

The background of the top half of the page is an abstract, high-speed motion blur effect. It consists of numerous curved, parallel lines in shades of blue and purple, with a prominent bright orange and red streak running horizontally across the middle. The lines appear to converge towards a bright light source on the right side, creating a sense of depth and speed.

# High Speed Ethernet Product Portfolio

400, 200, 100, 50, 40, 25, 10, 5, 2.5GbE

# Be ready for the future

Ethernet speeds are increasing. Networks are becoming more intelligent. Topologies are scaling to sizes never seen before. Spirent understands this growth. We support a variety of speeds and protocols so you can test under realistic conditions. We support unparalleled port and application scale so you can verify your products and services under expected loads. The Spirent products featured in this brochure are designed to support 400, 200, 100, 50, 40, 25, 10, 5, 2.5GbE on a single port.

In today's environment delivering a high quality user experience is more important than ever. A reputation for reliability can create a competitive advantage for new offerings. Maintaining both can be challenging as the number of devices on the network proliferates and the bandwidth they consume skyrockets. Testing your user experience, reliability and quality allows you to confidently launch new services dependent on higher speed links using Spirent's series of Quint-speed 100/50/40/25/10GbE industry-leading 5 speeds in a single module and latest 400/200/100/50GbE series of modules. Spirent has always been a leader in validating exactly these high density, high scale and high quality solutions.

## Spirent gives you:

- High FLEXIBILITY with support for more interfaces and protocols across several new quint-speed MX3, PX3, FX3 and DX3 series modules
- Ultra SPEED 400/200GbE, first to market, highest density multi-speed test modules
- Extreme SCALABILITY with 144x100GbE, 288x50GbE and 576x25GbE ports in one chassis—the industry's highest density available (DX3 and PX3 series modules)
- LOWEST COST OF OWNERSHIP PER PORT



SPT-N11U-110



Attero-100G



DX3-100GQ-T12



**DX3**

Data density

**PX3**

System validation

**FX3**

Functional depth

**MX3**

Multiplay scale



DX3-100GQ-T12



PX3-100GQ-T2



FX3-100GQ-T2



MX3-100GQ-T2

- High speed/performance 50GbE, 100GbE, 200GbE, 400GbE multi-speed modules
- Full set of 10GbE, 25GbE, 40GbE, 50GbE and 100GbE speeds on one module
- Support for ALL key form factors, CXP, CPAK, CFP, CFP2, CFP4, CFP8, OSFP, QSFP28, QSFP56, and QSFP-DD
- Support for RS-FEC and Auto-Negotiation/Link Training, mandatory IEEE requirements for testing
- Clause 74 BASE-R FEC, Clause 91 RS-FEC, and Clause 108 RS-FEC, Clause 119 RS-FEC, Clause 134 RS-FEC
- SR, LR optical transceivers, AOC and CR copper/breakout options
- Support for all key copper and optical interfaces across all form factors
- Support for key 25G form factor SFP28 available on 8 port (MX3-25GD-S8, MX3-25GO-S8 and FX3-25GD-S8, FX3-25G-S8)

- Spirent's Cloud Core Architecture ensures the system can simultaneously achieve high scale for multiple protocols - emulating tens of thousands of unique routers and simulated users at the same time
- Demonstrated 25.6 terabits of cloud traffic per second in industry's largest 100GbE test. View report: [www.spirent.com/About-Us/testedwithspirent](http://www.spirent.com/About-Us/testedwithspirent)
- Emulate 13,000 BGP routers advertising 10M routes and generating line rate traffic
- Maintain 1,200 BFD sessions per port involving multiple protocols with 50 millisecond updates per session
- Emulate and churn 64,000 PPPoE clients per port saturating the network with 100Gbps of simulated traffic



DX3-400GQ-T2

Highest 400/200/100/50GbE industry leading density supporting CFP8, OSFP, and QSFP-DD form factors



DX3-100GQ-T12

Highest 100/50/40/25/10GbE density using the 12-port QSFP28 DX3 series modules. When the 12-port 100GbE load module is combined with the power of the Spirent N11U chassis, it offers 144x100GbE ports and up to 576x25GbE ports for industry leading density

- 400GE and 1TE ready
- Integrated high-precision timing between ports, modules and chassis without need for separate timing device
- Any module in any slot – no chassis slot restrictions
- Built-in 1588v2 support
- Lower TCO and lower downtime with Power Save mode and fast firmware upgrades

**Flexibility****Scalability****Density****Platform for the Future**

## Spirent Services

Spirent Global Services provides a variety of professional services, support services and education services—all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services website at [www.spirent.com](http://www.spirent.com) or contact your Spirent sales representative.

