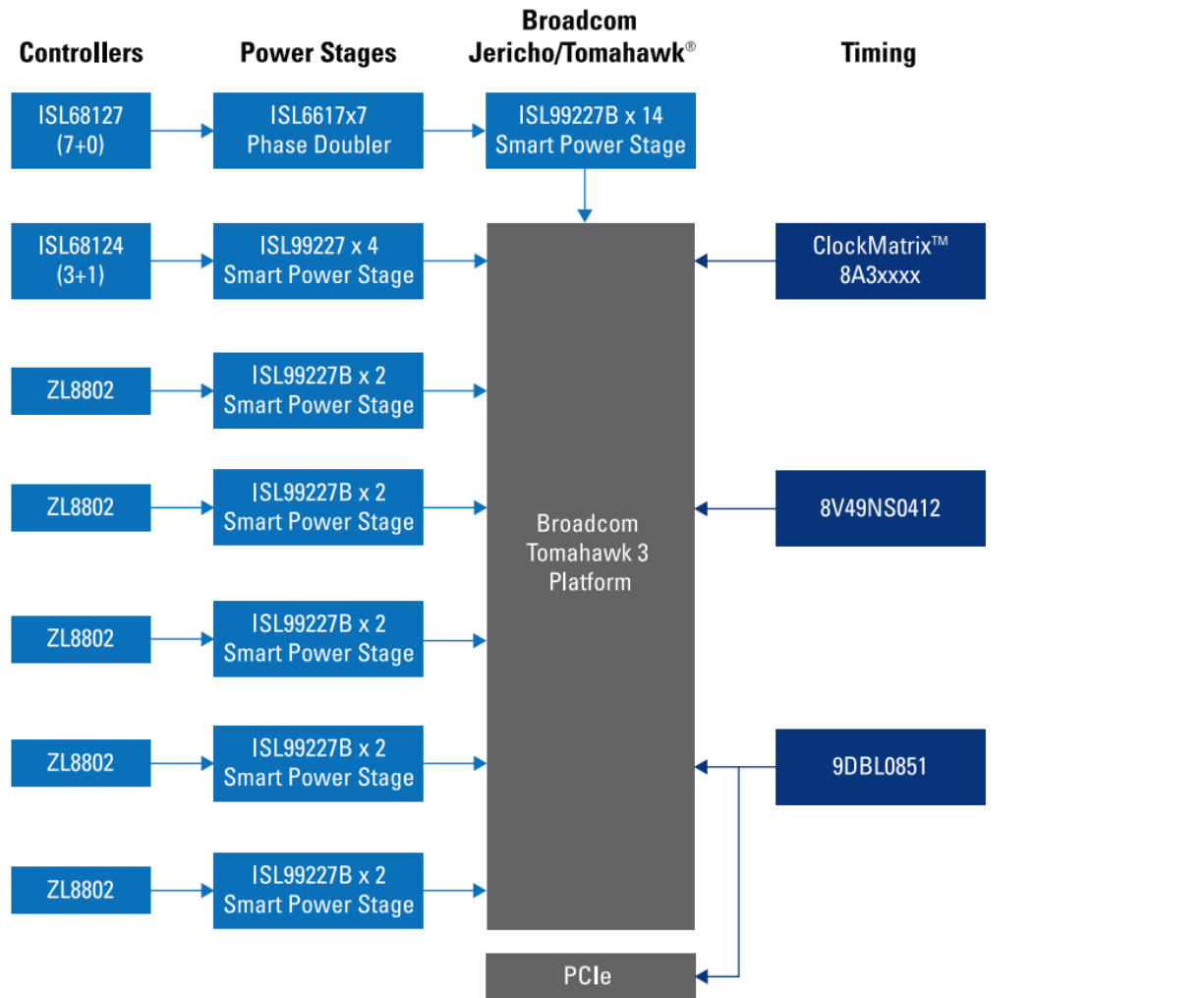


Title	Wireline Infrastructure Computing
Intro	Our timing and power solutions reduce component count and logistics for applications such as 10G-400G Ethernet switches, enterprise core and edge routers, optical transport networks, packet transport networks and access network equipment.
