



## System Capacity

### Maximum Trunks and Extensions

Type	KX-TDE100	KX-TDE200
<b>Total Number of Trunks</b>	128	128
Trunk (Physical Trunk Card)	120	128
Trunk (Virtual Trunk Card)	32	32
<b>Total Number of Extensions</b>	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.

## Option List

	Model	Description
<b>Main Processing Card</b>	KX-TDE0101	IP Convergence Main Processing Card (IPCMPR)
<b>IPCMPR Option Cards</b>	KX-TDE0110	16-Channel VoIP DSP Card (DSP16)
	KX-TDE0111	64-Channel VoIP DSP Card (DSP64)
	KX-TDA0196	Remote Card (RMT)
<b>Activation Key Cards</b>	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)
<b>Physical Trunk Cards</b>	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 (PRI 30)
	KX-TDA0290	PRI Card (PRI 23)
	KX-TDA0484	4-Channel VoIP Gateway Card (IP-GW4E)
	KX-TDA0490	16-Channel VoIP Gateway Card (IP-GW16)
	KX-TDA0143	4 Cell Station Interface Card (CSIF4)
	KX-TDA0144	8 Cell Station Interface Card (CSIF8)
<b>Physical Extension Cards</b>	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)
	KX-TDA0161	4-Port Doorphone Card (DPH4)
	KX-TDA0162	2-Port Doorphone Card (German Type)(DPH2)
<b>Other Physical Cards</b>	KX-TDA0164	4-Port External Input/Output Card (EI04)
	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-TDA0103	L-Type Power Supply Unit (PSU-L)
<b>Power Supply Units (PSUs)</b>	KX-TDA0104	M-Type Power Supply Unit (PSU-M)
	KX-TDA0108	S-Type Power Supply Unit (PSU-S)
<b>Cell Stations (CSs)</b>	<b>Basic CSs</b>	KX-TDA0141CE 2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for DECT Potable Station
		KX-TDA0141 2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for 2.4 GHz Potable Station
		KX-TDA0142CE 4-Channel Cell Station Unit Using a CSIF Card for DECT Potable Station
		KX-TDA0142 3-Channel Cell Station Unit Using a CSIF Card for 2.4 GHz Potable Station
	<b>High-Density CSs</b>	KX-TDA0151 2-Channel Cell Station Unit Using a DHLC/DLC Card (PT-interface CS) for 2.4 GHz Potable Station
		KX-TDA0152 3-Channel Cell Station Unit Using a CSIF Card for 2.4 GHz Potable Station
<b>Proprietary Equipment</b>	KX-A228	S/M-type Back-up Battery Cable
	KX-A229	L-type Back-up Battery Cable
	KX-A258	Blank Slot Cover
	KX-T30865	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)
- 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-TD7690)
- 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-T30800 series proprietary telephones and DSS consoles
- KX-T61600 series proprietary telephones and DSS consoles
- KX-T12300 series proprietary telephones and DSS consoles
- KX-TD7500 DECT portable station

## Maximum Terminal Equipment

Terminal Equipment Type	KX-TDE100	KX-TDE200
<b>Telephone</b>	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)

## Specifications

KX-TDE100/TDE200		
<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 50 Hz/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>RJ45 Port</b>	<b>MNT Port</b>	1 (for PC connection)
	<b>LAN Port</b>	1 (for LAN connection)
<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 (Basic)	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-TDE100</b>	334 mm(W) x 390 mm(H) x 272 mm(D)
	<b>KX-TDE200</b>	430 mm(W) x 415 mm(H) x 276 mm(D)
<b>Weight (when fully mounted)</b>	<b>KX-TDE100</b>	Under 12 kg
	<b>KX-TDE200</b>	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		
	Queueing Time Table	64		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		Voice Message	Built-in Simplified Voice Message (SVM)	125 messages	
	SMDR Call Storage	200 calls			SVM Total Recording Time	40, 60, or 120 minutes (depending on the recording quality)	
	Special Carrier Access Code	16 digits, 20 entries		Hospitality and Charge Management Features	Billing Items for Guest Rooms	4,000 records/PBX	
	Tenant	8			Hotel Operator	4	
	Time Service Holiday	24			Charge Rate	7 digits including a decimal	
	Verification Code	4 digits, 1,000 entries		Networking	Charge Denomination	3 currency characters/symbols	
	Verification Code Personal Identification Number (PIN)	10 digits, 1,000 entries			TIE Line Routing and Modification Table	32 entries	
Emergency Call	32 digits, 10 entries		Leading Number		3 digits		
Hot Line	32 digits		PBX Code		7 digits		
Key Pad Protocol Dial (ISDN Service Access)	32 digits		NDSS:Monitored PBXs		8		
Dialling	Personal Speed Dialling	32 digits, 100 entries/extn.		NDSS:Registered Extensions for Monitor PBX	250		
	Quick Dialling	8 digits, 4,080 entries		CTI	PC Console	8	
	Redial	32 digits			PC Phone	64	128
	System Speed Dialling	32 digits, 1,000 entries/tenant		Password	System Password for Installer	4 - 10 characters	
	Broadcasting Group	8 (32 members/group)			System Password for Administrator — for PC Programming	4 - 10 characters	
Call Pickup Group	64		System Password for User — for PC Programming		4 - 10 characters		
Idle Extension Hunting Group	64 (16 extensions/group)		System Password for Administrator — for PT Programming		4 - 10 digits		
Incoming Call Distribution Group	128 (32 extensions/group)		System Password for User — for PT Programming		4 - 10 digits		
Paging Group	32		Manager Password		4 - 10 digits		
PS Ring Group	32		Installer Level Programmer Code		4 - 16 characters		
Trunk Group	64		Administrator Level Programmer Code		4 - 16 characters		
Groups	VM (DPT) Group	2 groups x 12 ports (24 channels)		User Level Programmer Code	0 - 16 characters		
	VM (DTMF) Group	2 groups x 32 channels					
	TRS/Barring Level	7		Pro-grammer Code			
TRS/Barring	TRS/Barring Denied Code	16 digits, 100 entries/level					
	TRS/Barring Exception Code	16 digits, 100 entries/level					

Feature 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
  - Queueing 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
- 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  
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)
  - 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 Message Features**  
Built-in Simplified Voice Message (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 Service 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**

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  
Simple Network Management Protocol (SNMP) System Monitor  
Dynamic Host Configuration Protocol (DHCP) Assignment  
Packet Internet Groper (PING) Confirmation