

Side by Side Comparison

VENDOR:	NEC Corporation of America	NEC Corporation of America	Panasonic Communications Company of North America	Panasonic Communications Company of North America
MODEL:	DSX-40	DSX-80	KX-TDA30 (KX-TDA50/50G in U.S.)	KX-TDA100
APPLICATION:	Key; Hybrid; PBX	Key; Hybrid; PBX	Hybrid/PBX; IP-Enabled PBX; Hybrid; IP-Enabled Key	Hybrid/PBX; IP-Enabled PBX; Hybrid
FCC REG. NO.:	NIFKF00BDSX; NIFMF00BDSX; NIFPF00BDSX	NIFKF00BDSX; NIFMF00BDSX; NIFPF00BDSX	ACJMF03AKX-TDA50	ACJMF03AKX-TDA100
MANUFACTURED IN:	Thailand	Thailand	Japan	Japan
REGIONS WHERE SOLD:	North America	North America	North America (Canada as KX-TDA30 and U.S. as KX-TDA50/50G), EMEA (as KX-TDA30), CALA (as KX-TDA30), APAC (as KX-TDA30)	North America, EMEA, CALA, APAC
INTRODUCTION:	2007	2006	2004	2003
RELEASE/REV. LEVEL:	3.0	3.0	5.0	3.2
REVISION DATE:	2009/06U	2009/06U	2009/12U	2008/04U
REVISION DATE NOTES:				
REPORT BASED ON:	Product Description Manual	Product Description Manual	Manufacturer Information and Documentation	Manufacturer Information and Documentation
SYSTEM CAPACITY:				
Ports	40	80	28	96
Trunks	8 (analog)	64 (digital); 48 (analog)	12	64
Stations	56 total: 24 (digital); 18 (analog); 32 (IP)	64 total: 32 (digital); 32 (analog); 32 (IP)	28	128 (plus 128 wireless)
Busy Hour Calls	-	-	-	-
CAPACITY NOTES:				
Capacity Notes:	<p>NEC's DSX-40 is a KSU with a CPU motherboard that houses three daughter board expansion slots. The first slot can expand the system from four to eight CO lines. The other two slots can each accept an expansion card for eight digital or eight analog extensions. The KSU comes standard with four CO lines, eight digital extension ports, two analog extension ports, and two analog door box ports including relays. The IP Gateways cards adds support for up to 32 IP phones.</p> <p>Station cards include: 8-port digital station card (up to two); 8-port analog station card with message waiting (up to two).</p> <p>Trunk cards include: 4-port CO line expansion</p>	<p>NEC's DSX-80 is a 4-slot KSU with a CPU, 4-universal card slots and a power supply. The unit provides 80 ports with a maximum of 64 stations (32 digital or 32 analog stations plus 32 IP phones) and 64 digital or 48 analog trunks.</p> <p>Station cards include: 16-port digital station card (up to 2); 16-port analog station card with message waiting (up to 3); 8-port analog station card with message waiting (up to 3).</p> <p>Trunk cards include: T1/PRI card (up to 3 with 8 T1 circuits disabled - maximum 64 ports); 16-port CO card with Caller ID (up to 3); 8-port CO card with Caller ID (up to 3).</p> <p>Optional cards and</p>	<p>The KX-TDA30 (or KX-TDA50/50G in the U.S.) Digital Hybrid IP-PBX is a compact, modular unit that supports 12 trunk ports (12 analog trunks or 12 BRI channels), 24 wired extensions (or 48 wired extensions using eXtra Device Port (XDP) or Digital XDP functionality) plus four extension ports on the basic unit. The utilization of eight Cell Stations adds support for 28 multi-cell wireless DECT handsets. Station capacity is a total of 48 wired/wireless stations.</p> <p>The KX-TDA50G variant ships with Version 5.0 software and a built-in Caller ID card. A SIP trunking card is an option that can be selected to ship with the TDA50G.</p> <p>The four initial extension ports can be configured for Multi-Cell Wireless; four or eight 2-channel Cell Stations or two 8-channel Cell Stations can be connected to support up to 28</p>	<p>The KX-TDA100 Digital Hybrid IP-PBX is a modular 7-slot unit with six universal slots for station and trunk cards. The system supports a maximum of 96 ports with a typical configuration of 48 digital trunks and 48 digital stations (standard total is 80 ports with 16 channels per card slot). A maximum of 64 extensions (digital or analog or IP) are allowed, as well as a maximum of 64 CO trunks or 48 T1 channels or 46 PRI channels. Digital phones have an eXtra Device Port (XDP) that can connect to a single-line device (can have the same extension number or a different number). KX-TD7600 series phones can use the Digital eXtra Device Port (DXDP) feature that connects two KX-T7600 digital proprietary telephones to the same station port; one KX-T7600 telephone connects to the XDP port of another KX-T7600 phone, increasing the number of stations supported (a memory expansion module is required to add beyond 64 stations on the KX-TDA100 – the standard cabinet maximum). With DXDP, the station capacity is doubled to 128 wired telephones</p>

card with Caller ID (maximum one).

Optional cards and equipment include: DSX IntraMail 2 x 8, 4 x 8, DSX IntraMail 8 x 16, DSX IntraMail Pro 4 x 16, DSX IntraMail Pro 8 x 32, VoIP Gateway Daughterboard and DSX Analog Door Box.

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portable stations. Alternatively, the four initial extension ports can support up to 12 wired extensions using an eXtra Device Port (XDP) in a digital phone that can connect to a single-line device (can have the same extension number or a different number). KX-TD7600 series phones can use the new Digital XDP feature to double the station port capacity. The Digital XDP phone must be wired directly to another KX-T7600 for the feature to work.

The main unit is configured with four extension ports, four loop start CO ports, a power supply, RS232 port, USB port, Music On Hold port, Paging port and an SD memory card.

Station cards include 4-port Hybrid Line Card for four analog proprietary phones, KX-T7700 Series, DSS consoles, 2-port Cell Station or Single Line Telephones (maximum of one card); 4-port Digital Line Card for four KX-T7600 and KX-T7400 digital proprietary phones, DSS console, 2-port Cell Station and Voice Mail (maximum of one card); 8-port Digital Line Card for eight KX-T7600, KX-T7400, DSS console, 2-port Cell Station and Voice Mail (maximum of two cards); 4-port Single Line Telephone Card (maximum one card); 8-port Single Line Telephone Card (maximum two cards); 4-port or 8-port Proprietary Line Card for KX-T7700, DSS and Voice Mail (maximum one card). Version 4.0 adds a 4-port IP Extension card (maximum of one card; requires one 8-port slot).

Trunk cards include 4-port Loop Start Trunk Card for four loop start trunks with two ports for Power Failure Transfer (maximum of three cards); 4-port IP Gateway Card for 4-channel VoIP (maximum one card).

Optional cards include 4-port Doorphone Card (maximum one card); 8-channel Echo Canceller Card (maximum one card); Extension Caller ID card (maximum one card); 2-channel Message Card with 15 minutes recording time and 32 recorded messages (maximum one card); 4-port Caller ID Card (maximum two cards); Remote Maintenance Card (V.90 56 kbps) and CTI-Link Card that supports both CTI applications and PC programming, operating at the same time.

(plus 128 additional wireless phones). The Digital XDP phone must be wired directly to another KX-T7600 for the feature to work.

