

SURPASS hiT 7070 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 7070, as well as all other members of the SURPASS hiT 70xx family, has been optimized for both packet and traditional TDM traffic. It uses the latest 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 7070 follows the Nokia Siemens Networks ASTN/GMPLS strategic evolution.

Your customers

get customized bandwidth on demand, tailored service level agreements, and benefit from fast and flexible provisioning or upgrading of bandwidth and services.

Your business

can now cover new market segments (data as well as voice), profit from new applications and services such as bandwidth on demand, realize flexible enterprise Virtual Private Networks (VPNs), and benefit from customized service level agreements.

Your network

is enhanced, gaining in functionality due to the convergence of voice and data. It makes optimal use of available bandwidth capacity and is much simpler to operate. As less equipment is needed, you save investment and operational costs.

SURPASS hiT 7070 key features

- Non-blocking 160G@VC-4 and nx10G@VC-12 switching granularity
- Integrated Ethernet switching functionality
- Multi-service platform: 2M, 34/45M, 155M, STM-1/4/16/64, 40G, 10/100BT, GbE, 10 GbE
- GFP mapping, LCAS and support of virtual concatenation for optimal scalability of Ethernet services
- Support of concatenated services (VC-4-4c, VC-4-16c, VC-4-64c)
- A variety of STM-64 interfaces, including WDM variants
- Extensive protection mechanisms (SNCP, MSP, BSHR, hardware)



Full integration into Nokia Siemens Networks TNMS

The SURPASS hiT 7070 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 7070 protects the installed SDH investment and maintains the operator's TDM services and revenue.

Major benefits for carriers

- Increased revenue from new services
- 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 7070 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 7070 maximizes the revenue to be gained from existing capacity and opens new revenue streams while keeping investments low.

Significant investment and operational cost reductions

The SURPASS hiT 7070 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 the optimal use of existing resources are the main benefits of the SURPASS hiT 7070.

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 provides switching and overbooking with customer separation without the need of additional platforms and technologies.
- 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 7070 can be deployed as a UHC network feeder, a terminal or add-drop multiplexer, a local cross-connect or a multi-ring.

The SURPASS hiT 7070 offers

- Flexible and scalable 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
- Cost-efficient Metro WDM, CWDM and DWDM backbone feeding
- Carrier services such as TDM leased lines, VLAN, VPN application, SAN and clear channels
- GMPLS VPNs (layers 1 and 2) using the ASTN architecture

Designed with the future in mind

The SURPASS hiT 7070 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 and ASON.

Key abbreviations

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