

2 0 0 8 – 2 0 0 9

Office Communication Systems



▶ Intelligent, Versatile Communication Solutions



Panasonic made its first impact on the telephone systems industry in 1986 with the launch of the world's first two "hybrid port" systems (KX-T308 and KX-T616). The cost savings and superior flexibility of these hybrids quickly made them the world's best-selling systems.

In 1993 Panasonic rocked the industry again by introducing the world's first digital "super-hybrid" telephone systems (KX-TD816 and KX-TD1232).

The company followed that up in 1995 by releasing the first Digital Voice-Processing System (KX-TVP100).

Since then Panasonic has continued to demonstrate its commitment to providing future-ready, solution business oriented products, and developing new hardware and software as network services and customer needs evolve. This is clearly seen in the KX-TDA series of Hybrid IP PBX's, which are being released in 2003 to further support IP telephony while maintaining easy operation.

Panasonic continues to improve IP solutions with its KX-TDA product line-up, such as new IP proprietary telephones and IP SoftPhone, which provide affordable proprietary IP terminals to those working at home or in remote offices.

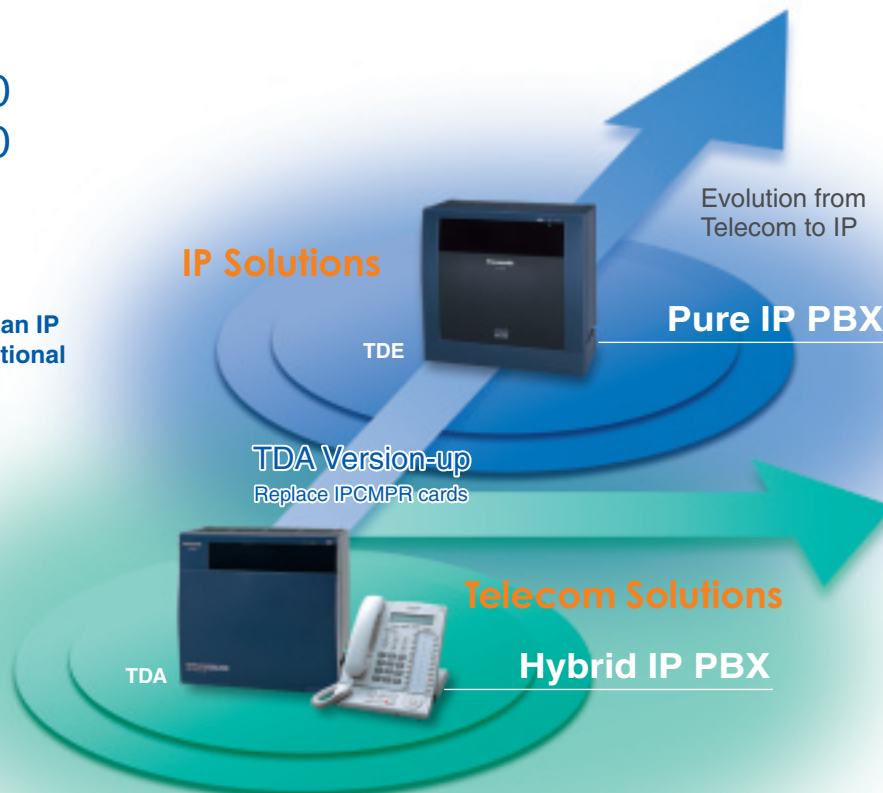
In 2007, We launch Pure IP PBX KX-TDE100/200 with new IP Proprietary Telephone.

This System work not only Pure IP PBX. But also communication system with variety of option.



- KX-TDE100
- KX-TDE200

A Pure IP PBX for an IP Platform and Traditional Telecom Lines.



Today's offices are shifting from traditional telecom systems to low-cost, flexible IP systems that take full advantage of the rapid growth in IP applications and globalisation. The KX-TDE100 and KX-TDE200 can be used to construct a full-IP telecom system, making them a perfect match for these new communications systems. The KX-TDE100 and KX-TDE200 offer new, standard-equipped IP functions that boost efficiency and lower communication costs.

They also include convenient and highly effective features such as wireless operation, voice mail and CTI. For companies planning to switch to a full-IP system, Panasonic IP-PBX systems offer a scalable, easy-to-use platform that adapts to a wide range of

business fields for future expansion. In addition, these models also support traditional telecom lines, so they allow IP systems to be integrated with conventional telecom systems such as ISDN and analogue lines. Depending on the office environment, it may be difficult to switch an existing traditional telecom line to a full IP system all at once due to time and cost restrictions. The KX-TDE100 and KX-TDE200 respond flexibly to needs like this. By changing the main board in the current TDA series, a new system can be easily constructed. This lets the KX-TDE100 and KX-TDE200 provide optimal solutions for companies that want to smoothly migrate to an IP system while continuing to use their existing telecom network.



Panasonic TDE series Power Enhancing Features

The KX-TDE series Pure IP PBXs are advanced corporate communication systems providing IP telephony features and functionalities over both local and broadband IP networks. They are an ideal communication platform to help customers solve all their business telephony needs today as well as in the future as they embrace full IP telephony, empowered with the latest SIP technology.

▶ New IP Features in the TDE

▶ Full-IP compatibility

- Initial system is up to 64 IP-proprietary telephones and 32 IP-trunks with the optional DSP card.
- SIP phones are up to 128 standard.
- Maximum System capacity with optional card
 - Total Number of Trunks : 128
 - Total Number of Extensions : 256
- Using a PC Programming Software, with the same method as the TDA series.
- 2 Built-in LAN ports

▶ Fully equipped with TDA functions and solutions

- Uses TDA's option cards and inherits its easy operation.
- Simple setup
- Easy maintenance
- Full support of TDA features
- Upgradeable to TDE by changing the main card (IPCMPR card) in the TDA

▶ Support the new IP-PT NT300 series

- Self labelling display (Only KX-NT366)
- 4 pages LCD x 12 flexible CO Buttons
- Bluetooth® Module for hands-free talking
- Add-on 12-key/60-key modules (Only KX-NT346 and KX-NT343)
- Reduced load on VoIP resources in the main PBX unit and load on Network.
- High sound quality (G.722 codec) between KX-NT300 series

▶ Easy Maintenance

- Using a PC Program, with the same method as the TDA series.



KX-TDE100

Max.Trunks : 128 (Max Physical cards 120)
Max.Extensions : 256 (Max Physical cards 160)



KX-TDE200

Max.Trunks : 128 (Max Physical cards 128)
Max.Extensions : 256 (Max Physical cards 256)

▶ Multi-site Programming

Up to four TDEs can be programmed by one PC at the same time when each TDE connected to the network. This function also makes it easy to set all of the PBX programs at the same time.

▶ Server connection

- The TDE supports the connection of the following, allowing for enhanced efficiency and record keeping.
- DHCP client for TDE
 - SNMP Agent/Alarm
 - SNTP client

▶ Built-in Simplified Voice Message

KX-TDE is preinstalled with the simplified Voice Mail feature (2 channels).

▶ Enhanced walking extension (Hot Desking)

It is possible to use any extension, and to have your extension setting available whenever you want it. This is a very useful feature when...

- You move locations
- There is no specific desk for you to use.



IP Proprietary Telephones

Ergonomic designs offer the ultimate in easy operation.
Literally filled with comprehensive IP telephony functions.

