LightABLE for Aerospace & Defense

Industrial (−40°C to 100°C) 150 Gbps embedded optical module

The LightABLE™ embedded optical module is a chip-size parallel transmitter/receiver featuring the lowest profile surface mount package in the industry. The LightABLE enables high I/O density and alleviates space and power challenges facing system designers today.

Key Advantages:
- Field proven: Thousands used in aerospace, defense, telecom, datacom, medical, and industrial applications.
- Lowest profile part enables compact systems and high I/O density.
- Low power density eases cooling requirements with distributed optics.
- Designed for pick and place manufacturing, solder reflow and high pressure cleaning.
- System robustness with industrial and commercial temperature ranges.
- Low power consumption: less than 100 mW/lane @ 12.5 Gbps.
- Lane bandwidth: up to 12.5 Gbps (28 Gbps under development).
- Multi lane configuration: full duplex 4+4 TRX, 12 TX, 12 RX.
**LightABLE Typical Applications**

**Active electronically scanned array radars**
- Data intensive high resolution radar
- Antenna array with thousands of RF transmitters/receivers
- High link budget requirements
- High performance embedded computer needed for beam forming
- Low BER for superior system performance
- Rugged environment

**High-performance embedded computers**
- Scalable multiprocessor architectures for ISR
- High speed interboard processing (12.5 Gbps/lane)
- Embedded optics with high optical I/O density
- Low power consumption (<100 mW per lane)
- High-density embedded optics near processor
- EMI immunity

**High resolution surveillance cameras**
- Advanced surveillance systems
- Gigapixels imaging unit
- Terabits/s data transfer applications
- Embedded optics for high bandwidth (12.5 Gbps/lane)
- High I/O density
- Must meet SWaP and harsh environment requirements

**Embedded Optical Transceiver**
Embedded parallel optical transceiver mounts onto printed circuit board via Meg-Array® plug or BGA balls.

**LightABLE**
- 12 TX, 12 RX or 4+4 TRX
- Up to 12.5 Gbps/lane
- Pluggable or surface mount
- Operating temp. (−40°C to 100°C)

**SNAP12**
- Board-edge mounting
- Up to 10.3125 Gbps bandwidth
- Operating temp. (−40°C to 95°C)

**MSA Modules**
MSA-compliant CFP and QSFP+ high-density transceivers for the datacom and telecom industry.

**CFP**
- Support 100GBASE-SR10
- Up to 11.2 Gbps bandwidth
- Single and dual 40 Gbps versions

**QSFP+ (40 Gbps)**
- Multimode: SR4, eSR4
- Single mode: IR4, LR4
- Parallel single mode: IR4, LR4

**Light on Board**
Light On Board™ technology provides a platform for direct optical connectivity to IC circuit packages for ultrashort reach and short reach interconnections between ICs, adjacent PCB’s and adjacent chassis.

**THE Light on Board® Company**

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