Station cards include 16-port IP Extension card; 8-circuit digital/DSS or single line telephones; 8-circuit digital; 8-circuit SLT with 2 power failure ports; 16-circuit SLT with 4 power failure ports (with/without Caller ID); 16-circuit SLT with Message Lamp; 16-circuit digital/DSS; 8-port 2.4GHz Cell Station Card (eight cell stations per card and maximum of 24 talk paths per card; 128 portable stations assigned; up to 2 Cell Station cards can be installed for 16 cell stations); 4-port 2.4GHz Cell Station Card (supports four cell stations per card with a maximum of 12 talk paths; 128 portable stations assigned); Version 1.1 or higher allows the use the KX-TA0141 Cell Station (two talk paths) that interfaces with a Digital Line Card or a Digital Hybrid Line Card (plugs into a station card, eliminating the need for a Cell Station Card).

Trunk cards include 8-circuit analog; 8-circuit Analog Extension Caller ID; 16-circuit analog; 24-channel T1 or 30-channel E1; 8-circuit Caller ID; 23-channel PRI; 16-channel IP Trunk Gateway Card; 4-channel VoIP gateway.

Optional cards include 2- or 4-port doorphone; 16-channel echo canceler (supports 4- or 8-party conference); 4-channel message card; remote programming card (56kbps modem) and CTI link card (10BaseT).

IP TELEPHONY:				
IP Telephony Option:	Yes	Yes	Yes	Yes
LAN Interface	S	S	O	O
WAN Interface	S	S	O	O
IP Telephony Notes:	<p>The system can be IP-enabled via one 4-channel VoIP gateway card (upgradable in 4-port increments up to 16 ports). The IP Gateway compresses and packetizes voice communication for transmission over a TCP/IP network (10/100BaseT), eliminating long distance charges.</p> <p>The IP Gateway card supports DSX IP Keysets (up to 32) or compliant third party SIP hard and soft phones. (IP or SIP trunking is not supported.)</p>	<p>The system can be IP-enabled via one 4-channel VoIP gateway card (upgradable in 4-port increments up to 16 ports). The IP Gateway compresses and packetizes voice communication for transmission over a TCP/IP network (10/100BaseT), eliminating long distance charges.</p> <p>The IP Gateway card supports DSX IP Keysets (up to 32) or compliant third party SIP hard and soft phones. (IP or SIP trunking is not supported.)</p>	<p>The system can be IP-enabled via one 4-channel VoIP gateway card (maximum of one IP gateway; requires two free slots). The H.323 V2 gateway compresses and packetizes voice and fax communication for transmission over a TCP/IP network (100BaseT), eliminating long distance charges.</p> <p>A 4-port IP Extension card allows connection of up to four IP extensions. One card can be installed in a KX-TDA50 and requires one 8-port slot.</p> <p>The system supports SIP trunking (eight SIP channels with four standard, plus four with additional card). SIP stations are not supported.</p> <p>Codecs supports are G.711, G.729A, G.723.1 (6.3 kbps) or G.723.1 (5.3kbps).</p>	<p>The system can be IP-enabled via two 16-channel IP Trunk Gateway cards (Version 2 and higher) enables connection of multiple KX-TDA 100/200 PBXs over a data network, compressing and packetizing voice and fax communication for transmission over the TCP/IP network and eliminating long distance charges. VoIP calls automatically re-route to public CO lines if a ring back or busy tone is not received within four seconds. Previously, the system was IP-enabled via an H.323 V2-compatible 4-channel VoIP gateway card. KX-TDA 100 supports 64 IP telephones via four 16-port IP Extension Gateway Cards (a Version 2 card option).</p> <p>Panasonic recommends Digital Leased Line, IP-VPN or Frame Relay. Codecs supports are G.729A, G.723.1 (6.3 kbps) or G.723.1 (5.3kbps).</p>
CHARACTERISTICS:				
Analog	Yes	Yes	Yes	Yes
Digital	Yes	Yes	Yes	Yes
IP	Yes	Yes	Yes	Yes
Blocking	No	No	No	No
Virtual NonBlocking	No	No	No	No
NonBlocking	Yes	Yes	Yes	Yes
Conversation Paths	80	132	INA	128
HARDWARE CONFIGURATION:				
Number of Cabinets:	1	1	1	1
Cabinet Dimensions:	10.5 in. high x 13.19 in. wide x 2.75 in. deep	13.69 in. high x 10.75 in. wide x 5.88 in. deep	14.875 in. high x 8.25 in. wide x 4.625 in. deep; 275 wide x 376 high x 117mm deep	13.375 in. high x 15.375 in. wide x 10.625 in. deep
Cabinet Weight:	3 pounds 9.5 ounces	4 pounds 5 ounces	9.03 pounds; 3.5kg	18.5 pounds
Cabinet Mounting:	Wall	Wall	Wall or 19-inch rack (optional)	Wall
PowerSply (Int/Ext):	Internal	Internal	Internal	Internal
- 110VAC Input Ver:	Yes	Yes	Yes (100-240 VAC, 1.5A, 50/60Hz)	Yes (120 VAC @ 60 Hz)
- 220VAC Input Ver:	No	No	Yes	No
- 48VDC Input Ver:	No	No	No	No
Power Consumption:	83 watts (full load)	91 watts (full load)	55 watts, average	140 watts (PSU-S); 210 watts (PSU-M)
Heat Dissipation:	450 BTUs	563 BTUs	INA	INA
Processor:	32-bit processor; DSP	32-bit processor; DSP	Central 32-bit microprocessor;	Central 32-bit microprocessor;

	technology; Linux operating system	technology; Linux operating system	Panasonic Proprietary Operating System	Panasonic Proprietary Operating System
Redundancy:	Not Offered	Not Offered	Not offered	Not offered
· Common Control:	-	-	-	-
· Disk Drives:	-	-	-	-
· Power Supplies:	-	-	-	-
· Other:	-	-	-	-
Software Packages:	1 standard software package	1 standard software package	1 basic package	1 basic package
Operating Temp:	32-104 degrees F (0-40 degrees C)	32-104 degrees F (0-40 degrees C)	32 to 104 degrees F	32 to 104 degrees F
Operating Humidity:	10%-95% non-condensing	10%-95% non-condensing	10% to 90%, noncondensing	10% to 90%, noncondensing
Circuit Card Types:	3 station/trunk cards; 4 option cards	6 station/trunk cards; 3 option cards	7 station card types; 2 trunk card types; 6 feature cards	7 station card types; 6 trunk card types; 5 feature cards
Card Slots:	1 CO card slot, 2 station card slots	4 universal card slots	7 slots	7 slots (6 universal)
Wiring:	1-pair	1-pair	1-pair for SLT or 7200 or 7400 or 7600 Series phones without XDP; 2-pair for most other phones and phones with XDP; one pair for DSS	1-pair for SLT or 7200 or 7400 or 7600 Series phones without XDP; 2-pair for most other phones and phones with XDP; one pair for DSS
Wiring Limitations:	2,000' using 2-wire 24-gauge wiring (digital phones and door box); 18,000' for single-line phones	2,000' using 2-wire 24-gauge wiring (digital phones and door box); 18,000' for single-line phones	2362 feet for digital phones (with 16-port Digital Extension Card)	2362 feet for digital phones (with 16-port Digital Extension Card)
SYSTEM FEATURES				
Abbr./Speed Dialing	S	S	S	S
· Max. Speed Dial No.	1,000	1,000	2,000 (1,000 per tenant)	8,000 (1,000 per tenant)
· Max. Dig/Speed No.	30	30	32	32
Account Codes				
· (Optional)	S	S	S	S
· Digits/Code	2 to 10	2 to 10	10	10
· (Forced)	S	S	S	S
· Digits/Code	2 to 10	2 to 10	10	10
· (Std., preprogrammed)	S	S	NA	NA
· Digits/Code	2 to 10	2 to 10	-	-
· (Verifiable)	S	S	S	S
· Digits/Code	2 to 10	2 to 10	10	10
· No of Codes	1,000	1,000	1,000	1,000
Auth. Codes (COS Ovr)	S	S	S	S
· Digits/Code	4	4	10	10
· No. of Codes	9,999	9,999	1	1
Auto Attendant	S	S	O	O
· Built-in	S	S	NA	NA
· External	O	O	O	O
Auto Route Selection	NA	NA	S	S
Auto Set Relocation	S	S	O (IP phones)	S (IP phones)
Auto Wakeup (Time Remdr)	NA	NA	S	S
Back Music (thru	S (2 1/8 in. Mono	S (2 1/8 in. Mono	S	S