Pure IP PBX Systems

New IP Proprietary Telephone Line-up



KX-NT366

- 6-Line Backlit Display
- 4 x 12-Self Labelling, Flexible CO Buttons
- Digital Speakerphone
- 2 Ethernet Ports (100 Base-T)
- Power-over-Ethernet (PoE)
- Bluetooth® Module (Option)
- Navigator Key

6-Line LCD & Self Labelling



KX-NT346

- 6-Line Backlit Display
- 24 Flexible CO Buttons
- Digital Speakerphone
- 2 Ethernet Ports (100 Base-T)
- Power-over-Ethernet (PoE)
- Bluetooth® Module (Option)
- Add-on 12-Key Module (Option: KX-NT303)
- Add-on 60-Key Module (Option: KX-NT305)
- Navigator Key

6-Line LCD



KX-NT343

- 3-Line Backlit Display
- 24 Flexible CO Buttons
- Digital Speakerphone
- 2 Ethernet Ports (100 Base-T)
- Power-over-Ethernet (PoE)
- Bluetooth® Module (Option)
- Add-on 12-Key Module (Option: KX-NT303) or Add-on 60-Key Module (Option: KX-NT305)
- Navigator Key

3-Line LCD

Options

Add-on Key Module



KX-NT303

- Add-on 12-Key Module (For KX-NT346 and KX-NT343 only)



KX-NT305

- Add-on 60-Key Module (For KX-NT346 and KX-NT343 only)

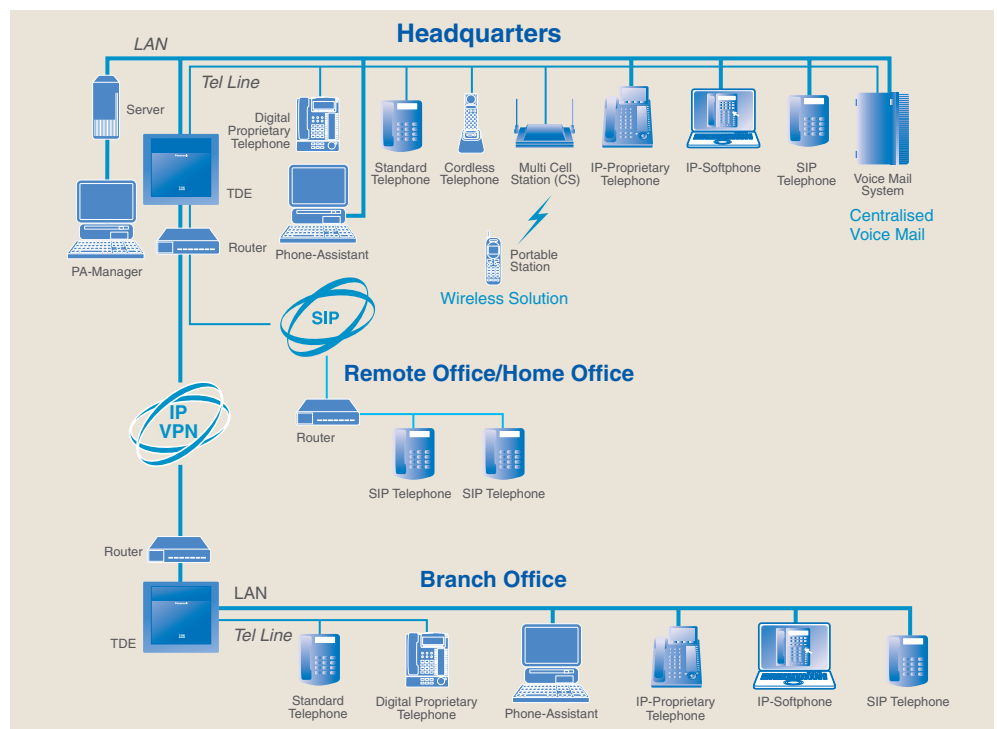
Bluetooth® Module



KX-NT307

Full-IP compatibility

Allows the use of an IP trunk line (H.323) and an SIP trunk, IP-PTs, IP softphone, and SIP extension.



Hybrid IP PBX Systems

The All You Need Networked System to maximise the performance of your business in the Convergence age



► Grows With You

The KX-TDA600's modular design lets you expand the system as your needs evolve. The Basic Shelf provides maximum 160 ports (240 ports with DXDP^{*1}), and the optional Expansion Shelf provides maximum 688 ports (1008 ports with DXDP^{*2}). Plus with the KX-TDA600's free slot architecture, you can easily insert expansion cards and access new features as well as expand your capabilities. This expandability means you can enhance system capabilities and features to meet your changing needs, without having to purchase a new system.

^{*1} Digital eXtra Device Port

^{*2} When connected to analogue CO line.

The number may vary depending on the configuration.



KX-TDA600/620

Max. 640 CO lines / 640 to 960 Extensions (with DXDP)



KX-TDA30

Max. 8 CO lines / 28 Extensions
(52 Extensions with DXDP) or
Max. 12 CO lines / 24 Extensions
(44 Extensions with DXDP)
IP-GW or E1 can be added using
a remaining slot.



KX-TDA100

Max. 96 CO Lines
(120 Channels with PRI30 x 4) /
96 Extensions
(160 Extensions with DXDP)



KX-TDA200

Max. 128 CO Lines / 128 Extensions
(256 Extensions with DXDP)

► Makes Communications Easy

- Stylish, Easy to use, and Efficient digital telephones
- A USB terminal that provides easy plug-n-play connection to a PC
- Expansion of digital proprietary telephones (DXDP)

► Cost-effective Performance

- Voice over Internet Protocol (VoIP)
- QSIG digital networking allows basic call handling (outgoing and incoming), closed numbering routing, and CLIP/COLP/CLIR/COLR
- Automatic Route Selection (ARS) / Least Cost Routing (LCR)
- Reliable networking via T1/E1, E&M

► Efficiency That You Will Appreciate

- Multi-cell wireless integration
- Mobile phone integration
- TAPI 2 CTI interface (TAPI and CSTA)
- PC-phone / PC-console
- Advanced call centre function
- ISDN capability (BRI/PRI)
- Centralised Voice Mail
- 2ch Cell Station to connect DPT interface port

IP Telephone



KX-NT136

- Dual-Ethernet Ports
- Effortless LAN Integration
- Programmable Keys with Red / Green LED
- Time-Saving, Easy-to-Use Navigator Key
- User-friendly Display
- Message / Ringer Lamp (Dual Colour)



KX-NT265

- 1 Line Display
- 8 Programmable CO Keys
- Message / Ringer Lamp
- Digital Speakerphone

Proprietary Telephone Line-up



KX-T7636

- Display Unit
- 6-Line Back-lit Display
 - 24 Programmable CO Keys
 - Digital Speakerphone
 - Optional 12 CO Keys and USB port
 - eXtra Device Port (XDP) and DXDP
 - Headset Compatible



KX-T7633

- Display Unit
- 3-Line Back-lit Display
 - 24 Programmable CO Keys
 - Digital Speakerphone
 - Optional 12 CO Keys and USB port
 - eXtra Device Port (XDP) and DXDP
 - Headset Compatible



KX-T7630

- Display Unit
- 3-Line Display
 - 24 Programmable CO Keys
 - Digital Speakerphone
 - eXtra Device Port (XDP) and DXDP
 - Headset Compatible

KX-T7665

- Display Unit
- 1-Line Display
 - 8 Programmable CO Keys
 - Message / Ringer Lamp
 - Speakerphone
 - DXDP



KX-T7625

- Speakerphone Unit
- 24 Programmable CO Keys
 - Digital Speakerphone
 - eXtra Device Port (XDP) and DXDP
 - Headset Compatible



KX-T7603

- Add-on Key Module
- 12 CO Keys



KX-T7667

- Digital Proprietary Telephone
- 1-Line Display
 - 12 Programmable CO Keys
 - Incoming Call / Message Lamp
 - Digital Speakerphone
 - Headset Compatible



KX-T7640

- Digital DSS Console
- 60 Direct Stations Selection (DSS) keys



KX-T7601

- USB Interface for KX-T7636/33



Analogue Telephone with Message Lamp (For Hotel etc...)

