

Nokia 7215 IXS-A1 Interconnect System for SONiC

As part of the Nokia Data Center portfolio, the Nokia 7215 IXS-A1 Interconnect System is designed to provide management connectivity for leaf and spine data center fabrics in enterprise, service provider and webscale data center and cloud environments.

Overview

High-bandwidth servers are driving the need for greater port speeds and density in data center architectures. Similarly, the need for more power-efficient and state-of-the-art network operating system (NOS) design is driving the modernization of network aggregation and interconnect within data centers.

The high-performance, fixed-configuration Nokia 7215 IXS-A1 system is designed to meet data center leaf-spine requirements. It offers 10GE and 1GE interfaces for intra-fabric out-of-band connectivity.

The 7215 IXS-A1 delivers a robust and comprehensive set of capabilities, including IP routing, Layer 2, QoS, telemetry and model-driven management.

The 7215 IXS-A1 is 1 RU high with a system capacity of 88 Gb/s full duplex (FD). It is equipped with 48 10/100/1000 Mb/s RJ45 ports and four 1/10GE SFP+ ports.

The 7215 IXS-A1 is optimized for management connectivity in leaf-spine data center designs. The 7215 IXS-A1 is an integrated system, which supports redundant AC and DC power supplies.



7215 IXS-A1

The system supports both front-to-back and back-to-front airflow configurations.

SONIC

Software for Open Networking in the Cloud (SONiC) is an open-source NOS based on Linux. It offers a full suite of network functionality which has been production-hardened in the data centers of some of the largest cloud-service providers.

SONiC offers teams the flexibility to create the network solutions they need while leveraging the collective strength of a large ecosystem and community.¹

The Nokia 7215 IXS-A1 implements SONiC.

Software features

SONiC offers a comprehensive set of open source features that are readily available and maintained via the SONiC community. For a complete list of capabilities and software support functions, please consult the SONiC website.

¹ https://sonicfoundation.dev/



Technical specifications

Table 1. 7215 IXS-A1 specifications

| Feature | 7215 IXS-A1 |
|--|--|
| System throughput Full duplex (FD) | 88 Gb/s |
| Ports | 4 x SFP+ |
| | 48 x RJ45 |
| Hardware support (maximum ports per chassis) | |
| 10GE | 4 |
| 1GE | 4 |
| 1000/100/10 Mb/s | 48 |
| Management ports | 1 x 1000Base-T |
| USB ports | 1 x USB 2.0 |
| Console ports | 1x RJ45 |
| Processor | 4-core ARM |
| Memory | 8 GB DDR4 |
| Memory buffer size | 3 MB |
| SSD | 16 GB eMMC |
| Power | Fixed redundant AC and DC AC: 100V to 240V DC: -48 V/ -60V 100 W AC 100 W DC |
| Integrated redundant power supplies | Yes |
| Fan modules | Fixed redundant Front-to-back or back-to-front airflow |
| Integrated redundant fans | Yes |
| Dimensions | Height: 4.37 cm (1.72 in); 1 RU Width: 43.85 cm (17.26 in) Depth: 25.38 cm (9.99 in) |
| Weight | 3.54 kg (7.8 lb) |
| 4-post mounting | Yes; rail kit option |
| Discrete Trusted Platform Module (TPM) | Yes |
| Normal operating temperature range (sustained) | 0°C to +40°C (32°F to +104°F) |
| Shipping and storage temperature range | -20°C to +70°C (-4°F to +158°F) |
| Normal humidity | 5% to 95%, non-condensing |



Standards compliance²

Environmental and NEBS

- ETSI EN 300 019-2-1; Storage Tests, Class 1.2
- ETSI EN 300 019-2-2; Transportation Tests, Class 2.3
- ETSI EN 300 019-2-3; Operational Tests, Class 3.2
- ETSI EN 300 753; Acoustic Noise, Class 3.2
- GR-3160-CORE

Electromagnetic compatibility

- AS/NZS CISPR 32 Class A
- BSMI CNS 15936 Class A
- BT GS-7
- EN 55035
- EN 55032 Class A
- ETSI EN 300 132-1 (AC)
- ETSI EN 300 386
- ETSI ES 201 468
- FCC Part 15 Class A
- ICES-003 Class A
- IEC CISPR 32 Class A
- IEC CISPR 35
- IEC/ EN 61000-3-2
- IEC/EN 61000-3-3
- IEC/EN 61000-6-2
- IEC/EN 61000-6-4
- KCC Korea Emissions KS C 9832
- KCC Korea Immunity KS C 9835
- VCCI Class A

Safety

- AS/NZS 62368-1
- FDA CDRH 21-CFR 1040
- IEC/BS/EN 60825-1
- IEC/BS/EN 60825-2
- IEC/UL/CSA/BS/EN 62368-1

Directives and regional approvals

- Directive 2011/65/EU RoHS (including Commission Delegated Directive EU 215/863)
- Directive 2012/19/EU WEEE
- Directive 2014/30/EU EMC
- Directive 2014/35/EU Low LVD
- BSMI Mark: Taiwan
- CE Mark: Europe
- CRoHS: China RoHS
- KC Mark: South Korea
- RCM Mark: Australia
- UKCA Mark: United Kingdom
- VCCI Mark: Japan

² System design intent is according to the listed standards. Refer to product documentation for detailed compliance status.



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Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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