Phones)	Minijacks)	Minijacks)		
Battery Backup, Memory	S (Flash Memory)	S (Flash Memory)	S	S
Battery Backup, System	O	O	O	O
- Direct Batt. Conn.	NA	NA	NA	NA
- UPS Package Required	O	O	O	O
Caller Identification				
- Inc. Caller ID (ICLID)	S	S	S (KX-TDA50G)	O
- ANI	S	S	S (KX-TDA50G)	O
- DNIS	S	S	NA	NA
Centrex Compatibility	S	S	S	S
Classes of Service	S	S	S	S
- No. of Classes	15	15	64	64
- Day/Night Class Svc.	S	S	S	S
Diagnostics (Self Test)	NA	NA	S	S
Dial Pulse/DTMF Signal	S	S	S	S
Direct In Lines	S	S	S	S
Direct Inward Dialing	NA	O (via T1)	S	O (via T1 or PRI)
Distinctive Ringing	S	S	S	S
Doorphones	S	O	O	O
- Max No. of Doorphones	2 built-in, plus 2 per digital station port	2 per digital station port	4	8
E911 Capability	NA	NA	NA	O (via PRI)
Ext. Alerting Device	O	O	NA	NA
External Page Interface	S	S	S	S
Hot Line/Crty Phone Svc.	S	S	S	S
ISDN Interface	NA	O	NA	O
- Primary Rate (Net.)	NA	O	NA	O
- Basic Rate (Net.)	NA	NA	O	NA
- Basic Rate (Int.)	NA	NA	NA	NA
- Max. PRIs	NA	2	-	2
- Max. BRIs	-	-	12 channels	-
Least Cost Route (LCR)	NA	NA	S	S
Malicious Call Trace	NA	NA	NA	NA
Multiple Trunk Groups	S	S	S	S
- No. of Groups	9	9	INA	64
Music-on-Hold Int.	S	S	S	S
- No. of Sources	S (4); O (4)	S (4); O (4)	1	2
- Built-in Synth.	S (2)	S (2)	NA	NA
NANP Compatible	S	S	S	S
Night Service				
- (Fixed)	S	S	S	S
- (Flexible)	S	S	S	S
- (Auto Activation)	S	S	S	S
- (Manual Activation)	S	S	S	S
Off-Premise Extensions	NA	NA	NA	O (via T1)
Private Lines	S	S	S	S
Recorded Msg. Svc.	O	O	O	O

Remote Access (DISA)	NA	NA	O	O
· (No. of DISA Codes)	-	-	32	32
· (Digits/Code)	-	-	10	10
Security Alarm Int.	NA	NA	NA	NA
SMDR Interface	S	S	S	S
Tenant Service	NA	NA	S	S
· (No. Tenant Group)	-	-	8	8
· (Intercom Blocking)	-	-	S	S
Toll Restriction				
· (0,1)	S	S	S	S
· (Area/Office Code)	S	S	S	S
· (Allow, Deny Lists)	S	S	S	S
· (No. of Lists)	5 tables/96 entries	5 tables/96 entries	5 allow/5 deny tables	5 allow/5 deny tables
· (All Outgoing)	S	S	S	S
· (Out, Expt. Local)	S	S	S	S
Toll Restriction Override				
· (by Code)	S	S	S	S
· (by Sys. Abb. Dial)	S	S	S	S
Traffic Measurement	NA	NA	NA	NA
Trunk-to-Trunk Connect	S	S	S	S
Trunk Types Supported				
· CO (loop-start)	S	S	S	S
· CO (ground-start)	NA	O (via T1)	NA	O (via T1)
· DID	NA	O (via T1)	NA	O (via T1, E1 or PRI)
· Tie (2 wire)	NA	O (via T1)	NA	O (via T1, E1 or PRI)
· Tie (4 wire)	NA	O (via T1)	NA	O (via T1, E1 or PRI)
· T1	NA	O	NA	O (T1 or E1)
· Max T1s	-	3 (8 circuits disabled)	-	2
· IP	NA	NA	O (SIP; H.323)	O (H.323)
APPLICATIONS				
<u>ACD/Contact Center</u>	S (UCD); NA (ACD)	S (UCD); NA (ACD)	S (ACD)	S (ACD); O (MIS)
Call Accounting System	O	O	O	O
Healthcare Package	NA	NA	O (outside U.S.)	O (outside U.S.)
Hospitality Package	NA	NA	S	S
· PMS Interface	NA	NA	O (outside U.S.)	O (outside U.S.)
IVR	NA	NA	NA	NA
Networking				
· via Analog Tie Lines	NA	NA	O	O
· via Digital T1 Lines	NA	NA	NA	O
· via ISDN PRI	NA	NA	NA	O
· via QSIG	NA	NA	O	O
· via VoIP	NA	NA	O	O
· Uniform Dialing Plan	-	-	S	S
· Feature Transparency	-	-	NA	S (limited)
Remote Equipment	O (remote IP phones)	O (remote IP phones)	NA	NA