KX-T7710

- Proprietary Telephone
- Message / Ringer Lamp
 - One-touch Button Panel
 - Data Port

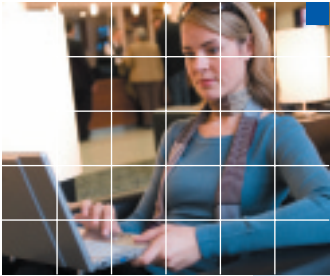


KX-T7101

- Single Line Telephone
- Message Lamp
 - One-touch Speed Dialler
 - Data Port

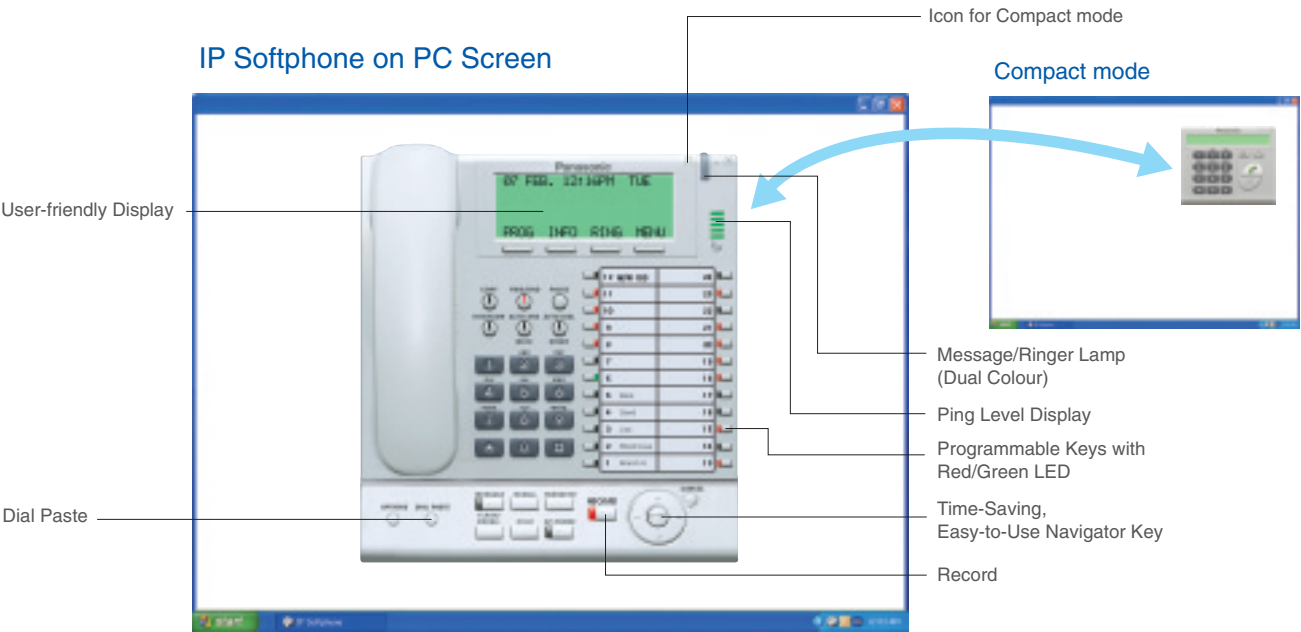


IP Softphone



KX-NCS8102

KX-NCS8102 is a PC based business softphone application. Provide IP Telephony with full Digital Proprietary Telephone. This IP Softphone is low cost and Mobility telephone for TDE & TDA. It lets business empower workers such as sales, support management and any other power users at their desk in any location.



Mobility

Enjoy smooth communications through your PC with virtually the same level of functions that you would have if you had brought your office phone with you.

Low Cost

There's no need for an off-site PBX or traditional telephone wiring.

Transparent Integration

You can administer and operate IP telephones just like other extension telephones.

Flexibility

IP technology lets you send data and voice over the same line.

Softphone Specifications

Alphanumeric Display (LCD)	6 lines x 24 characters
Programmable Keys with Dual Colour LED	24
Direct Station Selection (DSS) Keys with Busy Lamp Field (BLF)	Yes
Dial Paste	Yes
Record	Yes
Station Speed Dial	10 Numbers
USB Handset with Audio Ringer on PC	Yes
Peer to Peer Connection with NT300 Series	Yes





System Overview

The Multi-Cell DECT System is an integrated wireless mobility solution designed specifically for use with a Panasonic PBX*. This system provides automatic hand-over between installed wireless cells – enhancing coverage and giving you true communication mobility even within large premises.

The Panasonic KX-TCA355 ruggedised handset meets strict dust and splash resistant IP54 standards. This is combined with a vast array of business telephony features.

The KX-TCA256 DECT handset combines small size, light weight, with a host of powerful business telephony features. While the KX-TCA155 is a good choice for users who want good basic performance at a lower cost.

*The KX-TCA355, KX-TCA256 and KX-TCA155 must be connected to a compatible Panasonic Phone System (KX-TDA30, KX-TDA100, KX-TDA200, or KX-TDA600).

DECT

Basic Model



KX-TCA155

Compact Business Model

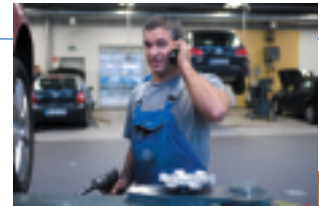


KX-TCA256

Tough-type Model
(IP54 compliant)



KX-TCA355



Impact-absorbing rubber installed on the entire circumference

External cabinet made of impact-resistant material

KX-TCA155, KX-TCA256 and KX-TCA355

- 6-line blue LCD backlight
- Illuminated keypad
- Multiple language display
- Speakerphone
- Programmable soft keys
- PBX functionality support
- 200 entry phonebook
- Headset compatible
- 9 polyphonic ringer melodies and 6 ringing patterns
- Vibrate alert*
- Meeting mode*

*Only KX-TCA355, 256

As for KX-TCA355 Tough Type Model

- IP5*= Dust resistance (Protection from dust penetration to a level that does not interfere with the operation of the handset)
- IP*4= Water resistance (Protection against splashing water)
The Panasonic KX-TCA355 DECT Handset complies to UKAS IP54 testing standards.
- Impact absorbing rubber is adopted around the KX-TCA355.
- The cabinet (outer plastic covering) is also used impact-touch materials.

Cell Stations

KX-TDA0141

DPT I/F Cell Station
2 speech path

KX-TDA0142

CS I/F Cell Station
4 speech path

High-Density Cell Station

KX-TDA0158

- The KX-TDA0158CE supports 8 speech paths.

KX-TDA0158



Repeater

KX-A272

Used with Repeater, the range can be extended.
A maximum of six repeaters per CS are available.

Maximum Terminal Equipment

The following shows the number of each terminal equipment type supported by the PBX

Terminal Equipment Type	KX-TDE100	KX-TDE200
Basic CS	32	32
High-density CS	16	16
PS	128	128

Required Equipment and Maximum Number of Calls

CS	Connection Card	Maximum Calls	Compatible PSs
KX-TDA0158CE	DHLC, DLC	8	KX-TCA155
KX-TDA0141CE	DHLC, DLC	2	KX-TCA256
KX-TDA0142CE	CS I/F	4	KX-TCA355

Providing customers with intelligent call handling through Computer Telephony Integration (CTI)

► **Phone Assistant** for Personal Productivity - Easy Access to Phone Features

By providing on-screen call related information like Caller ID, Calling Party's Name and allowing users to simply point-n-click or use keyboard shortcuts to quickly handle calls - users are able to do more in less time increasing personal productivity.



Confirm colleague availability and presence

It helps in determining who is available to handle calls before you decide to call them, greatly reducing the number of unanswered calls.

Easy access to system phone functions

Wizards appear as and when you need them, helping you with most common telephony features like Transfer, Forward, Do-Not Disturb, Hold, Park, and Conference call set

Dial easily through your database

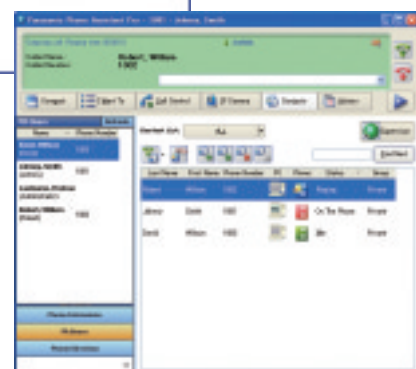
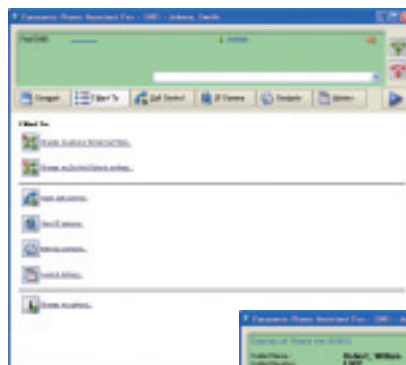
Users can create their own business and private contacts, show the presence and availability of all co-workers or they can simply dial external business contacts by double-clicking. The software can utilise Outlook address books for contact lists.

