

## TE406P/TE411P

### Ultimate density and performance with on-board echo cancellation

The **TE406P** and **TE411P** are the next generation of Digium hardware that offer on-board echo cancellation. They supports both E1 and T1 environments and is selectable on a per-card or per-port basis.

Echo cancellation and DTMF detection is supported for four full T1 (96 channels) or E1 (124 channels) and improves voice quality in situations where software echo cancellation is not sufficient, where echo cancellation is not done at the CO, or where CPU utilization must be minimized. By supporting 16ms of echo cancellation over 128 channels, 32ms over 64 channels, or 64ms over 32 channels, this card will perform in the most difficult of environments while providing capacity/length tradeoff. It provides echo cancellation to analog channel banks or for E&M signaling with echo from the far end. The TE406P/TE411P reduces CPU overhead required for software echo cancellation and frees resources for other processes, such as codec translation.

Digium has designed the TE406P/TE411P to be fully compatible with existing software applications and it is fully integrated with the Asterisk open source PBX/IVR platform. Also, the open source driver supports an API interface for custom application development. With the combination of Digium Hardware and Asterisk software, numerous combinations of telephony configurations are possible. From the traditional PBX to VoIP Gateways, Digium solutions are paving the way for a new generation of worldwide communications.

The TE406P and TE411P support industry standard telephony and data protocols, including Primary Rate ISDN (both N. American and Standard Euro) protocol families for voice, PPP, Cisco, HDLC, and Frame Relay data modes. Both line-side and trunk-side interfaces are supported, also included are advanced call features.

The TE406P is for use only with a 5.0-volt PCI slot. The TE411P is for use with a 3.3-volt PCI slot.

Please visit both our web sites at [www.digium.com](http://www.digium.com) and [www.asterisk.org](http://www.asterisk.org).

#### Target Applications

- Legacy PBX/IVR services
- Voice-over Internet Protocol (VoIP) services
- Complex IVR Trees
- "Meet-me-Bridge" conferencing
- VoIP Gateways (supports SIP, H.323 and IAX)
- Calling Card Platforms
- Voice/Data Router (replace expensive routers)

#### PRI Switch Compatibility

- EuroISDN (PRI or PRA) – Q.931/Q.921
- AT&T 4ESS
- DMS 100
- Lucent 5E
- Network or CPE
- National ISDN 2

#### CAS Voice Modes

- Feature Group D
- E&M Wink
- A-Law,  $\mu$ -Law, and Linear Modes Supported

#### Data Modes

- SyncPPP (both Fixed and Dialup)
- Frame Relay
- Cisco HDLC
- Multi-link PPP

#### Echo Cancellation

- G.168 compliant
- 128 taps over 128 channels (16ms over 128 channels)

