# PM6010/PM6011 DIGI-G5

FlexE Enabled and Ethernet-Optimized OTN Processor for Terabit-Class Applications

### Summary

Built for the cloud and 5G mobile transport era, the DIGI-G5 is a Flexible Ethernet (FlexE) enabled and Ethernet-optimized Optical Transport Network (OTN) processor, offering a total interface bandwidth of up to 1.2 Tbps.

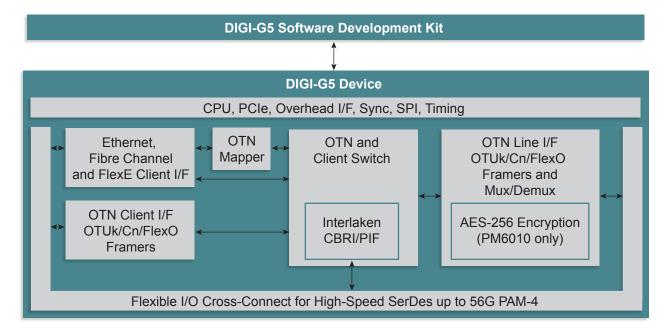
Representing five generations of Telecom and Hyperscale Cloud Service Provider-qualified OTN processing innovation, the DIGI-G5 delivers dense Ethernet and FlexE client, and "Beyond 100G" (B100G) OTN transport support for cloud-scale 100G+ packet-optical, OTN switching, DWDM and Data Center Interconnect (DCI) optical networking applications.

DIGI-G5 is complemented by Microchip's third-generation 100G OTN Software Development Kit (SDK) that enables maximum development leverage across multiple line card designs, applications and equipment platforms, reducing development costs while accelerating time-to-market.

# **Applications**

- High-density NxOTU4 and NxOTUCn line cards for OTN switches
- High-density line cards for hybrid OTN/packet switches
- Multi-service multi-rate high-density client cards
- Universal line/client cards

- Flexible transponders/muxponders (FlexPonders)
- Add Drop Multiplexers (ADMs)
- High-density FlexE capable data center interconnect
- Distributed OTN switches





## **DIGI-G5 Device Family**

- PM6010: DIGI-G5 with encryption support
- PM6011: DIGI-G5 without encryption support

Contact Microchip for the full ordering part number.

# **Highlights**

- OTN processor for terabit-class applications
- FlexE support
- Next-generation IEEE compliant Ethernet client support from 10 GbE to 400 GbE
- OTUk, OTUCn and Flexible OTN (FlexO) support
- Provides transparent and packet mapping of Ethernet over OTN
- Supports transparent mapping of Fibre Channel clients over OTN
- Enables transport of greater than 100G packet flows (B100G)
- All SerDes support up to 56G PAM-4
- FIPS 197 certified AES-256 OTN payload encryption
- LLDP monitoring for Ethernet and FlexE clients
- Flexible Interlaken system interface
- Integrated packet test set enabling a wide-array of inservice test capabilities
- Integrated synchronization support including IEEE 1588v2/ PTP, SyncE and IRIG/ToD

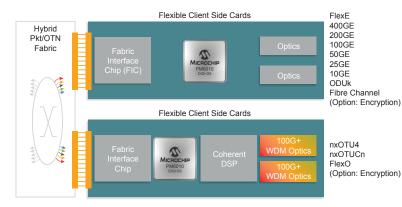
#### **Benefits**

- Scales line card capacity by 3× while reducing power by up to 50% per 100G port
- Provides seamless connectivity with next generation coherent DSPs, optical transceivers, and Fabric Interface Chips (FICs)
- Enables WAN topology mapping in DCI and SDN
  applications
- Enables a single-chip solution across multiple applications
  - Packet-optical line and client cards
  - Transponders and muxponders
  - Data center interconnect platforms
- Integrated OTN switch with DIGI-Mesh-Connect architecture enables fabric-less compact OTN switching platforms
- Third-generation 100G OTN SDK reduces deployment risk and lowers development costs with field-proven API libraries and firmware
- On-chip processor enables 1 Tbps application performance



# Core/Metro P-OTPs 1 Tbps+ Line Cards

- Total platform solution for line and client cards
- OIF OFP-compatible Interlaken interfaces

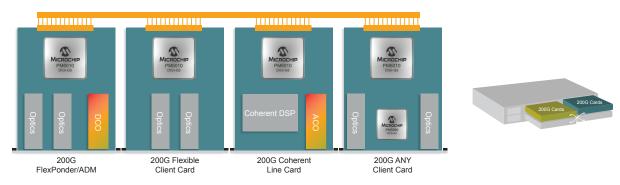


- Enables B100G OTN, Ethernet and FlexE services
- Industry's only sub-wavelength ODUk encryption



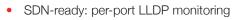
## Metro Distributed OTN Switch Muxponder/Transponder/ADM

- On-chip ODUk switching features with DIGI-Mesh-Connect for nonblocking, compact OTN switching platforms
- Flexible muxponder/transponder, OTN ADM modes
- Low latency, 25 GbE and PTP-over-OTN for 5G applications

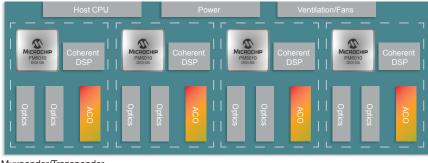


# High-Capacity DCI Single-Chip FlexPonders

• Low-power muxponder/transponders for scalable, high-capacity 1RU form factor architectures



• Optical security: low-latency AES-256 encryption





#### For More Information

www.microsemi.com



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