· Connect to Host via:	IP	IP	-	-
· Distance Limit:	No limit	No limit	-	-
· Survivable Nodes	NA	NA	NA	NA
<u>Unified Communications</u>				
Conferencing				
· Audio	S (8 parties ad-hoc); S (8 parties meet-me)	S (8 parties ad-hoc); S (8 parties meet-me)	S (ad-hoc); NA (meet-me)	S (ad-hoc); NA (meet-me)
· Multimedia	NA	NA	NA	NA
· Video	NA	NA	NA	NA
Instant Messaging	NA	NA	O (Phone Assistant)	NA
Presence	NA	NA	O (Phone Assistant)	O
<u>Unified Messaging</u>	O	O	O (limited)	O (limited)
<u>Voice Mail</u>	O	O	O	O
<u>Wireless</u>				
Proprietary	O	O	O	O
DECT	O	O	O	O
WiFi	NA	NA	NA	NA
FMC (Dual-Mode)	NA	NA	NA	NA
Mobile Twinning	NA	NA	O	O
Applications Notes:	<p>The system does not have true ACD capability; however, the DSX systems can have up to 30 department groups that can be configured for terminal hunting (straight line), circular or UCD hunting. In a UCD group, the call is distributed to the longest idle extension in the group. There is no limit to the number of extensions per group.</p> <p>The DSX-40 has built-in auto attendant capability, plus the NEC's IntraMail card option which is available in four configurations, each with 160 mailboxes: 4-port/8-hour, 8-port/16-hour, 4-port/16-hour, 8-port/32-hour. This is a DSP-based integrated voice mail and auto attendant capability which includes routing incoming calls, call record, answering machine emulation, Caller ID with return call and interactive soft keys for display phone users.</p> <p>Email Integration automatically sends an e-mail notification when a DSX keyset user receives a new message in their Subscriber Mailbox. Optionally, the e-mail can include the recorded message as a wav file attachment (requires IntraMail Pro 4 Port x 16 Hour or</p>	<p>The system does not have true ACD capability; however, the DSX systems can have up to 30 department groups that can be configured for terminal hunting (straight line), circular or UCD hunting. In a UCD group, the call is distributed to the longest idle extension in the group. There is no limit to the number of extensions per group.</p> <p>NEC's IntraMail card option is available in four configurations, each with 160 mailboxes: 4-port/8-hour, 8-port/16-hour, 4-port/16-hour, 8-port/32-hour. This is a DSP-based integrated voice mail and auto attendant capability which includes routing incoming calls, call record, answering machine emulation, Caller ID with return call and interactive soft keys for display phone users.</p> <p>Email Integration automatically sends an e-mail notification when a DSX keyset user receives a new message in their Subscriber Mailbox. Optionally, the e-mail can include the recorded message as a wav file attachment (requires IntraMail Pro 4 Port x 16 Hour or IntraMail Pro 8 Port x 32 Hour and Version 2.11</p>	<p>The Simple Voice Mail card (Version 3.0 and higher) includes two voice channels, stores 125 messages and has a total of 60 minutes of storage time (up to two cards are allowed for a total of four channels, 250 messages and 120 storage minutes). The system also digitally integrates with one Panasonic's KX-TVA or KX-TVS voice mail systems (KX-TVS95, KX-TVS125, and KX-TVS225); or conventional DTMF (analog) voice mail systems from other vendors. Panasonic's KX-TVA50 voice processing system (six ports, eight hours of voice storage and 64 mailboxes) and KX-TVA200 voice processing system (24 ports, 1,000 hours of voice storage and 1,024 mailboxes) offer popular voice messaging features, including call screening, call recording, message notification and interview service. E-mail Integration or message notification by e-mail sends a user notification by e-mail that they have a new message in their voice mailbox; the recorded voice message can be added to the e-mail as an attachment (requires KX-TDA Version 2.0).</p> <p>An incoming call distribution (ICD) group can provide a small call center with call queuing, wrap-up, member login/logout and VIP Calling (can assign priorities to call groups); Uniform Call Distribution (UCD) distributes calls evenly to the extension following the last extension to</p>	<p>The system digitally integrates with up to two Panasonic's KX-TVA or KX-TVS voice mail systems; or conventional DTMF (analog) voice mail systems from other vendors. Panasonic's KX-TVA50 voice processing system (six ports, eight hours of voice storage and 64 mailboxes) and KX-TVA200 voice processing system (24 ports, 1,000 hours of voice storage and 1,024 mailboxes) offer popular voice messaging features, including call screening, call recording, message notification, fax detection and interview service. E-mail Integration or message notification by e-mail sends a user notification by e-mail that there is a new message in the voice mailbox; the recorded voice message can be added to the e-mail as an attachment.</p> <p>ACD is not supported; however, an incoming call distribution (ICD) group can provide a small call center with call queuing, wrap-up, member login/logout and VIP Calling (can assign priorities to call groups); Uniform Call Distribution (UCD) distributes calls evenly to the extension following the last extension to answer a call and supports 128 groups with 128 extensions per group. R3.0 adds distribution to longest idle agent. A supervisor display extension can be assigned to monitor call statistics such as number of calls waiting and to change member status. Cellular phones can be part of an ICD group (maximum four per group).</p> <p>The KX-NCV200 two-in-one system combines an ACD Report Server and the KX-TVA200 Voice Processing System, enabling both</p>

IntraMail Pro 8 Port x 32 Hour and Version 2.11 software or higher).

Unified Messaging is possible via any of the NVM systems (Workstation, Server Desktop, or Server) connected to the DSX with analog station ports.

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Hotel/Motel features include Ring Message Waiting, Remote Station Lock, Quick Dialing and Room Status (check-in/check-out, wake-up call), Remote Wake-up Call Set, SMDR Hotel Feature Printout and SMDR Programmable Printout.

Systems can be networked via VoIP or leased telephone lines with or without the QSIG protocol which allows caller and called party identification features. VoIP networking supports the following transparent features: Caller Name and Number presentation or restriction and Connected Line Name and Number presentation or restriction and DSS/BLF (Busy Lamp Field); a single operator extension can monitor 32 extensions over seven external KX-TDA systems. In addition to Caller ID information, multi-site customers will also benefit from Centralized Voice Mail (requires KX-TDA R3.0 and KX-TVA200 voice processing system and optional SD card); satellite locations will have the following voicemail features: message waiting lights, direct mailbox access using the message-waiting key and auto attendant service. Network DSS/BLF (Network Busy Lamp) functionality is also available for up to eight systems to monitor 250 extensions each (requires KX-TDA 3.0 and optional SD card). Network ICD Groups can be assigned for expanded call coverage (maximum of four remote PBXs per ICD group). Two PBXs can share a common extension numbering plan, enabling transparent calling among two locations. Wireless handsets (portable stations) can be registered to up to four systems so that calls can be received at any of the four locations.

The system supports TAPI and CSTA. CTI features include pop-up displays of caller information, PC Phone and third-party CTI applications. Panasonic's Phone Assistant and Phone Assistant Pro are

call center reporting and voice processing in a single system (designed for Panasonic's KX-TDA 100/200 and KX-TDA600 Hybrid IP PBX systems). Reports (agent and group) based on incoming call data, including real-time call information such as extension status, call type and telephone numbers, are displayed to the ACD Report Client Windows-based PC.

Hotel/Motel features include Ring Message Waiting, Remote Station Lock, Quick Dialing and Room Status. Version 2 adds Room Status monitoring by an operator (such as Check In, Check Out, and Wake Up Call states), remote wake-up call setting by an operator and SMDR printouts.

Systems can be networked via T1 or PRI (QSIG protocol) or VoIP in which PBXs can be connected across an IP-type private network. Transparent features in a PRI (QSIG) or VoIP networked configurations include Caller Name and Number presentation or restriction and Connected Line Name and Number presentation or restriction. In addition to Caller ID information, multi-site customers will also benefit from Centralized Voice Mail (requires KX-TDA R3.0 and KX-TVA200 voice processing system and optional SD card); satellite locations will have the following voicemail features: message waiting lights, direct mailbox access using the message-waiting key and auto attendant service. Network DSS/BLF (Network Busy Lamp) functionality is also available for up to eight systems to monitor 250 extensions each (requires KX-TDA 3.0 and optional SD card). Network ICD Groups can also be assigned for expanded call coverage (maximum of four remote PBXs per ICD group). Two PBXs can share a common extension numbering plan, enabling transparent calling among two locations. Wireless handsets (portable stations) can be registered to up to four systems so that calls can be received at any of the four locations.

A 16-channel IP Trunk Gateway card enables connection of multiple KX-TDA 100/200 PBXs over a data network, compressing and packetizing voice and fax communication for transmission over the TCP/IP network and eliminating long distance charges.

