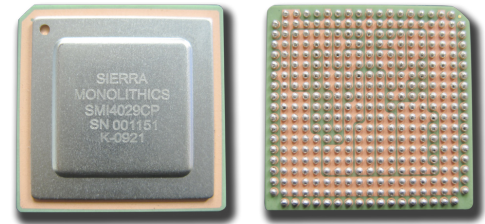


Product Brief



OPTICAL TRANSPORT & DATACOM PRODUCTS



SMI4029

40-45 Gbps 16:2 Multiplexer/CMU with DQPSK Precoder

Product Description

SMI4029 is a 16:2 Multiplexer with on chip Clock Multiplier Unit and DQPSK Precoder that support the data rate from 40 to 45Gbps consistent with SFI-5 standard.

Product Highlights

- ▶ SFI-5.1 compliant FIFO and deskew functions
- ▶ Dual ground-referenced high-speed differential output ports
 - 0.6 to 1.0 Volt pp differential output level
 - 11 psec (typical) rise/fall times
 - 3.7 psec p-p total jitter (typical)
 - Data-to-data skew adjustments for each output data lane
 - Full BGA package to support data rates: 19.9 to 22.3 Gbaud
- ▶ High-speed differential clock outputs with highly stable clock-data skew and low phase noise
 - Full (22.3 nominal) and half-rate (11.15 GHz nominal) CML clocks
 - Skew control of +/- 0.5UI on half-rate clock
 - 0.8 Volt pp differential output level
 - BGA launch to host printed circuit board

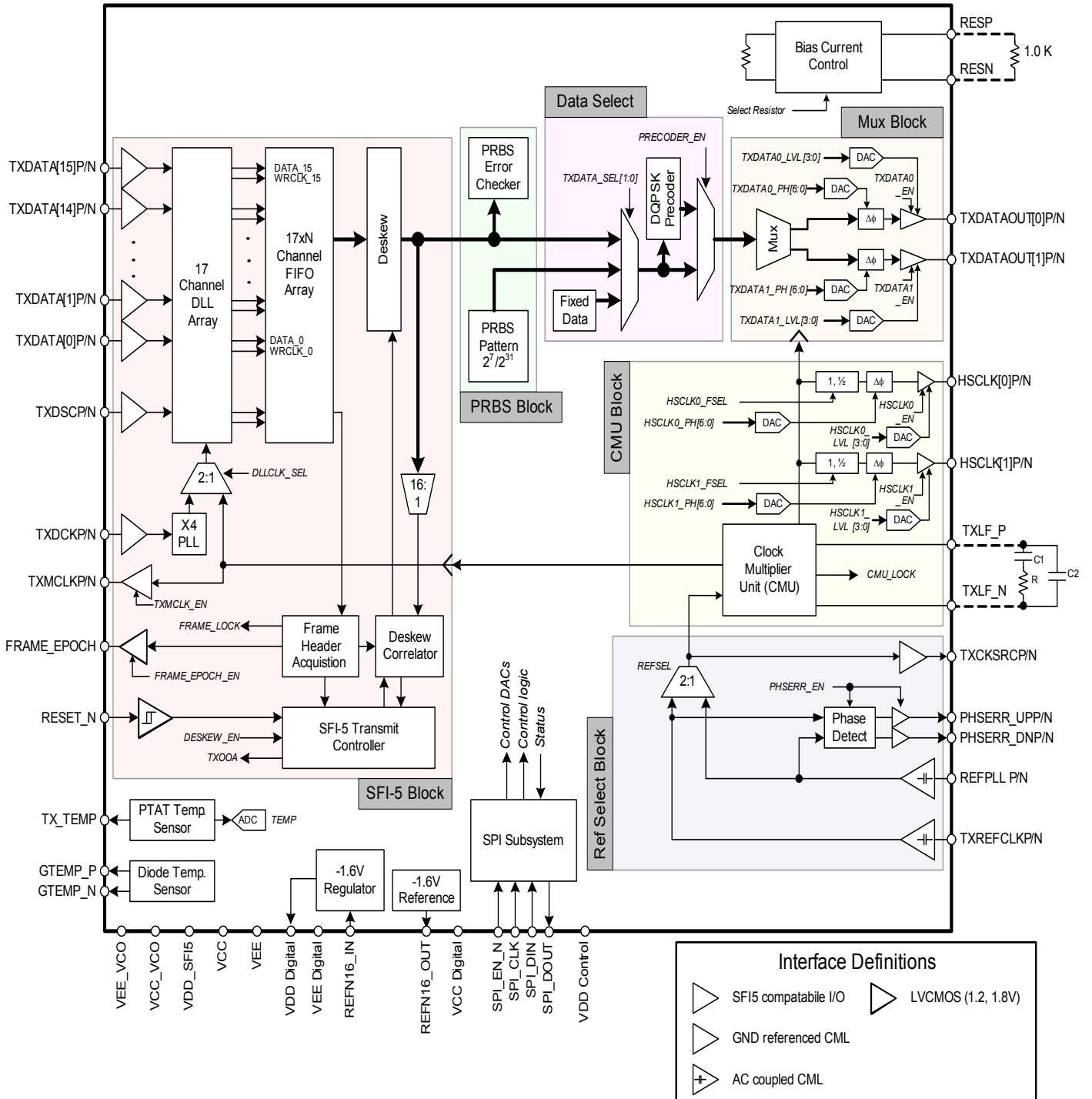
- ▶ SONET-compliant Clock Multiplier Unit (CMU) with VCO
- ▶ Three user selectable reference clock input ports
 - Input reference clock rate is 1/4th client-side baud rate: 622.08 to 696.73 MHz
- ▶ Reference clock clean-up loop circuitry
- ▶ On-chip PRWS error checker and pattern generator: 27-1 or 231-1 industry-standard patterns
 - On-chip error counter for measuring BER
 - Lane-by-lane error checking
- ▶ SPI control interface supports wide range of logic families
 - 1.2V or 1.8V LVCMOS
- ▶ Temperature sense output voltage
- ▶ Dual-power supply voltages: +1.2 or +1.8V and -2.8V
- ▶ BiCMOS Silicon Germanium technology for high reliability and lower cost
- ▶ Low power consumption: 2.4 Watts (typical, HSCLK outputs disabled)

Applications

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

Product Brief

SMI4029 Block Diagram



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.