

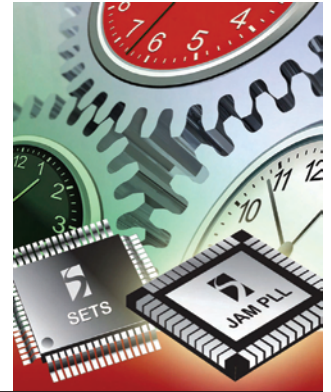
Product Brief



SEMTECH ADVANCED COMMUNICATIONS

SETS and JAM PLL

SONET/SDH Synchronization & Jitter Attenuation



Semtech revolutionizes SONET/SDH network synchronization by providing next generation solutions for higher levels of system synchronization management and overall system performance.

Key Features:

- **SONET/SDH system synchronization by SETS**
- **Frequency translation and jitter attenuation by JAM PLL**
- **Superior MTIE/TDEV figures ensure low bit-error rates**
- **Support free-run, locked, and holdover modes**
- **System synchronization and line card applications**
- **ETSI/ITU/Telcordia/ANSI sync standards compliance**
- **Applications include DSLAMs, access concentrators, add/drop multiplexers, digital cross-connects, access switches and routers, 2/3G wireless base stations and AdvancedTCA systems.**
- **Ideal for new systems and retrofit to existing machines**

Semtech's Synchronous Equipment Timing Source (SETS) family of products are employed worldwide throughout the most advanced optical telecom networks. SETS eliminates expensive discrete multi-chip configurations with a single-chip solution.

Semtech's Jitter Attenuating, Multiplying Phase Locked Loop (JAM PLL) family of products cleans up the jitter for high speed optical line cards, and provides low jitter clocks compliant up to OC-12/STM-4 spec.

JAM PLL has an integrated VCO, thus reduces the component cost and real estate on the PCB. Together with SETS parts, they offer a complete line card sync solution.

SONET/SDH Synchronization

SETS LINE CARD FAMILY KEY FEATURES

PART NUMBER	FEATURES														
	GENERAL FEATURES							INPUT CONFIGURATIONS				OUTPUT CONFIGURATIONS			
	Automatic reference switching	SONET/SDH compliance	Hit-less source switching	Holdover	Software control mode	Frequency monitoring	Activity monitoring	Loss of lock indication	Revertive/non-revertive mode	Output phase adjustment	Phase measurement	155.52MHz	38.88MHz, 51.84MHz, 77.76MHz	6.48, 25.52MHz	19.44MHz
ACS8515Rev2.1*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8525*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8526*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8527*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

SETS MASTER SYNCH CARD FAMILY KEY FEATURES

PART NUMBER	FEATURES														
	GENERAL FEATURES							INPUT CONFIGURATIONS				OUTPUT CONFIGURATIONS			
	Automatic reference switching	Hardware master/slave control mode	Stratum 3 SONE/SDH compliance	Stratum 3E compliance	Hit-less source switching	PBO on currently locked reference	Holdover (with appropriate TCXO, OCXO)	8-bit microprocessor modes	Frequency monitoring	Activity monitoring	Loss of lock indication	Revertive/non-revertive mode	Output phase adjustment	Phase measurement	155.52MHz
ACS8510Rev2.1*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8520*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8522*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8530*	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

*Pb-free version available for all products; RoHS and WEEE compliant

Visit our website to locate most current product specifications, datasheets and contact information for your local Semtech Field Applications Engineer.

