



SPIRENT
400G
Test Solution

Introduction

- Partnership Between Spirent, Huawei and Xilinx
- Two 400GbE Ports in Spirent N4U Chassis
- Part of Spirent Hardware Family
- True 400G Ethernet Solution
- Test Module Ready to Help Leaders Bring 400GbE to Fruition

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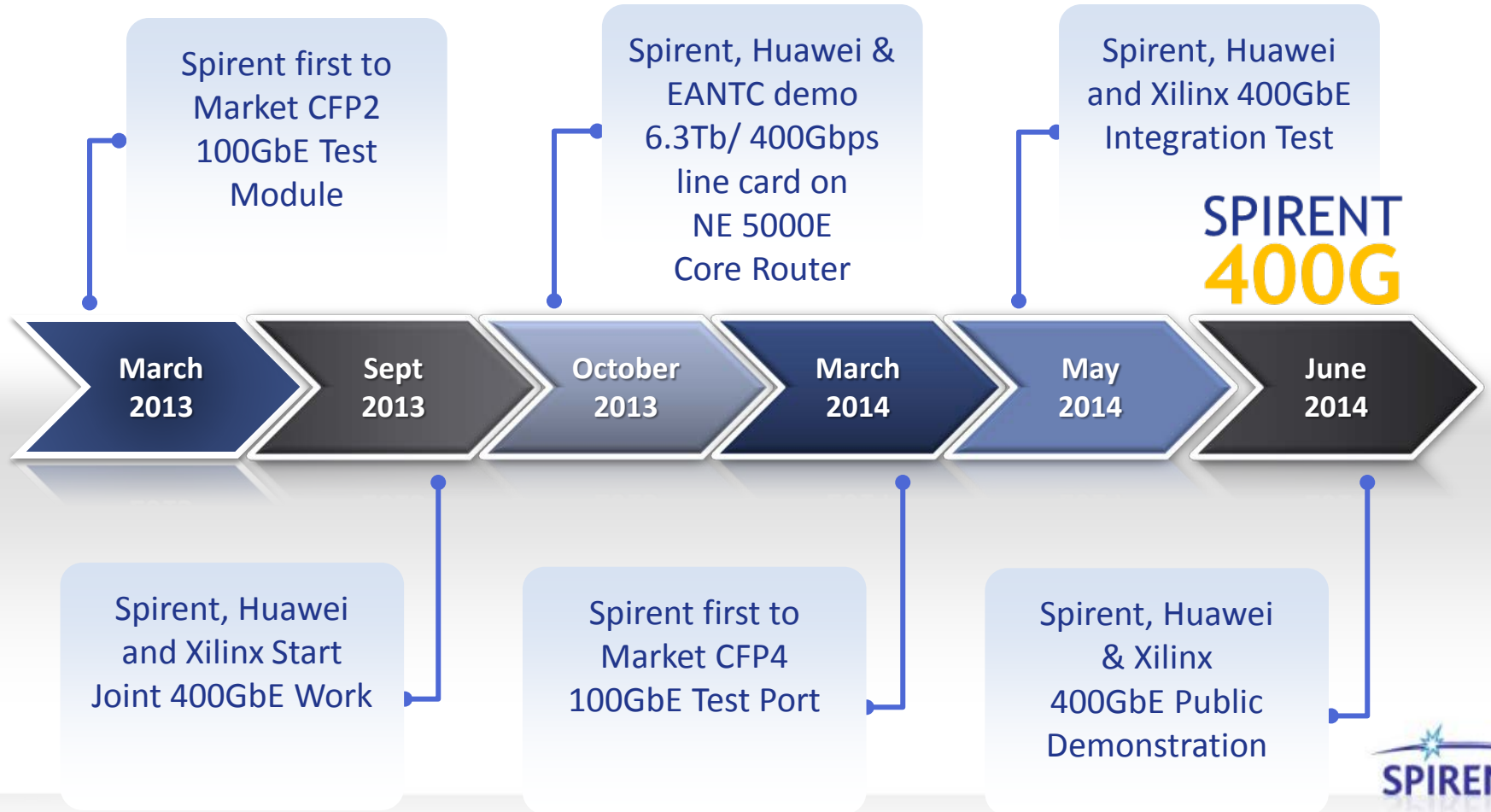
HUAWEI

