



KX-TDE100/200/600 BROCHURE

EVERY  
**CALL**  
MATTERS



EVERY  
CALL  
MATTERS

**TDE**  
**IP-PBX**

# ADVANCED BUSINESS COMMUNICATIONS



Panasonic KX-TDE series are advanced business communication platforms designed to leverage the most out of your IP Network. Targeting single or multi-site, small, medium and large businesses, these systems provide advanced unified communication solutions to give your business the right set of tools to have a competitive edge. The KX-TDE series also support a range of smart and easy to use wired and wireless terminals designed to enhance business productivity.

## ▶ YOUR BUSINESS INVESTMENT - PROTECTED

Businesses need to be able to effectively communicate today - yet want to make sure that they are properly equipped to handle the growing demands of their future communication needs.

Convergence ready, modular, extensible, flexible, SIP enabled, and providing built-in support for unified communications productivity applications; the KX-TDE series are ideal communication platforms for customers to solve all their business communication needs today as well as in the future as they embrace Unified Communications together with full IP telephony. These systems are designed to be easy to install, cost effective to run and quickly provide a good return on investment.

Convergence ready – the systems can integrate with your desktop tools and help improve communications with customers, suppliers and colleagues alike.

## ▶ ADVANCED PLATFORMS TO EMPOWER BUSINESS COMMUNICATIONS

The KX-TDE communication platforms allow businesses to enable fast and efficient collaboration over any distance - and helps businesses to efficiently connect and interact with customers, colleagues and partners with ease.

By combining the power of voice and data over converged high speed IP networks, the KX-TDE series provide companies with a flexible solution that lets businesses leverage the latest advances .



THE TDE SERIES COMMUNICATION PLATFORMS



## ▶ EASILY UPGRADE TO IP COMMUNICATIONS

A straight forward and smooth migration path is the key for customers upgrading to converged solutions.

Panasonic offers a simple yet reliable solution to make it easy for existing customers with KX-TDA Hybrid PBX systems to effortlessly migrate or upgrade to IP Telephony, simply by exchanging the Main Processor Card. Customers can then choose to deploy IP telephony, SIP trunking, or even implement unified communications productivity applications - as and when their business needs demand for it. This provides businesses with simple and evolutionary step to take advantage of all the new features and benefits from true convergence, whilst protecting investments and allowing adoption of new business solutions.



## ▶ RELIABILITY

The reliability of Panasonic TDE communication platforms are assured by rigorous quality control and testing before these systems leave the factory, guaranteeing you piece of mind.

The KX-TDE series are designed with no need for hardware maintenance with all programming changes possible from any local or remote location.

Talk to your local Panasonic dealer to understand how your business can benefit from the application enabled KX-TDE communication systems.



# WIDE CHOICE OF STYLISH TERMINALS



With the KX-TDE series - businesses can choose from any type of telephone terminals - the stylish IP telephones, DECT wireless or Digital terminals. Supporting a family of digital and even analogue phones - the KX-TDE series give companies an extensive and cost effective choice of solutions to suit their specific business telephony needs.

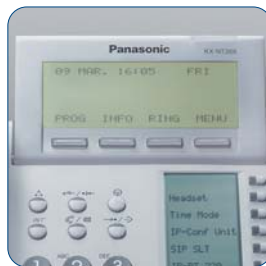
Optional Bluetooth Module



Self Labelling Keys



Easy To Read LCD Display



Easy To Navigate



Multi-tilt Angle Adjustment



## ▶ NT300 SERIES IP TERMINALS - A PERFECT TEAM PLAYER

Panasonic KX-TDE series support the KX-NT300 Series IP telephones that are stylish, intuitive, user friendly, and comfortable to use by all system telephone users.

The NT300 series IP telephones take you to a new dimension in audio experience, communications productivity, broadband network connectivity and customer care. These IP telephones bring you the power of the advanced KX-TDE systems - allowing quick access to the entire spectrum of the PBXs additional features and applications.

The IP telephones offer superb voice quality thanks to hands free speakerphone, acoustic echo cancellation, and support for wide-band G.722 audio.

Packed with a whole host of features, the KX-NT300 Series IP telephones could not be any simpler to use. In addition to all the regular functionalities - the IP Phones range includes:

- Large Easy to Read Alphanumeric LCD Displays
- Electronic self-labelling keys
- Bluetooth module providing wireless headset support
- Easy navigation key
- A 2nd IP port to reduce cost and desktop cable clutter
- Double tilt adjustment allowing independent tilt control for phone base and LCD display

All these added features are designed to provide you with enhanced desktop usability and comfort.



## ▶ INTEGRATION WITH YOUR DATA NETWORK

The NT300 Series IP terminals connect directly into your data network, and provide IP-Telephony features with enhanced levels of functionality and comfort compared to the already proven digital system terminals. Users can easily connect their PCs or work laptops to the company Local Area Network (LAN) using the built-in 2-port Ethernet switch on the back of the IP telephones - reducing desktop cable clutter. The advanced functionalities of these new IP system terminals will surely surprise you.



## ▶ SIP TELEPHONE SUPPORT

With built-in support for the latest SIP technology, the KX-TDE series can support SIP telephones as extensions. Companies can now use either Panasonic or standard off-the-shelf SIP phones and connect them to the KX-TDE systems as IP extensions to support in-house office users, remote workers and even road warriors connecting back to the office over high-speed broadband IP network from virtually anywhere.

