

Agilent N2X

N2X XS Test Cards

Technical Data Sheet



Increase test coverage and reduce test cost with these new high-performance, highly scalable routing test cards for N2X system. These next-generation cards offer up to double the routing protocol scalability of standard XR test cards.

Key Features

- **Powerful on-board CPU offers double performance, reducing the cost of scalability testing by up to 50%**
- **The highest routing protocol scalability of any test vendor, including up to 2100 BGP peers, 1000 LDP sessions, 400 ISIS sessions and 500 OSPF or RIP sessions per port**
- **Available for all Ethernet and POS interfaces up to 10 Gb/s**
- **Flexible architecture allows use of all CPU protocol emulation power on a single port, or distributed across multiple ports, providing maximum benefit for your test investment**
- **High performance CPU reduces setup time by up to 50% to configure large routing topologies**
- **All the same powerful N2X features, including integrated traffic and protocol support for superior test coverage**

Product Overview

Testing the maximum performance of network equipment is critical for both router development companies and network service providers. Now, Agilent N2X has made scalability testing more cost-effective, simple and realistic.

Agilent N2X is the industry's most comprehensive test solution for testing the development and deployment of network services for converging network infrastructures. Service providers, network equipment manufacturers (NEMs), and component manufacturers can verify service attributes of entire networks end-to-end, while also isolating problems down to individual networking devices and subsystems.

Agilent N2X incorporates the strength of the RouterTester 900 to deliver unparalleled test realism to verify the ultimate performance, scalability and resilience of carrier grade services and infrastructure.

The XS Test Cards for the Agilent N2X product family offer the highest protocol scalability in the industry, allowing you to simulate more routing peers than ever before. This ensures that you find your equipment's limits before your customers do.

Each XS Test Card can simulate up to 2100 BGP peers, 1000 LDP sessions, 400 ISIS sessions, and 500 OSPF or RIP sessions. When combined with additional Routing XS Test Cards, the possibilities for scalability testing are nearly endless.

Like the XR Test Cards, the XS Test Cards provide a full complement of N2X features. Each card provides fully integrated traffic and routing support, making it quick and easy to generate traffic to advertised routes. Full MPLS support is also provided for testing technologies such as Layer 2/3 MPLS VPNs, multicast and IPv6.

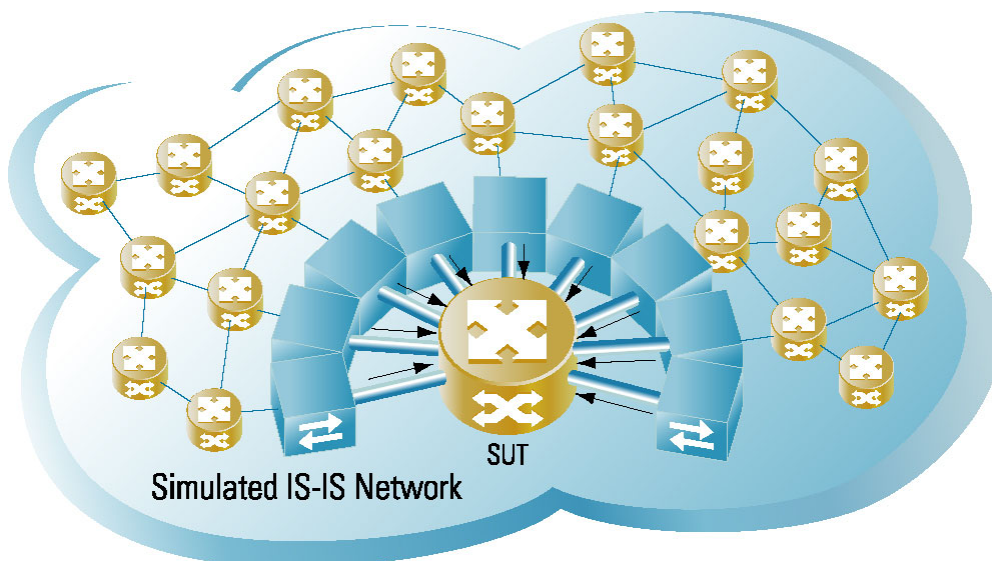


Figure 1: Routing XS Test Cards can emulate large routing topologies with thousands of sessions

Product Features

Powerful on-board CPU

Like the XR Cards, each XS Test Card has an upgradeable daughter-card with a powerful CPU architecture. There is no need to connect to an "outboard CPU" to increase the processing power of each test card.

This design allows for CPU upgrades, providing investment protection and allowing for even further protocol scalability and testing power in the future.

Highest protocol scalability in the industry

The N2X XS Test Cards enable you to easily reach or exceed the performance limits of the devices being tested. Up to 2100 BGP peers, 1000 LDP sessions, 400 ISIS sessions, and 500 OSPF or RIP sessions can be emulated on each card. When multiple XS Test Cards are combined together in a complete N2X system, you can completely surpass the limits of your device under test, ensuring that the most challenging real-world network conditions can be met.

Flexible architecture

The powerful CPU on each XS Test Card can be assigned to any or all of the ports on each card. N2X XS Test Cards provide from 1 to 4 ports, depending on the interface type. The protocol emulation power provided by each CPU can be either fully directed to a single test port, or shared across multiple ports - the choice is yours.

Reduced setup time

The XS Test Cards offer faster performance and thus reduced setup time when configuring large routing topologies for scalability testing. This allows you to shorten your testing cycles and improve time-to-market for your product or service.

