

# Panasonic

## ideas for life

### System Capacity

#### Maximum Trunk and Extension Cards

The following number of trunk and extension cards can be installed in the Hybrid IP-PBX for expansion.

Card Type	KX-TDA100	KX-TDA200
Trunk Card*1	6	8
Extension Card	6	8
Total	6	11

\*1 One T1, E1, PRI30, PRI23, or IP-GW4 card counts as 2 cards.

#### Maximum Terminal Equipment

The following number of items of terminal equipment can be supported by the 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-DT300/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	
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	



**Line-up**  
KX-TDA100 and KX-TDA200

### Option List

Category	Model No.	Description	
MPR Option Card	KX-TDA0105	Memory Expansion Card (MEC)	
	KX-TDA0196	Remote Card (RMT)	
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-TDA0187	T-1 Trunk Card (T1)	
	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-TDA0290CE/CJ	PRI Card (PRI30)	
	KX-TDA0290	PRI Card (PRI23)	
	KX-TDA0480	4-Channel VoIP Gateway Card (IP-GW4)	
	KX-TDA0484	4-Channel VoIP Gateway Card (IP-GW4E)	
	KX-TDA0490	16-Channel VoIP Gateway Card (IP-GW16)	
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 with Message Lamp Card (MSLC16)	
	KX-TDA0177	16-Port Single Line Telephone Extension Card with Caller ID (CSLC16)	
	KX-TDA0470	16-Channel VoIP Extension Card (IP-EXT16)	
Other 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-TDA0191	4-Channel Message Card (MSG4)	
	KX-TDA0192	2-Channel Simplified Voice Message Card (ESVM2)	
	KX-TDA0194	4-Channel Simplified Voice Message Card (ESVM4)	
	KX-TDA0410	CTI Link Card (CTI-LINK)	
	KX-TDA0820	SD Memory Card for Software Upgrade	
Optional SD Memory Cards	KX-TDA0920	SD Memory Card for Software Upgrade to Enhanced Version	
	KX-TDA0103	L-Type Power Supply Unit (PSU-L)	
Power Supply Unit (PSUs)	KX-TDA0104	M-Type Power Supply Unit (PSU-M)	
	KX-TDA0108	S-Type Power Supply Unit (PSU-S)	
Cell Stations (CSs)	2.4 GHz	KX-TDA0151	2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for 2.4 GHz Portable Station
		KX-TDA0152	3-Channel Cell Station Unit Using a CSIF Card for 2.4 GHz Portable Station
	DECT	KX-TDA0155CE	2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT Portable Station
		KX-TDA0156CE	4-Channel Cell Station Unit Using a CSIF Card for DECT Portable Station
		KX-TDA0158CE	8-Channel High-density Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT Portable Station
		KX-TDA0155	DECT 6.0 2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT 6.0 Portable Station
		KX-TDA0156	DECT 6.0 4-Channel Cell Station Unit Using a CSIF Card for DECT 6.0 Portable Station
		KX-TDA0158	DECT 6.0 8-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT 6.0 Portable 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:  
 • Digital proprietary telephones (e.g., KX-DT300 series) • Analogue proprietary telephones (e.g., KX-T7700 series) • IP proprietary telephones (e.g., KX-NT346, KX-NT343, KX-NT321) • Portable stations (e.g., KX-TCA275, KX-TCA175, KX-TCA256, KX-TCA364/355, KX-TD7690)  
 • DSS consoles (e.g., KX-DT390) • Single line telephones (e.g., KX-T7710)

#### Incompatible Panasonic Proprietary Telephones

The PBX does not support the following telephones:  
 • KX-T30800 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

# KX-TDA100

# KX-TDA200

(PMPR Ver. 5.0)

### Specifications

KX-TDA100/200	
<b>Control Bus:</b>	Original bus (16-bit, 8 MHz, 10 megabytes per second)
<b>Communication Bus:</b>	H.100 bus conformity (1024 time slots)
<b>Switching:</b>	Non-blocking
<b>Power Input:</b>	
<b>PSU-S</b>	100 V AC to 130 V AC; 1.4 A/200 V AC to 240 V AC; 0.8 A; 50 Hz/60 Hz
<b>PSU-M</b>	100 V AC to 130 V AC; 2.5 A/200 V AC to 240 V AC; 1.4 A; 50 Hz/60 Hz
<b>PSU-L</b>	100 V AC to 130 V AC; 5.1 A/200 V AC to 240 V AC; 2.55 A; 50Hz/60 Hz
<b>External Battery:</b>	+36 V DC (+12 V DC x 3, recommended maximum capacity is 28 Ah)
<b>Maximum Power Failure Tolerance:</b>	300 ms (without using backup batteries)
<b>Memory Backup Duration:</b>	7 years
<b>Dialling:</b>	
<b>Trunk</b>	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialling
<b>Extension</b>	Dial Pulse (DP) 10 pps, 20 pps Tone (DTMF) Dialling
<b>Mode Conversion:</b>	DP-DTMF, DTMF-DP
<b>Ring Frequency:</b>	20 Hz/25 Hz (selectable)
<b>Trunk Loop Limit:</b>	1600 Ω maximum
<b>Operating Environment:</b>	
<b>Temperature</b>	0 °C to 40 °C
<b>Humidity</b>	10 % to 90 % (non-condensing)
<b>Conference Call Trunk:</b>	From 10 x 3-party conference call to 4 x 8-party conference call
<b>Music on Hold (MOH):</b>	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
<b>Paging:</b>	
<b>Internal</b>	Level Control: -15 dB to +6 dB in 3 dB steps
<b>External</b>	2 ports (Volume Control: -15 dB to +15 dB in 1 dB steps)
<b>Serial Interface Port:</b>	
<b>RS-232C</b>	1 (maximum 115.2 kbps)
<b>USB</b>	1
<b>Extension Connection Cable:</b>	
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	1-pair wire (D1,D2)
PT-interface CS (High-density)	4-pair wire (D1,D2)
DSS Console and Add-on Key Module	1-pair wire (D1,D2)
<b>Dimension:</b>	
<b>KX-TDA100</b>	334 mm (W) x 390 mm (H) x 270 mm (D)
<b>KX-TDA200</b>	430 mm (W) x 415 mm (H) x 270 mm (D)
<b>Weight (when fully mounted):</b>	
<b>KX-TDA100</b>	Under 12 kg
<b>KX-TDA200</b>	Under 16 kg