Integration with IP Camera

Panasonic IP Camera can also be integrated, allowing users to answer a doorphone and open the door after viewing the IP camera video feed on screen.

Record conversations directly into Voice Mail (TVM50/200)

Allows Phone Assistant users to record the conversation that they are having with a caller.



Phone Assistant - intuitive user interface

View presence & availability.

Phone Assistant Status

for Supervisors and Team Leaders - Easy Call Monitoring

Business managers, supervisors, and team leaders can benefit from real-time monitoring of all team member telephony communication activities. The Phone Assistant Status application allows monitoring of up to 128 users - (combination of phone assistant users or normal phone extensions) with complete presence and availability information - perfect for any informal call centre.

Status users can pick up any ringing call being monitored, as well as silently Listen-in, Barge-in, or Take over a call. In addition - supervisors can even record a selected call - if required. Monitored extensions can also be flagged for easy identification - e.g. when monitoring a new employee or an agent in training.

Monitor employee phone status / usage

Phone Assistant Status Pro users can monitor all configured incoming calls. Monitoring allows Status users to see not only all telephony activities but also settings of the monitored users, e.g. call forwarding, absent messages, etc.

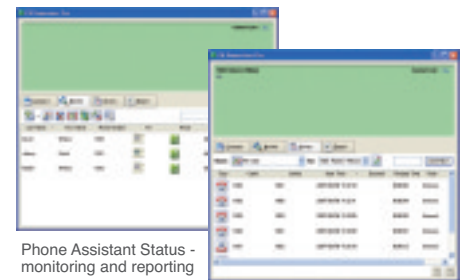
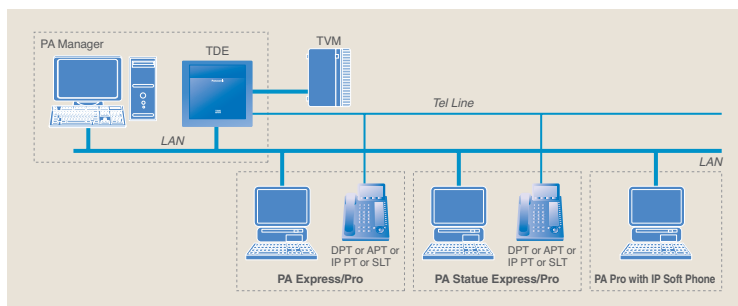
Extended reporting capabilities

The software supports extensive reporting capabilities with built-in reports as well as the ability to customize reports in order to keep track of all company telephony communications activities, such as the following.

- Status of monitored extensions
- History of all calls
- Output of call logs as CSV files



System Connection Diagram



Phone Assistant Status - monitoring and reporting

Phone Line

Phone Assistant Manager

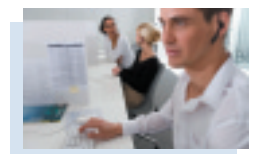
for the tool of IT Administrators - Easy Maintenance

IT departments can use any networked PC with a standard web browser to use the Phone Assistant Manager to create and set Phone Assistant users as well as make typical Adds/Moves and configuration changes to their TDA/TDE IP PBX. Using this tool, customers can use self help to modify simplesystem and extension settings like:



- Modify System Date/Time and Holidays
- Add/Modify PBX speed dial numbers
- Set system wide absent messages
- Set Call Forwarding, Do-Not-Disturb, Call Waiting etc, and
- Assign flexible programmable keys

With a properly configured office IP network, authorised IT department personnel can even remotely access and configure basic TDA PBX settings from anywhere in the world they have access to the office network.



Software List

Product Name	Model	Description
Phone Assistant Pro	KX-NCS1101	Software to control a telephone. License is required. KX-NCS1101 is for 1 license. KX-NCS1105 is for 5 licenses. KX-NCS1110 is for 10 licenses. KX-NCS1199 is for 128 licenses.
Phone Assistant Status Pro	KX-NCS1201	Software to monitor a call. A license is required. KX-NCS1201 is for 1 license.
Phone Assistant IP Soft-Phone Plug-In Module	KX-NCS9101	IP Soft-Phone Plug-In Module for PA Pro and PA Network Console. A license is required. KX-NCS9101 is for 1 license.
Phone Assistant Manager	KX-NCS1301	Web Software to control PBX Configuration.

Phone Assistant Express/Pro Specifications

Features	Express V1.6	Pro V1.6
User Capability	5 for TDA30, 10 for TDA100/200, 20 for TDA600, 10 for TDE100/200	max 128 Users (Pro trial version : 2 for TDA30, 4 for TDA100/200, 8 for TDA600)

Phone Assistant Status Express/Pro Specifications

Features	Express V1.6	Pro V1.6
User Capability	max 3 Users	max 8 Users
Extension Monitor	max 5 Extensions	max 100 Extensions (100 x 100 Groups)

Informal Call Centre System



ACD Report Server KX-NVC200

ACD Report Server is designed to bring advanced call centre functions to users of Panasonic PBX systems, such as the KX-TDA100/200/600, KX-TDE100/200. This provides useful functions real-time monitoring and call centre performance reports, and agent log-in. Oftentimes, the difference between gaining or losing a new customer can hinge on a single telephone call. Panasonic's call centre solution makes sure that every telephone call works in your favour.



KX-NCV200

- Real time Monitor**
ACD (Automatic Call Distribution) Monitoring
- Log Report**
Trunk Call Report/ System Report
- Real time Analysis**
Performance Graphs
- Voice Mail**

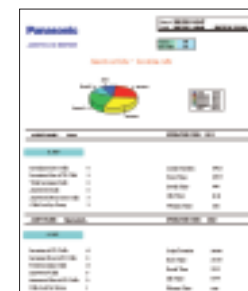
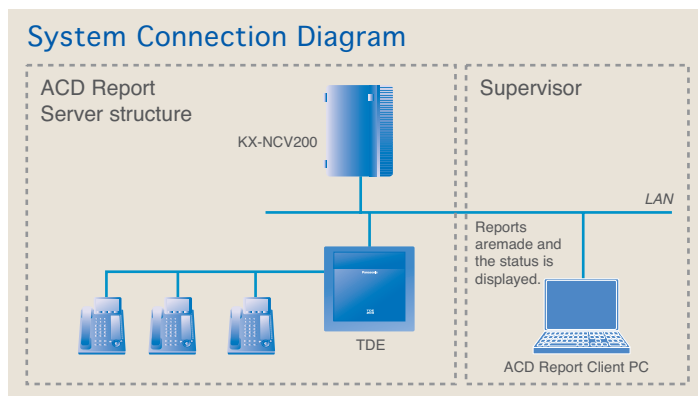
Screen of ACD Report Client



Performance Graphs



ACD Monitor



ACD Report

Optional Accessories

KX-TVM204	4 - Port Digital Expansion Card
KX-TVM296	Modem Card

Voice Processing System KX-TVM50/TVM200

The human voice is still the best way to communicate. And with the KX-TVM50 and KX-TVM200, Panasonic introduces two feature-packed voice processing systems (VPS) designed for efficient communication. The KX-TVM50 and KX-TVM200 each offer automated attendant, automatic call routing, and message notification, and each can be customised to your needs.

