EBS-E1 SPX

EXTERNAL BOARD FOR SOFT PBX WITH 1 TO 4 E1/T1

Main Characteristics

- Echo canceling in hardware
- DSPs for processing of audio and signaling
- Compatible with open source soft PBX
- Classification of call answering (Call Analyzer)

Models

- EBS-E1 300, with 1 E1 / T1
- EBS-E1 600, with 2 E1 / T1
- EBS-E1 900, with 3 E1 / T1
- EBS-E1 1200, with 4 E1 / T1

Typical Applications

- PBX and PBX IP
- Gateway
- Voice mail
- Conference
- IVR
- DAC

Overview

The EBS-E1 SPX readily presents itself as an excellent option for applications that require E1/T1 links and advanced voice resources.

Critical services related to digital PBX trunking such as signaling (R2D or ISDN) with a public safety answering point, dialing detection DTMF, tone generation (DTMF, MFC and 425Hz), as well as echo canceling, are performed by the module's DSPs. In addition, Khomp's EBS units offer a high availability of resources for performing these services in real time, simultaneously on all channels, without requiring extra processing from the host. This robust architecture allows for the use of the EBS-SPX in high density applications with compact servers.

Audible Response Unit (IVR), Telemarketing, Help Desk, Customer Service, Voice Mail, Call Center, Conference, IP PBX, among other features, are examples of applications in which the EBS-E1 SPX can be used.

Exclusive Resources of the EBS-E1 SPX:

- Network channels: 1 to 4 E1/T1 links
- Network protocols: ISDN and R2 Digital (with up to 120 MFC signaling trunks). It's possible to configure different protocols on each link.
- PBX Protocols: EL7, Line Side, LC and QSIG (SSCT and CT)
- **Optional** EBS-E1 Bypass contingency board for each 2 E1/T1, for handling failures.
- Telephone network information, including causes for rejection and hang ups via AMI and dialplan

- Specific signaling commands made available via AMI and AGI interfaces
- Detection of answering available via dialplan and AMI interface
- Balancing of calls between channels from one or more output routes

Physical characteristics:
- Connectors: 75 Ohms BNC or RJ45 connectors
- Weight: from 2.60 to 2.78Kg

Resources available on the entire EBS family of products

Voice processing

High capacity resources:
- All voice resources available simultaneously on all channels
- DSPs for processing of audio and signaling

Detection and generation of tones (DSP)
- MFC exchange (R2 signaling)
- Detection and generation of DTMF digits, fax tones, 425Hz (dial tone) and TDD messages *(Telecommunications Device for the Deaf)*
- Detection of intercept tones (voice mail, collect calls, etc.)
- Generation of programmable tones (beep)
- Detection of silence and presence of audio before and after answering
- Detection of fax signal and voice mail with standard signaling: 600Hz/450ms – 1000Hz/450ms or 300Hz/250ms
- Detection of programmable frequencies (for example: portability tone, non-standard voice mail, etc)

Audio enhancement features
- DTMF suppression
- Manual and automatic volume control (AGC)
- *Carrier grade* echo canceling in hardware
  - Up to 64ms (512 TAPS) simultaneously on all channels, independent of other resources
  - Convergence and automatic delay adjustment during the entire call
  - Compatible with ITU-T G.165 and G.168 norms (2000 and 2002)

High availability

- 2 Ethernet ports for server connection (network redundancy)
- Server redundancy (supports virtual IP)

OAMPT

- Automated installer for updating and implementing new systems
- Web system for configuration, monitoring and diagnostics
- Native integration with SNMP
- Signaling analyzer
- Remote monitoring in real time (via web)
- Web interface for control, visualization and download of logs

Physical Characteristics

- Standard 1U Module and 1/2 19" rack
- Measurements in mm: 44.5 (height) x 220.5 (width) x 280 (length)
- Power source: Full Range (100~240Vac - 50/60 Hz)

Compatibility

- Compatible with Asterisk®

Guarantees and Certifications

- Factory warranty 3 years
- The entire EBS line is Anatel certified
- ISO 9001:2008 Industry certified

Call signaling and handing

- Detection of collect calls through recognition of tones, signaling or double answering
- Call progress for generation of call control events in FXO interfaces and PBX protocols
- Classification of call answering *(Call Analyzer)*

EBS - E1 Bypass
EXCLUSIVE ACCESSORY FOR EBS-E1

EBS-E1 Bypass is a contingency device for products of the EBS family with E1/T1 links. With it, it is possible to handle server failures by transferring from one E1/T1 link to another.
Developed for exclusive use on the Khomp EBS-E1, the EBS-E1 Bypass functions with every 2 E1/T1 links, inside the equipment.
To acquire this accessory, request a price quote together with your EBS-E1 order.

Additional product images

Rear view of model with 4 E1/T1 links (BNC).

Rear view of model with 3 E1/T1 links (BNC).

Rear view of model with 2 E1/T1 links (BNC).

Rear view of model with 1 E1/T1 link (BNC).

Rear view of model with 4 E1/T1 links (RJ45).

Example of 7 EBS modules arranged in a standard 19'' rack

Application Model

EBS-E1 SPX
APPLICATION MODEL

OPERATOR OF FIXED TELEPHONY

E1

ETHERNET

EBS-E1 Model with 3 E1s

EBS SERVER PRO

SIP

SIP DEVICES

IPS 200   IPS 300   IPS 212   VIP WALL   IP WALL