EBS-E1

EXTERNAL BOARD WITH 1 TO 4 E1/T1

Main Characteristics

- DSPs for processing of audio and signaling
- Web interface for control, visualization and download of logs
- Classification of call answering (Call Analyzer)

Models

- EBS-E1 3000, with 1 E1/T1
- EBS-E1 6000, with 2 E1/T1
- EBS-E1 9000, with 3 E1/T1
- EBS-E1 12000, with 4 E1/T1

Typical Applications

- PBX
- IP PBX
- Gateway
- IVR
- DAC

Overview

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

Its voice resources, which include detection of voice mail, detection and suppression of DTMF and AGC, call progress, reproduction and recording of audio messages, detection of fax signals, among other items, are performed in the hardware's DSP, in addition to echo canceling. This robust architecture allows for the use of the EBS-E1 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 can be used.

Exclusive Resources of the EBS-E1:

- Network channels: 1 to 4 E1/T1 links
- VoIP channels: may be acquired separately
- Network protocols: ISDN and R2 Digital (with 30 MFC exchangers per E1/T1 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.

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)

Features programmable via API K3L

Switching of channels:
- Conference calls with up to 5 participants between any channels
- Full commutation between all channels and between modules

Recording and reproduction of voice messages
- Full-duplex mono or stereo recording
- Codecs available for recording and reproduction: G.711 (A-law and μ-law), GSM and ADPCM, PCM8, PCM16 and AMR.
- Reproduction of messages (play) in the PCM8, PCM11, PCM16, A-law and μ-law, GSM and DVI4 (ADPCM) formats

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

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)*

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)

Guarantees and Certifications

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

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

APPLICATION MODEL

ANALOG EXTENSIONS

TRADITIONAL PBX

1 E1

EBS-E1 Model with 3 E1s

2 E1

OPERATOR OF FIXED ELEPHONY

APPLICATIONS SERVER DIALLER IVR

EBS SERVER PRO