



ACS8510 SETS

Synchronous Equipment Timing Source for SONET or SDH Network Elements

ADVANCED COMMUNICATIONS

PRODUCT BRIEF

Description

The ACS8510 is a highly integrated, single-chip solution for the Synchronous Equipment Timing Source (SETS) function in a SONET or SDH Network Element. The device generates SONET or SDH Equipment Clocks (SEC) and frame synchronization clocks. The ACS8510 is fully compliant with the required specifications and standards.

The device supports Free-Run, Locked and Holdover modes. It also supports all three types of reference clock source: recovered line clock, PDH network, and node synchronization. The ACS8510 generates independent SEC and BITS clocks, an 8 kHz Frame Synchronization clock and a 2 kHz Multi-Frame Synchronization clock.

Two ACS8510 devices can be used together in a Master/Slave configuration mode allowing system protection against a single ACS8510 failure.

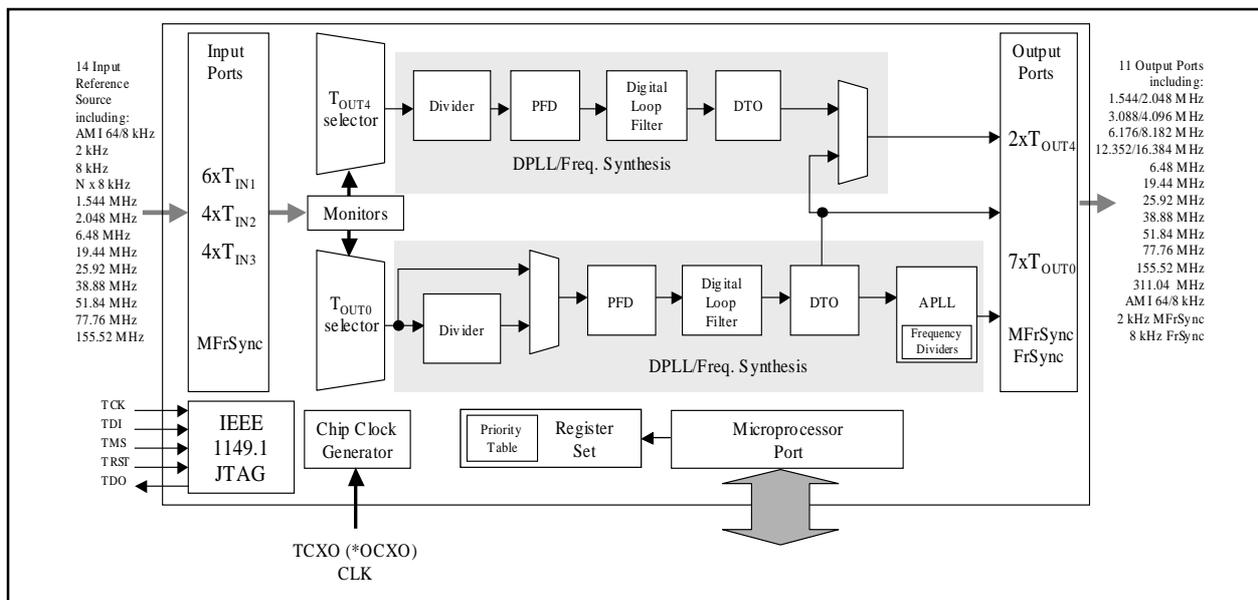
A microprocessor port is incorporated, providing access to the configuration and status registers for device setup and monitoring. The ACS8510 supports IEEE 1149.1 JTAG boundary scan.

* Meets Holdover requirements, lowest bandwidth 0.1 Hz.

Features

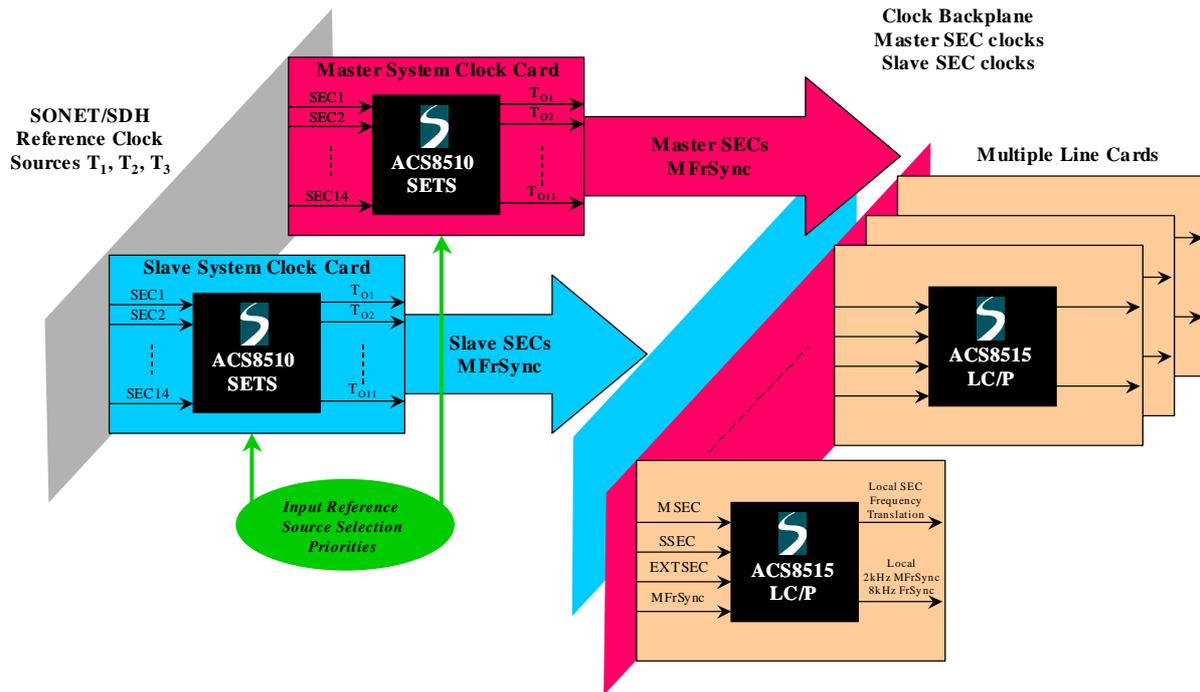
- Suitable for Stratum 3E*, 3, 4E and 4 SONET or SDH Equipment Clock (SEC) applications
- Meets AT&T, ITU-T, ETSI and Telcordia specifications
- Accepts 14 individual input reference clocks
- Generates 11 output clocks
- Supports Free-Running, Locked and Holdover modes of operation
- Robust input clock source quality monitoring on all inputs
- Automatic "hit-less" source switchover on loss of input
- Phase build-out for output clock phase continuity during input switchover and mode transitions
- Microprocessor interface - Intel, Motorola, Serial, Multiplexed, EPROM
- Programmable wander and jitter tracking/attenuation 0.1 Hz to 20 Hz
- Support for Master/Slave device configuration alignment and hot/standby redundancy
- IEEE 1149.1 JTAG Boundary Scan
- Single 3.3 v operation. 5 v I/O compatible
- Operating temperature (ambient) -40°C to +85°C
- Available in 100 pin LQFP package

Block Diagram



Applications

- SONET/SDH Add/Drop Multiplexers
- SONET/SDH Uplinks
- SONET/SDH Cross Connects
- ATM Switches and Routers

SONET/SDH Synchronization Solution


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