The system supports TAPI and CSTA. CTI features include pop-up displays of caller information, PC Phone and third-party CTI applications. Panasonic's Phone Assistant and Phone Assistant Pro are CTI software solutions (server applications) that work over a LAN or WAN with client software resident on the user's PC; features

			CTI software solutions (server applications) that work over a LAN or WAN with client software resident on the user's PC; features include PC-based call control, IP camera integration, contacts list (Microsoft Outlook integration), history, call recording (requires KX-TVS); several versions are available: PA for phone users, PA Network Console for operators, and PA Manager.	include PC-based call control, IP camera integration, contacts list (Microsoft Outlook integration), history, call recording (requires KX-TVS); several versions are available: PA for phone users, PA Network Console for operators, and PA Manager.
STATION FEATURES				
Abbr./Speed Dialing	S	S	S	S
· Max. Speed Dial No.	20	20	10 or 100	10 or 100
· Max. Dig/Speed No.	32	32	32	32
Automatic Busy Redial	S	S	S	S
· Max. No. of Attempts	15	15	INA	INA
Automatic Hold Recall	S	S	S	S
Auto. Line Prefer.	S	S	S	S
Bridging	S	S	S	S
Busy Override	S	S	S	S
Call Coverage	S	S	NA	NA
Call Duration				
· (Signal)	NA	NA	NA	NA
· (Display)	S	S	S	S
Call Forward				
· (Busy)	S	S	S	S
· (No Answer)	S	S	S	S
· (All Calls)	S	S	S	S
· (Fixed) (Preset Dest)	S	S	NA	NA
· (Var) UserSelDest.	S	S	S	S
· (w/Ovrd/Return)	S	S	NA	NA
· (Off-Premise)	S	S	S	S
· (Remote/Follow Me)	NA	NA	S	S
Call Log	NA	NA		
Call Park	S (10 orbits)	S (10 orbits)	S	S
Call Park (with Recall)	S	S	S	S
Call Pickup				
· (Directed)	S	S	S	S
· (Group)	S	S	S	S
· No. of Groups	8	8	64	64
Call Transfer	S	S	S	S
Camp On/Call Waiting	S	S	S	S
Conference	S	S	S	S
· Add-On (3-party)	S	S	S	S
· Multi-party (4 or more)	S (32 conf. circuits max.)	S (32 conf. circuits max.)	O	O
· Max No. of Parties	8	8	8 per conference (32 parties max.)	8 per conference (32 parties max.)
· Max Out. Part./Trks	8	8	7	7
· Meet-Me Conferencing	S	S	NA	NA

Direct Group Calling	S	S	S	S
Directory (LCD)	S	S	S	S
Do Not Disturb	S	S	S	S
DND w/ Override	S	S	S	S
- by Attendant	S	S	S	S
- by Secretary	S	S	S	S
- by Station	S	S	S	S
Exec. Ovr. of Priv	S	S	S	S
Flexible Station No.	S	S	S	S
- No. Digits (Min)	2	2	1	1
- No. Digits (Max)	3	3	5	5
Handsfree Ansback Int.	S	S	S	S
Hold				
- (Exclusive)	S	S	S	S
- (System)	S	S	S	S
Hot Desking	NA	NA		
Incoming Call Groups	S	S	S	S
Int. Paging thru Phones	S	S	S	S
- Max. No. Group/Zones	8	8	32 groups	32 groups
Manual Signaling	S	S	O (requires TVA VPS)	O (requires TVA VPS)
Multilingual Display	S	S	S	S
- Languages Supported	2 (English and Spanish)	2 (English and Spanish)	5	5
Off-Hook Voice Annc.	S	S	S	S
Personalized Ringing	S	S	S	S
- No. Different Rings	10 programmable choices	10 programmable choices	10 melodies/20 ring tones	10 melodies/20 ring tones
Pwr. Fail Transf. Phone	S	S	O	O
- Max. No. of Phones	2 per COIU card	2 per COIU card	4	16
Privacy	S	S	S	S
Privacy Rls. (Bridging)	S	S	S	S
Repeat Last No. Dialed	S	S	S	S
Ringing Line Preference	S	S	S	S
Saved Number Redial	S	S	S	S
Station Hunting				
- (Circular)	S	S	S	S
- (Terminal)	S	S	S	S
- (Secretarial) (Comb.)	NA	NA	NA	NA
- (Master/Pilot Number)	S	S	NA	NA
- (Dist, UCD-type)	S	S	S	S
- (No. Hunt Groups)	30 department groups	30 department groups	64	64
- (No. St./Hunt Gr)	No limit	No limit	32	32
Station Que w/ Callback	S	S	S	S
Trunk Que w/ Callback	S	S	S	S

SYSTEM ADMINISTRATION				
User Programmable				
· (via Sta. Set or DSS Con.)	S	S	S	S
· (via Attendant Console)	S (limited)	S (limited)	NA	NA
· (via PC)	S	S	S	S
Menu-Driven	S	S	S	S
Online Programming Changes	S	S	S	S
Offline Programming Change	NA	NA	S	S
Customer Database Storage				
· (RAM Chips)	NA	NA	NA	NA
· (EPROM)	NA	NA	NA	NA
· (FLASH Memory)	S	S	S	S
· (Floppy Disk)	NA	NA	S	S
· (Hard Drive)	S	S	S	S
· (Tape)	NA	NA	NA	NA
Default Database Offered	S	S	S	S
Remote Programming	S	S	O	O
System Administration Notes:	Remote or on-site programming is enabled by the PC Program Windows-based application; the PC is connected to the telephone systems's serial USB or Ethernet port. Data can be saved to a file on the hard disk. A software-based modem is available for remote access or access is available through a LAN.	Remote or on-site programming is enabled by the PC Program Windows-based application; the PC is connected to the telephone systems's serial USB or Ethernet port. Data can be saved to a file on the hard disk. A software-based modem is available for remote access or access is available through a LAN.	The system can be programmed using a proprietary telephone or PC console with the TDA programming tool. The Windows-based programming tool has 11 main categories, built-in help menu and multiple security levels. An SD storage device card stores system software and local database information. Remote programming and maintenance requires an optional modem. All KX-TDA and KX-TDE systems can be programmed centrally if configured for this. A CTI Link Card or VoIP Gateway card is required for KX-TDA, but no additional hardware is necessary for KX-TDE systems.	The system can be programmed using a proprietary telephone or PC console with the TDA programming tool. An SD storage device card is available for storing system software and local database information. Remote Programming/Maintenance requires an optional modem. All KX-TDA and KX-TDE systems can be programmed centrally if configured for this. A CTI Link Card (KX-TDA) or VoIP Gateway card (latest version KX-TDA15/30) is required, but no additional hardware is necessary for KX-TDE.
STATION EQUIPMENT:				
Analog Telephones:	Yes	Yes	Yes	Yes
Proprietary Electronic sets supported:	No	No	The KX-T7700 Series: KX-T7750 (24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, headset jack, no speakerphone/monitor only); KX-T7720 (24 programmable keys - 12 Co lines, 12 personal/feature keys, 10 fixed keys, speakerphone, headset jack); KX-T7731 (24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, speakerphone, headset jack); KX-T7731 (24	The KX-T7700 Series: KX-T7750 (24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, headset jack, no speakerphone/monitor only); KX-T7720 (24 programmable keys - 12 Co lines, 12 personal/feature keys, 10 fixed keys, speakerphone, headset jack); KX-T7731 (24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed

