

# Analog 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 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



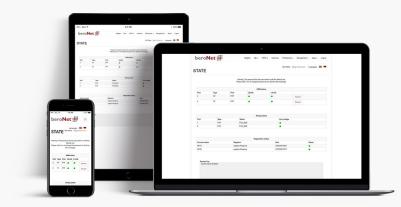
ISDN/Analog/GSM/LTE



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

### Standard configurations

### ANALOG INTERFACE

Model	Description	Additional Module Slots Available
BF4004FXOBox	4 FXO modular Gateway	1
BF4004FXSBox	4 FXS modular Gateway	1
BN16FXSfax_B	16 FXS Gateway, 16 Voice & Fax chan- nels, incl. BreakOut Box	0
BN16FXSfax_C	16 FXS Gateway, 16 Voice & Fax channels	0

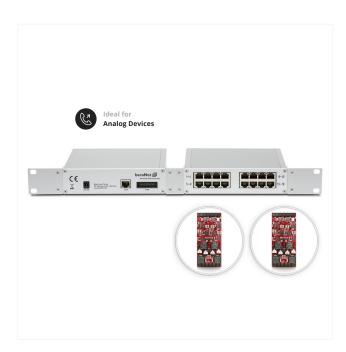
### **BERONET MODULES: ANALOG INTERFACE**

Model	Description
BNMO-2HYB	adds 2 BRI and 2 FXS ports
BNMO-4FXO	adds 4 FXO ports
BNMO-4FXS	adds 4 FXS ports

### BERONET MODULES: ISDN INTERFACE

Model	Description
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





### 16 FXS VoIP Gateway

The beroNet 16 FXS VoIP Gateway (BN16FXSfax\_B, BN16FXSfax\_C) has been designed to allow an easy integration of older telephone systems into IP infrastructures. It can connect up to 16 analog devices (Telephone or Fax) to an IPBX. Ideal for hospitals, Student Residences, Hotels and Fax-Service-Providers.

- Compatible with any PBX system
- Cloud managed
- Cascadable using PCM
- High quality Aluminium Housing
- Tough, no moving parts
- Operate analog devices as extensions of the VoIP system

### **GENERAL SPECS**

- 16 separate Analog FXS Ports
- Supports 0V to -94.5V
- FXS supports 3-5 REN (depending on line length of the line)
- Has current feed 20-41 mA
- Ringing frequency, amplitude, waveshape and cadences programmable (by country setting)
- G.168/G.165 echo cancellation with echo path change detection up to 128ms
- Codecs: G.711, G.726, G.723, G.729

- "TDM Bridging" of 2 beroNet devices through PCM bus
- T.38 Fax Relay (V.27, V.29 and V.17)
- 10/100 Mbit LAN port
- Power supply: 110-230V operating 12V DC at 2A
- PCM bus 8.192 kB/s
- 16 RJ45 Breakout
- Compliance: CE (EN55022, EN55024, EN60950)

### CONNECTIONS

- 10/100 Mbit Network interface
- Power supply: 110-230V, consumption 12V DC at 2 A
- 16 RJ45 Breakout

### DIMENSIONS AND WEIGHT ENVIRONMENT

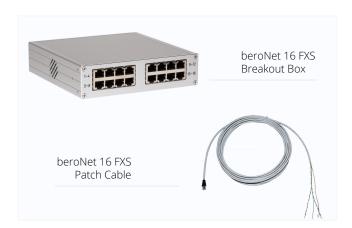
- Dimensions Gateway: 168 x 168 x 42 mm,
   Breakout: 168 x 168 x 42 mm
- Weight: Gateway 800g, Breakout: 700g
- Mounting: 1U, optional available: 19" rack brackets, wall-mountable
- Storage temperature: -20° 70°C
- Operating temperature: 0° 40°C
- Humidity: 20% 90%, non-condensing



#### **AVAILABLE OPTIONS**

BN16FXSfax_B	BN16FXSfax_C
16 FXS Gateway, incl. BreakOut Box and 4x patch cable, 16	16 FXS Gateway, incl. 4x BF16FXSCables (12 m each cable), 16
Voice & Fax channels	Voice & Fax channels

### BREAKOUT BOX OR CABLES



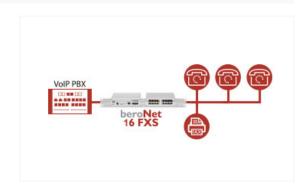
Our 16 FXS VoIP Gateway comes with two options; a gateway and a breakout box or a gateway and patch cables. If you plan to use the device with lots of phones and fax machines in the same room, then the breakout box is right for you.

However if you plan on installing this in a building with analog cabling, you may want to consider the patch cables. Check with your customer to see if there is a patch panel for their analog extensions. If there is – the cables are probably the best choice for you.

### **POSSIBLE SCENARIOS**

### Analog Adapter:

Compatible with any PBX System
Compatible with common VoIP Providers
Continued operation of analog devices (Telephone and Fax devices)





Ideal for hospitals, Student Residences, Hotels and Fax Service Providers.





### 4 FXS VoIP Gateway

The beroNet 4 FXS VoIP Gateway (BF4004FXSBox) provides 4 analog FXS ports for the connection of analog telephones, or Fax devices. With transparent hardware bridging, potentially difficult services fax devices, can be connected to SIP Trunk or IP-PBX through a beroNet Gateway. The 4 FXS VoIP Gateway is also available as an 8, 12 and 16 FXS Version.

- Extends analog devices to SIP
- Expandable with a supplementary module (PRI, BRI, FXO, FXS, GSM)
- Cloud managed
- Cascadable using PCM
- 19" rack or wall mountable
- High quality Aluminium Housing

### **GENERAL SPECS**

- 4 FXS Ports
- CLIP, CNIP
- · Hold, Retrieve, Transfer
- MWI (Stutter, FSK)
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.711 and including 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
- Compliance: CE (EN55022, EN55024, EN60950)

### **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

### POSSIBLE SCENARIOS

### Analog SIP Gateway:

- Operation of analog devices
- Top Quality Fax Over IP
- Modems Over IP







### 4 FXO VoIP Gateway

The beroNet 4 FXO Gateway (BF4004FXOBox) is equipped with 4 analog FXO ports (Foreign Exchange Office). With the 4 FXO Ports a soft PBX can be connected to an ordinary analog telephone provider. The Gateway connects SIP with analog in order to be connected to the public telephone network or to an internal analog connection of the telephone system.

- Connects SIP to analog (FXO), for connection to the public telephone network or to an internal analog port of the PBX
- Expandable with a supplementary module
- Cloud managed
- Cascadable using PCM 19" rack or wall mountable
- High quality Aluminium Housing

### **GENERAL SPECS**

- 4 FXO Ports
- CLIP, CNIP
- Flashhook
- Codecs: G.723.1 and Annex A, G.729 a/b, G.726, (up to 4 channels)
- G.711 and including 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)
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#### ENVIRONMENT

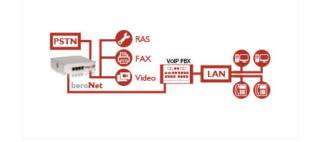
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### **POSSIBLE SCENARIOS**

### Analog SIP Gateway:

Advantages of both worlds: Analog & VoIP
As Failover solution for analog telephone exchange systems

Integration of Fax devices & Modems







## Need more info?

Please use our support portal or check out our services! We can help you with digital training (webinars), consulting, development and extended warranty.



SUPPORT



SERVICES



OUR BLOG