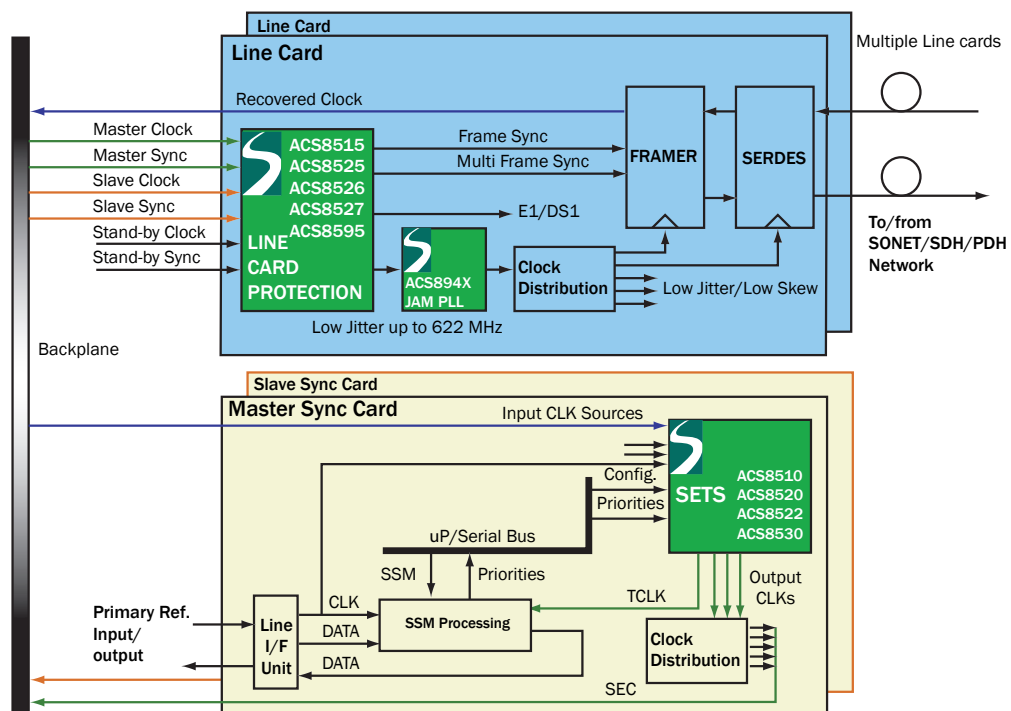
Jitter Attenuation

JAM PLL FAMILY KEY FEATURES

PART NUMBER	FEATURES																	
	GENERAL FEATURES									OUTPUT CONFIGURATIONS								
	Lead-free Package, RoHS and WEEE Compliant	OC-3/STM-1 and OC-12/STM-4 jitter compliance	Gigabit Ethernet jitter cleaning	Single input and single output	2 inputs and 4 outputs	Automatic/Manual Reference switching	LOS alarms for input and reference	Sync input and output	Inputs and outputs frequency programmable	SONET/SDH	ETHERNET	SONET/SDH ⁺	ETHERNET ⁺⁺	ETHERNET ⁺⁺	ETHERNET ⁺⁺	ETHERNET ⁺⁺	ETHERNET ⁺⁺	ETHERNET ⁺⁺
										19.44MHz	155.52MHz	19.44MHz	156.25MHz	125MHz	1.56, 2.5MHz	31.25MHz	62.50MHz	125MHz
										38.88MHz	1.55, 5.2MHz	38.88 MHz	77.76 MHz	155.52MHz	31.04MHz	62.50MHz	125MHz	19.53, 39.06MHz, 78.18MHz
										77.76MHz	1.56, 2.5MHz	77.76 MHz	156.25MHz	125MHz	1.56, 2.5MHz	31.04MHz	62.50MHz	125MHz
										156.25MHz	1.56, 2.5MHz	156.25MHz	125MHz	125MHz	1.56, 2.5MHz	31.04MHz	62.50MHz	125MHz
										125MHz	1.56, 2.5MHz	125MHz	125MHz	125MHz	1.56, 2.5MHz	31.04MHz	62.50MHz	125MHz
										1.55, 5.2MHz	1.56, 2.5MHz	1.56, 2.5MHz	125MHz	125MHz	1.56, 2.5MHz	31.04MHz	62.50MHz	125MHz
										19.44MHz	1.56, 2.5MHz	19.44MHz	156.25MHz	125MHz	1.56, 2.5MHz	31.04MHz	62.50MHz	125MHz
ACS8944T	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ACS8946T	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

+ Requires SONET/SDH input frequency

++ Requires Ethernet input frequency



Product Brief

Designing telecom network synchronization for the future

- Product synch solution widely adopted by major Tier 1 OEMs
- Participant in standard bodies defining TDM and Packet network synch solutions for the future
- Design expertise in system, hardware, software, and mixed signal IC design
- System architecture expertise ensures your design meets system standard compliance
- Semtech support assures customer design on-time and on-budget

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