



# ISDN Gateways

Modular VoIP Gateways that fit any need

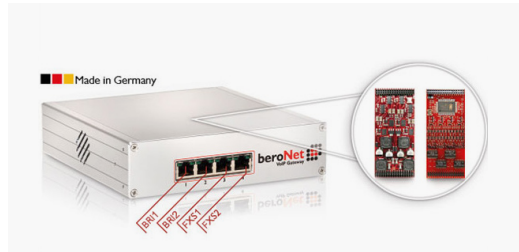


“ The beronet Gateway proved itself to be a robust and fail-proof carrier grade system from day one, handling up to 5000 calls per day. ”

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. Powered by beronet OS you can add SBC Software Licenses to turn your modular VoIP Gateway into a session border controller. With Apps you can transform a Modular VoIP Gateway into a Survival Branch Appliance or Mini-Appliance.



## 5 Good Reasons for beroNet Gateways



5 Minute Installation



Cloud Management



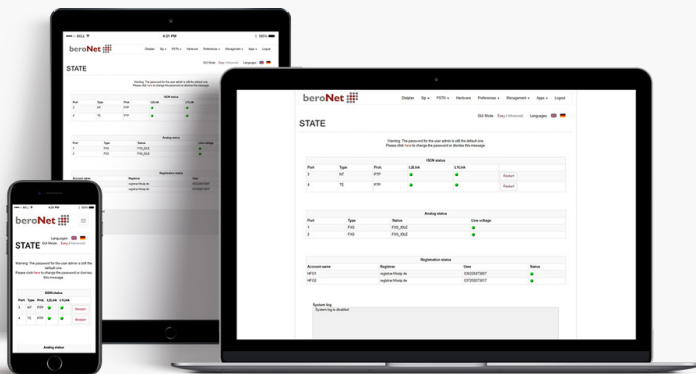
ISDN/Analog/GSM/LTE



Highly Flexible



Tough & Expandable



## Work smarter, not harder

Fast installation and administration of the beroNet Gateway with the easy to use Web interface of the beroNet Web GUI.

## Base Models

### EXPANDABLE WITH ADDON MODULES

Model	Max Concurrent Channels	Module Slots Available
BF400Box	16	2
BF1600Box	64	2
BF6400Box	128	2

## Standard Configurations

### ISDN INTERFACE

Model	Description	Additional Module Slots Available
BF4002S02FXSBox	2 BRI/S0 / 2 FXS modular Gateway	1
BF4004S0Box	4 BRI/S0 modular Gateway	1
BF4008S0Box	8 BRI/S0 modular Gateway	0
BF4001E1Box	1 PRI E1 modular Gateway – fractional E1 (16 concurrent channels)	1
BF16001E1Box	1 PRI E1 modular Gateway	1
BF16002E1Box	2 PRI E1 modular Gateway	1

## beroNet Modules

### ISDN INTERFACE

<b>Model</b>	<b>Description</b>
BNMO-2HYB	adds 2 BRI and 2 FXS ports
BNMO-4BRI	adds 4 BRI ports
BNMO-1E1	adds 1 PRI/E1 port
BNMO-2E1	adds 2 PRI/E1 ports
BNMO-1PRI	adds 1 PRI T1/E1 port
BNMO-2PRI	adds 2 PRI T1/E1 ports

### ANALOG INTERFACE

<b>Model</b>	<b>Description</b>
BNMO-2HYB	adds 2 BRI and 2 FXS ports
BNMO-4FXO	adds 4 FXO ports
BNMO-4FXS	adds 4 FXS ports



## 1 PRI VoIP Gateway

The beroNet 1 PRI VoIP Gateway (BF4001E1Box, BF16001E1Box,) contains one PRI (S2M, E1 or T1) port. The port can be operated individually in NT (Network Termination) or TE (Terminal Equipment) mode. A fax server can be also connected by adding a virtual CAPI. The Gateway is compatible with SIP. A connection to common PBX Systems is possible via the ISDN interface.

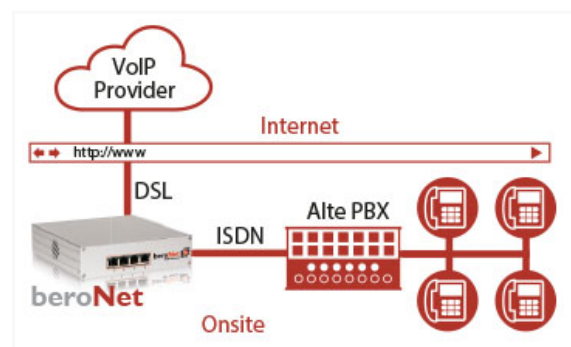
### GENERAL SPECS

- 1 PRI (S2M, E1) ISDN Port
- The Port is configurable in NT or TE Mode
- 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
- Optional CAPI 2.0 available (Fax, voice)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 16 channels)
- G.711 u/a (up to 64 channels), including echo cancellation
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 16 channels)
- SIP user agent IETF RFC3261 compatible
- SIP via UDP/TCP, optional TLS support, SRTP
- "TDM Bridging" of two beroNet devices via PCM Bus
- Power supply: 110-230V, operating 12V DC at 2A
- Compliance: CE (EN55022, EN55024, EN60950)

### POSSIBLE SCENARIOS

SIP Trunk Gateway:

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





## 2 PRI VoIP Gateway

The beroNet 2 PRI VoIP Gateway (BF16002E1Box) contains 2 PRI (S2m, E1 and/or T1) Ports. Every port can be operated individually in NT (Network Termination) or TE (Terminal Equipment) mode. By adding a virtual CAPI a Fax Server can also be connected. It's the ideal Gateway to conduct a Soft Migration (Step By Step Migration from classic PBX to VoIP System). The Gateway can be easily updated and remote managed via the beroNet Cloud.

