

SURPASS hiT 7080 Multi-Service Provisioning Platform

Nokia Siemens
Networks



Highlights at a glance

The SURPASS hiT 70xx series enables true multi-service provisioning and meets the needs of tomorrow's converged networks. It is a cost-effective platform that covers the whole range of network applications required for the regional and metro core.

The SURPASS hiT 7080, as all other members of the SURPASS hiT 70xx family, has been optimized for both packet and traditional TDM traffic. It uses state-of-the-art technologies such as the ASTN architecture within the standard GMPLS control plane, thus preparing the carrier's network for the evolutionary step to a next generation optical network. The SURPASS hiT 7080 is aligned with the Nokia Siemens Networks ASTN/GMPLS strategic evolution.

Your customers

get customized bandwidth and tailored service level agreements, and benefit from a fast and flexible bandwidth upgrade.

Your business

can address new market opportunities, offer highest quality Virtual Private Networks to enterprise customers, and benefit from an ever-increasing need for data communication services.

Your network

is enhanced, supporting data-based services. It makes optimal use of available capacity and becomes simpler to operate. The SURPASS hiT 7080 brings the client data to your network, improving your market competitiveness through higher service flexibility and faster service provisioning while reducing your operational expenditure.

SURPASS hiT 7080 key features

- Single-core 340G@VC-4 and 40G@VC-12/VC-3 switching granularity
- Multi-service platform: 2M, 34/45M, 155M, STM-1/4/16/64/256, 10/100BT, GbE, 10GbE, Fiber Channel
- Integrated packet fabrics (L2 switch, RPR and MPLS based systems)
- Support of concatenated services VC-12 to VC-4
- Integrated STM-16/64 DWDM interfaces for direct interworking with the SURPASS hiT 7300, hiT 7500 and FSP3000
- Extensive protection features (HW, SNCP, MSP, 2F/4F MS-SPRing incl. Low Priority Traffic)
- GMPLS/ASTN based restoration
- Extension shelf solutions

Full integration into Nokia Siemens Networks' TNMS

The SURPASS hiT 7080 is fully integrated into Nokia Siemens Networks' best-in-class network management system (TNMS), which provides end-to-end administration and performance monitoring for the converged next generation SDH network.

It also improves operating efficiency, reduces costs for service delivery and simplifies network operations.

Seamless integration into existing network infrastructure

The SURPASS hiT 7080 protects the installed SDH investment and maintains the operator's TDM services and revenue.



Major benefits for carriers

- Flexibility to provide services that meet the operators' SLAs
- Significant reductions in OPEX and CAPEX
- Seamless integration into the existing network infrastructure
- Full integration into Nokia Siemens Networks' best-in-class network management system (TNMS)

Increased revenues from new services

The SURPASS hiT 7080 gives carriers a unique competitive advantage by transporting flexible Ethernet services using reliable SDH technology. Ethernet services can be offered with carrier-grade quality as well as best-effort service. The SURPASS hiT 7080 maximizes the revenue to be gained from existing capacity and opens new revenue streams while keeping investments low.

Significant reductions in investment and operational costs

The SURPASS hiT 7080 is highly scalable, allowing the operator to start with a basic configuration at the lowest price and to cost-efficiently upgrade the system step-by-step while still in service. Not only is the bandwidth scalable, but also the number and type of services, bringing all the flexibility that carriers need in today's telecommunication market. It prepares the operator's networks for future requirements, allows business-driven growth and assures early time-to-market.

OPEX and CAPEX reductions as well as optimal use of existing resources are the main benefits of SURPASS hiT 7080.

Further features

- The convergence of data and voice combined with increased functionality and high integration density significantly reduces the amount of equipment needed and saves operational and maintenance costs considerably.
- The integrated Layer 2 switch module, RPR and MPLS provide switching and overbooking with customer separation without the need of additional platforms and technologies. The carrier can thus offer Ethernet services with different service qualities: carrier-grade Ethernet for business customers and best-effort Ethernet for a large amount of additional customers, such as residential customers.
- The automated processes brought by GMPLS implementation allow service providers to configure the network quickly and simply.
- Network utilization is improved by using meshed restoration, multiple failures resilience and traffic engineering.

Technological advantages

The SURPASS hiT 7080 can be deployed as a UHC feeder, a terminal or add-drop multiplexer, a local cross-connect or a multi-ring in point-to-point, chain, ring and meshed topologies, and ring interconnections.

The SURPASS hiT 7080 offers

- Flexible and scalable point-to-point links through the use of GFP and LCAS
- Point-to-multipoint or multipoint-to-multipoint connections and aggregation via an integrated Layer 2 switch to build VLANs
- RPR for the metropolitan area, where ring topologies dominate
- MPLS for aggregation in the core area, where meshed topologies dominate
- GMPLS VPNs (layers 1 and 2) using the ASTN architecture

Designed with the future in mind

The SURPASS hiT 7080 allows carriers to scale into the future by upgrading their switching matrix capacity and line rates. Moreover, it features trend technologies such as Ethernet Layer 2, RPR, MPLS and ASON.

Key abbreviations

ASON	Automatically Switched Optical Network
ASTN	Automatically Switched Transport Network
GFP	Generic Framing Procedure
GMPLS	Generalized Multi-Protocol Label Switching
LCAS	Link Capacity Adjustment Scheme
MPLS	Multi-Protocol Label Switching
MSP	Multiplex Section Protection
RPR	Resilient Packet Ring
SLA	Service Level Agreement
SNCP	Sub-Network Connection Protection
UHC	Ultra-High Capacity

The SURPASS hiT 7080 helps carriers significantly cut costs and increase revenue through more efficient and new service delivery, and allows them to quickly adapt to customers' demands. This makes the SURPASS hiT 7080 a key investment for profitable and future-proof metropolitan and backbone networks.