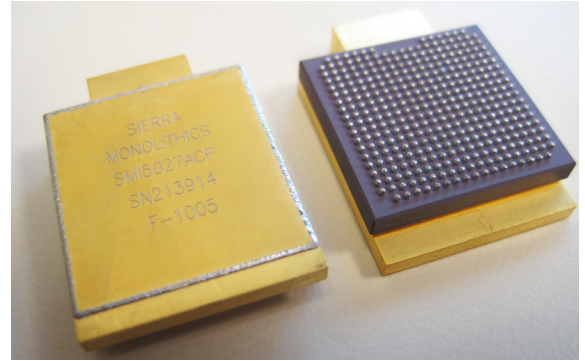


# Product Brief



OPTICAL TRANSPORT & DATACOM PRODUCTS



## SMI5027

### 56 Gbps 16:2 Multiplexer/CMU with DQPSK Precoder

#### Product Description

SMI5027 is 16:2 Multiplexer with on chip clock multiplier unit and DQPSK Precoder that supports data rates up to 56Gbps consistent with the SFI-5 standards.

#### 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
  - 11 psec (typical) Rise/Fall Times
  - 3.7 psec p-p total jitter (typical)
  - Data-to-Data Skew Adjustments for Each Output Data Lane; +/- 0.25UI
- ▶ High-Speed Differential Clock Outputs with Highly Stable Clock-Data Skew and Low Phase Noise
  - Full (27.8 nominal) and Half-Rate (13.9 GHz nominal) CML Clocks
  - Skew control of +/- 0.5UI
  - 0.8 Volt pp Differential Output Level

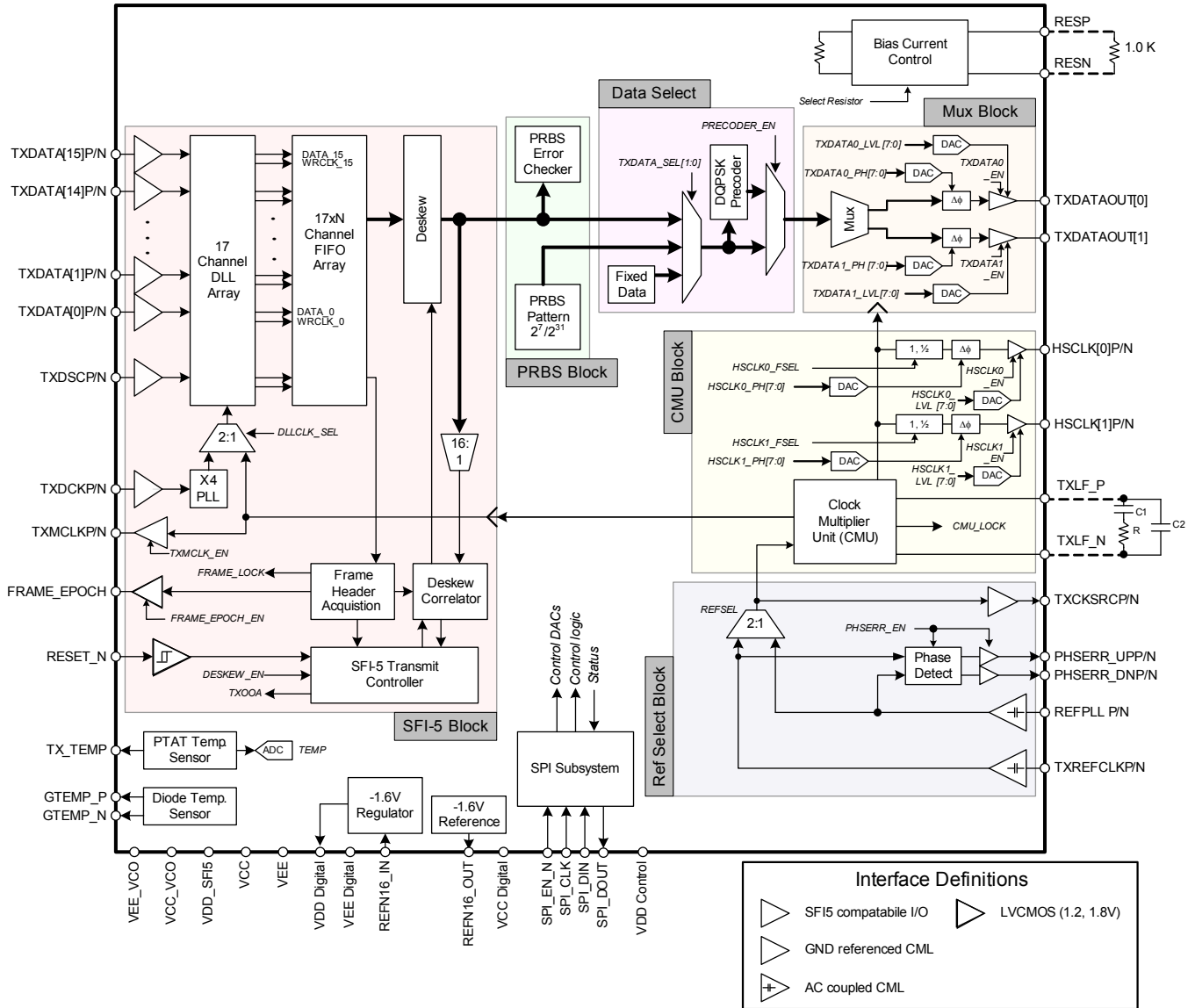
- ▶ SONET-compliant Clock Multiplier Unit (CMU) with VCO
- ▶ Three User Selectable Reference Clock Input Ports
  - Input reference clock rate is 1/4<sup>th</sup> client-side baud rate: 862.500 to 884.375 MHz
- ▶ Reference Clock Clean-Up Loop Circuitry
- ▶ On-Chip PRWS Error Checker and Pattern Generator:
  - 2<sup>7</sup>-1 or 2<sup>31</sup>-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: 2.4 Watts

#### Applications

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

# Product Brief

## SMI5027 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.