

VoLTE SBC – SIP to the mobile network

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Successor to the GSM gateway: voice over LTE, with fallback to 2G and 3G.



- Two, four or six LTE ports, one SIM card per port, voice and SMS including concatenated messages
- Hybrid models add BRI, FXS or FXO in the same housing, so one device covers mobile and fixed line; other combinations on request
- Full SBC function on the SIP side: topology hiding, SIP DoS detection, header rewriting, TCP to UDP and RTP to SRTP
- Also works on 2G and 3G where networks still offer them
- HD Voice with a licence for BNSBC-M-2LTE and -4LTE: AMR-WB over LTE, G.722 on the SIP side (then G.722 only, up to 4 HD channels)

Models

MODEL	INTERFACES	CHANNELS	SESSIONS INCLUDED	MAX. TRANSPARENT	MAX. TRANSCODED
BNSBC-M-2LTE	2 × LTE	2	2	128	8
BNSBC-M-4LTE	4 × LTE	4	2	128	8
BNSBC-M-6LTE	6 × LTE	6	2	128	8
BNSBC-M-2LTE4FXS	2 × LTE + 4 × FXS	6	2	128	8
BNSBC-M-2LTE4FXO	2 × LTE + 4 × FXO	6	2	128	8
BNSBC-M-2LTE2HYB	2 × LTE + 2 × BRI + 2 × FXS	8	2	128	8
BNSBC-M-2LTE4BRI	2 × LTE + 4 × BRI	10	2	128	8

Sessions are SIP-to-SIP sessions: included without licence, maximum with session licences. Channels: one mobile channel per LTE port, plus the ISDN or analogue channels of the hybrid models. EU version; other LTE combinations on request.

Technical data

HARDWARE

Housing	BNSBC-M-6LTE Fanless aluminium housing, wide version, 218 × 170 × 42 mm (W × D × H, without antenna) Other models Fanless aluminium housing, 170 × 170 × 42 mm (W × D × H, without antenna)
Weight	approx. 860–1080 g, without power supply; plus 20 g per antenna
Network	2 × Ethernet 10/100 Mbit/s (LAN, WAN)
Power	12 V DC via external power supply, max. 24 W
Environment	Operating 0 to 40 °C with the supplied power supply, 0 to 70 °C with a power supply rated for this range; storage –20 to 70 °C; humidity 10–90 % operating, 5–95 % storage, non-condensing
Expandability	BNSBC-M-2LTE, -4LTE, -6LTE Fixed configuration, not modular Other models Both module slots in use
Mounting	BNSBC-M-6LTE 19-inch rack mounting with BNSBC19BracketL Other models 19-inch rack mounting with BF19Bracket
Scope of delivery	Device; power supply 12 V (BFPower); short LTE rod antenna (BFANTLTES); 2 × BNSBC-M-4LTE, 3 × BNSBC-M-6LTE, 1 × other models

COMPLIANCE AND WARRANTY

CE	Radio equipment 2014/53/EU, RoHS, REACH
Marks	CE
Warranty	2 years; extendable by 3 years to 5 years in total

Matching accessories

BNSBC-SESSION-TP-4...128	Licences for transparent SIP-to-SIP sessions
BNSBC-SESSION-4/-8	Licences for transcoded SIP-to-SIP sessions
BNSBC-CODEC-G722-LTE	HD Voice licence: AMR-WB over LTE as G.722 on the SIP side For: BNSBC-M-2LTE, -4LTE
BF19Bracket	19-inch mounting bracket for one device For: all except BNSBC-M-6LTE
BNSBC19BracketL	19-inch mounting bracket for the wide housing For: BNSBC-M-6LTE

MOBILE NETWORK

Radio	2G, 3G and 4G (VoLTE); one radio module and one SIM card per LTE port, one call per port; CLIP and CLIR
Bands	2G: B3, B8 · 3G: B1, B3, B8 · 4G: B1, B3, B7, B8, B20, B28A
Transmit power	Max. GSM 900: 33 dBm · DCS 1800: 30 dBm · UMTS: 24 dBm · LTE: 23 dBm
SMS	SMS including concatenated messages; local, authenticated SMS API with SIM selection

VOICE

HD Voice	Licence BNSBC-CODEC-G722-LTE for BNSBC-M-2LTE and -4LTE, others on request: AMR-WB over LTE, G.722 on the SIP side; the LTE ports then use G.722 only, up to 4 HD channels
Codecs	G.711; G.729 and G.723.1 for up to 4 calls at a time, without licence
Signal processing	Echo cancellation G.168/G.165 up to 128 ms, VAD/CNG, DTMF detection and generation

SIP, SECURITY AND MANAGEMENT

SIP	RFC 3261 over UDP, TCP or TLS 1.2 (TLS without additional licence); SRTP media encryption
SBC functions	Topology hiding, SIP DoS detection, access control lists, SIP header manipulation, TCP/UDP and RTP/SRTP conversion
Management	beroNet OS with web interface; provisioning via DHCP option or REST API; beroCloud for remote configuration, monitoring and firmware updates

Session licences

Calls between the LTE, ISDN or analogue ports and SIP need no session licence. Only SIP-to-SIP sessions are licensed; included sessions and maximum per model are listed in the model table.