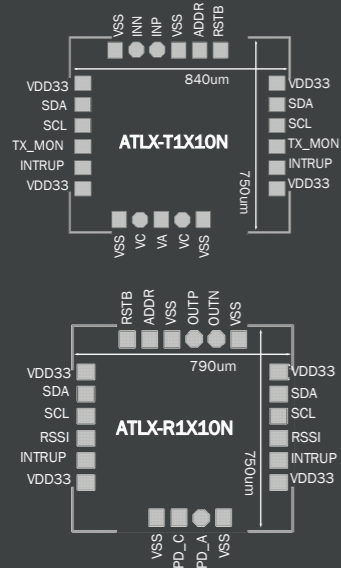
Applications

- 10GBASE-SR Transceiver
- Infiniband DDR and FDR
- Active Optical Cables
- 16G Fibre Channel

Features

- 1.0Gb/s to 14.5Gb/s rates supported
- Typical TX/RX consumption is 21mA/62mA with SINGLE 3.3V supply
- 20 μ App RX sensitivity for 10^{-12} BER at 10.3125 Gbps
- Programmable TX input EQ and output Ibias/Imod/Ipre-emp
- Detection of LOS and TX faults
- Symmetrical low speed pad layout

10G Tx/Rx



25G/100G SR IC

ATLX-T1X25C & ATLX-R1X25C
ATLX-T4X25C & ATLX-R4X25C

Applications

- 25G/100GBASE-SR Transceiver
- 100Gbps Ethernet EDR InfiniBand
- Active Optical Cables
- 32G Fibre Channel
- CPRI

Features

- 24.33Gbps to 28.05Gbps with reference-free CDR
- 2.5Gbps to 20Gbps with bypass mode
- Typical TX/RX consumption with CDR and emphasis is 230mW/197mW per channel
- Bypass mode TX/RX consumption is 140mW/135mW per channel
- -11dBm RX sensitivity for 10-12 BER at 25.78Gbps
- Programmable TX output Ibias/Imod
- Programmable TX/RX input EQ and output pre-emphasis
- Embedded detection of LOS, LOL, TX faults and diagnostic monitors.
- Symmetrical low speed pad layout (100G only)

100G Tx/Rx