KX-TVM50/200 Specifications

Number of Ports	KX-TVM50	KX-TVM200
Number of Ports	2 to 6	0 to 24
Voice Storage	Initial: 4h Max.: 8h	Max. 1000 h
Number of Mailboxes (including System Manager and Message Manager mailboxes)	Max. 64	Max. 1024
Number of Messages	Unlimited	
Message Recording Medium	Flash Memory	HDD
Remote Modem	Modem Card (Max. 33,600 bps)	
Support of DHCP and SMTP Server*1	•	•
Scheduled Backup*1	•	•

*1 Require upgrade of Ver. 2.0

Optional Accessories

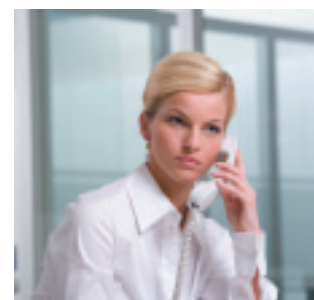
TVM Cards		TVM50	TVM200
KX-TVM502	2-Port Hybrid Expansion Card	•	-
KX-TVM503	2-Port Digital Expansion Card	•	-
KX-TVM524	Memory Expansion Card	•	-
KX-TVM594	LAN Interface Card	•	-
KX-TVM296	Modem Card	•	•
KX-TVM204	4-Port Digital Expansion Card	-	•



KX-TVM50



KX-TVM200



Analogue Telephone Systems

An analogue telephone system that offers easy-to-use communication power

Analogue Telephone Systems



KX-TEA308

3 CO lines / 8 Extensions

- 3 CO lines and 8 Extensions (8: Hybrid)
- 3-level Automatic Reception with Voice Guidance
- DISA (Direct Inward System Access) with message
- Built-in Voice Message (BV)
- Caller ID Display on SLT and APT
- Flexible SMS Routing
- Intuitive Customisation and Maintenance
- UCD (Uniform Call Distribution) with message
- Doorphones, Door Openers, and Doorbells



KX-TES824

3 CO lines / 8 Extensions
(Max. 8 CO lines / 24 Extensions)

- Expandable from 3 CO lines and 8 Extensions to 8 CO lines and 24 extensions
- 3-level Automatic Reception with Voice Guidance
- DISA (Direct Inward System Access) with message
- Built-in Voice Message (BV)
- Caller ID Display on SLT and APT
- Flexible SMS Routing
- Intuitive Customisation and Maintenance
- UCD (Uniform Call Distribution) with message
- Doorphones, Door Openers, and Doorbells



KX-TEM824

6 CO lines / 16 Extensions
(Max. 8 CO lines / 24 Extensions)

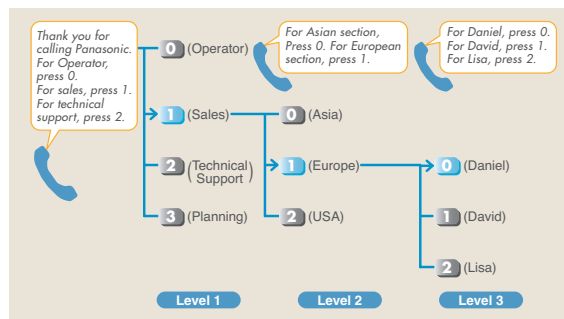
- Expandable from 6 CO lines and 16 Extensions to 8 CO lines and 24 extensions
- 3-level Automatic Reception with Voice Guidance
- DISA (Direct Inward System Access) with message
- Built-in Voice Message (BV)
- Caller ID Display on SLT and APT
- Flexible SMS Routing
- Intuitive Customisation and Maintenance
- UCD (Uniform Call Distribution) with message
- Doorphones, Door Openers, and Doorbells

3-level Automatic Reception with Voice Guidance

- More efficient handling of incoming calls.
- Callers can call after-hours and still access desired extensions.
- Shares the operator load.

3-level Automated Attendant (AA) service allows a caller to dial a single-digit number following the guidance of 3-level DISA* outgoing messages, and be directed to the appropriate section without having to go through an operator.

*DISA (Direct Inward System Access)



Caller ID Display*¹ on SLT and APT

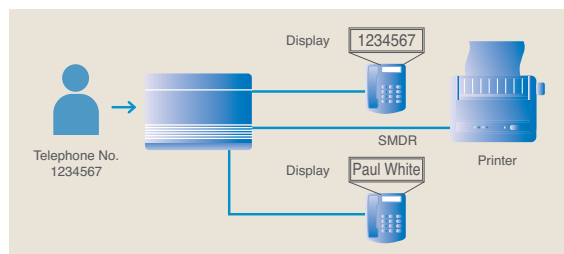
- Caller Recognition.
- Better Call Management.

The system is compatible with Caller ID, which allows a user to see the caller's information on Single Line Telephones (SLTs)*² and Analogue Proprietary Telephones (APTs). An assigned name in program "System Speed Dialling Name Setting" will be displayed when the caller's telephone number matches one of System Speed Dialling numbers assigned in program "System Speed Dialling Entry". Proprietary display telephones can be used to access the Caller ID log for the 20 most recent calls (Call Log). And the system has 300 common logs. The logged incoming calls can be called back easily.

*¹ An optional card is required.

Please contact your dealer or phone company to confirm if the Caller ID service is available in your area.

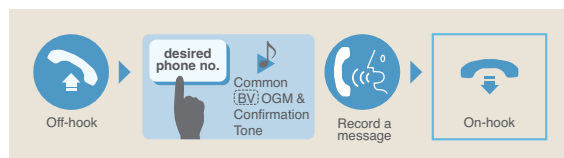
*² SLT that supports Caller ID is required.



Built-in Voice Message (BV)*

Customise your mailbox by recording your own greeting messages that are played when you can't answer your phone. Your callers can record their messages directly into your personal mailbox, allowing you to receive private information without relying on hand-written notes and memos. Call Centres and Workgroups can use the common message area for recording caller messages that can be played back later by an operator (manager).

*An optional voice message card is required.



Smart-Looking Telephones that Answer the Needs of Today's Energetic Office



Panasonic's new telephones combine a fresh, energetic design with functions that answer the call for convenience and efficiency.



KX-T7735

Display Unit

- 3 lines x 16 characters LCD
- 12 Programmable CO Keys
- Navigator Key
- Speakerphone
- Headset Compatible

► High-Quality Design

Easy-to-grip handset, solid-touch keys, and a smart matte finish.

► Incoming Call / Message Lamp

This large, easy-to-see lamp announces incoming calls or messages, so you'll always know whose telephone is ringing – even from a distance.

► Navigator Key (KX-T7735 and KX-T7730)

For quick adjustment of the volume and display and contrast.

► Tilt-Angle Adjustment

The telephone adjusts to either of two angles for easier use and a smaller, space-saving footprint.





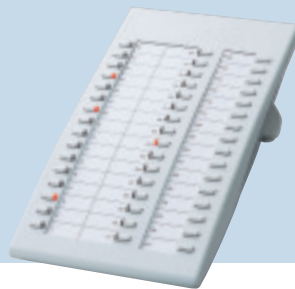
KX-T7730
Display Unit
- 1 line x 16 characters LCD



KX-T7750
Monitor Unit



KX-T7720
Speakerphone Unit



KX-T7740
DSS Console
- 32 Direct Station Selection (DSS) keys
- 32 Busy Lamp Field (BLF) keys



KX-T7765
Doorphone

Analogue Telephone Systems System Capacity

		TEA308	TES824	TEM824
CO lines	Basic	3	3	6
	Max		8	8
Extensions	Basic	8	8	16
	Max		24	24
Intercom paths		3	4	4
DTMF receivers		2	2	4
Door intercoms and openers (max.)		2	4	4

Optional Accessories

			TEA308	TES824	TEM824
Telephones	KX-T7750	Proprietary Telephone with Monitor (12 CO keys)	•	•	•
	KX-T7720	Proprietary Telephone with Speakerphone (12 CO keys)	•	•	•
	KX-T7730	Proprietary Telephone with 1-Line Display and Speakerphone (12 CO keys)	•	•	•
	KX-T7735	Proprietary Telephone with 3-Line Display and Speakerphone (12 CO keys)	•	•	•
	KX-T7740	DSS Console (32 DSS / BLF keys, 16 PF keys)	•	•	•
	KX-T7710	Proprietary Telephone with Message / Ringer Lamp, One-Touch Dialler, Data Port	•	•	•
	KX-T7101	SLT with Message Lamp, One-Touch Dialler, Data Port	•	•	•
Others	KX-T7765	Doorphone	•	•	•
	KX-A227	Backup Battery Cable	•	•	•
Analogue Cards	KX-TE82460	2-Port Doorphone / Door Opener Card	•	•	•
	KX-TE82461	4-Port Doorphone / Door Opener Card	-	•	•
	KX-TE82474	8-Port Single Line Telephone Extension Card	-	•	•
	KX-TE82480	2-Port Analogue CO Line and 8-Port Single Line Telephone Extension Card	-	•	•
	KX-TE82483	3-Port Analogue CO Line and 8-Port Hybrid Extension Card	-	•	-
	KX-TE82491	Message Expansion Card for OGM (1 ch, 180 sec)	-	•	•
	KX-TE82492	2-Channel Voice Message Card	•	•	•
	KX-TE82493	3-Port Caller ID Card	•	•	•
	KX-TE82494 ^{*1}	3-Port Caller ID Card	•	•	•

SLT : Single Line Telephone APT : Analogue Proprietary Telephone

DISA : Direct Inward System Access

Notes:

Some cards will be exported to limited countries. Please contact your dealer and confirm the availability of specific cards in your country.

