ISDN Gateways

Modular VoIP Gateways that fit any need

"The beroNet Gateway proved itself to be a robust and fail-proof carrier grade system from day one, handling up to 5000 calls per day."

Ercan Yapalak, IT DEPARTMENT ZEHNDER GMBH

OVERVIEW

beroNet Modular VoIP Gateways hold up to two modules. Fully expandable, the devices can be custom built for any potential need and be managed via the beroNet Cloud. Powered by beroNet OS you can add SIP-to-SIP software licenses and with apps transform a Modular VoIP Gateway into a Survival Branch Appliance or Mini-Appliance. Compatible with all PBX systems and usable for almost any VoIP provider.

Base Models

EXPANDABLE WITH ADDON MODULES

Please note: The BF400Box, BF1600Box and BF6400Box are end-of-life. They will be replaced by the following models: BNSBC-M, BNSBC-L and BNSBC-XL.

Model	NIC	Module Slots Available	Max Concurrent Channels	Max Concurrent SIPtoSIP Sessions Transparent / Transcoding
BF400Box	1	2	16	128 / 8
BNSBC-M	2	2	16	128 / 8
BF1600Box	1	2	64	128 / 32
BF6400Box	1	2	128	128 / 64

Standard Configurations

EXPANDABLE WITH ADDON MODULES

Model	Description	Concurrent PSTN Channels	Additional Module Slots Available
BF4002S02FXSBox	2 BRI and 2 FXS Modular VoIP Gateway	6	1
BF4004S0Box	4 BRI HPC Modular VoIP Gateway	8	1
BNSBC-M-8BRI	8 BRI HPC Modular VoIP SBC-Gateway	16	0
BF4001E1Box	1 PRI/E1 HPC, fractional E1 Modular VoIP Gateway	15	1
BF16001E1Box	1 PRI/E1 HPC Modular VoIP Gateway	30	1
BF16002E1Box	2 PRI/E1 HPC Modular VoIP Gateway	60	1

Cloud Managed

Compatible with any PBX

Fast Installation

Tough, no moving parts

Energy Efficient

Modular & Flexible

100% Silent

Easy Expandable

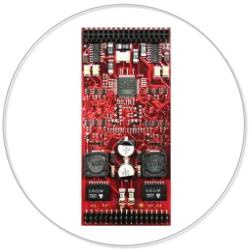
Modular technology for control and flexibility

beroNet Gateway's modular design enables this device to meet any unique need. Modular VoIP technology increases adaptability and flexibility by allowing you to change the modules instead of the entire device if it is needed for a different VoIP installation.

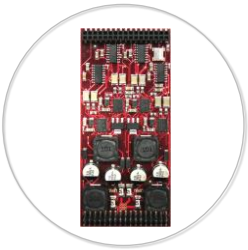
Modular beroNet SBC VoIP Gateways can be equipped with up to two modules. Digital ISDN (BRI/PRI) and analog (FXS/FXO) are available and can be combined. Thanks to their flexibility the beroNet SBC VoIP Gateways always offer the right solution for different customer requirements.

PRI

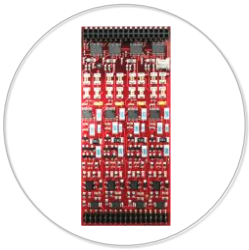
BRI



Hybrid
2 BRI / 2 FXS



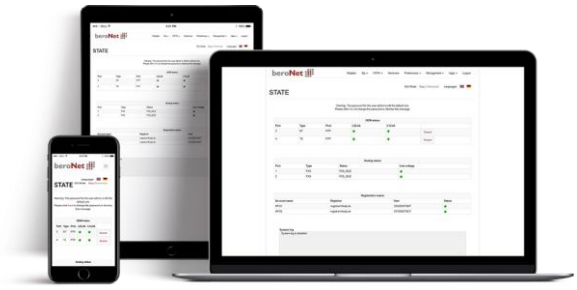
FXS



FXO

beroNet Addon Modules

Interface	Model	Description
Analog	BNMO-4FXO	adds 4 FXO ports
Analog	BNMO-4FXS	adds 4 FXS ports
ISDN / Analog	BNMO-2HYB	adds 2 BRI and 2 FXS ports
ISDN	BNMO-4BRI	adds 4 BRI ports with High Precision Clock for DECT
ISDN	BNMO-1E1	adds 1 PRI E1 port with High Precision Clock for DECT
ISDN	BNMO-2E1	adds 2 PRI E1 ports with High Precision Clock for DECT
ISDN	BNMO-1PRI	adds 1 PRI T1/E1 port with High Precision Clock for DECT
ISDN	BNMO-2PRI	adds 2 PRI T1/E1 ports with High Precision Clock for DECT



Powered by beroNet OS

beroNet OS allows you to easy configure your VoIP Gateway via an intuitive web interface, to directly provision your devices with XML and to register it in the beroNet Cloud for remote monitoring and management. Take advantage of a deep range of intelligent and customizable features. Work smarter, not harder.