XILINX®



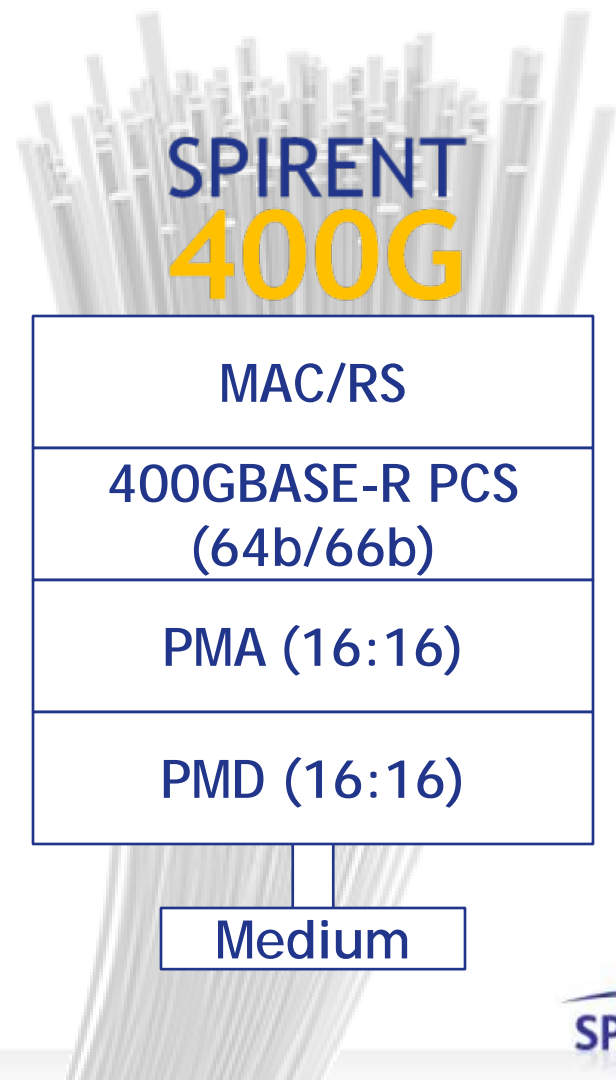
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Timeline



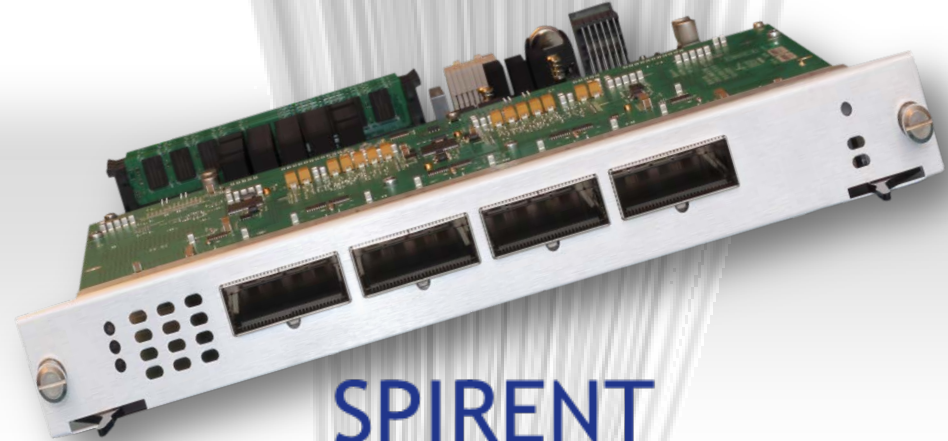
Single Port 400GbE

- 400G MAC
 - 1 stream at up to 400Gbps or
 - Multiple streams aggregated up to 400Gbps
- 400G PCS
 - Based on 16 lane PCS
 - 25Gb/s per PCS lane
 - 64B/66B encoding
 - Periodic insertion of alignment markers
- Physical Layer
 - 4 CFP2 modules provide 16x25G optical lanes
 - For single port 400G PMD




400GbE Testing - This And More!

- Tx and Rx Ethernet Frames from 64 to 16K bytes
- Generating and Analyzing 400G Traffic
 - A single stream at 400Gbps
 - Multiple streams that aggregate to 400Gbps
- Clock Adjustment (PPM Adjustment)
- Per Port and Per Stream Statistics
 - Latency
 - Frames Out of Sequence
 - Frame counts and rates
- Layer 1 Statistics to Help Debug Link Problems
- User-created Frame Contents
- Wire Rate Capture of Received Traffic



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Demo Preview - Control Panel and Port Statistics



400 Gbit/second Ethernet

Control panel | Gauges | Stream stats | **Analyzer details** | Rx PCS | System info

Transmit streams

	Current	New
Number of streams	1	1
Frame length	64	64
% line rate	100	100
Burst mode	Continuous	Not applicable