## ▶ ADVANCED DIGITAL PROPRIETARY TERMINALS

The Panasonic KX-DT300 Series advanced desktop phones are designed for business users who require a range of feature-rich telephony devices to match their constantly changing business needs.

These easy to use, advanced business class telephone devices are designed for effective daily communications. Connected to the KX-TDE systems, the digital terminals are extremely reliable and provide a wide range of features to support the right solution for all your business applications.

# ANYTIME ANYWHERE COMMUNICATIONS



The KX-TDE series seamlessly integrate with unified communications productivity applications for improved business efficiency - whether you use IP, Digital, DECT wireless Terminals or even Smart Mobile Devices. Empower your staff to handle business communications on any device - anytime, anywhere.

## ► COMMUNICATION ASSISTANT PRODUCTIVITY APPLICATION SUITE

The Panasonic Communication Assistant productivity software suite is a highly intuitive unified communications (UC) solution that blends easy point and click telephony together with presence, availability, Microsoft Outlook® integration, visual voice messaging and a variety of collaboration tools to simplify and enhance real-time communications for business telephony users.

Designed for easy installation and maintenance - Communication Assistant can be deployed without the need of any additional server - making it an ideal solution for small to medium size businesses with limited IT knowledge and staff while enterprise businesses requiring scalability to support large deployments, thinclient support and enhanced features - can choose Communication Assistant (CA) server based deployments.

## ► COMMUNICATION ASSISTANT - HIGHLIGHTS

- Easy & User-friendly Operation
- Team Management & Collaboration
- Integrated Presence and Availability
- Effective Visualisation
- Business Application Integration
- IP Camera Integration

Mode	Targeted Solution	Benefits
Communication Assistant Basic Express	Point and click unified communications for desk based or remote workers	Helps you visually control office communications from your PC.
Communication Assistant Pro	Point and click unified communications for desk based or remote workers. Provides users with real-time presence information	Helps you visually control all your communications from your PC. Stay informed of users availability in real-time. Provides Agent functionality for informal call centres.
Communication Assistant Supervisor	Team supervisors to monitor employees' call activities.	Helps you to visually manage all your group members telephony activities.
Communication Assistant Operator Console	A company receptionist can use the Console application to quickly and easily handle multiple calls professionally.	Helps you visually control all your communications from your PC using either mouse clicks or quick keyboard operations.



CA Pro

REMOTE WORKER USING SOFTPHONE



CA Basic Express

OFFICE WORKER



CA Operator Console

RECEPTIONIST HANDLING CUSTOMER CALLS



CA Supervisor

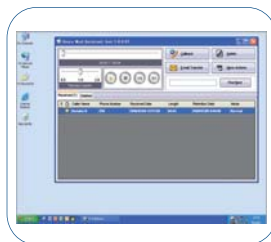
SUPERVISOR SUPPORTING TEAM MEMBERS



COMMUNICATION ASSISTANT TOGETHER WITH THE KX-TDE SERIES ENABLES BUSINESSES TO IMPLEMENT UNIFIED COMMUNICATIONS - ENHANCING BUSINESS PRODUCTIVITY.

## ▶ COMMUNICATION ASSISTANT - VM ASSISTANT MODULE

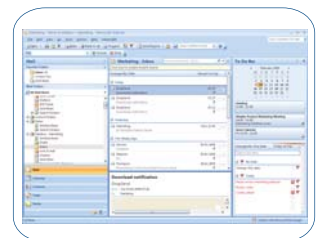
Companies using the optional advanced KX-TVM Voice Messaging solution - can allow Communication Assistant users to visually manage their voice mails with Voice Mail Assistant.



VM Assistant module allows Unified Messaging functionality - allowing users to access and retrieve in the order they prefer - any voice messages left for them. Users can listen to the messages - on either their desk phone, or on their PC and even download messages for forwarding to any work colleague via email.

## ▶ INTEGRATION WITH MICROSOFT® OUTLOOK®

Communication Assistant seamlessly integrates with Microsoft® Outlook® allowing users to easily dial contact phone numbers and receive incoming call pop-up alerts. Focus on your business communications from within MS Outlook - for those who use Outlook as their primary communication tool.



## ▶ COMMUNICATION ASSISTANT OPERATOR CONSOLE

Communication Assistant operator console application is designed for the busy office receptionists - offering on top of the standard CA Pro features - console features - optimised to handle multiple telephone calls using either mouse clicks or quick keyboard operations. The console application allows operators to quickly, efficiently and professionally handle all company communications between customers and colleagues.

# WIRELESS MOBILITY SOLUTIONS



Businesses can increase employee availability and enhance customer service by providing un-hindered access to wireless telephony. Respond to customers, suppliers and colleagues alike, without being tethered to just one location, saving your business time and money.

Easily see Incoming Calls and Messages



Easily to Dial in Dark Conditions



Easy To Read Colour LCD Display



Headset Jack for Hands-Free Access



Splash and Dust Resistant



## ▶ MOBILE/GSM INTEGRATION FOR ANYTIME ANYWHERE MOBILITY

Mobile phones are a compelling way for doing business outside of the office. The KX-TDE series support the latest mobile phone integration technology - enabling calls directed to an office extension to be redirected to a Mobile telephone at a lower, fixed cost. Calls can then also be transferred back to a colleague's office extension or even back to the office voice mail system for graceful handling.