### GENERAL SPECS

- 2 PRI (S2M, E1) ISDN Ports
- Every Port is configurable in NT or TE Mode
- Termination resistors (100 Ohm) per line configurable
- Layer 2 ist 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
- Optional CAPI 2.0 available (Fax, voice)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 16 channels)
- G.711 u/a (up to 64 channels), including echo cancellation
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- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 16 channels)
- SIP user agent IETF RFC3261 compatible
- SIP via UDP/TCP, optional TSL support, SRTP
- "TDM Bridging" of 2 beroNet devices via PCM Bus
- Power supply: 110-230V, operating 12V DC bei 2 A
- Compliance: CE (EN55022, EN55024, EN60950)

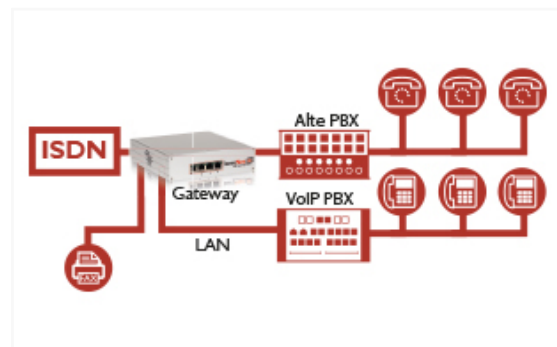
### POSSIBLE SCENARIOS

Soft Migration (VoIP Migration):

Step By Step Migration

Cost savings through integration of the proprietary PBX System

The proprietary PBX System continues to act as a Backup System





## 4 BRI VoIP Gateway

The beroNet 4 BRI VoIP Gateway (BF4004S0Box) contains 4 BRI (S0) ports. It can be connected to the public telephone network or to an internal connections 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. By adding a virtual CAPI, a Fax Server can also be connected. The beroNet 4 BRI VoIP Gateway is ideal to enable a PSTN connection without quality degradation joining the advantages of ISDN & VoIP.

### GENERAL SPECS

- 4 BRI (S0) ISDN Ports
- the 4BRI module has an integrated High Precision Clock (HPC)
- Each Port is configurable in NT or TE Mode with PIN interchanging
- Termination resistors (100 Ohm) for every Port separately configurable
- TE / NT and Termination per Port switchable in Software (Jumperfree)
- 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
- Optional CAPI 2.0 available (Fax, voice)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.711 and Echo Cancellation up to 16 channels
- G.168/G.165 Echo cancellation with echo path change detection, up to 128ms
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 4 channels)
- SIP user agent IETF RFC3261 compatible
- SIP via UDP/TCP, optional TSL support, SRTP
- "TDM Bridging" of two beroNet devices via PCM Bus
- Power supply: 110-230V, operating 12V DC at 2A
- Compliance: CE (EN55022, EN55024, EN60950)

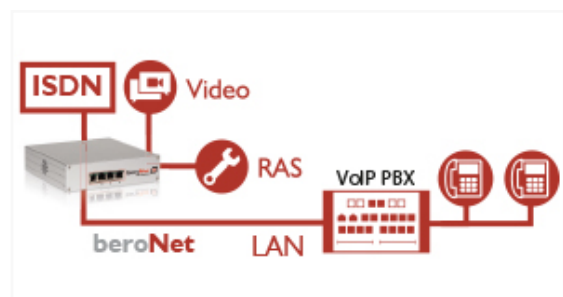
### POSSIBLE SCENARIOS

PSTN Connection without Quality Degradation:

Advantages of both world's: ISDN & VoIP

Further use of High Quality ISDN

Integration of ISDN Dataservice & Video Telephony





## 8 BRI VoIP Gateway

The beroNet 8 BRI VoIP Gateway (BF4008S0Box) contains 8 BRI (S0) ports. It can be connected to the public telephone network or to an internal connections of the telephone system. Furthermore a classic telephone system can be connected to a VoIP connection or a VoIP PBX via the 8 BRI VoIP Gateway. By adding a virtual CAPI, a Fax Server can also be connected. The beroNet 8 BRI VoIP Gateway is ideal to enable a PSTN connection without quality degradation joining the advantages of ISDN & VoIP.