<p>Digital Telephones:</p> <p>Digital Telephone Notes:</p>	<p>Yes</p> <p>DSX telephones include: 22-Button Display (3-line x 24-character LCD, four soft keys, 12 Feature Keys, 12 Fixed Function Keys, half duplex speakerphone); 34-Button Backlit Display (3-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, half duplex speakerphone); 34-Button Backlit Display Full Duplex Speakerphone (3-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); 34-Button Backlit Super Display Full Duplex Speakerphone (9-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); DSX Cordless Lite II (900 MHz, 2-line x 16-character LCD, 4 Feature Keys, 8 Fixed Keys, 30 channels, 7 hours talk time).</p>	<p>Yes</p> <p>DSX telephones include: 22-Button Display (3-line x 24-character LCD, four soft keys, 12 Feature Keys, 12 Fixed Function Keys, half duplex speakerphone); 34-Button Backlit Display (3-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, half duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); 34-Button Backlit Super Display Full Duplex Speakerphone (9-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); DSX Cordless Lite II (900 MHz, 2-line x 16-character LCD, 4 Feature Keys, 8 Fixed Keys, 30 channels, 7 hours talk time).</p>	<p>programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, 1-line x 16-character backlit LCD, backlit key pad, speakerphone, headset jack); KX-T7736 (requires Release 4.0 or higher; 24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, 3-line x 16-character LCD, speakerphone, headset jack). KX-T7731 and KX-T7736 replace KX-T7730 and KX-T7000 series are also supported.</p> <p>Yes</p> <p>The KX-T7600 Series includes: KX-T7636 (6-line x 24-character display, 24 programmable keys, handsfree speakerphone, optional 12 CO keys); KX-T7633 (3-line x 24-character display, 24 programmable keys, handsfree speakerphone); KX-T7630 (3-line x 24-character display, 24 programmable keys, handsfree speakerphone); KX-T7645 (no display, 24 programmable keys, handsfree); KX-T7640 DSS (60 keys for all T7600 models). Multi-cell wireless handsets include KX-T7690 (5-line LCD) and KX-T7680 (3-line LCD).</p> <p>The following KX-T7400 Series phones are available: KX-T7420 (with 12 programmable keys, 13 fixed keys); KX-T7425 (with 24 programmable keys, 13 fixed keys); KX-T7431 (with 12 programmable keys, 13 fixed keys, and 16-character x 1-line LCD); the KX-T7433 (24 programmable keys, 13 fixed keys, 16-character x 3-line tilt LCD, 3 softkeys); KX-T7436 (24 programmable keys, 13 fixed keys, 24-character x 6-line tilt LCD, 3 softkeys, and 10 function keys); KX-T7453 (24 programmable keys, 3-line x 16-character LCD); KX-T7456 (24 programmable keys, 6-line x 24-character backlit LCD).</p> <p>The following wireless phone models are supported: KX-T7880/KX-T7885 900 MHz and KX-TD7894/KX-TD7895 Digital Spread Spectrum phones.</p>	<p>keys, 1-line x 16-character backlit LCD, backlit key pad, speakerphone, headset jack); KX-T7736 (requires Release 4.0 or higher; 24 programmable keys - 12 CO lines, 12 personal/feature keys, 10 fixed keys, 3-line x 16-character LCD, speakerphone, headset jack). KX-T7731 and KX-T7736 replace KX-T7730 and KX-T7000 series are also supported.</p> <p>Yes</p> <p>The KX-T7600 Series includes: KX-T7636 (6-line x 24-character display, 24 programmable keys, handsfree speakerphone, optional 12 CO keys); KX-T7633 (3-line x 24-character display, 24 programmable keys, handsfree speakerphone); KX-T7630 (3-line x 24-character display, 24 programmable keys, handsfree speakerphone); KX-T7645 (no display, 24 programmable keys, handsfree); KX-T7640 DSS (60 keys for all T7600 models). Multi-cell wireless handsets include KX-T7690 (5-line LCD) and KX-T7680 (3-line LCD).</p> <p>The following KX-T7400 Series phones are available: KX-T7420 (with 12 programmable keys, 13 fixed keys); KX-T7425 (with 24 programmable keys, 13 fixed keys, and 16-character x 1-line LCD); the KX-T7433 (24 programmable keys, 13 fixed keys, 16-character x 3-line tilt LCD, 3 softkeys); KX-T7436 (24 programmable keys, 13 fixed keys, 24-character x 6-line tilt LCD, 3 softkeys, and 10 function keys); KX-T7453 (24 programmable keys, 3-line x 16-character LCD); KX-T7456 (24 programmable keys, 6-line x 24-character backlit LCD).</p> <p>The following wireless phone models are supported: KX-T7880/KX-T7885 900 MHz and KX-TD7894/KX-TD7895 Digital Spread Spectrum phones.</p>
<p>IP Telephones:</p> <p>IP Telephone Notes:</p>	<p>Yes</p> <p>Two DSX IP phones (similar to digital versions) are available: 34-Button Backlit Display Full Duplex Speakerphone (3-line x 24-character LCD, four</p>	<p>Yes</p> <p>Two DSX IP phones (similar to digital versions) are available: 34-Button Backlit Display Full Duplex Speakerphone (3-line x 24-character LCD, four</p>	<p>Yes</p> <p>KX-NT300 Series includes KX-NT346 (6-line backlit display, 24 programmable keys, digital speakerphone, two Ethernet ports (100Base-T), PoE, optional Bluetooth module, 12- or 60-key add-on module); KX-</p>	<p>Yes</p> <p>KX-NT265 Multi-line IP System Telephone has eight programmable keys (dual-color LEDs), a one-line by 16-character LCD and speakerphone; KX-NT136 IP Proprietary Telephone (based on Panasonic's KX-T7636)</p>