^{*1} This card can only be used with a PBX that has software version 3.0 or later and hardware version 2 or later. The existing 3-Port Caller ID Card (KX-TE82493) can also be used, regardless of the PBX version.

Optional Accessories

Optional Accessories for TDE & TDA

Category	Model No.	Description	TDE100	TDE200	TDA30	TDA100	TDA200	TDA600
TDE options	KX-TDE0110	16-Channel VoIP DSP Card	●	●	-	-	-	-
	KX-TDE0111	64-Channel VoIP DSP Card	●	●	-	-	-	-
	KX-NCS4104	4-Channel IP Trunk Activation Key	●	●	-	-	-	-
	KX-NCS4208	8-Channel IP Softphone/IP Proprietary Telephone Activation Key	●	●	-	-	-	-
	KX-NCS4508	8-Channel IP Proprietary Telephone Activation Key	●	●	-	-	-	-
TDE & TDA Options	KX-NCS4716	16-Channel SIP Extension Activation Key	●	●	-	-	-	-
	KX-NCS4910	Activation Key for Software Upgrade to Enhanced Version	●	●	-	-	-	-
	KX-A228	S/M-type Back-up Battery Cable	●	●	●	●	●	●
	KX-A229	L-type Back-up Battery Cable	●	●	-	●	●	●
	KX-A258	Blank Slot Cover	●	●	-	●	●	●
	KX-TDA0103	L-Type Power Supply Unit	●	●	-	●	●	●
	KX-TDA0104	M-Type Power Supply Unit	●	●	-	●	●	●
	KX-TDA0105	Memory Expansion Card	●	●	-	●	●	●
	KX-TDA0108	S-Type Power Supply Unit	●	●	-	●	●	●
	KX-TDA0161	4-Port Doorphone Card	●	●	-	●	●	●
	KX-TDA0162	2-Port Doorphone Card (German Type)	●	●	-	●	●	●
	KX-TDA0164	4-Port External Input/Output Card	●	●	-	●	●	●
	KX-TDA0166	16-Channel Echo Canceller Card	●	●	-	●	●	●
	KX-TDA0168	Extension Caller ID Card	●	●	-	●	●	●
	KX-TDA0170	8-Port Digital Hybrid Extension Card	●	●	-	●	●	●
	KX-TDA0171	8-Port Digital Extension Card	●	●	-	●	●	●
	KX-TDA0172	16-Port Digital Extension Card	●	●	-	●	●	●
	KX-TDA0173	8-Port Single Line Telephone Extension Card	●	●	-	●	●	●
	KX-TDA0174	16-Port Single Line Telephone Extension Card	●	●	-	●	●	●
	KX-TDA0175	16-Port Single Line Telephone Extension with Message Lamp Card	●	●	-	●	●	●
	KX-TDA0177	16-Port Single Line Telephone Extension Card with Caller ID	●	●	-	●	●	●
	KX-TDA0180	8-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA0181	16-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA0182	8-Port DID Card	●	●	-	●	●	●
	KX-TDA0183	4-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA0184	8-Port E & M Trunk Card	●	●	-	●	●	●
	KX-TDA0187	T-1 Trunk Card	●	●	-	●	●	●
	KX-TDA0188	E-1 Trunk Card	●	●	-	●	●	●
	KX-TDA0189	8-Port Caller ID/Pay Tone Card	●	●	-	●	●	●
	KX-TDA0190	Optional 3-Slot Base Card	●	●	-	●	●	●
	KX-TDA0191	4-Channel Message Card	●	●	-	●	●	●
	KX-TDA0193	8-Port Caller ID Card	●	●	-	●	●	●
	KX-TDA0196	Remote Card	●	●	-	●	●	●
	KX-TDA0284	4-Port BRI Card	●	●	-	●	●	●
	KX-TDA0288	8-Port BRI Card	●	●	-	●	●	●
	KX-TDA0290	PRI Card (PRI23)	●	●	-	●	●	●
	KX-TDA0290CE/CJ	PRI Card (PRI30)	●	●	-	●	●	●
	KX-TDA0410	CTI link Card	-	-	-	●	●	●
	KX-TDA0470	16-Channel VoIP Extension Card	●	●	-	●	●	●
	KX-TDA0484	4-Channel VoIP Gateway Card	●	●	-	●	●	●
	KX-TDA0490	16-Channel VoIP Gateway Card	●	●	-	●	●	●
	KX-TDA0820	SD Memory Card for Software Upgrade	●	●	-	●	●	●
	KX-TDA0920	SD Memory Card for Software Upgrade to Enhanced Version	●	●	-	●	●	●
	KX-TDA6105	Memory Expansion Card	●	●	-	●	●	●
	KX-TDA6110	Bus Master Card	●	●	-	●	●	●
	KX-TDA6111	Bus Master Expansion Card	●	●	-	●	●	●
	KX-TDA6166	16-Channel Echo Canceller Card	●	●	-	●	●	●
	KX-TDA6174	16-Port Single Line Telephone Extension Card	●	●	-	●	●	●
	KX-TDA6175	16-Port Single Line Telephone Extension with Message Lamp Card	●	●	-	●	●	●
	KX-TDA6181	16-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA620	Expansion Shelf	●	●	-	●	●	●
	KX-TDA6201	Mounting Kit for expanding to a 3- or 4- shelf System	●	●	-	●	●	●
	KX-TDA6920	SD Memory Card for Software Upgrade to Enhanced Version	●	●	-	●	●	●
TDA30 Options	KX-A236	Additional AC Adaptor	-	-	●	-	-	-
	KX-TDA3105	Memory Expansion Card	●	●	-	●	●	●
	KX-TDA3161	4-Port Doorphone Card	●	●	-	●	●	●
	KX-TDA3162	2-Port Doorphone Card (German Type)	●	●	-	●	●	●
	KX-TDA3166	8-Channel Echo Canceller Card	●	●	-	●	●	●
	KX-TDA3168	Extension Caller ID Card	●	●	-	●	●	●
	KX-TDA3171	4-Port Digital Extension Card	●	●	-	●	●	●
	KX-TDA3172	8-Port Digital Extension Card	●	●	-	●	●	●
	KX-TDA3173	4-Port Single Line Telephone Extension Card	●	●	-	●	●	●
	KX-TDA3174	8-Port Single Line Telephone Extension Card	●	●	-	●	●	●
	KX-TDA3180	4-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA3182	3-Port DID Card	●	●	-	●	●	●
	KX-TDA3183	2-Port Analogue Trunk Card	●	●	-	●	●	●
	KX-TDA3188	E-1 Trunk Card	●	●	-	●	●	●
	KX-TDA3191	2-Channel Message Card	●	●	-	●	●	●
	KX-TDA3192	2-Channel Simplified Voice Message Card	●	●	-	●	●	●
	KX-TDA3193	4-Port Caller ID Card	●	●	-	●	●	●
	KX-TDA3196	Remote Card	●	●	-	●	●	●
	KX-TDA3280	2-Port BRI Card	●	●	-	●	●	●
	KX-TDA3283	1-Port BRI Card	●	●	-	●	●	●
	KX-TDA3450	4-Channel SIP Trunk Card	●	●	-	●	●	●
	KX-TDA3451	4-Channel VoIP DSP Card	●	●	-	●	●	●
	KX-TDA3470	4-Channel VoIP Extension Card	●	●	-	●	●	●
	KX-TDA3480	4-Channel VoIP Gateway Card	●	●	-	●	●	●
	KX-TDA3820	SD Memory Card for Software Upgrade	●	●	-	●	●	●
	KX-TDA3920	SD Memory Card for Software Upgrade to Enhanced Version	●	●	-	●	●	●
Wireless	KX-TCA355	DECT Portable Station (PS) Tough type Model	●	●	●	●	●	●
	KX-TCA256	DECT Portable Station (PS) Compact Business Model	●	●	●	●	●	●
	KX-TCA155	DECT Portable Station (PS) Basic Model	●	●	●	●	●	●
	KX-TD7694	2.4GHz Portable Station (PS)	●	●	●	●	●	●
	KX-TD7684	2.4GHz Portable Station (PS)	●	●	●	●	●	●
	KX-TD7690	2.4GHz Portable Station (PS)	●	●	●	●	●	●
	KX-TDA0141CE	2-Channel Cell Station Unit Using a DHLCD/LC Card for DECT Portable Station	●	●	●	●	●	●
	KX-TDA0141	2-Channel Cell Station Unit Using a DHLCD/LC Card for 2.4 GHz Portable Station	●	●	●	●	●	●
	KX-TDA0142CE	4-Channel Cell Station Unit Using a CSIF Card for DECT Portable Station	●	●	-	●	●	●
	KX-TDA0142	3-Channel Cell Station Unit Using a CSIF Card for 2.4 GHz Portable Station	●	●	-	●	●	●
Telephones	KX-TDA0143	4 Cell Station Interface Card (CSIF4)	●	●	-	●	●	●
	KX-TDA0144	8 Cell Station Interface Card (CSIF8)	●	●	-	●	●	●
	KX-TDA0151	2-Channel Cell Station Unit Using a DHLCD/LC Card for 2.4 GHz Portable Station	●	●	-	●	●	●
	KX-TDA0152	3-Channel Cell Station Unit Using a CSIF Card for 2.4 GHz Portable Station	●	●	-	●	●	●
	KX-TDA0158	8-Channel High-density Cell Station Unit Using a DHLCD/LC Card for DECT Portable Station	●	●	-	●	●	●
	KX-NT300series	KX-NT366/364/343 Option KX-NT305/303 and NT307 (See to Page 5)	●	●	●	-	-	-
	KX-T76series	KX-T7636/33/30/25/65/67 and Option T7640, T7603 and T7601 (See to Page 7)	●	●	●	●	●	●
	KX-T77series	KX-T7735/30/50/20 and Option T7740 (See to Page 14-15)	●	●	●	●	●	●
	KX-T7765		●	●	●	●	●	●
	KX-T7765		●	●	●	●	●	●
Doorphone Other Options	KX-A291	Hotel PMS Interface (Up to 128 rooms)	●	●	●	●	●	●
	KX-A292	Hotel PMS Interface (Up to 256 rooms)	●	●	●	●	●	●
	KX-A293	Hotel PMS Interface (Up to 960 rooms)	●	●	●	●	●	●
	KX-TDA0300	PC Console Software	-	-	●	●	●	●
	KX-TDA0350	PC Phone Software	-	-	●	●	●	●

