

Nokia Siemens Networks Multicontroller Platform Multicontroller BSC and Transcoder Multicontroller RNC

Nokia Siemens
Networks



Multipurpose, scalable, compact:
Multicontroller Platform is a key component of the
Nokia Siemens Networks unique Single RAN solution.

One platform, several technologies

Communications service providers (CSP) can gain major benefits from flexible and adaptive platforms that can be configured easily with software. Nokia Siemens Networks is taking Single RAN technology to the next level with revolutionary high capacity and future-proof controllers for IP-based radio networks that support GSM and 3G on the same hardware platform.

Nokia Siemens Networks Multicontroller Platform is an innovative way to enable CSPs to expand their networks while also investing in future-proof technology. The platform offers an innovative modular architecture that allows CSPs to flexibly, rapidly and cost-effectively scale up capacity, connectivity and functionality to match their business needs and the expectations of their customers.

Fully compliant with the latest 3GPP and other industry standards, the Multicontroller Platform delivers the flexibility and versatility that CSPs need to protect their investments.

Highly scalable connectivity, voice capacity and data throughput

The platform's intrinsic modularity allows it to be adapted easily to meet the demands of any traffic mix and network topology. The Multicontroller Platform fits any network architecture, whether highly centralized with high capacity BSCs and RNCs located at a switch site, or a distributed setup in which radio network controllers are located close to small, remote base station areas.

The platform's blend of highly flexible hardware and distributed software makes it easy to expand capacity and improve functionality to meet network capacity needs and deliver advanced end-user services.

Fully IP-based, high capacity internal switching and native support for packet transport allow rapid and efficient management of voice and data traffic, as well as supporting the highest peak data rates at the air interface, today and tomorrow.

Reliable and dependable

The compact Nokia Siemens Networks Multicontroller Platform is extremely fault tolerant, for maximum reliability. All the centralized functions of the network element are protected to guarantee high availability, while both hardware and software are supervised constantly, with back-up components ready to take over in the event of a failure. Similarly, all processors back each other up continuously.

Reduced operational costs

Multicontroller Platform's power consumption can be less than 1 W per connected base station, reducing operating costs radically. The equipment's incredibly small size brings further cost savings in site investment, transportation and installation.

The simple architecture makes commissioning easy and fast. Spare part management is also highly cost-effective, because fewer parts are used and many modules are identical, making them interchangeable across different functions.

Multicontroller BSC and Transcoder

This high capacity, future-proof radio network controller uses revolutionary hardware and a modular architecture that is easily scaled to future-proof CSP investments.

Multicontroller BSC can be configured to serve high voice and data traffic volumes and/or manage a high number of cells. Moreover, modules can be added easily to meet changing traffic or use patterns. And when new technologies need to be adopted, the Multicontroller BSC can be converted into a 3G Multicontroller RNC with a simple software upgrade.

Multicontroller BSC supports native packet transport to ensure that all the transport bandwidth savings that come with Packet Abis transport are captured. Multicontroller BSC can also operate as the timing master for BTS synchronization via time-over-packet.

Technical Data

CS voice capacity:	>26,000 Erl
PS data capacity:	1.1 Gbps
Connectivity:	Up to 4,400 TRXs; up to 4,400 cells; up to 4,400 base stations
Transport interfaces:	16 x GE, 6 x 10GE
Availability:	> 99.999%
Redundancy:	Module and plug-in unit level redundancy
Installation options:	2 to 8 modules
Height x width x depth:	177 x 444 x 450 mm (per module)
Power consumption:	~800 W (per module)
Power supply:	-48V/-60V (DC); 230V (AC)

The product also supports the smooth evolution of existing networks. Installed as an expansion to Nokia Siemens Networks Flexi BSC, the multicontroller provides flexible increases in capacity and adds multicontroller capabilities to protect GSM capacity investments. Multicontroller BSC includes

transcoder implementation, enabling transcoder resources to be located physically with the BSC or deployed at a separate site to support several BSCs simultaneously. Consequently, Multicontroller BSC can be connected via the standardized A-Interface to any other vendor's core network (3GPP Rel.8 based A over IP).

Multicontroller RNC

Combining the advantages of the compact and scalable hardware platform with those of modular and flexible software, Multicontroller RNC is the benchmark for network controllers.

Multicontroller RNC offers the market's highest capacity that can be optimized easily to meet the needs of any traffic mix and network topology. The product can be configured to serve high voice or data traffic, and to enhance coverage. The lub interface throughput can be up to 50 Gbps to support the highest peak data rates of current and future air interfaces.

With native support for packet transport, Multicontroller RNC also meets the needs of IP-based networks.

Multicontroller RNC enables existing capacity to be expanded smoothly and flexibly. It can be installed as an expansion to the Nokia Siemens Networks IPA2800 RNC family, providing the best way to use and balance Control Plane and User Plane resources to:

- rapidly fulfill increasing data throughput demand
- enhance the always-on connectivity of smartphone applications
- provide seamless support for the data throughput of HSPA+ and beyond.

Technical Data

CS voice capacity:	> 200,000 Erl
PS data capacity:	Up to 50 Gbps
Connectivity:	Up to ~30,000 cells
Transport interfaces:	16 x GE, 6 x 10GE
Availability:	> 99.999%
Redundancy:	Module and plug-in unit level redundancy
Installation options:	2 to 8 modules
Height x width x depth:	177 x 444 x 450 mm (per module)
Power consumption:	~ 800 W (per module)
Power supply:	-48V/-60V (DC); 230V (AC)

Modular capacity steps and flexible resource allocation are natively built into Multicontroller RNC, helping to meet the challenge created by smartphones that cause unpredictable increases in the volume of network data and signaling traffic.

Multicontroller RNC can be evolved with software upgrades to meet future requirements, thus safeguarding its investment.



Multicontroller Platform module

The Nokia Siemens Networks Multicontroller Platform combines a compact and scalable hardware platform with modular and flexible software to create a new era in network controllers. Unrivalled modularity and space saving features meet all traffic and signaling capacity requirements and network topology needs.

Flexibility, speed, expandability, reliability and low operating costs make Multicontroller Platform the network controller of choice, now and in the future.