Overview	<p>With demanding power and performance requirements, wireline infrastructure computing elements are placing increasingly difficult demands on power and timing solutions. The combination of high performance and specialized timing along with a broad portfolio of power products addresses the needs of these modern systems.</p> <p>Timing requirements are especially challenging in the latest wireline equipment. Solutions offered to meet these challenges include the industry's best and most flexible support of SyncE/IEEE1588 providing a single chip synchronization solution to reduce component count and logistics.</p> <p>Typical applications include 10G-400G Ethernet switches, enterprise core and edge routers, optical transport networks, packet transport networks, and access network equipment.</p> <p>Timing Key Features:</p> <ul style="list-style-type: none"> <li>- High Performance flexible synchronization and I/O features provides centralized timing solution to ease design</li> <li>- High performance with programmability allows flexibility in addressing changes to design and fast time-to-market</li> <li>- Configurable DPLL bandwidth for jitter attenuation optimizes device fit to various design needs – portable design</li> <li>- Low Power HSCL interface allows small footprint and reduces board utilization</li> <li>- All products are standards-compliant and proven on leading reference designs</li> </ul>
Block Diagram	 <p>The block diagram illustrates the power and timing architecture for wireline infrastructure computing. It is organized into four main functional areas: <b>Controllers</b>, <b>Power Stages</b>, <b>Broadcom Jericho/Tomahawk®</b>, and <b>Timing</b>.</p> <ul style="list-style-type: none"> <li><b>Controllers:</b> Includes ISL68127 (7+0), ISL68124 (3+1), and six ZL8802 units.</li> <li><b>Power Stages:</b> Includes one ISL6617x7 Phase Doubler, one ISL99227 x 4 Smart Power Stage, and five ISL99227B x 2 Smart Power Stage units.</li> <li><b>Broadcom Jericho/Tomahawk®:</b> A central vertical block labeled "Broadcom Tomahawk 3 Platform" that receives input from the ISL99227B x 14 Smart Power Stage and the ISL99227 x 4 Smart Power Stage.</li> <li><b>Timing:</b> Includes ClockMatrix™ 8A3xxxx, 8V49NS0412, 9DBL0851, and a PCIe interface at the bottom.</li> </ul> <p>Arrows indicate the flow of power and timing signals between these components, showing a centralized architecture where the Tomahawk 3 Platform manages the power and timing for the various stages and controllers.</p>

	<p>Controllers Power Stages Timing Phase Doubler Smart Power Stage</p>																																
Recommended Products	<table border="1"> <thead> <tr> <th><u>Products</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td colspan="2"><b>Digital Multiphase Controller</b></td> </tr> <tr> <td>ISL68127</td> <td>Digital Dual Output, 7-Phase Configurable, PWM Controller with PMBus</td> </tr> <tr> <td>ISL68124</td> <td>Digital Dual Output, 4-Phase Configurable, PWM Controller with PMBus</td> </tr> <tr> <td colspan="2"><b>Digital PWM Controller</b></td> </tr> <tr> <td>ZL8802</td> <td>Dual Channel/Dual Phase PMBus ChargeMode Control DC/DC Digital Controller</td> </tr> <tr> <td colspan="2"><b>Synchronous Driver for Multiphase PWM</b></td> </tr> <tr> <td>ISL6617</td> <td>PWM Doubler with Phase Shedding Function and Output Monitoring Feature</td> </tr> <tr> <td colspan="2"><b>Smart Power Stage</b></td> </tr> <tr> <td>ISL99227</td> <td>Smart Power Stage (SPS) Module with Integrated High Accuracy Current and Temperature Monitors</td> </tr> <tr> <td>ISL99227B</td> <td>Smart Power Stage (SPS) Module with Integrated High Accuracy Current and Temperature Monitors</td> </tr> <tr> <td colspan="2"><b>Clock Generator</b></td> </tr> <tr> <td>8A34 Family</td> <td>ClockMatrix™ multichannel digital PLL</td> </tr> <tr> <td>8V49NS0412</td> <td>FemtoClock® NG 12-output clock generator</td> </tr> <tr> <td colspan="2"><b>PCI Express Clock Buffer</b></td> </tr> <tr> <td>9DBL0851</td> <td>8-output 3.3V PCIe zero-delay buffer</td> </tr> </tbody> </table>	<u>Products</u>	<u>Description</u>	<b>Digital Multiphase Controller</b>		ISL68127	Digital Dual Output, 7-Phase Configurable, PWM Controller with PMBus	ISL68124	Digital Dual Output, 4-Phase Configurable, PWM Controller with PMBus	<b>Digital PWM Controller</b>		ZL8802	Dual Channel/Dual Phase PMBus ChargeMode Control DC/DC Digital Controller	<b>Synchronous Driver for Multiphase PWM</b>		ISL6617	PWM Doubler with Phase Shedding Function and Output Monitoring Feature	<b>Smart Power Stage</b>		ISL99227	Smart Power Stage (SPS) Module with Integrated High Accuracy Current and Temperature Monitors	ISL99227B	Smart Power Stage (SPS) Module with Integrated High Accuracy Current and Temperature Monitors	<b>Clock Generator</b>		8A34 Family	ClockMatrix™ multichannel digital PLL	8V49NS0412	FemtoClock® NG 12-output clock generator	<b>PCI Express Clock Buffer</b>		9DBL0851	8-output 3.3V PCIe zero-delay buffer
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