SLT : Single Line Telephone

APT : Analogue Proprietary Telephone

DPT : Digital Proprietary Telephone

DISA : Direct Inward System Access

DECT : Digital Enhanced Cordless Telecommunications

* The number of the CO keys can be added up to 36 CO with KX-T7603.

Note: Some cards will be exported to limited countries. Please contact your dealer and confirm the availability of specific cards in your country.

System Capacity

Optional Accessories and System Capacity

KX-TDE100 KX-TDE200

System Capacity (PMMPR Ver. 1.0)

Maximum Trunks and Extensions

Type	KX-TDE100	KX-TDE200
Total Number of Trunks	128	128
Trunk (Physical Trunk Card)	120	128
Trunk (Virtual Trunk Card)	32	32
Total Number of Extensions	256	256
Extension (Physical Extension Card)	160	256
Extension (Virtual Extension Card)	128	128
IP-PT and IP Softphone	64	64
SIP Extension	128	128

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.

Maximum Terminal Equipment

Terminal Equipment Type	KX-TDE100	KX-TDE200
Telephone	256	256
SLT	96	128
KX-T7600 series DPT	128	256
KX-T7560/KX-T7565 DPT	96	128
Other DPT	32	128
APT	24	64
IP-PT	160	160
IP-PT *1 (supported by IP-EXT16 card)	96	128
IP-PT *2 (supported by IPCMPR card)	64	64
SIP Extension	128	128
DSS Console	8	8
Basic CS	32	32
High-Density CS	16	16
PS	128	128
Voice Processing System (VPS)	2	2
Doorphone	16	16
Door Opener	16	16
External Sensor	16	16
External Relay	16	16

*1 KX-NT136 and KX-NT265

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

KX-TDA100/200 (PMPR Ver. 3.2)

Maximum Number of Trunks

Type	Maximum Number	
	KX-TDA100	KX-TDA200
Trunk	96 (120ch*1)	128

*1 When using PRI30 x 4 cards.

Maximum Terminal Equipment

The following number of items of terminal equipment can be supported by the Hybrid IP-PBX. For how to count the total number of items of equipment to be connected, refer to "MEC Card Calculation".

Terminal Equipment Type	KX-TDA100		KX-TDA200	
	Without MEC Card	With MEC Card	Without MEC Card	With MEC Card
Telephone	64	160	128	256
SLT	64	96	128	128
KX-T7600 series DPT	64	128	128	256
KX-T7560/KX-T7565 DPT	64	96	128	128
Other DPT	32	32	128	128
APT	24	24	64	64
IP-PT	64	96	128	128
DSS console	8		8	
CS	32		32	
PS	128		128	
Voice Processing System (VPS)	2		2	
Doorphone	16		16	
Door Opener	16		16	
External Sensor	16		16	

KX-TDA600 (PLMPR Ver. 3.1)

Maximum Number of Trunks

Type	Maximum Number			
	Basic System	2-shelf System	3-shelf System	4-shelf System
Trunk	160	320	480	640

Maximum Terminal Equipment

The following number of items of terminal equipment can be supported by the Hybrid IP-PBX.

Terminal Equipment Type	Basic System	2-shelf System	3-shelf System	4-shelf System
Telephone (using Digital XDP)	160 (288)*1	320 (576)*1	480 (800)*1	640 (960)*1
SLT	160	320	480	640
KX-T7600 series DPT	256	512	640	640
Other DPT	128	256	384	512
APT	80	160	240	320
IP-PT	160	320	480	640
DSS console			64	
CS	32	64	96	128
PS (without an EMEC card)			256	
PS (with an EMEC card)			512	
Voice Processing System (VPS)*2			8	
Doorphone	16	32	48	64
Door Opener	16	32	48	64
External Sensor	16	32	48	64
External Relay	16	32	48	64

KX-TDA30 (PMPR Ver. 4.0)

Maximum Number of Trunks

The Hybrid IP-PBX supports the following number of trunks.

Line Type	Maximum Number (channels)
LCOT + BRI+DID	12
VoIP (H.323)	4
VoIP (SIP)	8
E1	32

Maximum Terminal Equipment

The following number of items of terminal equipment can be supported by the Hybrid IP-PBX. Depending on the type and total number of items of equipment to be connected the MEC card may be reduced. To determine whether or not the MEC card is necessary refer to "MEC Card Calculation".

