



## Silicon Labs' Timing Solutions for Cavium MPUs

### Overview

Silicon Labs has a wide selection of timing products including clock generators, jitter attenuating clocks, XO/VCXOs, and buffers supporting applications in the communications, computing, broadcast, video, and the consumer electronics markets.

The following are Silicon Labs' timing products in Cavium MPU reference designs. All of Silicon Labs' products are offered with short lead time of 2 to 4 weeks, and supports 2.5/3.3 V operation at industrial temperatures from -40 to +85 °C.

### Clock Generator Features

- Meets Cavium's jitter requirements: PCIe Gen 2, 3 compliant
- Push-pull output eliminates 50Ω output resistor
- Integrated termination resistor on PCIe outputs
- Small size: 20QFN (3 x 3 mm<sup>2</sup>)

### Jitter Attenuating Clock Features

- Any-output frequency from any-input frequency
- Ultra-low jitter: <300 fs RMS (12 kHz to 20 MHz)
- Multi-format: LVCMOS, LVDS, LVPECL, CML
- Selectable loop bandwidth and integrated filter

### Silicon Labs and Cavium

Cavium MPUs	Silicon Labs' Solution	Applications
Econa (CNS1xxx) Econa (CN1xxx)	<ul style="list-style-type: none"> <li>• SL28PCIE26**</li> <li>• SL28SRC02/04*,</li> <li>• SL28PCIE10*</li> </ul>	<ul style="list-style-type: none"> <li>• Broadband gateway</li> <li>• Network attached storage</li> <li>• Internet devices and 802.11n</li> </ul>
Pure Vu Video (CNW3xxx) Pure Vu Video II (CN5xxx)	<ul style="list-style-type: none"> <li>• SL38160-17A/18**</li> </ul>	<ul style="list-style-type: none"> <li>• Video</li> <li>• Embedded applications</li> </ul>
OCTEON II (CN6xxx) OCTEON Plus (CN5xxx) OCTEON (CN3xxx)	<ul style="list-style-type: none"> <li>• SL38000-15AH/17A**</li> <li>• SL28PCIE10*</li> <li>• Si5327</li> </ul>	<ul style="list-style-type: none"> <li>• Access and service providers</li> <li>• Broadband and consumer</li> <li>• Enterprise and data center</li> </ul>

\*Note: Reference design in process. \*\*Note: Available now.

