

Evolium™ Micro Base Station

The modular microcellular solutions

In today's competitive environment, GSM operators face a double challenge: they must constantly boost network coverage and services while increasing capacity to serve growing subscriber bases.

Once allocated spectrum has been fully utilized (through such techniques as cell splitting and optimized frequency reuse patterns), or when deep indoor coverage is required, operators must turn to other capacity solutions.

For tight, high-traffic environments, the microcellular technique offers the best solution to increase coverage and capacity and catch more traffic while providing top quality customer service.

Compact and modular, the Evolium™ Micro Base Station adapts to your current and future needs by providing from 2 to 6 TRXs in GSM 900, GSM 1800 and dualband. Designed to grow as your network does, it supports numerous applications in different environments by providing not only microcell coverage, but also minicell, and in-building cell. Moreover, the Evolium™ Micro Base Station is GPRS Ready via a simple software upgrade.

Part of the Evolium™ Multistandard Base Station range, the Evolium™ Micro Base Station shows how Alcatel innovations enable you to make the most of your investments.

Multiple configurations.

Unique modular design delivers flexible solutions for numerous applications.

- Mix and match modules to suit your particular frequency band, antenna and transceiver needs:
 - Each module contains 2 TRXs
 - 4 different module configurations:
 - GSM 900 or GSM 1800
 - Single-antenna or low-loss version



ALCATEL

- Up to 3 modules per base station (6 TRXs)
- Omni or sectored antenna configurations
- Dualband configuration
- Designed to adapt to your installation constraints (indoor and outdoor),
- 90-minute battery back-up unit.

Enhanced radio performance.

Scalable and adaptable to smoothly handle growing traffic volume and changing patterns.

- -107dBm receiver sensitivity
 - Single-antenna version delivers 2W of transmission output power (33dBm)
 - Low-loss version provides 4.5W of transmission output power (36.5dBm),
- Radio Frequency Hopping,
- Antenna diversity.

Packed with features.

A multitude of choices in a sleek, compact unit.

Versatile and lightweight

- Wall or pole mounting,
- Indoor/outdoor mounting with cover or indoor mounting without cover,
- Optional fan extends operating temperature up to 55 °C.

Adaptable transmission features

- 75 or 120 Ω transmission impedance,
- Supports multiple transmission technologies, including:
 - G.703 with 40dBm sensitivity, allowing a maximum distance of 1.8km between BTS with simple copper cables
 - Additional technologies such as HDSL with site support cabinet,
- Supports different frequency synchronization modes, including free running and PCM,
- Station unit sharing,
- Integrated connection box.



Cost efficient power supply

- Very low power consumption (2 TRXs at 130W),
- Protection against short power supply glitches (up to 200ms).

Fast, easy installation

- Less than one hour installation or replacement time,
- Precision mounting by a single person with the motorized installation arm,
- Hassle-free upgrades and reconfigurations thanks to firmware and software downloads capabilities,
- No preventive maintenance for standard configurations,
- External security alarm support.

Evolium™ Microcellular Solutions.

A pioneer in microcellular solutions, Alcatel is a leading supplier of microcellular systems worldwide. More than two dozen operators in 11 countries have selected Alcatel solutions for their networks.

The Evolium™ Micro Base Station is part of the Evolium™ GSM Radio Solution. It offers the same state-of-the-art technology and modular architecture as the Evolium™ Multistandard Base Station. It provides all the Evolium™ benefits in terms of compactness, sensitivity and capacity.

As a leading provider of complete microcellular solutions, Alcatel's approach goes beyond simple base station performance to focus on the overall GSM system.

Thanks to the very powerful handover algorithms developed with the Evolium™ GSM Radio Solution, traffic is controlled with Alcatel Intelligent Traffic Management. Traffic load is optimally distributed between your network layers (GSM 900 or 1800 bands, micro and macro layers).



To best satisfy your particular needs, Evolium™ Microcellular Solutions are supported by all-in-One Alcatel Service™. You can benefit from Alcatel's experience in network QoS assessment, identify the best densification scenario while ensuring optimized deployment through efficient network and frequency planning. With all-in-One Alcatel Services™, you can be sure to get the best performance from your microcellular layer and your entire network.



The Evolium™ Micro Base Station delivers the finest technology available to satisfy your coverage, capacity and service quality requirements.

Evolium™ Micro Base Station Alcatel 9110.

Specifications	Single-antenna	Low-loss version
Frequency band	GSM 900 or GSM 1800	
Capacity	2 to 6 TRX (2 TRX per cabinet)	
Tx output power	33dBm	36.5dBm
Rx sensitivity	-107dBm	
Radio FH, Power control, DTX	standard	
Temperature range	-33 °C to +45 °C (standard)	
	-33 °C to +55 °C (with optional fan)	
Power supply	170 ... 270 V AC (47 ... 63 Hz)	
Power consumption (2 TRX)	130W	
2 TRX BTS size (H x W x D)*		
(fully equipped, w/o cover)	75 x 39 x 14 cm	
(fully equipped, incl. cover)	82 x 45 x 19 cm	
2 TRX BTS weight		
(fully equipped, w/o cover)	27kg	
(fully equipped, incl. cover)	32.5kg	

* Including mounting frame