Continuous
 Burst
 Timed

Copy to new | Apply

Tx PPM adjust

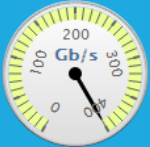
-50 to 60 | 0

Analyzer capture

Status: Stopped, done
Buffer use: 0x0000 - 0x0000
Start | Download

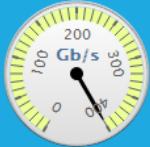
Generator port statistics

Frames	285,429,112,897
Bytes	18,267,463,225,408
Frames/sec	595,238,096
bits/sec	400,000,000,826




Analyzer port statistics

Frames	287,643,222,341
Bytes	18,409,166,229,824
Frames/sec	595,238,095
bits/sec	399,999,999,677
FCS errs	0

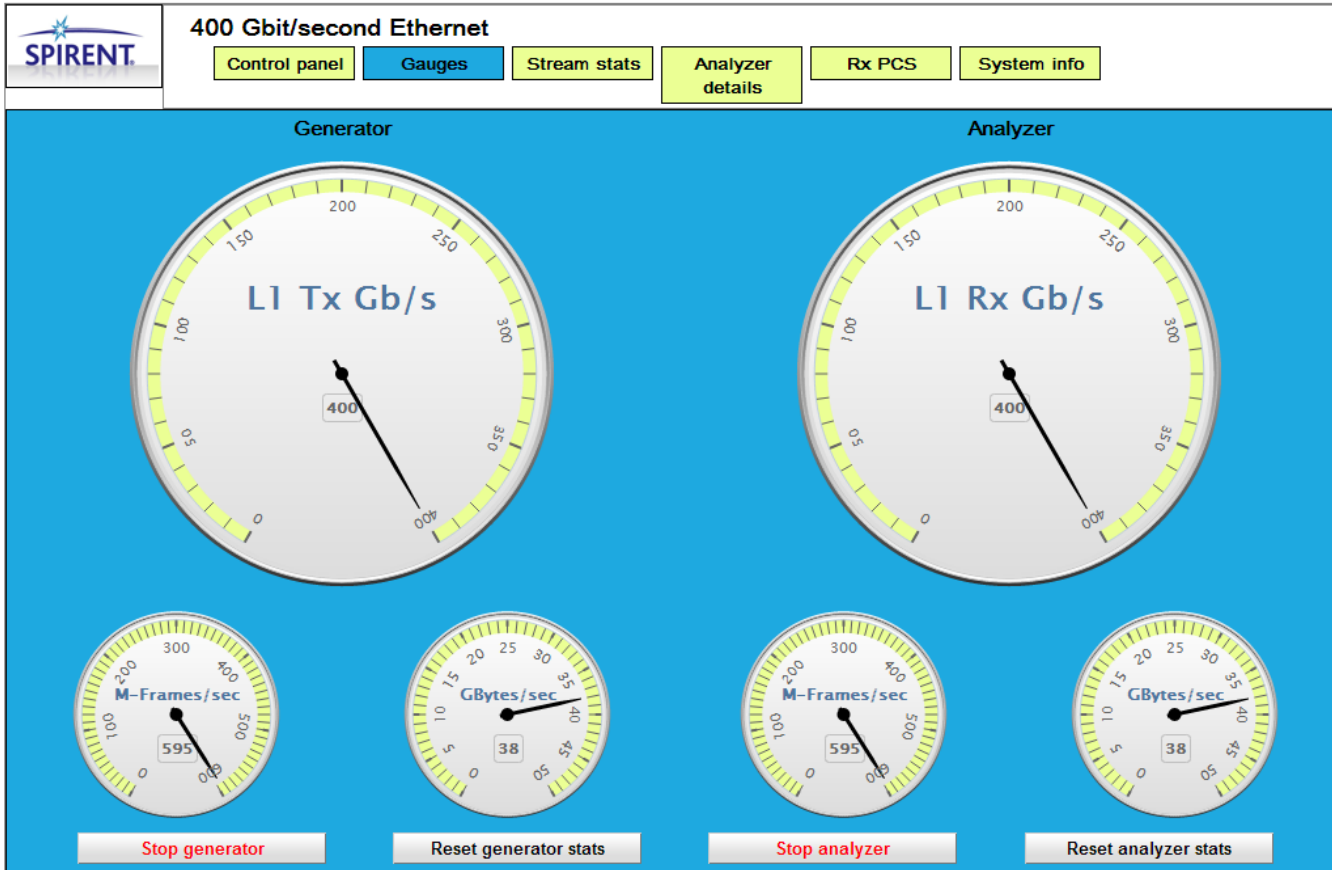


Stop generator | **Reset generator stats** | **Stop analyzer** | **Reset analyzer stats**

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Demo Preview - Real Time Statistics



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World's First 400GbE Single Port Interface...

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For more information visit [Spirent.com/go/400G](https://spirent.com/go/400G)