### Featured Reference Designs

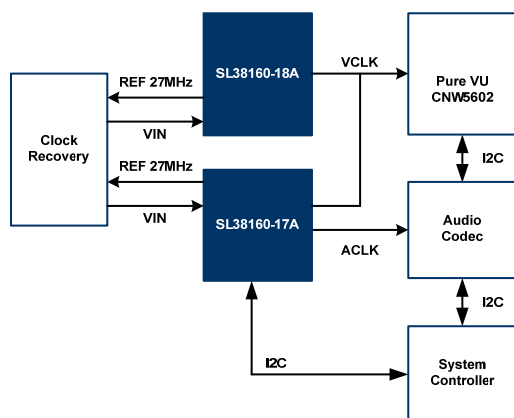


Figure 1. Silicon Labs SL38160 and Cavium's PureVu

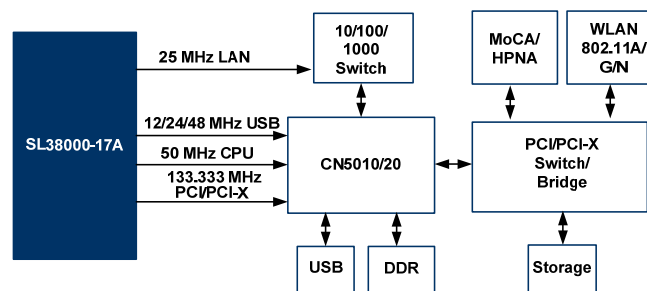


Figure 2. Silicon Labs SL38000 and Cavium's OCTEON

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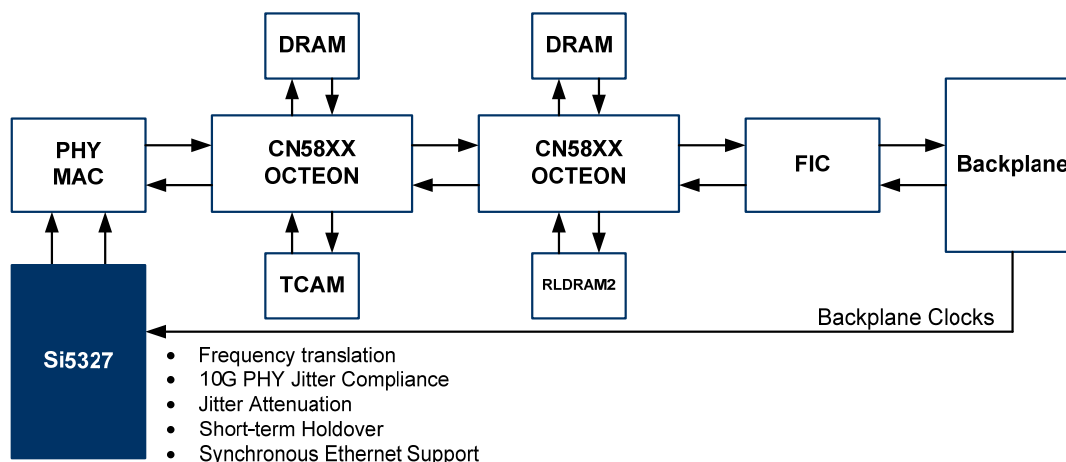


Figure 3. Silicon Labs Si5327 and Cavium's OCTEON (GMII) ATCA Based Line Card/AMC Designs

### Orderable Part Numbers

Silicon Labs' Part Number	Caviums' Design	Control	FOUT (MHz)	VDD	Output	Package
SL38000-15AH/17A	CN5010/20	Pin	12, 25, 50, 125, 133	3.3	LVC MOS	28TSSOP
SL38160-17AH	CNW5602	I2C	27, 8.19-49.15, 13.5-148.5	3.3	LVC MOS	16TSSOP
SL38160-18AH	CNW5602	I2C/Pin	27, 25-202	3.3	LVC MOS	16TSSOP
SL28PCIE26	CNS3410/20	I2C	100	3.3	Diff push-pull	32QFN (5 x 5 mm <sup>2</sup> )
SL28SRC02/04	CNS3420/10	Pin/I2C	100	3.3	Diff push-pull	20/24QFN (3 x 3, 4 x 4 mm <sup>2</sup> )
SL28PCIE10	CN52xx/54xx/56xx	I2C	Ref, 27, 48, 100	3.3	LVC MOS, Diff push-pull	32QFN (5 x 5 mm <sup>2</sup> )
Si5327	CN5010/20	I2C/SPI	0.002 to 808	1.8/ 2.5/ 3.3	LVC MOS, LVDS, LVPECL, CML	36QFN (6 x 6 mm <sup>2</sup> )

### Resources

- Product data sheets, applications notes, whitepapers: [www.silabs.com/Timing](http://www.silabs.com/Timing)
- Timing product selector guide: [www.silabs.com/Marcom\\_Documents/Resources/Timing\\_Selector\\_Guide.pdf](http://www.silabs.com/Marcom_Documents/Resources/Timing_Selector_Guide.pdf)
- Generate a custom clock: [www.silabs.com/ClockBuilder](http://www.silabs.com/ClockBuilder)
- Generate a custom XO/VCXO part number: [www.silabs.com/VCXOPartnumber](http://www.silabs.com/VCXOPartnumber)
- Generate a custom silicon oscillator part number: [www.silabs.com/SiXOPartnumber](http://www.silabs.com/SiXOPartnumber)

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