

Evolium™ Multi-BSS Fast Packet Server

GPRS in a box



>> A unique solution for GPRS management

GPRS can give you a big advantage over your competitors and boost customer loyalty. But to cash in, GPRS introduction must be fast, simple and cost-effective.

What's the best way to meet this challenge? By avoiding hardware modifications to your existing network.

While integrating products and management of voice and data.

Alcatel's answer is the Evolium™ Multi-BSS Fast Packet Server (MFS), a unique solution for the Evolium™ BSS part.

The Evolium™ MFS houses almost all GPRS-specific hardware and functions based on:

- PCU-Packet Control Unit (ETSI standard)
- Gb interface (interface between the BSS & the GPRS backbone).

The Evolium™ MFS gives you hassle-free GPRS deployment with low entry costs.

The smooth, low-cost path to GPRS.



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>> **Hassle-free roll-out**

The Evolium™ MFS makes it easy to install GPRS.

It fits right into your existing Evolium™ BSS network, with no hardware changes. Because it is located on the MSC site, there's no need to visit any BSS sites. All it takes is a limited software upgrade — remotely done. Without service interruption.

The Evolium™ MFS is fully compatible with the Evolium™ GSM Solutions and interoperable within any NSS environment. Moreover, this cost-effective solution fits into your existing transmission system; existing A-ter and A lines can be reused for GPRS thanks to shared transmission links.

No site visits. Just a software upgrade. It doesn't get any simpler.

>> **System description**

Alcatel's unique, high-performance Plug-and-Play boards are at the heart of the Evolium™ MFS. These GPRS Processing Unit (GPU) boards make it scalable and support key GPRS specific functions.

Each Evolium™ MFS comprises either one or two precabled telecom subracks. Each subrack can handle up to 11 GPU boards, plus one redundant board. As your system grows, just plug-in more boards, up to 22. The boards are automatically set up. No particular configuration operation is necessary.

Each powerful GPU board can handle a BSC, supporting up to 16 PCM links at 2 Mbit/s. A fully loaded Evolium™ MFS supports 22 BSCs.

The Evolium™ MFS can handle a raw data rate of up to 13.4 kbit/s per radio channel — 107.2 kbit/s with 8 time slots.

Ready for higher data rates (CS-3/CS-4/EDGE).

GPRS possible on all TRX of a cell (in B7). If packet traffic grows above the capacity of one GPU board, several GPU boards can be connected to one BSC (in B7).

High signaling capacity thanks to the GPRS Master Channel (in B7).

Reliability and security are guaranteed. All MFS elements are redundant, eliminating the risk of system failure.



The Evolium™ MFS gives you a choice of 3 Gb interface options, including:

- Intermediate Frame Relay network (Standard Frame Relay protocol)
- Direct point-to-point
- Intermediate Network Elements, such as the MSC and Transcoders, may be traversed.

>> Seamless build-up

Thanks to its modular architecture, the Evolium™ MFS is scalable. That means you don't need to equip your whole network at once. You can begin small by targeting a promising market, then add capacity as demand grows — where and when you're ready.

Capacity will never be a problem since the Evolium™ MFS can handle up to 5,280 Packet Data Channels (PDCH) simultaneously.

>> Cost-effective operations

The Evolium™ MFS handles both voice and data, smoothing your operation and maintenance procedures.

Teamed up with the Evolium™ Operation and Maintenance Center, the Evolium™ MFS provides a reliable GPRS solution. With the capacity you need. When you need it.

Thanks to a clear split between voice and data management as well as dynamic allocation of radio usage to voice or data traffic, you can set priorities and optimize use of your radio resources. Radio Frequency Hopping is of course available on GPRS channels. Voice and data can be multiplexed on existing trunks, so there's no need for new transmission links.



The Evolium™ MFS gets your network into shape and performing at peak levels in no time.

Optimized management of radio resources.

>> A safe investment

The Evolium™ MFS has been specifically designed to enable you to introduce GPRS as quickly, simply and cost-effectively as possible.

With the Evolium™ MFS you minimize start-up costs, spend only as you grow and maximize your return on investment.

Evolium™ Multi-BSS Fast Packet Server

Alcatel 9135 MFS

Specifications

Frequency bands	GSM 900/1800/1900
BSCs supported	11 (1 telecom subrack) / 22 (2 telecom subracks)
PDCH per MFS	5,280
Channel coding schemes supported	CS-1, CS-2 (Hardware ready for CS-3, CS-4, EDGE)
Channel coding capacity per TRX	Raw data rate up to 107.2 kbit/s with CS-2
Power supply	-48V DC
Consumption	1830W with 1 telecom subrack 2800W with 2 telecom subracks
Size (HxWxD)	220 x 100 x 60 cm
Weight	400kg
Temperature range	+5 to +40°C
Humidity range	5 to 85%



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