Mobile telephones can be integrated into ICD groups which allow incoming calls to ring both the desk phone and the mobile handset simultaneously, allowing businesses to publish "one-number" access while providing users with the added flexibility to pick-up calls from either their desk phone or mobile phone.

## ▶ MULTI-CELL DECT WIRELESS FOR OFFICE MOBILITY SOLUTION

The Panasonic office mobility solution lets you carry on your conversation over lightweight, business-smart wireless DECT terminals while you are away from your desk or moving around the office. Using Wireless XDP (eXtra Device Port), users can set their DECT wireless handsets to have the same extension as their desk phone, and then receive calls even when away from their desk.

The Multi-Cell DECT System is an integrated wireless mobility solution providing automatic hand-over between installed wireless cells - enhancing coverage and giving you true communication mobility even within large premises.



- Colour LCD Display \*1
- Illuminated Keypad
- Multiple Language Display
- Speakerphone
- Programmable Soft Keys
- PBX functionality support
- 200 Entry Phonebook
- Headset Compatible
- 10 Ringer Melodies \*1
- 10 Programmable Hot Key Dialling
- Vibrate Alert\*2
- Meeting Mode\*2
- IP64 Dust and Splash resistant\*3

\*1 KX-TCA175 and KX-TCA275 only  
 \*2 KX-TCA364 and KX-TCA275 only  
 \*3 KX-TCA364 only

## ▶ BUSINESS MOBILITY TERMINALS

With standard, compact business or tough-type DECT that is able to handle harsh environments - you can be assured that no matter what your needs - with Panasonic; you have the DECT business mobility solution of your choice.

The KX-TCA275 DECT handset combines small size, light weight and durability, with a host of powerful business telephony features, while the KX-TCA175 is a perfect choice for users who want good performance in a standard size handset. In addition, to handle tough environments - the KX-TCA364 ruggedised handset meets strict dust and splash resistant IP64 standards.



## ▶ EXTENDING OFFICE MOBILITY WIRELESS COMMUNICATION

The KX-TDE series allow wireless communications over an extended range by using multiple and High Density cell stations that boost the flexibility and mobility of your wireless handsets.

The system provides automatic hand-over between installed wireless cells - enhancing coverage and giving you true communication mobility even within large premises.



**KX-A272**  
Repeater



**KX-TDA0155**  
2ch Cell Station



**KX-TDA0156**  
4ch Cell Station



**KX-TDA0158**  
8ch Cell Station



**KX-NCP0158**  
8ch IP Cell Station

# ADVANCED MESSAGING SOLUTIONS



Advanced voice messaging applications provide enhanced call handling flexibility. Voice guidance provides a user friendly interface to simplify and streamline business communications by efficiently routing customer calls to the correct department or agents. Further, voice mail storage facility can be used for graceful offline call handling during busy hours - increasing overall productivity and providing better customer service.

## ▶ ENHANCED SIMPLE VOICE MAIL (ESVM)

Key applications that can be implemented using the built-in or optional ESVM cards include: user as well as group voice mail services, voice guidance based call routing, transfer out from voice mailbox to MSG functions, multi-level auto-attendant with OGM recordings, queue messages, CO-to-CO end of call detection, mobile phone extension support and many more.

## ▶ KX-TDE SERIES OFFERS THREE TYPES OF MESSAGING SOLUTIONS:

**1. Built-In Solution:** Built-in 2 channel Enhanced Simple Voice Messaging (ESVM) solution.

**2. Optional Solution:** ESVM2 (Option: KX-TDA0192) or ESVM4 (Option: KX-TDA0194) Enhanced SVM cards provide added message recording and outgoing message handling capabilities that help ensure calls from your customers are routed through properly and are always answered or processed gracefully. These optional cards can be configured to run in three modes for complete flexibility:

**SVM Mode:** For Simple Voice Mail only features.

**MSG Mode:** For DISA functionality leveraging Outgoing Message recordings. The MSG mode can also support mobile telephone extension integration allowing for mobile telephones to be used as PBX extensions. Companies can even upload from PC high-quality sound files (8kHz, 16 bit .wav file) that can be played as OGM recordings – for various outgoing message applications.

**SVM + MSG Mode:** Allowing customers to have both a simple voice mail as well as DISA functionality. Both Built-in and optional ESVM cards provide the ability to assign uploaded High Quality custom music files as Music-on-Hold announcements.

**3. External Solution:** Companies requiring enhanced voice messaging capabilities beyond the functions found on the optional ESVM cards can upgrade to the external KX-TVM50 or KX-TVM200 messaging solutions providing enhanced message applications and customer service. These external optional voice processing systems come fully packed with business class voice messaging features, designed to help businesses handle every call in a courteous and efficient manner.



## ▶ KX-TVM KEY FEATURES:

The KX-TVM50/TVM200 offer a host of voice messaging based features such as:

- Voice Messaging Service
- Automated Attendant Service
- E-Messaging (email notification with voice message attachment)
- Interview Service
- Voice Mail Menu on LCD of system phones for Easier Operation
- Caller Name Announcement
- Caller ID / CLIP based Greetings
- Call Screening
- Call Recording
- Holiday Service
- Multi-Lingual Voice Prompts
- Fax Detection / Routing

With the KX-TVM50 and KX-TVM200 - Panasonic delivers new levels of communication ease and efficiency that can help any business achieve higher productivity.