General Specifications

- Connects SIP with ISDN
- ISDN Ports separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) for every port separately configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- G.711 and echo cancellation, (up to: 16 channels with BF400, 64 channels with BF1600, 128 channels with BF6400)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to: 4 channels with BF400, 16 channels with BF1600, 64 channels with BF6400)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to: 4 channels with BF400, 16 channels with BF1600, 32 channels with BF6400)
- DTMF digit detection and generation
- Voice activity detection / comfort noise generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- Two module slots (PRI, BRI, FXO, FXS, hybrid)
- “TDM Bridging” of two beroNet devices via PCM Bus
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- High quality aluminium housing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19” rack brackets
- Virtual CAPI available
- Optional remote management via beroCloud

5 Good Reasons for beroNet Gateways

Less time training and more time with your customers

Cloud integration simplifies remote updates and backups

Free and premium support if you come across any issues

Flexibility and adaptability for long-term use

Enhanced with Apps for additional functionality

END OF LIFE

ALL-IP ready

1 PRI VoIP Gateway

The beroNet 1 PRI VoIP Gateway (BF4001E1Box and BF16001E1Box*) contains one PRI port, with an integrated high precision clock E1 module. The port can be operated individually in NT (Network Termination) or TE (Terminal Equipment) mode. To satisfy market where T1 is standard a T1 module can be built in a BF1600Box. Compatible with SIP, a connection to common PBX Systems is possible via the ISDN interface.

*The BF4001E1Box and BF16001E1Box are EOL and will be replaced by BNSBC-M-1PRI and BNSBC-L-1PRI.

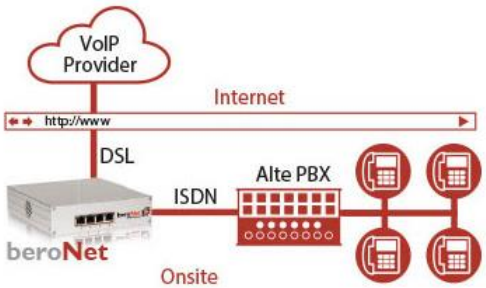
General Specifications

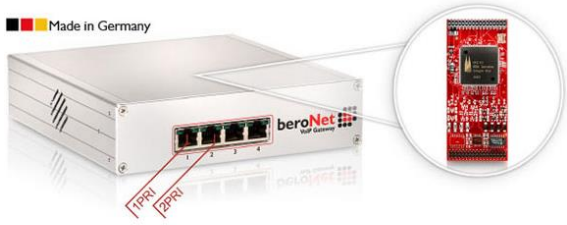
- 1 PRI E1 ISDN port with integrated High Precision Clock
- The port is separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) per line configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- G.711 and echo cancellation, (up to 64 channels)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to 16 channels)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 16 channels)
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- One additional module slot (PRI, BRI, FXO, FXS, hybrid)
- “TDM Bridging” of two beroNet devices via PCM Bus
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19” rack brackets
- Virtual CAPI available (fax, voice)
- Optional remote management via beroCloud

Possible Scenarios

Sip Trunk Gateway:

- Compatible with all PBX Systems
- Usable for almost any VoIP Provider
- Cost saving due to further use of the proprietary PBX





END OF LIFE

2 PRI VoIP Gateway

The beroNet 2 PRI VoIP Gateway (BF16002E1Box*) contains 2 PRI ports, with an integrated high precision clock E1 module. Every port can be operated individually in NT (Network Termination) or TE (Terminal Equipment) mode. To satisfy market where T1 is standard a T1 module can be built in a BF1600Box. It's the ideal Gateway to conduct a step by step migration from classic PBX to VoIP system. The Gateway can be easily remote managed via the beroCloud.

*The BF16002E1Box is EOL and will be replaced by BNSBC-L-2PRI.

