

The TelcoBridges Tdev™ TMP6400 is a high-density computer telephony (CTI) development platform that meets the needs of service providers looking to expand their value-added services (VAS), providing a cost-effective foundation for introducing new offerings while rapidly scaling to meet the needs of growing subscriber numbers.

Whether deployed on a wireline, wireless or VOIP network, the TMP6400 delivers seamless voice interoperability across TDM and IP networks. However the TMP6400 builds on those capabilities with an advanced application platform for delivering ring-back tones, unified communications, pre-paid / post-paid calling, conferencing, Fax over IP (T.38), voicemail, and other enhanced services to subscribers irrespective of access protocol or device. Leveraging TelcoBridges' Toolpack™ software toolkit, and a choice of host deployment platforms, the TMP6400 provides the ability to rapidly develop and deploy applications that tie together real-time communications from the network with stored external data sources to provide unique subscriber-specific services.

Offering the industry-leading highest port density and the lowest operating cost—an average 66% less power consumption than competing products offering similar capacity—the fully field-upgradable Tdev TMP6400 supports the drive by service providers to increase their profitability, while reduce the environmental impact of their network footprint.

FEATURES & BENEFITS

Carrier grade: Architected to exacting industry standards, the TMP6400 is designed to meet the need for reliability that service providers and their customers demand. The TMP6400 features a non-blocking architecture providing full availability of call channels and other system resources (IVR, VOIP).

Flexibility: A network-agnostic platform, the TMP6400 supports multiple 'any-to-any' switching as well as transcoding support for all major wireline, wireless and Internet voice codecs. With separate chipsets for signaling, transcoding and interactive voice response (IVR), the TMP6400 provides true full channel availability.

Density: Supporting up to 64 T1/E1/J1, 3 DS-3 or 1 STM-1 interfaces for a total of 2048 universal voice channels per unit, the TMP6400 offers significant density in a 1U or 2U form factor. The TMP6400 enables consolidation of multiple devices for signaling, transcoding and IVR into a single box.

High availability: The TMP6400 features full redundancy with fault-tolerant hardware and software components.

For more information on how the Tdev TMP6400 can help transform your value-added service offerings, visit www.telcobridges.com.

> Tdev TMP6400



2U form factor with redundant power supplies shown here;
a 1U unit with a single power supply is also available

TMP6400 SPECIFICATIONS

NETWORK INTERFACES

Telephony

8 to 64 T1/E1/J1 TDM ports (hardware & software upgradeable); or
1 to 3 DS3 (software upgradeable) + 2 T1/E1 for SS7 signaling or BITS
synchronization; or
1 OC3/STM-1 (with Automatic Protection Switching (APS)) + 2 T1/E1 for SS7
signaling or BITS synchronization

Capacity

TDM: 192 to 2048 channels
VoIP: 192 to 2048 universal channels (vocoder dependent) per device; even
more using less complex codecs such as G.711

WAN IP

Dual 100/1000 Base-T for VoIP traffic

LAN

Dual Redundant 100/1000 Base-T

MEDIA PROCESSING

PCM Coding A-law to μ -law encoding and conversion

Universal Codecs G.711, G723.1, G.726, G.729ab, T.38 (2048 channels)

DTMF Relay RFC2833, SIP INFO method, in-band

Echo Cancellation G.168 – 128ms tail length on all channels simultaneously

Fax Support T.38 fax relay, Group 3, Fax/modem bypass,
G.711 fax fallback

Optional Codecs* AMR, AMR-WB (G.722.2), GSM-FR/GSM-EFR,
EVRC/QCELP, G.728, G729eg, iLBC

> Independent dynamic codec selection per channel

APPLICATION AND DEVELOPMENT SOFTWARE

TB Media Gateway™ application (w/source code)

> TDM-to-TDM switching, TDM-to-IP-to-TDM gateway, IP-to-IP hairpinning

> Transcoding, trunking, call routing, fax relay and other functions

> Call Detail Records (CDR): user-definable text files and RADIUS

> Call routing engine

>> Fully scriptable (based on Ruby scripting language)

>> CLI (ANI)-based routing and translation

>> DID (DNIS)-based routing and translation

>> Least cost routing (with time of day/week/year scheduling and other criteria)

>> Routing based on Nature of Address (NOA), Numbering Plan Indicator (NPI),
and others

>> Pre-and post-routing digit translation

> High availability

Toolpack Application Development Environment

> Pre-developed C++ classes (call bridging, call routing, IVR, embedded web-
based GUI, voicemail, ODBC database access/RADIUS for CDRs, etc.)

> Linux, Intel/SPARC Solaris, Windows OS environments

REGULATORY COMPLIANCE

EMC FCC Part 15, EN55022, EN61000, ENV50204

Environmental Designed to meet NEBS Level 3

Safety CE, UL60950, CSA C22.2 No.60950-1-03

SIGNALING

ISDN PRI (14+ variants), National ISDN-2, Euro ISDN, DMS100, DMS250, 4ESS,
SESS, Japan INS-NET1500

SIP: RFC 3261 User Agent, SIP Authentication

CAS R2: scriptable state machine enables user-generated variants

SS7*: (20+ variants) MTP2, MTP3, SCCP, TCAP and ISUP

> Up to 64 SS7 links, up to 2048 CICs, HSL, redundant SS7, single or multiple
point codes per device

SIGTRAN*: SCTP, M2PA, M2UA, M3UA

H.248: ITU-T H.248.1

* Additional licenses required.

QUALITY OF SERVICE (VoIP)

Dynamic jitter buffer (adaptive and fixed), Packet loss concealment,
suppression; Denial of Service (DoS) protection for VoIP media

IVR FEATURES

DSP-based plug-in modules; base configuration of 512 channels; field
upgradeable to 1024, 1536 and 2048 channels

> Play and record

> DTMF detection, generation, suppression

> Voice Activity Detection (VAD), Comfort Noise Generation (CNG), Automatic
Gain Control (AGC)

MANAGEMENT INTERFACES

1 DB-9 serial console port with RS-232C adapter

MANAGEMENT & CONTROL

> SNMP v2 GET of individual appliance configuration and statistics

> TelcoBridges Element Management System (Toolpack)

>> Live configuration and software upgrades via HTTP

>> Monitoring via HTTP

>> Configuration of multiple devices in the same system with a single interface

HARDWARE SPECIFICATIONS

Physical Interfaces

PSTN: 8 to 64 T1/E1/J1 via RJ-48, 1 to 3 DS3, Dual-BNC STM-1 optical or
electrical links (with APS).

IP: Dual interface 100/1000 Base-T Ethernet VoIP ports

OAM & Control: Dual redundant 100/1000 Base-T Ethernet ports

Dimensions

1U with single power supply

> 1.75" H (44,5 mm) x 17.4" W (442 mm) x 16" D (406 mm)

2U with dual power supplies

> 3.5" H (88.9 mm) x 17.4" W (442 mm) x 16" D (406 mm)

Environmentals

Weight: 1U model @ 15lbs (6.8kg); 2U model @ 20 lbs (9.1 kg)

AC Power: 90 to 260 Volts AC, 47/63 Hz

DC Power: -40 to -60 Volts DC

Power Consumption: 128 W fully loaded

Operating temperature range: 0 to +55 °C, 95% rel. hum. non-condensing

Storage temperature range: -10 to +75 °C, 95% rel. hum. non-condensing