Nokia 7360 ISAM NVNT-C VDSL2 Line Card - Official Technical Overview & Hardware Datasheet

NOKIA 7360 ISAM NVNT-C VDSL2 LINE CARD: ELECTRICAL AND CROSSTALK SPECIFICATIONS

OFFICIAL TECHNICAL OVERVIEW & HARDWARE DATASHEET

EXECUTIVE SUMMARY

This document serves as the definitive technical reference for the Nokia 7360 Intelligent Services Access Manager (ISAM) NVNT-C VDSL2 Line Card, a high-density subscriber access solution engineered for ultra-broadband delivery over existing copper infrastructure. Part of the field-proven Nokia 7360 ISAM FX family, this line card enables service providers to deliver VDSL2 vectoring and bonding capabilities, achieving aggregate data rates exceeding 100 Mb/s per subscriber while leveraging the platform's high-capacity, non-blocking backplane architecture .

The NVNT-C is optimized for seamless integration within the 7360 ISAM FX-4, FX-8, and FX-16 chassis, supporting a mix of PON, point-to-point fiber, and VDSL2 services on a single, future-proof platform. This datasheet details the line card's electrical specifications, physical interface characteristics, crosstalk

mitigation performance, and compliance standards critical for network planning, deployment, and procurement.



HARDWARE ARCHITECTURE & SILICON

The 7360 ISAM NVNT-C VDSL2 Line Card is architected to operate within the high-bandwidth ecosystem of the 7360 ISAM FX chassis, leveraging a system backplane that provides dual 100Gb/s connections to each line termination (LT) slot for guaranteed non-blocking throughput . The card's design is built around a Broadcom VDSL2 chipset, supporting advanced 17a and 35b profiles to maximize reach and data rates over legacy copper loops .

The NVNT-C integrates System Level Vectoring (SLV) capabilities, enabling comprehensive crosstalk cancellation that significantly improves line stability

and performance in high-density subscriber environments. This is augmented by the card's physical interface, which features integrated splitter functionality for POTS (Plain Old Telephone Service) coexistence, allowing simultaneous delivery of legacy voice and high-speed data services over a single copper pair .

KEY FEATURES & ROUTING LOGIC

The NVNT-C VDSL2 Line Card is distinguished by its sophisticated feature set, designed to maximize operational efficiency and subscriber Quality of Experience (QoE).

- VDSL2 Vectoring & Bonding: Supports ITU-T G.993.2 VDSL2 standards with advanced vectoring for crosstalk cancellation and bonding for increased bandwidth, delivering up to 100 Mb/s and beyond to subscribers over existing copper .
- High-Density Subscriber Aggregation: Provides a high port density per line card, maximizing subscriber capacity within the compact 7360 ISAM FX chassis and reducing operational costs .
- Integrated POTS Splitter: Features a combined LT/splitter design, simplifying deployment and reducing the need for external components in FTTN (Fiber to the Node) and FTTC (Fiber to the Curb) scenarios .
- System Level Vectoring (SLV) Processor Compatibility: Works in conjunction

with a dedicated SLV processor within the chassis to perform advanced noise cancellation across the entire binder group, optimizing performance for all connected lines .

- Resilient & Redundant Architecture: Fully supports the 7360 ISAM FX's active/active controller redundancy and load-sharing capabilities, ensuring maximum network uptime and service continuity .

- Comprehensive Management: Fully manageable via Nokia's 5520 AMS (Access Management System) and 5529 APC (Access Provisioning Center), providing granular control over line profiles, diagnostics, and performance monitoring .

COMPLIANCE & STANDARDS

The Nokia 7360 ISAM NVNT-C VDSL2 Line Card complies with a comprehensive suite of industry standards, ensuring interoperability and adherence to regulatory requirements.

- VDSL2 Compliance: Fully conforms to ITU-T G.993.2 (VDSL2) standards, supporting all mandatory and optional profiles (8b, 17a, and 35b) for global deployment .

- POTS Coexistence: Integrated splitter complies with relevant standards for POTS and ADSL/VDSL spectrum compatibility, ensuring minimal interference

between legacy and broadband services.

- Electromagnetic Compatibility (EMC): Meets stringent EMC requirements for telecommunications equipment, ensuring minimal interference with other systems and compliance with regional regulations (e.g., FCC Part 15, EN 55022).

- Safety & Environmental: Designed to operate within a wide temperature range of -40°C to 65°C and relative humidity of 5% to 93% (non-condensing), making it suitable for central office and outdoor cabinet environments .

- Network Management: Interfaces with Nokia's management systems via SNMP, CLI, and TL1, adhering to standard network management protocols.

TECHNICAL SPECIFICATIONS

The following table provides detailed specifications for the Nokia 7360 ISAM NVNT-C VDSL2 Line Card.

Parameter	**Specification**
Form Factor	Plug-in Line Card for 7360 ISAM FX-4, FX-8, FX-16 Chassis
Chassis Compatibility	7360 ISAM FX-4, FX-8, FX-16 (requires FANT-F or FANT-G NT cards)
Port Density	48-port VDSL2 with integrated POTS splitter (NDLS-E variant)

VDSL2 Profiles Supported	8b, 17a, 35b (ITU-T G.993.2)
Chipset	Broadcom (BCM65300 or BCM65200 series)
Crosstalk Cancellation	System Level Vectoring (SLV) support
Interface	RJ21 connector or similar high-density Telco connector (for copper pairs)
Backplane Bandwidth	2 x 100 Gb/s per LT slot (system-wide)
POTS Support	Yes, integrated splitter for POTS coexistence
Operating Temperature Range	-40°C to 65°C (-40°F to 149°F)
Relative Humidity	5% to 93% (non-condensing)
Management	5520 AMS, 5529 APC, CLI, SNMP, TL1



ORDERING SKU INFORMATION

The Nokia 7360 ISAM NVNT-C VDSL2 Line Card is available as a field-replaceable unit (FRU) and is offered in various configurations for the 7360 ISAM FX platform.

- Base Line Card: NDLS-E VDSL2 combined LT/splitter over POTS with SLV .
- Compatible Chassis: 7360 ISAM FX-4 (4-slot), FX-8 (8-slot), and FX-16 (16-slot) .
- Required Controllers: FANT-F (480Gb/s switching matrix) or FANT-G (1.2Tb/s NT card) controllers .
- Related Components: NDPS-B Vector Processing Server card for System Level Vectoring (SLV) functionality .

For detailed ordering information, including specific part numbers and regional availability, please contact your local Nokia sales representative.