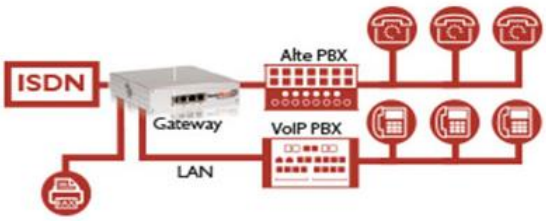
General Specifications

- 2 PRI E1 ISDN ports with integrated High Precision Clock
- Every port is separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) per line configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- G.711 and echo cancellation, (up to 64 channels)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to 16 channels)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 16 channels)
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- One additional module slot (PRI, BRI, FXO, FXS, hybrid)
- "TDM Bridging" of two beroNet devices via PCM Bus
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19" rack brackets
- Virtual CAPI available (fax, voice)
- Optional remote management via beroCloud

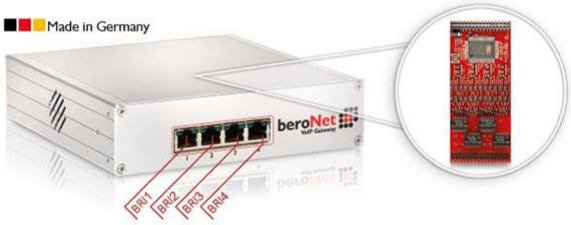
Possible Scenarios

Soft Migration (VoIP Migration):

- Step By Step Migration
- Cost saving through integration of the proprietary PBX system
- The proprietary PBX System continues to act as a backup system



4 BRI VoIP Gateway



END OF LIFE

The beroNet 4 BRI VoIP Gateway (BF4004S0Box*) contains 4 BRI ports. Every port can be operated individually in NT or TE mode. It can be connected to the public telephone network or to an internal connection of the telephone system. Furthermore, a classic telephone system can be connected to a VoIP connection or a VoIP PBX via the 4 BRI VoIP Gateway. The beroNet 4 BRI VoIP Gateway is ideal to enable a PSTN connection without quality degradation joining the advantages of ISDN & VoIP.

*The BF4004S0Box is EOL and will be replaced by BNSBC-M-4BRI.

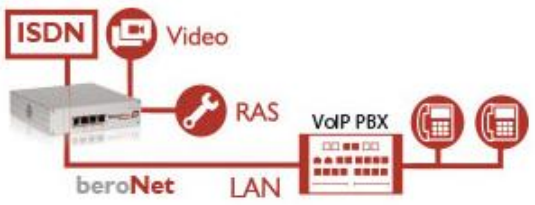
General Specifications

- 4 BRI ISDN ports with integrated High Precision Clock
- Every port is separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) per line configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- G.711 and echo cancellation, (up to 16 channels)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 4 channels)
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- One additional module slot (PRI, BRI, FXO, FXS, hybrid)
- “TDM Bridging” of two beroNet devices via PCM Bus
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19” rack brackets
- Virtual CAPI available (fax, voice)
- Optional remote management via beroCloud

Possible Scenarios

PSTN connection without quality degradation:

- Advantages of both world’s: ISDN & VoIP
- Further use of high quality ISDN
- Integration of ISDN data service & video telephony



8 BRI VoIP Gateway

The beroNet 8 BRI VoIP Gateway (BNSBC-M-8BRI) contains 8 BRI ports. Every port can be operated individually in NT or TE mode. It can be connected to the public telephone network or to an internal connection of the telephone system. Furthermore, a classic telephone system can be connected to a VoIP connection or a VoIP PBX via the 4 BRI VoIP Gateway. The beroNet 4 BRI VoIP Gateway is ideal to enable a PSTN connection without quality degradation joining the advantages of ISDN & VoIP.

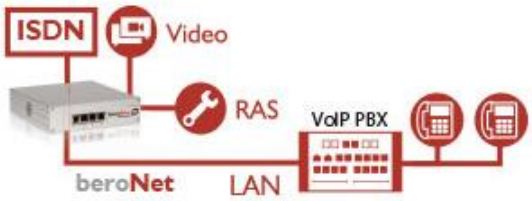
General Specifications

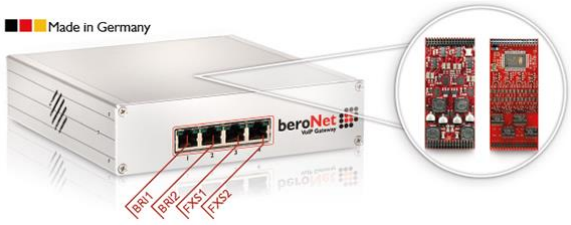
- 8 BRI ISDN ports, with integrated High Precision Clock
- Every port is separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) per line configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- G.711 and echo cancellation, (up to 16 channels)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 4 channels)
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- Two 100Mbit network ports (LAN / WAN)
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19” rack brackets
- Virtual CAPI available (fax, voice)
- Optional remote management via beroCloud

Possible Scenarios

PSTN connection without quality degradation:

- Advantages of both world’s: ISDN & VoIP
- Further use of high quality ISDN
- Integration of ISDN data service & video telephony





END OF LIFE

BRI & FXS VoIP Gateway

The beroNet BRI & FXS VoIP Gateway (BF4002S02FXSBox*) contains 2 BRI and 2 FXS ports. It connects SIP with ISDN and analog FXS; ideal for connecting analog devices like telephone, fax, alarm system, ec cash and modems. The switching of TE or NT mode as well as the terminating resistors for each port is done jumper free using the beroNet Web GUI. A fax server can also be connected with a virtual CAPI.

