

# GSM-EDGE Superfemto

PRODUCT SHEET



# GSM-EDGE Superfemto

- **Lowest-cost GSM solution on the market**
  - **Dual and quad-band**
  - **Easy to install and configure**
  - **Simple all-IP interface**
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## REACHING EVERYONE, EVERYWHERE

Reaching new subscribers is becoming more and more challenging, as only the most remote locations and lowest-ARPU subscribers remain uncovered. Consequently, operators seeking expansion face low-ROI business cases. That was before the GSM-EDGE Superfemto. NuRAN's highly integrated picocell solution dramatically decreases both CAPEX and OPEX, turning even the most challenging sites into profitable deployments.

## SIMPLE TO DEPLOY

The GSM-EDGE SuperFemto supports GSM, GPRS, and EDGE in a variety of logical channel combinations, adapting to traffic requirements and optimally exploiting radio link resources.

Deploying a radio access network (RAN) through the help of a GSM-EDGE SuperFemto only requires minimal infrastructure as backhaul communications are performed through Ethernet, leveraging existing IP networks. Network planning is also made much simpler through the GSM-EDGE SuperFemto's network listening capability, which allows identifying neighbouring cells and measuring their signal strengths.

The GSM-EDGE SuperFemto comes in several band options: dual-band Euro (900/1800), dual-band US (850/1900), and quad-band (quad-band version not CE compliant). Multi-band support greatly eases logistics and inventory management. It is also an important asset in cases of spectrum reallocation, as the complete pico network may change band of operation without the need to replace the units, or on-site intervention.

## APPLICATIONS

- In-building coverage
- Offshore platforms & ships
- Private networks
- Network-in-a-box

## NETWORK READY

With its Abis over IP interface, the GSM-EDGE Superfemto is able to interface natively with any IP-capable BSC. Alternatively, combined with NuRAN BSC, it provides a complete BSS ready to connect to an operator's core network.

## SPECIFICATIONS

### Analog

- Band support: dual-band Euro, dual-band US, or quad-band
- Operating frequencies:

Band	Reception	Transmission
850	824–850 MHz	869–895 MHz
900	880–915 MHz	925–960 MHz
1800	1710–1785 MHz	1805–1880 MHz
1900	1850–1910 MHz	1930–1990 MHz

- Network monitoring:
  - RF activity scan
  - BSIC decoding
- Performance: Superior to GSM 05.05 (picocell profile)
- Maximum output power:

Band	GMSK	8PSK
850	22 dBm	18 dBm
900	22 dBm	18 dBm
1800	25 dBm	20 dBm
1900	25 dBm	20 dBm

- Gain range: 10 steps
- Clock accuracy: < 0.1 ppm
- Oscillator type: VCTCXO or OCXO
- Long-term correction: synchronization on macro/micro BTS through network monitoring.

### Channel support

- Traffic:
  - TCH/F + FACCH/F + SACCH/TF
  - TCH/H(0,1) + FACCH/H(0,1) + SACCH/H(0,1)
- Beacon:
  - FCCH + SCH + BCCH + CCCH
  - FCCH + SCH + BCCH + CCCH + SDCCH/4(0..3) + SACCH/C4(0..3)
  - SDCCH/8 (0..7) + SACCH/C8(0..7)

- Packet switching:
  - CS-1 to CS-4 encoding
  - MCS-1 to MCS-9 encoding
- Speech format: AMR, HR, FR
- Encryption: A5/1, A5/2, & A5/3

### Physical interfaces

- Antenna type: (3) omni SMA
- Traffic and control: 10/100 Mbps Ethernet RJ45
- Status indicator: (2) LEDs

### Logical interfaces

- Abis over IP

### Electrical

- Power consumption: less than 13 W
- Input voltage: 5 VDC

### Mechanical

- Dimensions: 201 mm × 140 mm × 29 mm (WxDxH)
- Weight: 725 g
- Installation: desktop, wall-mount, ceiling-mount

### Environmental

- Operating temperature: 0 °C to 45 °C
- Storage temperature: –40 °C to 70 °C
- Humidity: 90%, non-condensing
- Cooling: passive

### Compliance

- 3GPP TS 04.04
- 3GPP TS 05.02 — 05.05
- 3GPP TS 05.08
- 3GPP TS 05.10

NuRAN Wireless products are constantly being improved; therefore, NuRAN Wireless reserves itself the right to modify the information herein at any time and without notice.



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