	<p>soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); 34-Button Backlit Super Display Full Duplex Speakerphone (9-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility).</p> <p>The IP Gateway card supports these DSX IP Keysets, as well as compliant third party SIP hard and soft phones.</p>	<p>soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility); 34-Button Backlit Super Display Full Duplex Speakerphone (9-line x 24-character LCD, four soft keys, 24 Feature Keys, 12 Fixed Function Keys, full duplex speakerphone, optional Bluetooth wireless headset and PC compatibility).</p> <p>The IP Gateway card supports these DSX IP Keysets, as well as compliant third party SIP hard and soft phones.</p>	<p>NT343 (3-line backlit display, 24 programmable keys, digital speakerphone, two Ethernet ports (100Base-T), PoE, optional Bluetooth Module, 12- or 60-key add-on module). KX-NT366 is not compatible.</p> <p>KX-NT265 Multi-line IP System Telephone has eight programmable keys (dual-color LEDs), a one-line by 16-character LCD and speakerphone; KX-NT136 IP Proprietary Telephone (based on Panasonic's KX-T7636) has a 6-line back-lit display, 24 CO keys, half duplex speakerphone, two Ethernet connections (for PC and LAN connection) and Power-over-Ethernet (PoE) compliance; an IP Soft Phone called the KX-TDA0350 emulates the KX-NT136.</p>	<p>has a 6-line back-lit display, 24 CO keys, half duplex speakerphone, two Ethernet connections (for PC and LAN connection) and Power-over-Ethernet (PoE) compliance; an IP Soft Phone called the KX-TDA0350 emulates the KX-NT136.</p>
DSS/BLF CONSOLE SUPPORTED:	A 60-button DSS Console is available (maximum four per system and plugs into a digital station port).	A 60-button DSS Console is available (maximum four per system and plugs into a digital station port).	KX-T7640 DSS Console (60 DSS/BLF keys) works with all T7600 series models. Models KX-T7636 and KX-T7633 support the KX-T7603 12-CO Key Add-On Module. Earlier DSS Consoles include: KX-T7740 DSS Console (48 keys) or the KX-T7040, KX-T7240, or KX-T7441 48-button unit or the KX-T7440 66-button unit; up to 4 consoles can be equipped on a system and from 1 to 4 consoles can be associated with a single telephone..	KX-T7640 DSS Console (60 DSS/BLF keys) works with all T7600 series models. Earlier DSS Consoles include: KX-T7740 DSS Console (48 keys) or the KX-T7040, KX-T7240, or KX-T7441 48-button unit or the KX-T7440 66-button unit; up to 4 consoles can be equipped on a system and from 1 to 4 consoles can be associated with a single telephone..
ATTENDANT POSITION:	Attendants can use a 34-Button Display or 34-Button Super Display Telephone with or without a DSS Console (up to four attendants per system).	Attendants can use a 34-Button Display or 34-Button Super Display Telephone with or without a DSS Console (up to four attendants per system).	A PC Attendant Console is available or the attendant could use any proprietary keyset, but typically a display model digital keyset with or without a DSS/BLF unit.	A PC Attendant Console is available or the attendant could use any proprietary keyset, but typically a display model digital keyset with or without a DSS/BLF unit.
COMPATIBILITY:				
Circuit cards:	DSX-40 circuit cards are not compatible with larger DSX-80 or DSX-160 systems.	Circuit cards are compatible among DSX systems, and DS Series cards (analog and digital trunk cards and station cards) can be used with the DSX.	Circuit cards are only compatible with the KX-TDA50 system.	Circuit cards are compatible among KX-TDA100/200/600 systems.
Telephone equipment:	DSX digital phones are compatible among DSX systems, and DS Series telephones can be used with the DSX.	DSX digital phones are compatible among DSX systems, and DS Series telephones can be used with the DSX.	Proprietary and digital telephones are compatible among Panasonic KX-TA and KX-TD and KX-TDA systems; IP telephones are compatible with KX-TDA, TDE and NCP systems (except for the KX-NT366).	Proprietary and digital telephones are compatible among Panasonic KX-TA and KX-TD and KX-TDA systems; IP telephones are compatible with KX-TDA100/200/600 systems.
Wiring plan:	DS and DSX support compatible 1-pair wiring.	DS and DSX support compatible 1-pair wiring.	Wiring is compatible with other Panasonic systems.	Wiring is compatible with other Panasonic systems.
AVERAGE COST:	Not disclosed by manufacturer	Not disclosed by manufacturer	Contact vendor	Contact vendor

STRENGTHS:

1. Targeting businesses with 5-20 employees, NEC's DSX-40 is a KSU that comes standard with four CO lines, eight digital extension ports, two analog extension ports, and two analog door box ports including relays. Three slots are available for expansion to eight CO lines and 24 digital stations or 18 analog stations. The IP Gateway card adds support for up to 32 IP phones.

2. Notable features include PC programming via an IP connection, high density 16-port analog trunk and station cards, T1 and ISDN PRI support and compact DSX telephones with built-in speakerphone, wall mounting and large backlit display and backlit keypad. Similar 32-Button IP speakerphones are also offered, as well as compatible third party SIP hard and soft phones (R3.0 or higher required).

3. NEC's integrated flash-memory-based IntraMail voice mail system is compatible with both DS and DSX systems and is available in four configurations.

4. Email Integration automatically sends an e-mail notification when a DSX keyset user receives a new message in their Subscriber Mailbox. Optionally, the e-mail can include the recorded message as a wav file attachment (requires IntraMail Pro 4 Port x 16 Hour or IntraMail Pro 8 Port x 32 Hour and Version 2.11 software or higher).

5. Some additional productivity features are available (R3.0 or higher) such as cascading message notification and find-me follow-me. A line scheduling feature allows scheduling of incoming calls according to open/closed times.

6. DSX provides an upgrade path for the company's DS Series for small to medium-sized businesses. DS Series

1. Targeting businesses with 10-25 employees, NEC's DSX-80 is a 4-slot KSU with a CPU, 4-universal card slots and a power supply. The unit provides 80 ports with a maximum of 64 stations (using 32 digital or 32 analog stations plus 32 IP phones) and 64 digital or 48 analog trunks.

2. Notable features include PC programming via an IP connection, high density 16-port analog trunk and station cards, T1 and ISDN PRI support and compact DSX telephones with built-in speakerphone, wall mounting and large backlit display and backlit keypad. Similar 32-Button IP speakerphones are also offered, as well as compatible third party SIP hard and soft phones (R3.0 or higher required).

3. NEC's integrated flash-memory-based IntraMail voice mail system is compatible with both DS and DSX systems and is available in four configurations.

4. Email Integration automatically sends an e-mail notification when a DSX keyset user receives a new message in their Subscriber Mailbox. Optionally, the e-mail can include the recorded message as a wav file attachment (requires IntraMail Pro 4 Port x 16 Hour or IntraMail Pro 8 Port x 32 Hour and Version 2.11 software or higher).

5. Some additional productivity features are available (R3.0 or higher) such as cascading message notification and find-me follow-me. A line scheduling feature allows scheduling of incoming calls according to open/closed times.

6. DSX provides an upgrade path for the company's DS Series for small to medium-sized businesses. DS Series telephones and DS Series cards (analog and digital trunk cards and station cards) can

1. The KX-TDA30 (KX-TDA50/50G in U.S.) Digital Hybrid IP-PBX phone system for small businesses and residences combines PBX functionality with wireless communication and IP via an integrated VoIP option for transmission of voice calls over a Virtual Private Network. SIP trunk support is also available (V5.0 or higher). The KX-TDA50G variant ships with Version 5.0 software and a built-in Caller ID card. A SIP trunking card is an option that can be selected to ship with the TDA50G.

2. KX-TDA30 (24 extensions or 48 extensions using eXtra Device Port (XDP) or Digital XDP functionality) supports the company's line of proprietary telephones (KX-T7400, 7700, 7300, 7200 and 7000), plus the KX-T7600 family of 24-line digital phones. An eXtra Device Port (XDP) in a KX-T7600 digital phone can connect to the back of another KX-T7600 phone to double the station port capacity. Version 4.0 adds support for Panasonic IP telephones (up to four).

3. For employee mobility, the KX-TDA30 includes four extension ports that can be used for connecting Cell Stations; the addition of an Hybrid Line Card (HLC) or Digital Line Card (DLC) card connects additional Cell Stations.

4. The system supports the Simple Voice Mail card (Version 3.0 and higher) with two or four voice channels, or the system can be digitally integrated to one of Panasonic's KX-TVA or KX-TVS Voice Processing systems for live call screening, two-way recording and enhanced Caller ID features. Panasonic's KX-TVA voice processing system supports E-mail Integration or message notification by e-mail.

5. A plug-in slot architecture allows for easy expansion.

6. An SD storage device card is available for storing system software and local database information; data can also be backed up using a PC to an external hard disk drive.

7. VoIP Networking connects PBXs across an IP-type private network. Centralized programming is possible.

1. The KX-TDA100 and KX-TDA200 Digital Hybrid IP-PBX phone systems combine PBX functionality with wireless communication and IP via an integrated VoIP option for transmission of voice calls over a Virtual Private Network.