## ▶ CENTRALISED VOICE MAIL

For networked multi-site deployments – centralised voicemail is possible for up to 8 networked IP PBX systems. Extension users from each branch site can forward calls when in busy or no-answer state to the central voice messaging system and access messages using VM access codes.

# CALL CENTRE SOLUTION



The KX-TDE series come with built-in sophisticated Call Centre solutions flexible enough for most customer needs - allowing businesses to efficiently route customer calls to appropriate departments, helpdesks or sales teams.

## ▶ PACKED WITH CALL CENTRE FEATURES

Whatever the size of your company, efficient and courteous handling of telephone calls is a major factor in a successful business. Panasonic provides multiple solutions for small, medium and large Call Centres, to help control and make use of high volume calls. The following call centre features are integrated into the PBX and can be expanded to suit more sophisticated call centres in combination with CTI software solutions available in the market:

- Intelligent and Automatic Call Routing
- Flexible Routing to distribution groups
- VIP call routing
- Automated Attendant
- Call Queue with waiting message
- Walking Extensions ('Hot Desking')
- Supervisor call queue monitoring

## ▶ CALL DISTRIBUTION

The KX-TDE series supports Incoming Call Distribution (ICD) Groups - the basic building blocks to implement Call Centre functionality. Incoming calls received by an ICD group can be distributed to Call Centre agents using supported call distribution methods and when a pre programmed number of agents in the group are busy, additional incoming calls can be put in a queue. Agents can also be assigned to multiple ICD groups - allowing for a smaller number of agents to handle calls in multiple ICD groups in order to operate a flexible call centre. The system provides four standard call distribution methods. Further, it even allows prioritising incoming call distribution groups for added flexibility. These distribution methods are:

- Longest Idle Extension
- Uniform Call Distribution (UCD)
- Priority Hunting
- Ring



## ▶ SUPERVISOR FEATURES

The KX-TDE series support built-in Call Centre Supervisor features - allowing management and performance overview in real-time of calls in queue and agent call handling. The supervisor can:

- a. Monitor each agent's phone status
- b. Remotely log-in a logged-out agent
- c. Log-out agent's extension.

In addition, the supervisor extension, can either use a 6-line system display telephone or Communication Assistant supervisor application to manage and monitor various important Call Centre Statistics showing items such as:

- Total number of calls handled
- Average wait time
- Lost calls etc



## ▶ AGENT FEATURES

The system supports extensive standard call centre agent features. Agents can work more efficiently using the following built-in features to help increase agent productivity as well as overall business productivity:

- Log-in/Log-out (Specific ICD Group, or All Groups)
- Automatic Log-out
- Wrap-up (Incoming / Outgoing calls)
- Hot Desking / Walking Extensions for Virtual Extensions
- Account Code (Qualify Code)

## ▶ A STEP-BY-STEP APPROACH TO CALL CENTRE SOLUTION

Companies requiring advanced Call centre functionalities can use the optional ACD Report Server (KX-NCV200). This allows companies with all types of customer-facing departments and call centres to benefit from sophisticated real-time agent and queue monitoring, detailed performance monitoring and analysis, comprehensive reporting and overall call centre performance visualisation.

With Panasonic optional NCV200 - call centre customers now have a clear choice and upgrade path for their call centre businesses. Enhance your call centre businesses with optional NCV200.

# SOLUTIONS FOR ALL INDUSTRIES



For businesses, personal contact with customers is a significant factor for success. The telephone system is at the heart of all communications, whether it is conveyed by IP, by traditional telephony or by employing wireless technology. What is crucial for businesses is quality and reliability. Panasonic provides applications and solutions that address all these crucial business needs.

## ▶ HOSPITALITY

The Hospitality market requires the communications system to be flexible, economical and easy to use, with maximum reliability and adaptability for the individual needs. An essential need of PC integration to allow guest room billing and system management has also become a requirement of this sector. Panasonic's KX-TDE series are perfectly equipped with all these necessary hospitality features and solutions.

## ▶ MEDICAL

To be able to work effectively and comfortably in a medical environment, Panasonic provides a communication platform that can adapt perfectly to fit the needs of the health industry. With DECT and 3G/GSM wireless mobility, advanced call distribution and flexible computer integration - Panasonic provides an effective solution and allows easy integration with life saving technologies.

## ▶ CONSTRUCTION

Speed and flexibility are an essential way of working in the construction industry, and the Panasonic KX-TDE series can adapt quickly to your changing business requirements. Need to add conferencing solutions or wireless capability? KX-TDE series provides all the solutions you need to keep pace with easy setup of new devices and applications. Customers can be proud to own a Panasonic system.

## ▶ LOGISTICS

You need it there and you need it fast. The Panasonic KX-TDE series provides solutions combining the best of DECT wireless and mobile phones integrated with business applications to help keep you and your staff in touch with real-time 'presence' applications. Stay ahead of the competition with an advanced business solution that can keep pace with changing business requirements.



## ▶ CUSTOMER SERVICES

We all would like to offer our customers the best service we possibly can, and while you might be the best today, what about tomorrow? Panasonic communication platforms offer service-orientated solutions, which can be expanded to meet your customer needs now and well into the future.

## ▶ LEGAL

Professional on time communications is an essential part of business in the legal sector, and the Panasonic KX-TDE series provides a solution to meet those needs with solutions for conference calls, mobile workers and advanced applications to integrate with your office business environment.