# System Feature Capacity

	Item	KX-TDA100	KX-TDA200		Item	KX-TDA100	KX-TDA200
<b>System</b>	Absent Message-Extension	1 x 16 characters		<b>ARS</b>	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 for Tenant	16 digits	
	Extension Number	1-5 digits (1-4 digits for PSs)			Authorisation Code for Trunk	10 digits	
	Extension Personal Identification Number (PIN)	10 digits, 1 entry/extension			Outgoing Call Log - PT	100 records/extn. 1,520 records/system	
	Host PBX Access Code	10 digits, 10 entries/trunk group			Outgoing Call Log - PS	100 records/extn. 640 records/system	
	Multiple Subscriber Number (MSN)	10 entries per ISDN-BRI port			Incoming Call Log - PT	100 records/extn. 3,040 records/system	
	Number of the Characters of Name	20		Incoming Call Log - PS + Incoming Call Distribution Group	100 records/extn. or group Total 2,048 records/system		
	Printing Message	8		Message Waiting - PS + Incoming Call Distribution Group	256		
	Queuing Time Table	64		Message Waiting - PT + SLT	512		
	Ring Tone Pattern Plan	8		Outgoing Message (OGM)	64		
	Simultaneous Programmers	<ul style="list-style-type: none"> <li>• one system programmer + 63 personal programmers</li> <li>• one manager programmer + 63 personal programmers</li> <li>• 64 personal programmers</li> </ul>		<b>Voice Message</b>	OGM Total Recording Time	MSG4 Card:8 minutes;ESVM2/ESVM4 Card:20 minutes (at High recording quality)	
	SMDR Call Storage	200 calls (4,000 calls w/MEC card)			Built-in Simplified Voice Message (SVM)	ESVM2/ESVM4 Card:250 messages per card/block	
	Special Carrier Access Code	16 digits, 20 entries			SVM Total Recording Time	ESVM2/ESVM4 Card: 20, 60, or 120 minutes (depending on the recording quality)	
	Tenant	8		<b>Hospitality and Charge Management Features</b>	Billing items for guest rooms (only available w/ EMEC or MEC)	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		
<b>Dialling</b>	Emergency Call	32 digits, 10 entries		<b>Networking</b>	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	Without MEC: 32 digits, 10 entries/extn. With MEC: 32 digits, 100 entries/extn.			NDSS;Monitored PBXs	8	
	Quick Dialling	4 digits, 80 entries (an additional 4,000 8 digit entries w/MEC Card)		NDSS;Registered Extensions for Monitor PBX	250		
Redial	32 digits		<b>CTI</b>	PC Console	8		
System Speed Dialling	Without MEC: 32 digits, 1,000 entries. With MEC: Additional 1,000 32-digit entries/tenant.			PC Phone	64	128	
<b>Groups</b>	Broadcasting Group	8 (32 members/group)		<b>Password</b>	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)		<b>Pro-grammer Code</b>	Administrator Level Programmer Code	4 - 16 characters		
VM (DTMF) Group	2 groups x 32 channels			User Level Programmer Code	0 - 16 characters		
<b>TRS/Barring</b>	TRS/Barring Level	7					
	TRS/Barring Denied Code	16 digits, 100 entries/level					
	TRS/Barring Exception Code	16 digits, 100 entries/level					

## Features List

### 1. 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 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

- Budget Management
- Extension Dial Lock
- Dial Tone Transfer
- Walking COS
- Verification Code Entry

#### Automatic 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
- Paralleled 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)
- Automatic Fax Transfer
- Built-in Simplified Voice Message (SVM)
- 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)
- Advice 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

#### T1 Line Service Features

#### 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

- Station Message Detail Recording (SMDR)
- 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
- 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 QSIG
- 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 Proprietary Telephone (IP-PT) Features

- IP Proprietary Telephone (IP-PT)

#### Computer Telephony Integration (CTI) Features

- Computer Telephony Integration (CTI)
- PC Phone/PC Console

#### Cellular Phone Features

## 2. System Configuration and Administration Features

#### System Configuration - Hardware

- Extension Port Configuration

#### System Configuration - Software

- Class of Service (COS)
- 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