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### Ordering information

#### Spirent Chassis

|   |              |
|---|--------------|
| Spirent N11U Chassis and controller with 110V AC power supply | SPT-N11U-110 |
| Spirent N11U Chassis and controller with 220V AC power supply | SPT-N11U-220 |
| Spirent N4U Chassis and controller with 110V AC power supply  | SPT-N4U-110  |
| Spirent N4U Chassis and controller with 220V AC power supply  | SPT-N4U-220  |

#### Load Modules Supported

|   |                |
|---|----------------|
| 2-Port 100GbE QSFP28 (100GbE only)          | MX3-100GO-T2   |
| 2-Port 100GbE QSFP28 (100/25GbE)            | MX3-100GD-T2   |
| 2-Port 100GbE QSFP28 (100/50/25GbE)         | MX3-100GTN-T2  |
| 2-Port 100GbE QSFP28 (100/40/10GbE)         | MX3-100GTL-T2  |
| 2-Port 100GbE QSFP28 (100/50/40/25/10GbE)   | MX3-100GQ-T2   |
| 2-Port 25GbE QSFP28 (25/10GbE)              | MX3-25GD-T2    |
| 8-Port 25GbE SFP28 (25/10GbE)               | MX3-25GD-S8    |
| 8-Port 25GbE SFP28 (25GbE only)             | MX3-25GO-S8    |
| 2-Port 100GbE QSFP28 (100GbE only)          | FX3-100GO-T2   |
| 2-Port 100GbE QSFP28 (100/25GbE)            | FX3-100GD-T2   |
| 2-Port 100GbE QSFP28 (100/50/25GbE)         | FX3-100GTN-T2  |
| 2-Port 100GbE QSFP28 (100/40/10GbE)         | FX3-100GTL-T2  |
| 2-Port 100GbE QSFP28 (100/50/40/25/10GbE)   | FX3-100GQ-T2   |
| 2-Port 25GbE QSFP28 (25/10GbE)              | FX3-25GD-T2    |
| 8-Port 25GbE SFP28 (25/10GbE)               | FX3-25GD-S8    |
| 8-Port 25GbE SFP28 (25GbE only)             | FX3-25GO-S8    |
| 12-Port 100GbE QSFP28 (100/25GbE)           | PX3-100GD-T12  |
| 12-Port 100GbE QSFP28 (100/50/40/25/10GbE)  | PX3-100GQ-T12  |
| 2-Port 400GbE QSFP-DD (400GbE only)         | DX3-400GO-T2   |
| 2-Port 200GbE QSFP-DD (200GbE only)         | DX3-200GO-T2   |
| 2-Port 400GbE QSFP-DD (400/200/100/50GbE)   | DX3-400GQ-T2   |
| 2-Port 400GbE QSFP-DD (400/100GbE)          | DX3-400GD-T2   |
| 2-Port 400GbE QSFP-DD (400/50GbE)           | DX3-400GDF-T2  |
| 2-Port 400GbE CFP8 (400GbE only)            | DX3-400GO-P2   |
| 2-Port 200GbE CFP8 (200GbE only)            | DX3-200GO-P2   |
| 2-Port 400GbE CFP8 (400/200/100/50GbE)      | DX3-400GQ-P2   |
| 2-Port 400GbE CFP8 (400/100GbE)             | DX3-400GD-P2   |
| 2-Port 400GbE CFP8 (400/50GbE)              | DX3-400GDF-P2  |
| 2-Port 400GbE OSFP (400GbE only)            | DX3-400GO-O2   |
| 2-Port 400GbE OSFP (400/200/100/50GbE)      | DX3-400GQ-O2   |
| 2-Port 400GbE OSFP (400GbE only)            | PX3-400GO-O2   |
| 2-Port 400GbE OSFP (400/200/100/50GbE)      | PX3-400GQ-O2   |
| 12-Port 100GbE QSFP28 (100GbE only)         | DX3-100GO-T12  |
| 12-Port 100GbE QSFP28 (100/25GbE)           | DX3-100GD-T12  |
| 12-Port 100GbE QSFP28 (100/50/25GbE)        | DX3-100GTN-T12 |
| 12-Port 100GbE QSFP28 (100/40/10GbE)        | DX3-100GTL-T12 |
| 12-Port 100GbE QSFP28 (100/50/40/25/10GbE)  | DX3-100GQ-T12  |
| 12-Port 25GbE QSFP28 (25/10GbE)             | DX3-25GD-T12   |
| 12-Port 25GbE QSFP28 (25GbE only)           | DX3-25GO-T12   |
| 8-Port 100 GbE QSFP28 (100GbE only)         | DX2-100GO-T8   |
| 8-Port 100GbE CFP4 (100GbE only)            | DX2-100GO-R8   |
| 4-port 100 GbE (100GbE only)                | MX2-100GO-P4   |
| 4-port 100 GbE CFP2 (100GbE only)           | FX2-100GO-P4   |
| 4-Port 100 GbE CFP2 (100GbE operation only) | DX2-100GO-P4   |
| 4-Port 100 GbE CFP2 (tri-speed module)      | DX2-100G-P4    |
| 16-Port 10GbE Copper (10/5/2.5/1GbE/100M)   | DX2-10GQ-C16   |
| 16-Port 5GbE Copper (5/2.5GbE)              | DX2-5GD-C16    |
| 16-Port 2.5GbE Copper (2.5GbE only)         | DX2-2.5GO-C16  |