## ▶ SALES

Staying in touch with colleagues and customers is a daily task for companies involved in selling products and service solutions. The KX-TDE series provides advanced solutions to meet those needs. From integrated voicemail, audio conferencing to real-time presence information, The KX-TDE series provide the key to the best in communications.

## ▶ HEALTH SERVICE

A telecommunication system in nursing facilities and resident housing must have a high level of reliability to meet the requirements of staff. Panasonic's KX-TDE series meet these requirements and offer custom-made solutions that can be integrated to support administrative tools and emergency call systems. The investment ensures security by flexible, advanced technology.



***st* CALL**

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EVERYTHING MATTERS

## System Capacity

Type		KX-TDE100	KX-TDE200
Maximum Trunks and Extensions	<b>Total Number of Trunks</b>	128	128
	Trunk (Physical Trunk Card)	120	128
	Trunk (Virtual Trunk Card*1)	32	32
	<b>Total Number of Extensions</b>	256	256
Maximum Terminal Equipment	Extension (Physical Extension Card)	160	256
	Extension (Virtual Extension Card*1)	128	128
	IP-Proprietary Telephone (IP-PT) and IP Softphone	64	64
	SIP Extension	128	128
	<b>Telephone</b>	256	256
	Single Line Telephone (SLT)	96	128
	KX-T7600 series Digital Proprietary Telephone (DPT)	128	256
	KX-T7560/KX-T7565 DPT	96	128
	Other DPT	32	128
	Analogue Proprietary Telephone (APT)	24	64
	IP-PT	160	160
	IP-PT *2 (supported by IP-EXT16 card)	96	128
	IP-PT *3 (supported by IPCMPR card)	64	64
	SIP Extension	128	128
	<b>DSS Console</b>	8	8
	<b>Basic Cell Station (CS)</b>	32	32
	<b>High-Density CS</b>	16	16
	<b>Portable Station (PS)</b>	128	128
	<b>Voice Processing System (VPS)</b>	2	2
<b>Doorphone</b>	16	16	
<b>Door Opener</b>	16	16	
<b>External Sensor</b>	16	16	
<b>External Relay</b>	16	16	

Note: For non peer-to-peer calls via the DSP card, calls cannot be made or received when all of the card's resources are being used.

\*1 For Virtual Trunks and Extensions, a DSP card is required. Maximum 1 card per system.

\*2 KX-NT136, KX-NT265, and NT300 series \*3 KX-NT300 series and KX-NT265 (software version 2.00 or later only)



**Standby power consumption reduced by 45%**

Standby power consumption 2.8 W / Port  
Compared to the 2003 model KX-TDA100/TDA200

## Option List

	Model	Description	
Main Processing Card	KX-TDE0101	IP Convergence Main Processing Card (IPCMPR)	
IPCMPR Option Cards	KX-TDE0110	16-Channel VoIP DSP Card (DSP16) - Built-in: 4 x IP-Trunks + 8 x IP-PT Extensions	
	KX-TDE0111	64-Channel VoIP DSP Card (DSP64) - Built-in: 16 x IP-Trunks + 32 x IP-PT Extensions	
	KX-TDA0196	Remote Card (RMT)	
Activation Key Cards	KX-NCS4104	4-Channel IP Trunk Activation Key (4 IP Trunk)	
	KX-NCS4208	8-Channel IP Softphone/IP Proprietary Telephone Activation Key (8 IP Softphone/IP PT)	
	KX-NCS4508	8-Channel IP Proprietary Telephone Activation Key (8 IP PT)	
	KX-NCS4716	16-Channel SIP Extension Activation Key (16 SIP Extension)	
	KX-NCS4910	Activation Key for Software Upgrade to Enhanced Version (Software Upgrade 01)	
Physical Trunk Cards	KX-TDA0180	8-Port Analogue Trunk Card (LCOT8)	
	KX-TDA0181	16-Port Analogue Trunk Card (LCOT16)	
	KX-TDA0182	8-Port DID Card (DID8)	
	KX-TDA0183	4-Port Analogue Trunk Card (LCOT4)	
	KX-TDA0184	8-Port E&M Trunk Card (E&M8)	
	KX-TDA0188	E-1 Trunk Card (E1)	
	KX-TDA0189	8-Port Caller ID/Pay Tone Card (CID/PAY8)	
	KX-TDA0193	8-Port Caller ID Card (CID8)	
	KX-TDA0284	4-Port BRI Card (BRI4)	
	KX-TDA0288	8-Port BRI Card (BRI8)	
	KX-TDA0290	PRI Card (PRI 30)	
	KX-TDA0484	4-Channel VoIP Gateway Card (IP-GW4E)	
	KX-TDA0490	16-Channel VoIP Gateway Card (IP-GW16)	
	Physical Extension Cards	KX-TDA0143	4 Cell Station Interface Card (CSIF4)
		KX-TDA0144	8 Cell Station Interface Card (CSIF8)
		KX-TDA0170	8-Port Digital Hybrid Extension Card (DHLC8)
		KX-TDA0171	8-Port Digital Extension Card (DLC8)
		KX-TDA0172	16-Port Digital Extension Card (DLC16)
		KX-TDA0173	8-Port Single Line Telephone Extension Card (SLC8)
KX-TDA0174		16-Port Single Line Telephone Extension Card (SLC16)	
KX-TDA0175		16-Port Single Line Telephone Extension Card with Message Lamp Card (MSLC16)	
KX-TDA0470		16-Channel VoIP Extension Card (IP-EXT16)	
Option Cards		KX-TDA0161	4-Port Doorphone Card (DPH4)
	KX-TDA0162	2-Port Doorphone Card (German Type)(DPH2)	
	KX-TDA0164	4-Port External Input/Output Card (EIO4)	
	KX-TDA0166	16-Channel Echo Canceller Card (ECHO16)	
	KX-TDA0168	Extension Caller ID Card (EXT-CID)	
	KX-TDA0190	Optional 3-Slot Base Card (OPB3)	
	KX-TDA0192	2-Channel Enhanced Simple Voice Message Card (ESVM2)	
	KX-TDA0194	4-Channel Enhanced Simple Voice Message Card (ESVM4)	
	Power Supply Units (PSUs)	KX-TDA0103	L-Type Power Supply Unit (PSU-L)
		KX-TDA0104	M-Type Power Supply Unit (PSU-M)
KX-TDA0108		S-Type Power Supply Unit (PSU-S)	
Cell Stations (CSs)		KX-TDA0141	2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT Potable Station
	KX-TDA0142	4-Channel Cell Station Unit Using a CSIF Card for DECT Potable Station	
	KX-TDA0158	8-Channel High-Density Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT Potable Station	
Proprietary Equipment	KX-A228	S/M-type Back-up Battery Cable	
	KX-A229	L-type Back-up Battery Cable	
	KX-A258	Blank Slot Cover	
	KX-T7765	Doorphone	

