

# DIGITAL TELEPHONY CARDS

Digium® cards in the TE series are high-performance, cost effective, digital telephony interfaces which support T1 and E1 environments. The environments are selectable on a per-card or per-port basis. This feature enables signaling translation between T1 and E1 equipment, and allows inexpensive T1 channel banks to connect with E1 circuits. The bus-mastering TE cards improve I/O speed over slave-only architectures, resulting in reduced CPU usage and increased card density per server. The cards provide the power to interconnect traditional telephony systems with emerging Voice-over IP (VoIP) technologies.

The TE cards support industry standard telephony protocols, including Primary Rate ISDN (both N. American and Euro Standard) protocol families. Both line-side and trunk-side interfaces are supported, as well as advanced call features.

The TE cards have been designed to be fully compatible with existing software applications. They are fully integrated with Digium's Asterisk® software. The open source drivers for these cards support an API for custom application development. With the combination of Digium hardware and Asterisk software, numerous telephony configurations are possible. From the traditional PBX to VoIP Gateways, Digium solutions are paving the way for a new generation of worldwide communications.

## 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 – Network or CPE

## PRI Switch Compatibility

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

## Framing Types

Superframe (D4)  
Extended Superframe (ESF)  
Channel Associated Signaling (CAS)  
Common Channel Signaling (CCS)

## Coding Types

Alternative Mark Inversion (AMI)  
Bipolar with Eight (8) Zero Substitution (B8ZS)  
High Density Bipolar of Order Three (3) Code (HDB3)\*

*\*Optional Cyclic Redundancy Check 4 (CRC4)*



## 4 Port T1/E1 PRI

4 Digital Interface Ports  
Selectable T1, E1 or J1 Mode / Half-Length, Full-height, Digital Card  
TE405P for use only with a 5.0V PCI 2.2 compliant slot.  
- Bundled with VPMOCT128 Echo Cancellation Module as TE407P  
TE410P for use only with a 3.3V PCI 2.2 compliant slot.  
- Bundled with VPMOCT128 Echo Cancellation Module as TE412P  
TE420 for use only with a PCI-Express 1.0 compliant slot.  
- Bundled with VPMOCT128 Echo Cancellation Module as TE420B

## 2 Port T1/E1 PRI

2 Digital Interface Ports  
Selectable T1, E1, or J1 Mode / Half-length, Full-height, Digital Card  
TE205P for use only with a 5.0V PCI 2.2 compliant slot.  
- Bundled with VPMOCT64 Echo Cancellation Module as TE207P  
TE210P for use only with a 3.3V PCI 2.2 compliant slot.  
- Bundled with VPMOCT64 Echo Cancellation Module as TE212P  
TE220 for use only with a PCI-Express 1.0 compliant slot.  
- Bundled with VPMOCT64 Echo Cancellation Module as TE220B

## 1 Port T1/E1 PRI

1 Digital Interface Port  
Selectable T1, E1, or J1 Mode / Half-length, Low Profile, Digital Card  
TE122 for use only with a 3.3V or 5.0V PCI 2.2 compliant slot.  
- Bundled with VPMOCT032 Echo Cancellation Module as TE122B  
TE121 for use only with PCI-Express 1.0 compliant slot.  
- Bundled with VPMOCT032 Echo Cancellation Module as TE121B

# Digium, The Asterisk Company



The Asterisk Company

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For more detailed information  
about Digium's ESP Program,  
please visit [www.digium.com/esp](http://www.digium.com/esp)

## DIGIUM®

Digium is the creator, sponsor, and innovative force behind Asterisk®, the industry's first and world's most popular open source telephony software. Additionally, Digium provides a variety of VoIP communication solutions that fit the needs of small, medium, and large businesses. Digium's product lines include commercial business phone systems, as well as software, hardware, and other components needed to create powerful custom telephony solutions.

## BUSINESS COMMUNICATIONS SYSTEMS

Digium's line of award winning Switchvox IP PBX phone systems are built on a strong foundation of our open source Asterisk software. Switchvox solutions are designed to be extraordinarily easy to use and provide features that most small and medium businesses had previously considered out of their reach.

Switchvox's web-aware unified communications capabilities are unique in an industry cluttered with old technology. Integration with web and back office applications turns your phone system into a powerful platform for employees' productivity and efficiency. Its web-based Switchboard provides an intuitive control panel to assist with call management in real time while unifying phone calls, faxes, e-mails, instant messaging, Google Maps, CRM systems and other web tools from an easy-to-use, centralized control panel.

We're able to offer these PBX systems with superior capabilities for a fraction of the cost of traditional vendors' products because the shift to an open source software foundation represents a dramatic leap forward in telephony technology.

## CUSTOM COMMUNICATIONS SOLUTIONS

Digium empowers users, developers and integrators to build custom telephony solutions by offering a variety of software, hardware, and third-party components. From a simple phone system, to a sophisticated telephony application, Digium makes it possible for the world to communicate in an infinite number of ways at a fraction of the cost of proprietary solutions.

At the heart of these offerings is Asterisk, the powerful open source telephony development toolkit. Asterisk is free software that turns an ordinary computer into a feature-rich voice communications platform. Its flexible architecture lets you configure it as an IP PBX, a voicemail server, IVR server, VoIP gateway, call recorder, automatic call distributor and virtually any other voice-enabled application you can imagine.

To support Asterisk-based solutions, Digium offers a full line of high quality analog and digital interface cards to connect your solution to the public telephone network. In addition, Digium offers add-on software components like Fax For Asterisk, G.729 codec, and high performance echo cancellation (HPEC) to enhance your solution.