sysmoBSC/IP data sheet

sysmocom
systems for mobile communications GmbH

Introducing symsoBSC/IP

The sysmocom sysmoBSC/IP is a small form-factor, low-power embedded computer system for running either the classic BSC (Base Station Controller) function, or the **OsmoNITB**, **OsmoBSC**, **OsmoSGSN** and/or **OpenGGSN** software packages for operating all elements of a small GSM/GPRS/EDGE network with multiple BTSs.

It is suitable for a wide range of applications, including

- Rural cellular networks in lowest-ARPU regions
- GSM related research and development laboratories
- Production testing of GSM/EDGE terminal equipment, including M2M
- Rapidly deployable GSM networks
- Private GSM networks (PBX style use)
- In-building coverage/capacity extension
- Remote area GSM deployments, utilizing any IP-based (e.g. satellite) back-haul service

BTS compatibility

SysmoBSC/IP is compatible with the following BTS products:

- Sysmocom sysmoBTS
- ip.access nanoBTS

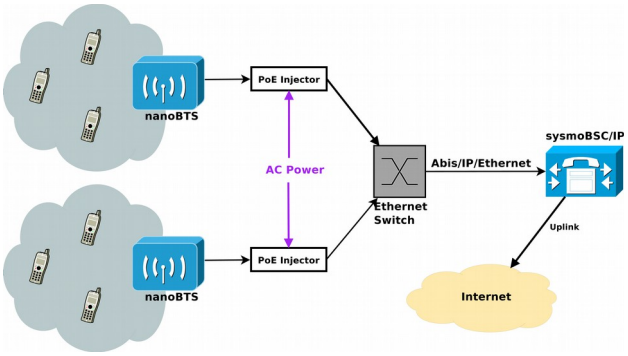
For support of legacy E1 based BTSs, pleas refer to our sysmoBSC/E1 product.

Beyond the BSC

sysmocom not only offers this innovative sysmoBTSC product, but a variety of other products and services, such as

- **sysmoBTS** small form-factor, low-power Base Transceiver Station for all four GSM bands
- **sysmoSIM** SIM cards, pre-programmed and with custom printing
- **sysmoDX** – RF duplexers for all four GSM bands
- extensive portfolio of **support contracts** for all sysmocom Products
- **training services** for installation, network deployment, operation
- **vendor-agnostic integration** and inter-operation with other vendor RAN and Core Network products
- variety of sectorized and omni-directional **antennas** and accessories

Physical Network Topology



sysmocom – systems for mobile communications GmbH
Schivelbeiner Str. 5,10439 Berlin, GERMANY

Phone: +49-30-60987128-0
Fax: +49-30-60987128-9
e-mail: info@sysmocom.de
web: http://sysmocom.de/

Mechanical / Electrical specification

Dimensions of enclosure (W x H x D)	168 x 28 x 160 mm (excluding power supply)
Weight	450 g (excluding power supply)
A-bis Interface	RJ45 Ethernet (100-Base-Tx)
External Interface	RJ45 Ethernet (100-Base-Tx)
Management Interface	RJ45 Ethernet (100-Base-Tx), DB-9 RS-232
CPU / SoC	500 MHz AMD Geode LX800
Input Voltage	7-20V DC, maximum 15W
Cooling	Passive. Active cooling optionally available depending on customer-specific enclosure or environmental requirements
Internal Memory	256 MB RAM, 16 GB Flash
Operational Temperature	0 to 50 °C

Software / Logical specification

Number of BTSs supported	10 (recommended. No hard-coded limit)
Number of Transceivers supported	40 (recommended. No hard-coded limit)
BTS Back-haul (Signalling)	A-bis according to TS 08.58 an TS 12.21, encapsulated over TCP/IP
BTS Back-haul (Voice)	RTP/UDP/IP with FR/EFR/AMR payload according to IETF and ETSI specs
BTS Back-haul (Data)	Gb intreface with NS and BSSGP; NS-over-IP
Max. concurrent calls	unlimited
Max. simultaneous SMS	unlimited
Operating System	Embedded Linux (Poky based)

Available Options / Configurations

- BSC-only Software
  To provide a classic GSM BSS/RAN architecture, with TS 08.08 A interface (over IP) towards a regular MSC. Choose this option if you are a mobile operator with existing core network and MSC.
- NITB Software
  To run a complete GSM Network-in-the-box, without any external dependencies (aside from the BTSs)
- NITB Software with GPRS/EDGE support
  In addition to the GSM NITB for Voice and SMS, also include a miniature SGSN and GGSN to provide packet data services.

sysmocom – systems for mobile communications GmbH
Schivelbeiner Str. 5,10439 Berlin, GERMANY

Phone: +49-30-60987128-0
Fax: +49-30-60987128-9
e-mail: info@sysmocom.de
web: http://sysmocom.de/