### Compatible Panasonic Proprietary Telephones

- The PBX supports the following telephones:
- IP Proprietary Telephones (e.g. KX-NT300 series)
- IP softphones (e.g. KX-NCS8100, NCS8101)
- Digital Proprietary Telephones (e.g., KX-T7600 series)
- Analogue Proprietary Telephones (e.g. KX-T7700 series)
- Portable Stations (e.g. KX-TCA355, KX-TCA256, KX-TCA155)
- DSS consoles (e.g. KX-T7640)
- Single Line Telephones (e.g. KX-T7710)

### Incompatible Panasonic Proprietary Telephones

- The PBX does not support the following telephones:
- KX-T3080 series proprietary telephones and DSS consoles
- KX-T61600 series proprietary telephones and DSS consoles
- KX-T123200 series proprietary telephones and DSS consoles
- KX-TD7500 DECT portable station

## Specifications

KX-TDE100/TDE200		
Control Bus	Original bus (16-bit, 8 MHz, 10 megabytes per second)	
Communication Bus	H.100 bus conformity (1024 time slots)	
Switching	Non-blocking	
Power Input	PSU-S	100 V AC to 130 V AC; 1.4 A 200 V AC to 240 V AC; 0.8 A 50 Hz/60 Hz
	PSU-M	100 V AC to 130 V AC; 2.5 A 200 V AC to 240 V AC; 1.4 A 50 Hz/60 Hz
	PSU-L	100 V AC to 130 V AC; 5.1 A 200 V AC to 240 V AC; 2.55 A 50 Hz/60 Hz
External Battery	+36 V DC (+12 V DC x 3, recommended maximum capacity is 28 Ah)	
Maximum Power Failure Tolerance	300 ms (without using backup batteries)	
Memory Backup Duration	7 years	
Dialling	Trunk	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialling
	Extension	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialling
Mode Conversion	DP-DTMF, DTMF-DP	
Ring Frequency	20 Hz/25 Hz (Selectable)	
Trunk Loop Limit	1600 Maximum	
Operating Environment	Temperature	0 C to 40 C
	Humidity	10 % to 90 % (non-condensing)
Conference Call Trunk	From 10 x 3-party conference call to 4 x 8-party conference call	
Music on Hold (MOH)	2 ports (Level Control: -11 dB to +11 dB in 1 dB steps)	
	MOH1: External Music Source port MOH2: Selectable Internal/ External Music Source port	
Paging	Internal	Level Control: -15 dB to +6 dB in 3 dB steps
	External	2 ports (Volume Control: -15 dB to +15 dB in 1 dB steps)
Serial Interface Port	RS-232C	1 (maximum 115.2 kbps)
RJ45 Port	MNT Port	1 (for PC connection)
	LAN Port	1 (for LAN connection)
Extension Connection Cable	SLT	1-pair wire (T, R)
	DPT	1-pair wire (D1, D2) or 2-pair wire (T, R, D1, D2)
	APT	2-pair wire (T, R, D1, D2)
	PT-interface CS (Basic)	1-pair wire (D1, D2)
	PT-interface CS (High-Density)	4-pair wire (D1, D2)
Dimension	KX-TDE100	334 mm(W) x 390 mm(H) x 272 mm(D)
	KX-TDE200	430 mm(W) x 415 mm(H) x 276 mm(D)
Weight (when fully mounted)	KX-TDE100	Under 12 kg
	KX-TDE200	Under 16 kg