### GENERAL SPECS

- 8 BRI (S0) ISDN Ports (accessible via BNTadpater)
- the 8 BRI module has an integrated High Precision Clock (HPC)
- Each Port is configurable in NT or TE Mode with PIN interchanging
- Termination resistors (100 Ohm) for every Port separately configurable
- TE / NT and Termination per Port switchable in Software (Jumperfree)
- 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
- Optional CAPI 2.0 available (Fax, voice)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.711 and Echo Cancellation up to 16 channels
- G.168/G.165 Echo cancellation with echo path change detection, up to 128ms
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 4 channels)
- SIP user agent IETF RFC3261 compatible
- SIP via UDP/TCP, optional TSL support, SRTP
- "TDM Bridging" of 2 devices via PCM Bus
- Power supply: 110-230V, operating 12V DC at 2A
- Compliance: CE (EN55022, EN55024, EN60950)

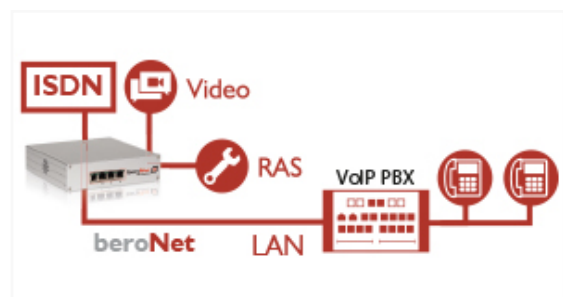
### POSSIBLE SCENARIOS

PSTN Connection without Quality Degradation:

Advantages of both world's: ISDN & VoIP

Further use of High Quality ISDN

Integration of ISDN Dataservice & Video Telephony







## FXS & BRI VoIP Gateway

The beroNet FXS & BRI VoIP Gateway (BF4002S02FXSBox) contains 2 BRI (S0) 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 JumperFree using the beroNet Web GUI. A fax server can also be connected with a virtual CAPI.

### GENERAL SPECS

- 2 BRI (S0) ISDN and 2 FXS Ports
- Every Port is configurable in NT or TE Mode with PIN interchanging
- Termination resistors (100 Ohm) for every port separately configurable
- TE / NT and Termination per Port transposable in Software (Jumperfree)
- Layer 2 is Q.921 and Layer 3 is Q.931 (EuroISDN DSS1) compatible
- DSS1 Feature Satz: CLIP/No-Screening, CLIR, COLP, UUS, MCID, CD, CNIP AOC-D
- Q.SIG Feature Set: CNIP
- 2 FXS Ports / CLIP, CNIP
- Hold, Retrieve, Transfer / MWI (Stutter, FSK)
- Optional CAPI 2.0 available (Fax, voice)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 16 channels) G.711 u/a
- G.168/G.165 echo cancellation with echo path change detection, up to 128ms
- Voice activity detection / comfort noise generation
- DTMF digit detection and generation
- T.38 Fax Relay (V.27, V.29 and V.17) (up to 16 channels)
- SIP user agent IETF RFC3261 compatible
- SIP via UDP/TCP with optional TSL support, SRTP
- "TDM Bridging" of two beroNet devices via PCM Bus
- Power supply: 110-230V, operating 12V DC at 2A
- Compliance: CE (EN55022, EN55024, EN60950)

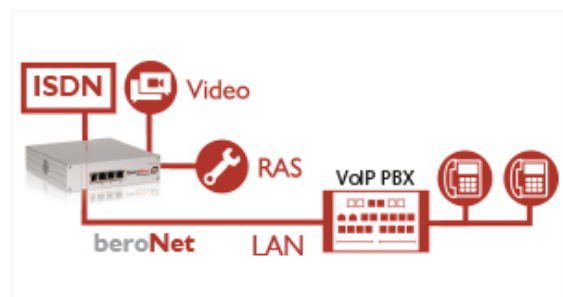
### POSSIBLE SCENARIOS

PSTN Connection without Quality Degradation:

Advantages of both world's: ISDN & VoIP

Further use of High Quality ISDN

Integration of ISDN Dataservice & Video Telephony



**ADVANTAGES**

- Connects SIP with ISDN, for the connection to the public telephone network
- ISDN Ports separately as TE or NT mode switchable
- For multiple devices as well as system connections
- Expandable with a supplementary module (PRI, BRI, FXO, FXS)
- Via Cloud administrable
- Cascadable using PCM
- 19" rack or wall mountable
- High quality Aluminium Housing
- Virtual CAPI available
- Operation of analog devices

**DIMENSIONS AND WEIGHT**

- Dimensions: 168 x 168 x 42 mm
- Weight: 800g
- Mounting: 1U, optional available: 19" rack brackets, wall-mountable

**ENVIRONMENT**

- Storage temperature: -20° - 70°C
- Operating temperature: 0° - 40°C
- Humidity: 20% - 90%, non-condensing



Cloud  
Managed



Compatible with  
any IPBX



Fast  
Installation



Though, no  
small parts



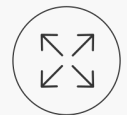
Energy  
Efficient



Modular  
& Flexible



100%  
Silent



Easy  
Expandable

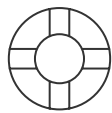
No other Gateway  
is integrated faster  
and easier





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SUPPORT



SERVICES



OUR BLOG