*The BF4002S02FXSBox is EOL and will be replaced by BNSBC-M-2HYB.

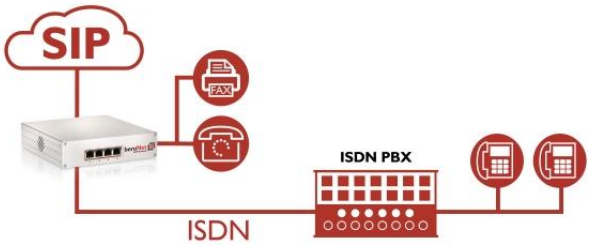
General Specifications

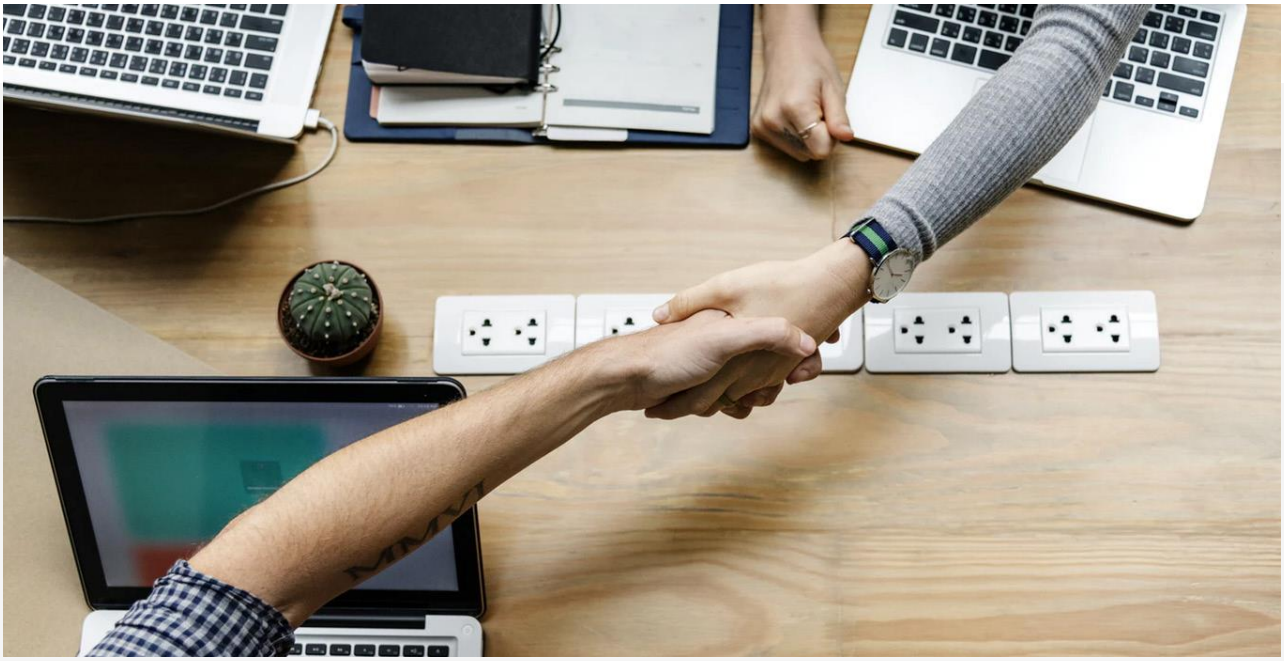
- 2 BRI ISDN and 2 FXS ports
- Every port is separately as TE or NT mode switchable in software (jumper free)
- Termination resistors (100 Ohm) per line configurable
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Set: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- 2 FXS ports / CLIP, CNIP
- G.711 and echo cancellation, (up to 16 channels)
- G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 4 channels)
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- SIP user agent IETF RFC3261 compatible
- SIP over UDP/TCP with optional TLS 1.2 support, SRTP
- One additional module slot
- Power supply: 110–230V, operating 12V DC at 2A
- Average power consumption: 6 Watts (24W max.)
- CE, FCC and ACMA compliant
- Storage temperature: -20° to 70°C
- Operating temperature: 0° to 70°C
- Humidity: up to 90%, non-condensing
- Dimensions: 168 x 168 x 42 mm
- Weight: 800 g
- Mounting 1U, optional available: 19” rack brackets
- Virtual CAPI available (fax, voice)
- Optional remote management via beroCloud

Possible Scenarios

PSTN connection without quality degradation:

- Advantages of both world’s: ISDN & VoIP
- Further use of high quality ISDN
- Integration of analog devices





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