

sysmoNITB 2G starter kit

sysmocom

systems for mobile communications GmbH



- unpack the starter kit
- connect the power supply and the antennas,
- connect the sysmoNITB 2G with the sysmoBTS 1002 and (if desired) the internet gateway
- insert the SIM cards into the telephones
- power on the phones

The starter kit includes

- One **sysmoNITB 2G**
- One **sysmoBTS 1002**, indoor enclosure, 23 dBm transmit power (configurable down to 0 dBm)
- Three compatible SMA rubber antennas
- One international power supply (110 to 240 V AC, 50/60Hz, EU/US/UK plug)
- **20** pre-provisioned SIM cards (10 3FF, 10 4FF)
- Printed copy of the **sysmoBTS** Getting Started Guide
- Fully installed + configured software image with **OsmoBTS** and **OpenBSC / OsmoNITB** Software
- Customer-specific factory configuration of transmit band, ARFCN, transmit power, MCC, MNC and other parameters
- 4 hours of remote support by sysmocom staff (e-mail based, remote login/configure)
- USB-cable for access to serial console

2G out of the box

The sysmoNITB 2G starter kit is the combination of a **sysmoNITB 2G** and a **sysmoBTS 1002** to provide a ready to run pre configured 2G network. Although the 2G NITB could even run directly on the sysmoBTS products, the usage of a dedicated NITB provides several advantages like

- connection of more than one BTS
- traffic monitoring on Abis interface
- multiple Ethernet ports for the NITB
- more computing power

The starter kit is suitable for a wide range of applications, including

- IoT Testing for 2G based solutions
- 2G related research and development
- Production testing of 2G terminal equipment
- Rapidly deployable 2G networks
- Private 2G networks (PBX style use)
- In-building coverage/capacity extension
- Remote area 2G deployments, utilizing any IP-based satellite back-haul service

Benefit from sysmocom's world-class experience in all areas of cellular networks from RAN to core network, permitting flexible integration of other network elements like BSC into the BTS itself.

Starter Kit for product evaluation

The **sysmoNITB 2G starter kit** enables you to get quickly started and run a **completely autonomous GSM network** without the need for any external components.

All you need to do in order to make calls and send SMS between your phones in this private GSM network is to

Custom-tailored GSM solutions

sysmocom is not just another RAN vendor with a fixed product portfolio. All our products are based on Open Source software components, permitting customization both by sysmocom as well as the customer.

Access to the source code is key in enabling our customers to create products and services outside the constraints of existing, standardized GSM protocols, interfaces or procedures. Any aspect of our products can be modified according to customer needs.

This gives our customers security in investment and in solution maintenance.

If you are looking for solutions in the world of mobile networks, get in touch with us. Based on a vast amount of existing code and know-how we are likely to help you fast, efficiently and comprehensively.

Mechanical / Electrical specification sysmoNITB 2G

Dimensions of enclosure (W x H x D)	168 x 28 x 160 mm (excluding power supply)
Weight	450 g (excluding power supply)
Iuh Interface	RJ45 Ethernet (1000-Base-Tx)
External Interface	RJ45 Ethernet (1000-Base-Tx)
Management Interface	RJ45 Ethernet (1000-Base-Tx), DB-9 RS-232
CPU / SoC	1 GHz dual-core 64bit AMD G series T40E
Input Voltage	12V DC, maximum 12W
Cooling	Passive. Active cooling optionally available depending on customer-specific enclosure or environmental requirements
Internal Memory	2 GB RAM, 16 GB Flash (SSD)
Operational Temperature	0 to 50 °C

Mechanical / Electrical specification sysmoBTS 1002

Dimensions of enclosure (W x H x D)	165 x 140 x 45 mm (indoor / table-top enclosure)
Dimensions of PCB assembly	160 x 120 x 40 mm
Weight	770 g (with metal enclosure), < 200 g (PCB assembly)
RF Input (SMA)	<ul style="list-style-type: none"> GSM 850/900/1800/1900 quad-band uplink band Sensitivity: -100 dBm (exceeding 3GPP TS 05.05 pico BTS requirements)
RF Output (SMA)	<ul style="list-style-type: none"> GSM 850/900/1800/1900 downlink band Max. output power: (850/900): 22 dBm GMSK, 18 dBm 8PSK (1800/1900): 25 dBm GMSK, 20 dBm 8PSK
CPU / SoC	TI Davinci (ARM926 @ 405 MHz + DSP @ 804 MHz)
Input Voltage	5 V (DC), power consumption: <= 10W (typ.), 13W (max.)
Cooling	Passive, no fan or other moving parts
Internal Memory	128 Mbyte SLC NAND Flash, 128 Mbyte DDR2 SDRAM
Communications Interface	RJ45 Ethernet (100-Base-Tx)

Software / Logical specification

Number of Transceivers	1 TRX / 8 timeslots
Supported timeslot configurations	CCCH, CCCH+SDCCH/4, SDCCH/8, TCH/F, TCH/H, PDTCH
Ciphering	A5/0, A5/1, A5/2 and A5/3
GPRS	GPRS-only PCU with Gb-over-IP interface
Max. concurrent calls	14 (TCH/H on 7 timeslots)
Max. simultaneous SMS	60 (7*SDCCH/8 + 1*SDCCH/4)
Operating System	Embedded Linux (Poky based) on sysmoBTS Open Embedded on sysmoNITB 2G

sysmocom – systems for mobile communications GmbH
Alt-Moabit 93, 10559 Berlin, GERMANY

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