EBS-Modular SPX

ALL INTERFACES. ONE PRODUCT.

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Main Characteristics

- All voice resources available simultaneously on all channels
- DSPs for processing of audio and signaling
- Web interface for control, visualization and download of logs
- Classification of call answering (Call Analyzer)
- Compatible with open source soft PBX

Typical Applications

- PBX
- IP PBX
- Gateway
- IVR
- DAC

Models

3 slots for any combination of:

- 1 or 2 E1/T1 links
- 4 FXO analog line interfaces
- 1 or 2 GSM channels
- 8 FXS interfaces

58 COMBINATIONS POSSIBLE

Overview

EBS-Modular integrates GSM, FXS, FXO and E1/T1 interfaces in a single piece of hardware that is compact and flexible, allowing for the development of high performance convergence solutions with great reliability. Can be acquired in accordance with the needs of the application, combining 3 of the following interfaces: 1 or 2 E1/T1, 8FXS, 4FXO, 1 and 2 GSM. Each interface has the same performance characteristics and functionalities as the EBS products, but are combined in a single unit.

Exclusive Resources of the EBS-Modular:

E1/T1
- Modules with 1 or 2 E1/T1 links
- Maximum of 2 E1/T1 per product.
- Also available with RJ45 connectors

And all of the other characteristics of the EBS-E1 SPX family

FXO
- Modules with 4 FXO analog line interfaces

And all of the other characteristics of the EBS-FXO SPX family

GSM
- Modules with 1 or 2 GSM channels
- 1 SIM Card for each GSM channel
- 3dB antenna with cable included with each GSM module

And all of the other characteristics of the EBS SPX family

FXS
- Modules with 8 FXS interfaces
- 1 RJ45 connector for every 4 FXS lines

And all of the other characteristics of the EBS-FXS 240 SPX family

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)

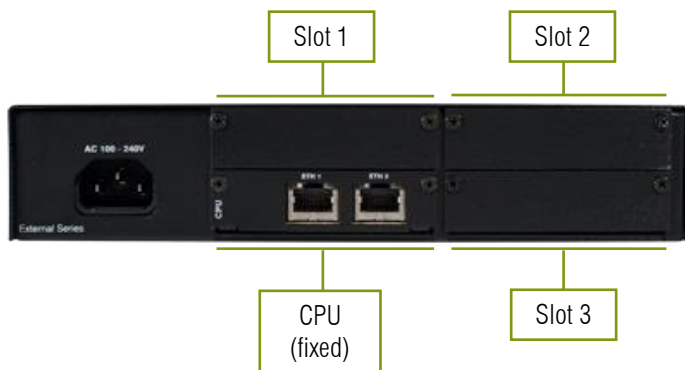### Compatibility
- Compatible with Asterisk®

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

Call signaling and handling

- 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*)

Additional product images

Rear view without interfaces inserted.

Example of assembly with 2 E1, 2 GSM and 4 FXO

Example of assembly with 4 FXO, 2 GSM and 8 FXS

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

Application Model