#### Accessories

|   |                 |
|---|-----------------|
| Copper DAC QSFP28 100 GBASE-CR4 1M                  | ACC-1034A       |
| Copper DAC QSFP28 100 GBASE-CR4 3M                  | ACC-1035A       |
| Active optical cable QSFP28 100GBASE-SR4 5M         | ACC-1036A       |
| Copper DAC QSFP28 100GBASE-CR4 5M                   | ACC-1038A       |
| Optical transceiver QSFP28 100GBASE-SR4 MMF 850NM   | ACC-6095A       |
| Optical transceiver QSFP28 100GBASE-LR4 SMF 1310NM  | ACC-6096A       |
| Optical transceiver CFP4 100GBASE-SR4               | ACC-6097A       |
| Optical transceiver CFP4 100GBASE-LR4               | ACC-6098A       |
| Active optical cable CFP4 100GBASE-SR4              | ACC-1037A       |
| Adapter CFP2 to CFP4                                | ACC-6091A       |
| Adapter CFP2 to QSFP28                              | ACC-6094A       |
| Adapter CFP8 to QSFP-DD                             | ACC-6015        |
| SR10 CFP2 to CPAK adapter - order direct from Cisco | CVR-CFP2-CPAK10 |
| LR4 CFP2 to CPAK adapter - order direct from Cisco  | CVR-CFP2-CPAK4  |
| SR10 Transceiver - order direct from Cisco          | CPAK-100G-SR10  |
| LR4 Transceiver - order direct from Cisco           | CPAK-100G-LR4   |
| Cable 2 X 40G MPO Breakout (DX2-100G-P4 Only)       | ACC-1025        |
| Cable 8 X 10G MPO-LC Fanout (DX2-100G-P4 Only)      | ACC-1026        |
| Optical Transceiver 100GBASE-LR4 CFP2 1310NM-SMF    | ACC-6083A       |
| Optical Transceiver 100G BASE-SR10 CFP2 850NM-MMF   | ACC-6084A       |
| Optical Transceiver CFP 100GBASE-LR10 1550NM SMF    | ACC-6067A       |