# System Feature Capacity

	Item	KX-TDE100	KX-TDE200		Item	KX-TDE100	KX-TDE200	
System	Absent Message-Extension	1 x 16 characters		ARS	Routing Plan Table	16 entries		
	Absent Message-System	8 x 16 characters			Leading Number Table	16 digits, 1,000 entries		
	Call Park Zone	100			Leading Number Exception Table	16 digits, 200 entries		
	Conference	3-8 parties per conference (32 parties total)			ARS Carrier	10		
	COS	64			Itemised Billing Code	10 digits		
	DID/DDI Table	32 digits, 1,000 entries		Authorisation Code	10 digits			
	Extension Number	1-5 digits (1-4 digits for PSs, 2-4 digits for extensions which have a VM [DPT] mailbox)		Call Log and Message Waiting	Outgoing Call Log - PT	100 records/extn. 1,520 records/system		
	Extension Personal Identification Number (PIN)	10 digits, 1 entry/extension			Outgoing Call Log - PS	100 records/extn. 640 records/system		
	Host PBX Access Code	10 digits, 10 entries/trunk group			Incoming Call Log - PT	100 records/extn. 3,040 records/system		
	Multiple Subscriber Number (MSN)	10 entries per ISDN-BRI port			Incoming Call Log - PS + Incoming Call Distribution Group	100 records/extn. or group Total 2,048 records/system		
	Number of the Characters of Name	20			Message Waiting - PS + Incoming Call Distribution Group	256		
	Printing Message	8		Message Waiting - PT + SLT	512			
	Queuing Time Table	64		Voice Message	Outgoing Message (OGM)	64		
	Ring Tone Pattern Plan	8			OGM Total Recording Time	8 minutes		
	Simultaneous Programmers	• one system programmer + 63 personal programmers • one manager programmer + 63 personal programmers • 64 personal programmers			Built-in Simplified Voice Message (SVM)	125 messages		
	SMDR Call Storage	200 calls			Enhanced Simplified Voice Message (ESVM)	250 messages		
	Special Carrier Access Code	16 digits, 20 entries			SVM Total Recording Time	40, 60, or 120 minutes (depending on the recording quality)		
	Tenant	8		Hospitality and Charge Management Features	Billing Items for Guest Rooms	4,000 records/PBX		
	Time Service Holiday	24			Hotel Operator	4		
	Verification Code	4 digits, 1,000 entries			Charge Rate	7 digits including a decimal		
	Verification Code Personal Identification Number (PIN)	10 digits, 1,000 entries			Charge Denomination	3 currency characters/symbols		
	Dialling	Emergency Call	32 digits, 10 entries		Networking	TIE Line Routing and Modification Table	32 entries	
		Hot Line	32 digits			Leading Number	3 digits	
		Key Pad Protocol Dial (ISDN Service Access)	32 digits			PBX Code	7 digits	
		Personal Speed Dialling	32 digits, 100 entries/extn.			NDSS: Monitored PBXs	8	
		Quick Dialling	8 digits, 4,080 entries		NDSS: Registered Extensions for Monitor PBX	250		
		Redial	32 digits		CTI	PC Console	8	
		System Speed Dialling	32 digits, 1,000 entries/tenant			PC Phone	64   128	
	Groups	Broadcasting Group	8 (32 members/group)		Password	System Password for Installer	4 - 10 characters	
		Call Pickup Group	64			System Password for Administrator — for PC Programming	4 - 10 characters	
Idle Extension Hunting Group		64 (16 extensions/group)		System Password for User — for PC Programming		4 - 10 characters		
Incoming Call Distribution Group		128 (32 extensions/group)		System Password for Administrator — for PT Programming		4 - 10 digits		
Paging Group		32		System Password for User — for PT Programming		4 - 10 digits		
PS Ring Group		32		Manager Password		4 - 10 digits		
Trunk Group		64		Installer Level Programmer Code		4 - 16 characters		
VM (DPT) Group		2 groups x 12 ports (24 channels)		Administrator Level Programmer Code		4 - 16 characters		
VM (DTMF) Group	2 groups x 32 channels		User Level Programmer Code	0 - 16 characters				
TRS/ Barring	TRS/Barring Level	7		Programmer Code	Administrator Level Programmer Code	4 - 16 characters		
	TRS/Barring Denied Code	16 digits, 100 entries/level			User Level Programmer Code	0 - 16 characters		
	TRS/Barring Exception Code	16 digits, 100 entries/level						

## Feature List

### Call Handling Features

#### Incoming Call Features

- Incoming Trunk Call Features
  - Direct In Line (DIL)
  - Direct Inward Dialling (DID)/Direct Dialling In (DDI)
  - Multiple Subscriber Number (MSN)
  - Ringing Service
  - Calling Line Identification (CLI) Distribution
  - Intercept Routing
  - Intercept Routing-No Destination
- Internal Call Features
  - Internal Call Block
- Incoming Call Indication Features
  - Ring Tone Pattern Selection
  - Call Waiting

#### Receiving Group Features

- Idle Extension Hunting
- Incoming Call Distribution Group Features
  - Group Call Distribution
  - Outside Destinations in Incoming Call Distribution Group
  - Queuing Feature
  - VIP Call
  - Overflow Feature
  - Log-in/Log-out
  - Supervisory Feature
- Call Distribution Port Group

#### Call Forwarding (FWD)/

- Do Not Disturb (DND) Features
  - Call Forwarding (FWD)
  - Do Not Disturb (DND)
  - FWD/DND Button, Group FWD Button

#### Answering Features

- Line Preference-Incoming
- Call Pickup
- Hands-Free Answerback

#### Making Call Features

- Predialling
- Automatic Extension Release
- Intercom Call
- Trunk Call Features
  - Emergency Call
  - Account Code Entry
  - Dial Type Selection
  - Reverse Circuit
  - Trunk Busy Out
  - Pause Insertion
  - Host PBX Access Code (Access Code to the Telephone Company from a Host PBX)
  - Special Carrier Access Code