Terminal Equipment Type	Without Additional AC Adaptor	With Additional AC Adaptor
SLT	24*1	24*1
KX-T7600 series DPT/KX-T7600 series DSS console, and KX-T7560/KX-T7565 DPT	Total 24	Total 48
KX-T7600 series DPT	24	48
KX-T7600 series DSS console	4	4
KX-T7560/KX-T7565 DPT	24	24
Other DPT/Other DSS console and APT	Total 4	Total 24
Other DPT	4	4
Other DSS console	4	4
APT	4	4
IP-PT	4	4
DSS console	4	4
VPS	4 ports (1 VPS)*2	4 ports (1 VPS)*2
SLT, PT, DSS console, and VPS	28	56
CS	4	8
PS	28	28
Doorphone	4	4
External Sensor	4	4

*1 The number includes all ports of SLC cards, regardless of whether an SLT is connected or not.

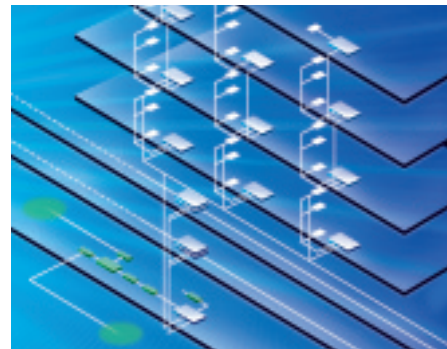
*2 A maximum of 4 ports (8 channels) of a single VPS can be connected to the Hybrid IP-PBX.

- ▶ Networking Solutions
- ▶ Messaging Solutions
- ▶ Professional Billing or Hospitality
- ▶ Small Call Centre Management
- ▶ Wireless Solutions
- ▶ Mobile Integration

Revolutionary changes are occurring today in both telecommunications and information technology. Our business environments are also changing to focus more on solution-oriented applications. Panasonic business telephone systems are uniquely positioned to maximise the benefits to be afforded by such changes, with products that are always at the cutting edge and packaged in such a way as to offer customers a total solution approach.

Networking Solutions

Any type of business can benefit from a reliable, low-cost, easy-to-use inter-office networking system. Features such as E&M leased lines and voice-over IP can help you cut costs dramatically while enjoying easy access within a private inter-office network. For example, network numbering lets you assign telephone numbers to each extension at a branch or head office, saving time and money. KX-TDE/TDA supports VoIP Network, TIE Line (PRI/T1/E1/E&M), QSIG Network etc. and user can manage a company-wide IP-PBX System from head office, branch office and plants in different locations as Multi-site office.



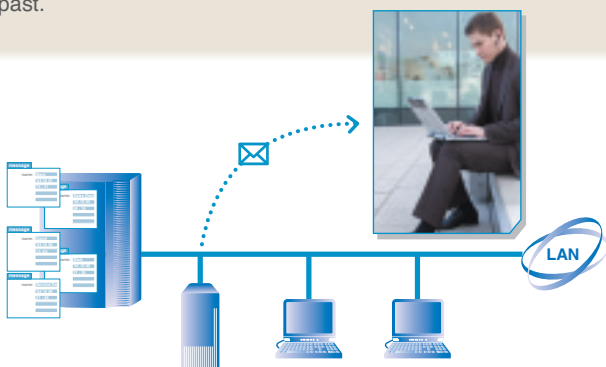
Messaging Solutions

Panasonic's messaging solutions give you multilingual capabilities and efficient call handling, so you can give customers the service and support they deserve. You also benefit from a system that takes messages automatically and keeps you in touch 24 hour a day. And, of course, you'll love the cost savings. Panasonic's messaging solutions mean more convenience for you and more satisfaction for your



You can configure the VPS to notify you by e-mail when you've received new messages; you can then log in to your mailbox remotely and listen to your messages. Better yet, have the VPS send your new messages in telephone-quality WAV file format as e-mail attachments, and listen to your messages without even picking up the phone! You can easily forward them by e-mail to other parties, and keep backup copies of those messages on your PC.

Calling the office to check your messages is finally a thing of the past.



Centralised Voice Mail

Voicemail resource can be shared across the network. It provides centralised mailbox access, Message Waiting indication, Direct mailbox access and Auto attendant service.

Custom Service

Using Custom Service, you can give callers 1-digit access to department extensions, special announcements, and other information. The caller listens to the first Custom Service Menu, then select from the options available.

Voice Mail (VM) Menu on the LCD

For easier operation, Voice Mail menus and the number of new messages received can be displayed on the LCD screens of Proprietary Telephones. Users can retrieve messages or specify parameters.

Exclusive Panasonic Functions

▶ Live Call Screening (LCS)

When the LCS mode is activated, you can monitor incoming messages and decide whether or not to take the call. This handy feature is similar to having a telephone answering machine right at your desk.

▶ Two-Way Recording

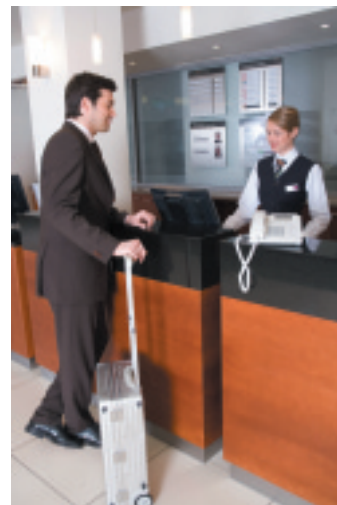
This feature allows an extension user to record a conversation in a mailbox by simply pressing the Two-Way Record function key. A variation of this feature is **Two-Way Transfer**, which permits the extension user to record a conversation in another Subscriber's mailbox; this is ideal for firms that want their receptionists to personally record messages from callers.

Professional Billing or Hospitality

For companies in the hospitality field, Panasonic PBX systems are a great tool for improving productivity and customer service. These systems provide a built-in hotel function with features such as check in/out, wake up call, and more. They can also be integrated with an external charge box and message-waiting lamps on room telephones.

Use of a Property Management System (PMS) interface (KX-A291/KX-A292/KX-A293) allows the KX-TDA series to link with computer-based hotel management software, for efficient operation with most of the world's hotel software. This provides several features that boost efficiency and let you provide better customer service, including:

- Check in/out
- Wake up call set/cancel/confirmation/alarm
- Message waiting lamp on/off
- Room status information
- Call accounting
- Set / Clear extension name



Small Call Centre Management

No matter how large or small your operation, Panasonic offers PBX systems that make you look brilliant. Our intelligent call-management features help improve work efficiency, increase customer satisfaction, and polish your company image. Panasonic digital telephone systems provide Uniform Call Distribution (UCD), which distributes calls to a group of extensions for your agents to answer. When all agents are busy, the system serves as a receptionist, playing a message to the caller. A supervisor can monitor the call status on the LCD of Digital Proprietary Telephone and check the real-time performance for the management decisions.

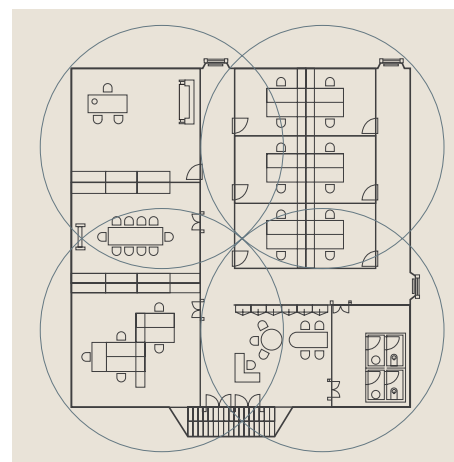
► Built-in Call Centre features

- Call Distribution to Longest Idle Extension
- VIP Priority
- Busy-on-Busy
- Queuing Message
- Wrap-up
- Log-in / Log-out



Wireless Solutions (DECT)

Wireless compatible, Panasonic Business Telephone System gives you greater efficiency and mobility with communication powers that go way beyond the office. In operations such as factories and warehouses, it lets your staff stay on top of merchandise while moving about the shop floor. At car dealerships and other businesses with widespread locations, it lets you respond to customers more quickly. This new digital system lets you provide prompt customer service and make the most of every business opportunity.



Mobile Integration

Mobile telephones can be registered to the PBX as extensions. The mobile telephone members work as "Virtual" Portable Stations (PS) and use 3-5 digit PBX extension numbering. Calls that come for salespeople while they are out of the office can be sent to their mobile telephone without having to use call forwarding. Work can be smoothly handled from outside the company.



