

ISDN VoIP gateways: BRI and PRI to SIP

ISDN gateways

The ISDN side of the modular platform: one housing, one web interface, from two BRI ports to 60 PRI channels.



- TE or NT mode per port in software, no jumpers; on BRI with pin swap and 100-ohm termination, on PRI in NT mode with an E1 crossover cable
- High precision clock on the 4 × BRI and PRI modules, which DECT base stations need to stay in sync
- From two BRI ports to two PRI ports: up to 16 channels on BNSBC-M, up to 60 PRI channels on BNSBC-L
- Calls between ISDN and SIP need no session licence; only SIP-to-SIP traffic is licensed
- Fax servers reach the line through beroCAPi without an ISDN card in the server

Models

MODEL	PSTN INTERFACES	PSTN CHANNELS	SESSIONS INCLUDED	MAX. TRANSPARENT	MAX. TRANSCODED
BNSBC-M-2HYB	2 × BRI + 2 × FXS	6	2	128	8
BNSBC-M-4BRI	4 × BRI	8	2	128	8
BNSBC-M-8BRI	8 × BRI	16	2	128	8
BNSBC-L-4BRI	4 × BRI	8	2	128	16
BNSBC-M-1PRI	1 × PRI T1/E1	16	2	128	8
BNSBC-L-1PRI	1 × PRI T1/E1	30	2	128	16
BNSBC-L-2PRI	2 × PRI T1/E1	60	2	128	16

Sessions are SIP-to-SIP sessions: included without licence, maximum with session licences.

Session licences

Calls between the PSTN interfaces (FXS, FXO, BRI, PRI) 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.

Technical data

HARDWARE

Housing	Fanless aluminium housing, 170 × 170 × 42 mm (W × D × H)
Weight	approx. 820–840 g, without power supply
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-8BRI Both module slots in use BNSBC-M-1PRI Not expandable: the PRI port already uses all 16 channels Other models Second module slot free, upgradable with an upgrade kit
Mounting	19-inch rack mounting with BF19Bracket or BF19BracketDBL
Scope of delivery	Device, power supply 12 V (BFPower)

VOICE

Transcoding	In the hardware DSP: up to 8 sessions on BNSBC-M, up to 16 on BNSBC-L
Codecs	G.711; on BNSBC-M models also 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
Fax	T.38 fax relay

TELEPHONY

ISDN	Q.921/Q.931 (EuroISDN DSS1); DSS1: CLIP/no screening, CLIR, COLP, UUS, MCID, CD, CNIP; Q.SIG: CNIP; TE or NT mode set in software
Port mode	TE or NT per port in software; BRI with pin swap and 100-ohm termination; PRI in NT mode with an E1 crossover cable (BF1E1Cross)
PRI	T1/E1 (S2M), 30 channels per E1 port; BNSBC-M up to 16 channels in total
Clock	High precision clock for DECT on the 4 × BRI and PRI modules, not on the BRI/FXS hybrid module
FXS	CLIP, CNIP, message waiting indication (stutter tone, FSK)

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; beronetCloud for remote configuration, monitoring and firmware updates

COMPLIANCE AND WARRANTY

CE	EMC 2014/30/EU, low voltage 2014/35/EU, RoHS, REACH
Marks	CE, FCC, ACMA (RCM)
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	BNSBCUPGRADEKITPRI	Upgrade kit for a second PRI module For: all except BNSBC-M-8BRI, -1PRI
BNSBC-SESSION-4/-8	Licences for transcoded SIP-to-SIP sessions	BF19Bracket	19-inch mounting bracket for one device
BNSBC-SESSION-16	Licences for transcoded SIP-to-SIP sessions For: BNSBC-L-4BRI, -1PRI, -2PRI	BF19BracketDBL	19-inch mounting bracket for two devices side by side, 1 U
BNMO-...	Add-on modules: 4 × BRI, 2 × BRI + 2 × FXS, 4 × FXS, 4 × FXO, 1 or 2 × PRI T1/E1 For: all except BNSBC-M-8BRI, -1PRI	BFFXXCableKit	Cable kit RJ45 to RJ11 For: BNSBC-M-2HYB
BNSBCUPGRADEKIT	Upgrade kit for a second module: front panel and connector board For: all except BNSBC-M-8BRI, -1PRI	BF1E1Cross	E1/T1 cross-over cable For: BNSBC-M-1PRI, BNSBC-L-1PRI, -2PRI
		BFExtendedWarranty_M/_L	Warranty extension by 3 years to 5 years in total
		beronetCloud_Account	beronetCloud account
		BFPower	Power supply 12 V