#### Seizing a Line Features

- Line Preference - Outgoing
- Trunk Access

#### Memory Dialling Features

- One-Touch Dialling
- KX-T7710 One touch Dialling
- Last Number Redial
- Speed Dialling - Personal/System
- Quick Dialling
- Hot Line

#### Primary Directory Number (PDN)/

#### Secondary Directory Number (SDN) Features

- Busy Line/Busy Party Features
- Automatic Callback Busy (Camp-on)
- Executive Busy Override
- Call Monitor
- Second Call Notification to Busy Extension
  - Call Waiting Tone
  - Off-Hook Call Announcement (OHCA)
  - Whisper OHCA

#### Toll Restriction (TRS)/

#### Call Barring (Barring) Features

- Toll Restriction (TRS)/Call Barring (Barring) Budget Management
- Extension Dial Lock
- Dial Tone Transfer
- Walking COS
- Verification Code Entry

#### Automated Route Selection (ARS) Features

#### Conversation Features

- Hands-Free Operation
- Off-Hook Monitor
- Mute
- Headset Operation
- Data Line Security
- Flash/Recall/Terminate
- External Feature Access (EFA)
- Trunk Call Limitation
- Parallelled Telephone
- Calling Party Control (CPC) Signal Detection

#### Transferring Features

- Call Transfer

#### Holding Features

- Call Hold
- Call Park
- Call Splitting
- Music on Hold

#### Conference Features

- Conference
- Privacy Release

#### Paging Features

#### Broadcasting Features

#### Optional Device Features

- Doorphone Call
- Door Open
- Trunk Answer From Any Station (TAFAS)
- Background Music (BGM)
- Outgoing Message (OGM)
- Direct Inward System Access (DISA)
- External Sensor
- External Relay Control

#### Caller ID Features

- Caller ID
- Incoming Call Log

#### Message Features

- Message Waiting
- Absent Message

#### Proprietary Telephone (PT) Features

- Fixed Buttons
- Flexible Buttons
- LED Indication
- Display Information

#### Integrated Services Digital Network (ISDN) Service Features

- Calling/Connected Line Identification Presentation (CLIP/COLP)
- Advance of Charge (AOC)
- Call Forwarding (CF) - by ISDN (P-MP)
- Call Forwarding (CF) - by ISDN (P-P)
- Call Hold (HOLD) - by ISDN
- Call Transfer (CT) - by ISDN
- Three-party Conference (3PTY) - by ISDN
- Malicious Call Identification (MCID)
- Completion of Calls to Busy Subscriber (CCBS)
- ISDN Extension
- ISDN Service Access by Keypad Protocol

#### E1 Line Service Features

#### Voice Message Features

- Built-in Simplified Voice Message (SVM)
- Simplified Voice Message card (SVM)
- Voice Mail Features
  - Voice Mail (VM) Group
  - Voice Mail DTMF Integration
  - Voice Mail DPT (Digital) Integration

#### Portable Station (PS) Features

- Portable Station (PS) Connection
- PS Ring Group
- PS Directory
- PS Feature Buttons
- Wireless XDP Parallel Mode
- Virtual PS

#### Administrative Information Features

- Record Log Features
  - Station Message Detail Recording (SMDR)
  - Syslog Record Management
- Printing Message
- Call Charge Services

#### Hospitality Features

- Room Status Control
- Call Billing for Guest Room

#### Extension Controlling Features

- Extension Personal Identification Number (PIN)
- Extension Feature Clear
- Walking Extension Features
  - Walking Extension
  - Enhanced Walking Extension
- Timed Reminder

#### Audible Tone Features

- Dial Tone
- Confirmation Tone

#### Networking Features

- TIE Line Service
- Voice over Internet Protocol (VoIP) Network
- Virtual Private Network (VPN)
- QSIG Standard Features
  - Calling/Connected Line Identification

- Presentation (CLIP/COLP) and Calling/Connected Name Identification Presentation (CNIP/CONP) - by QSIG365
- Call Forwarding (CF) - by QSIG
- Call Transfer (CT) - by QSIG
- Completion of Calls to Busy Subscriber (CCBS) - by QSIG
- QSIG Enhanced Features
- Network Direct Station Selection (NDSS)
- Centralised Voice Mail Network ICD Group
- PS Roaming by Network ICD Group

#### IP Telephone Features

- IP Proprietary Telephone (IP-PT)
- SIP (Session Initiation Protocol) Extension Peer-to-Peer Connection
- Self Labelling (KX-NT366 Only)

#### Computer Telephony Integration (CTI) Features

- Computer Telephony Integration (CTI)
- PC Phone/PC Console
- Cellular Phone Features
- Voice Message Clear

### System Configuration and Administration Features

#### System Configuration - Hardware

- Extension Port Configuration

#### System Configuration - Software

- Class of Service (COS) Group
- Group
- Tenant Service
- Time Service
- Operator Features
- Manager Features

#### System Data Control

- PC Programming
- PT Programming
- Password Security
- Quick Setup
- Automatic Setup
- Flexible Numbering/Fixed Numbering
- Floating Extension
- Software Upgrading

#### Fault Recovery/Diagnostics

- Power Failure Transfer
- Power Failure Restart
- Local Alarm Information
- Simple Network Management Protocol (SNMP) System Monitor
- Dynamic Host Configuration Protocol (DHCP) Assignment
- Packet Internet Groper (PING) Confirmation