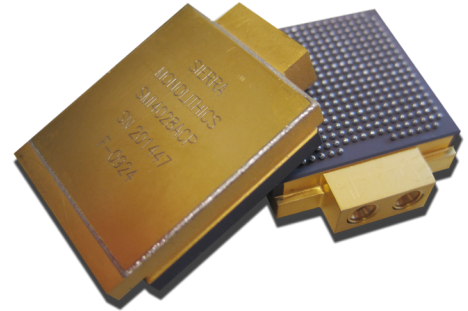


Product Brief



OPTICAL TRANSPORT & DATACOM PRODUCTS



SMI4028

45 to 49 Gbps 16:2 Multiplexer/CMU with DQPSK Precoder

Product Description

SMI4028 is a 16:2 Multiplexer with on chip Clock Multiplier Unit and DQPSK Precoder that support the data rate from 45 to 49Gbps.

Product Highlights

- ▶ User-Enabled DQPSK Precoder Function
- ▶ SFI-5+ Compliant FIFO and Deskew functions
- ▶ Dual Ground-Referenced High-Speed Single-Ended Output Ports
 - 0.3 to 0.7 Volt pp SE Output Level (adjustable for reduced power)
 - 14 psec (typical) Rise/Fall Times
 - 4.8 psec p-p total jitter (typical)
 - 1.0 psec (rms) total jitter
 - Data-to-Data Skew Adjustments for Each Output Data Lane; +/- 0.25UI
 - GPP0 Connection; 22.5 to 24.5 Gbaud (f_{Baud})
- ▶ High-Speed Differential Clock Outputs with Highly Stable Clock-Data Skew and Low Phase Noise
 - Full (23.5 nominal) and Half-Rate (11.75 GHz nominal) CML Clocks
 - Skew control of +/- 0.5UI on Half-Rate Clock
 - 0.8 Volt pp Differential Output Level

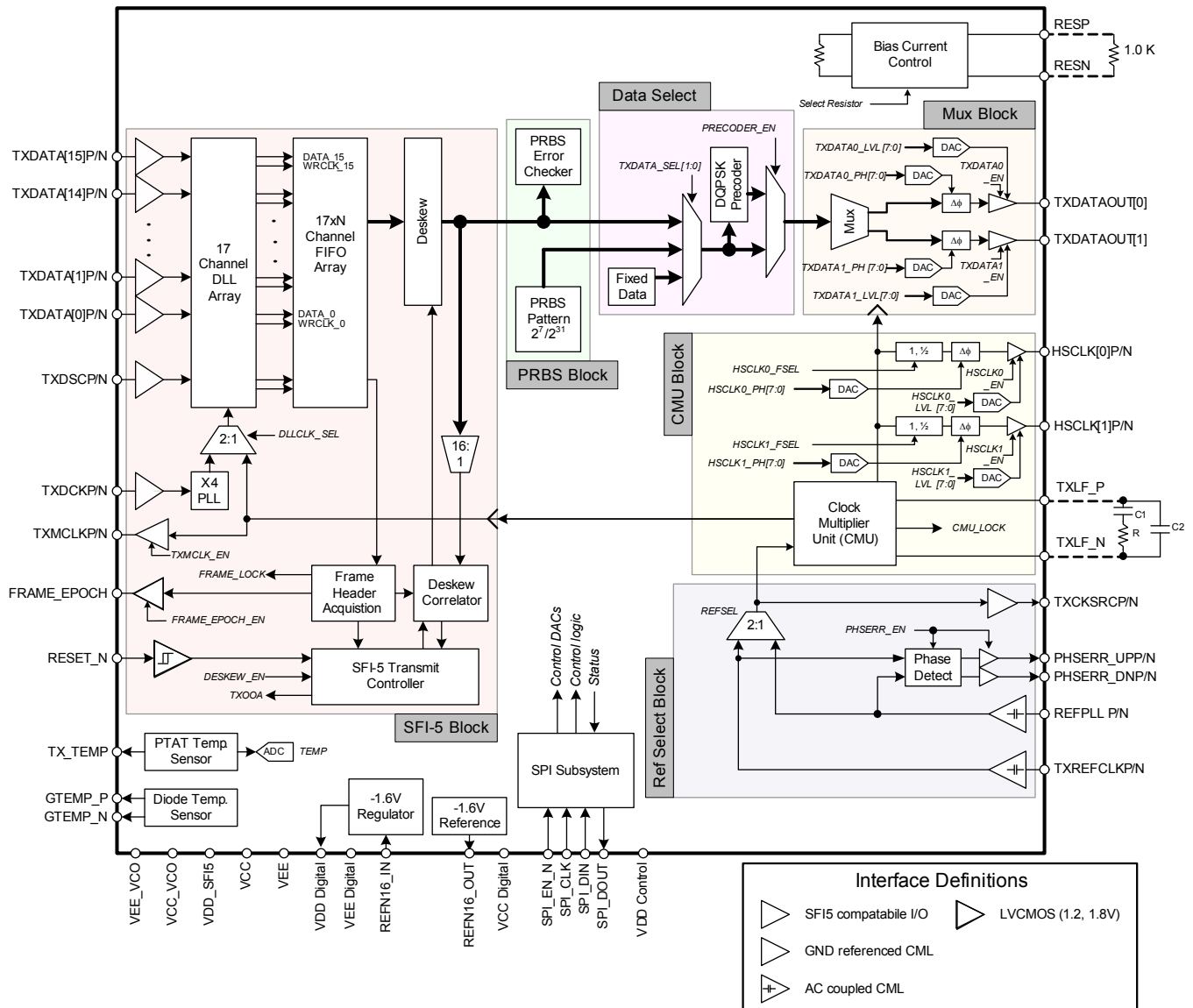
- ▶ SONET-compliant Clock Multiplier Unit (CMU) with VCO
- ▶ User Selectable Reference Clock Input Ports
- ▶ Reference Clock Clean-Up Loop Circuitry
- ▶ On-Chip PRWS Error Checker and Pattern Generator:
 - 2^7-1 or $2^{31}-1$ industry-standard patterns
 - On-chip error counter for measuring BER
 - Lane-by-lane error checking
- ▶ SPI Control Interface Supports 1.2V or 1.8V LVCMOS
- ▶ Temperature Sense Output Voltage
- ▶ Dual-Power Supply Voltages: +1.2 or +1.8V and -2.8V
- ▶ Low Power Consumption: 2.9 Watts (typical)

Applications

- ▶ OC768/OTU3 Modules and Transponders
- ▶ MSPP, ADM and Cross-connects
- ▶ IP Routers and Switches

Product Brief

SMI4028 Block Diagram — 16:2 Multiplexer/CMU with DQPSK Precoder



Sierra Monolithics Inc. is now part of Semtech Incorporated. To view the most current product specifications and datasheets, contact your local Semtech Field Applications Engineer.