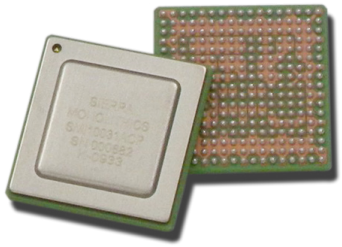
Product Brief

OPTICAL TRANSPORT & DATACOM PRODUCTS



SMI10021

100-113 Gbps 10:4 Mux/CMU with Dual-DQPSK Precoder for Short Reach Applications

Product Description

SMI10021 is a 10:4 Multiplexer with on chip Clock Multiplier Unit and user enabled Dual/Single DQPSK Precoder function that support the data rates from 100 to 113Gbps.

Product Highlights

- Quad AC-Coupled CML Line-Side Output Ports
  - 25.0 to 28.3 Gbps per channel
  - 0.3 to 0.6 Volt pp SE/ 0.6 to 1.2Volt pp Differential Output Level, Typical (adjustable for reduced power)
  - 11 psec (typical) Rise/Fall Times
  - 4 psec p-p total jitter (typical)
  - Selectable Line-side pre-emphasis to compensate loss due to PCB interconnect
- High-Speed Differential Clock Outputs with Highly Stable Clock-Data Skew and Low Jitter
  - Full (25 - 28.3 GHz) and Half-Rate (12.5 - 14.15 GHz) CML Clocks
  - 0.8 Volt pp Differential Output Level
- Optional input reference clock rate at 1/16th client-side baud rate (625.0 to 707.5 MHz) or 1/64th client-side baud rate (156.25MHz to 176.875MHz)
- Reference Clock Clean-Up PLL Circuitry
- CAUI/MLD-compatible client-side interface
  - Optional SFI-S Compliant Deskew Function
  - Hot-plug compatible for ac-coupled inputs
  - Capable of dc-coupled operation with 1.2V source termination voltages
- On-Chip PRWS Error Checker and Pattern Generator: 2^7-1, 2^9 - 1, 2^{11} - 1 2^{15} - 1, 2^{23} - 1 or 2^{31}-1 industry-standard patterns
  - On-chip bit and error counters for measuring BER
  - Parallel and lane-by-lane error checking capacities
  - Programmable 80-bit arbitrary pattern generator
- SPI Control Interface
- Temperature Sense Output Voltage
- Power Supply Voltages: +1.2V, +1.5V and +2.8V
- Package: Full BGA-style package

Applications

- OTU4/100GE Modules and Transponders
- Routers and Switches

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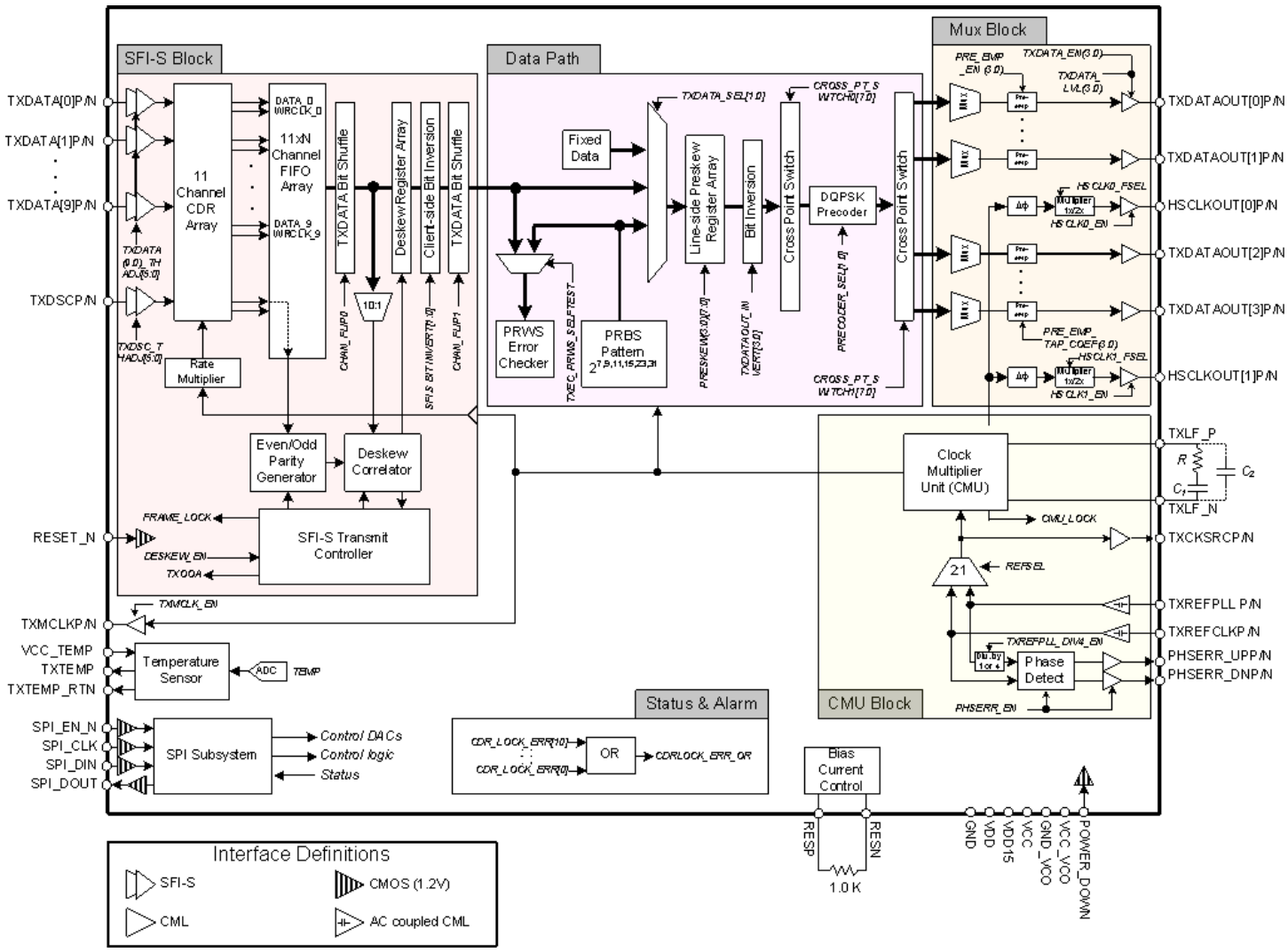
SMI10021 Block Diagram — 100-113 Gbps 10:4 Mux/CMU with Dual-DQPSK Precoder



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.