Complete N2X feature set

The XS Test Cards offer an identical feature set to their companion XR cards. Integrated routing and traffic testing is supported, with up to 32K test streams per port and real-time statistics such as packet loss, latency and sequence errors.

Tcl scripts written for XR or XP cards can easily be re-used with XS Test Cards.

Refer to software product literature for a complete listing of features and specifications of specific protocols and applications.

Wide range of interfaces up to 10Gb/s

The N2X XS Test Cards are offered for a wide range of interface types and speeds, ranging from 10 Mb/s to 10 Gb/s.

Interfaces include 10/100 Mb Ethernet, Gb Ethernet, 10 Gb Ethernet, OC-3c/12c POS, OC-48c POS, and OC-192c POS.

Refer to SXR card product literature for a complete listing of features and specifications.

Technical Specifications

Supported Protocols

IPv4 Routing Protocols	<ul style="list-style-type: none"> • BGP-4 • OSPF • RIP • ISIS
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MPLS Protocols	<ul style="list-style-type: none"> • RSVP-TE • LDP
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IPv6 Routing Protocols	<ul style="list-style-type: none"> • BGP-4+ • OSPFv3 • RIPng • ISISv6
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Multicast Protocols	<ul style="list-style-type: none"> • IGMP • PIM • MSDP
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Performance Data

Note all data is given per card. Actual performance observed may vary (higher or lower) depending on test conditions and characteristics of system under test. Performance data is subject to change without notice. All performance data is obtained using the Tcl API.

BGP-4

BGP Peers	2,100
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VPN-BGP Peers	360
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OSPF

Unicast Adjacencies	600
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Multicast Adjacencies	500
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LSAs	72,000
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RIP

Sessions	500
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Routes	20,000
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IS-IS

Sessions	400
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LSPs	36,000
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RSVP

Sessions	1
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LSPs (tunnels)	30,000
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LDP

Sessions	1,000
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LSPs (tunnels)	200,000
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Software Compatibility

The N2X XS cards require Packets and Protocol application software.

Ordering Information

E7922B	4-port 10/100 Ethernet XS Test Card
E7918B	2-port 10/100/1000 Ethernet (GBIC/RJ45) XS Test Card
E7919B	2-port Gigabit Ethernet (GBIC) XS Test Card
E7907B	2-port OC-3c/12c ATM/POS/FR XS Test Card
E7909B	2-port OC-48c POS/FR XS Test Card
E7315B	1-port 10G Ethernet XENPAK XS Test Card
E7317B	1-port 10G UniPHY XS Test Card (1310nm)
E7318B	1-port 10G UniPHY XS Test Card (1550nm)

For customers with existing XR cards, the following upgrades are available:

E7922AU	E7922A to E7922B upgrade
E7919AU	E7919A to E7919B upgrade
E7909AU	E7909A to E7909B upgrade
E7907AU-001	E7907A#001 to E7907B#001 upgrade
E7907AU-002	E7907A#002 to E7907B#002 upgrade
E7917AU-001	E7917A#001 to E7907B#001 upgrade
E7917AU-002	E7917A#002 to E7907B#002 upgrade
E7317AU	E7317A to E7317B upgrade
E7318AU	E7318A to E7318B upgrade

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Agilent N2X

Agilent's N2X multi-service tester combines leading-edge services with carrier grade infrastructure testing and emulation. The N2X solution set allows network equipment manufacturers and service providers to more comprehensively test new services end-to-end, resulting in higher quality of service and lower network operating costs.

Warranty and Support

Hardware Warranty

All N2X hardware is warranted against defects in materials and workmanship for a period of 1 years from the date of shipment.

Software Warranty

All N2X software is warranted for a period of 90 days. The applications are warranted to execute and install properly from the media provided.

This warranty only covers physical defects in the media, whereby the media is replaced at no charge during the warranty period.

Software Updates

With the purchase of any new system controller Agilent will provide 1 year of complimentary software updates. At the end of the first year you can enroll into the Software Enhancement Service (SES) for continuing software product enhancements.

Support

Technical support is available throughout the support life of the product. Support is available to verify that the equipment works properly, to help with product operation, and to provide basic measurement assistance for the use of the specified capabilities, at no extra cost, upon request.

Ordering Information

To order and configure the test system consult your local Agilent field engineer.

United States:

Agilent Technologies
Test and Measurement Call Center
P.O. Box 4026
Englewood, CO 80155-4026
1-800-452-4844

Canada:

Agilent Technologies Canada Inc.
5150 Spectrum Way
Mississauga, Ontario
L4W 5G1
1-877-894-4414

Europe:

Agilent Technologies
European Marketing Organisation
P.O. Box 999
1180 AZ Amstelveen
The Netherlands
(31 20) 547-2323
United Kingdom
07004 666666

Japan:

Agilent Technologies Japan Ltd.
Measurement Assistance Center
9-1, Takakura-Cho, Hachioji-Shi,
Tokyo 192-8510, Japan
Tel: (81) 426-56-7832
Fax: (81) 426-56-7840

Latin America:

Agilent Technologies
Latin American Region Headquarters
5200 Blue Lagoon Drive, Suite #950
Miami, Florida 33126
U.S.A.
Tel: (305) 269-7500
Fax: (305) 267-4286

Asia Pacific:

Agilent Technologies
19/F, Cityplaza One, 1111 King's Road,
Taikoo Shing, Hong Kong, SAR
Tel: (852) 3197-7777
Fax: (852) 2506-9233

Australia/New Zealand:

Agilent Technologies Australia Pty Ltd
347 Burwood Highway
Forest Hill, Victoria 3131
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