2. KX-TDA100 (96 ports and 64 telephones or 128 telephones using DXDP) and KX-TDA200 (192 ports and 128 telephones or 256 telephones using DXDP) support the company's current line of proprietary telephones (KX-T7400, 7700, 7300, 7200 and 7000), plus a family of KX-T7600 24-line digital phones. A Digital eXtra Device Port (DXDP) connects two KX-T7600 digital proprietary telephones to the same station port; one KX-T7600 telephone connects to the XDP port of another KX-T7600 phone, doubling the number of stations supported (a memory expansion module is required to add beyond 64 stations on the KX-TDA100 – the standard cabinet maximum).

3. The system supports two proprietary IP telephones with eight or 24 programmable keys, a 1-line or 6-line back-lit display, speakerphone, two Ethernet connections (for PC and LAN connection) and Power-over-Ethernet (PoE) compliance. A VoIP Softphone is also available.

4. For employee mobility, the KX-TDA100 supports an optional 8-circuit 2.4GHz Cell Station Card - up to 2 cards can be installed for connection of 16 cell stations located throughout a building for 128 assigned wireless handsets. A wireless handset can share an extension with a wired telephone. A cost-effective 4-port Cell Station card (Version 1.1 and higher) is available for customers that need fewer wireless handsets than are supported by the 8-port Cell Station card. In addition, 2-port Cell Stations interface with a Digital Line Card or a Digital Hybrid Line Card, allowing the customer to have a cell station without purchasing the 4- or 8-port Cell Station Card - a cost savings to the customer.

5. The system can be digitally integrated to Panasonic's KX-TVA or KX-TVS Voice Processing systems for live call screening, two-way recording and enhanced Caller ID features. Panasonic's KX-TVA systems support E-mail Integration or message notification by e-mail.

6. The KX-NCV200 two-in-one system combines an ACD Report Server and the KX-TVA200 Voice Processing System, enabling both call center reporting and voice processing in a single system (designed for Panasonic's KX-TDA

telephones and DS Series cards (analog and digital trunk cards and station cards) can be used with the DSX. The DS KSU, however, is not compatible with DSX.

be used with the DSX. The DS KSU, however, is not compatible with DSX.

8. Panasonic offers the KX-T7775 Door Phone with connection for a standard doorbell and an optional IP camera or a surveillance system.

9. Version 2.0 (or higher) software activates four sensor inputs currently on all KX-TDA5161 Door Phone Cards; the sensor reacts to input from an external sensor device and calls a system phone, analog phone, wireless handset or incoming call distribution group. Fax Detection (Version 2.0 or higher) is available on the 2-channel message/DISA card.

10. For employee productivity, the system supports Panasonic's Phone Assistant and Phone Assistant Pro (server applications) that work over a LAN or WAN with client software resident on the user's PC; features include PC-based call control, IP camera integration, contacts list (Microsoft Outlook integration), history, call recording (requires KX-TVS).

100/200 and KX-TDA600 Hybrid IP PBX systems). Reports (agent and group) based on incoming call data, including real-time call information such as extension status, call type and telephone numbers, are displayed to the ACD Report Client Windows-based PC.

7. A plug-in slot architecture allows for easy expansion.

8. An SD storage device card is available for storing system software and local database information; data can also be backed up using a PC to an external hard disk drive.

9. Systems can be networked via traditional T1 or PRI (QSIG protocol) or VoIP in which PBXs can be connected across an IP-type private network. Centralized programming is possible.

10. Relay sensor and controls for home automation allow extensions to activate door openers, alarms lights and even household appliances.

11. Panasonic offers the KX-T7775 Door Phone with connection for a standard doorbell and an optional IP camera or a surveillance system.

CAUTIONS:

1. Redundancy is not available. Competing systems may offer a redundancy option, allowing the system to switch to a backup processor or standby server in real-time in the event of a failure, ensuring that critical telephony applications are always available.

2. Some typical telephone system applications are not offered such as ACD, networking, IVR, CTI and E911.

3. Some typical telephony features are unavailable, including Remote Access (DISA), Off Premises Extensions, Timed Reminder and a security alarm interface.

4. The system does not support Least Cost Routing or Automatic Route Selection.

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1. The system does not offer some advanced functionality such as a T1 or E1 interface, TAPI-compliance, unified messaging or meet-me or multi-media conferencing, though these may be available in the future.

2. Redundancy is not offered. Competing systems may offer a redundancy option, allowing the system to switch to a backup processor or standby server in real-time in the event of a failure, ensuring that critical telephony applications are always available.

3. Some features and functionality require the optional SD card, including centralized voice mail, network ICD groups, 250 Network DSS keys and ICD group call distribution to longest idle extension.

4. The system addresses international offices with support for several languages; however, other systems from leading manufacturers support a larger language selection.

5. The operating system is proprietary. Many forward-

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4. The system addresses international offices with support for several languages; however, other systems from leading manufacturers support a larger language selection.

5. The operating system is proprietary. Many forward-looking systems are using the Linux operating system, a standard, open and secure operating system that is considered stable and well-

	<p>available.</p> <p>6. The system is available only in North America; numerous competing systems are available worldwide, supporting businesses with offices in other regions.</p> <p>7. The DSX-40 KSU and the expansion daughter boards are not compatible with larger DSX-80 or DSX-160 systems. However, phones, DSS consoles and any optional hardware are compatible among all DSX systems.</p> <p>8. Some more advanced functionality is not offered such as multimedia or video conferencing. However, these capabilities are possible using external solutions, implemented separately from the DSX.</p> <p>9. Visit other TelecomTactics' databases for additional Cautions on phones and applications.</p>	<p>available.</p> <p>6. The system is available only in North America; numerous competing systems are available worldwide, supporting businesses with offices in other regions.</p> <p>7. Some more advanced functionality is not offered such as multimedia or video conferencing. However, these capabilities are possible using external solutions, implemented separately from the DSX.</p> <p>8. Visit other TelecomTactics' databases for additional Cautions on phones and applications.</p>	<p>looking systems are using the Linux operating system, a standard, open and secure operating system that is considered stable and well-suited for processor-intensive applications.</p> <p>6. Programming software is optional.</p> <p>7. The system supports IP extensions (V4.0 or higher); however, the system is limited to a maximum of four IP extensions (one 4-port card which requires an 8-port slot).</p> <p>8. Visit other TelecomTactics' databases for additional Cautions on phones and applications.</p>	<p>suited for processor-intensive applications.</p>
<p>GENERAL COMMENTS:</p>	<p>1. The NEC DSX systems are currently available in the U.S. only. Earlier DS Series systems (DS1000 and DS2000) are available in North America, Caribbean and Latin America (CALA) and Asia Pacific (APAC).</p>	<p>1. The NEC DSX-80 is currently available in the U.S. only. Earlier DS Series systems (DS1000 and DS2000) are available in North America, Caribbean and Latin America (CALA) and Asia Pacific (APAC).</p>	<p>1. In June 2004, Panasonic announced a new two-year warranty for KX-TDA IP PBX systems and KX-T7600 Series proprietary wired telephones. New KX-TDA Digital Hybrid IP PBX Systems and KX-T7600 Series phones may be returned for up to two years from the date of purchase if defects in materials or workmanship are found.</p> <p>2. The KX-TDA50G refers to units that ship with Version 5.0 software and a built-in Caller ID card. V5.0 software can be loaded on any KX-TDA50, however.</p>	<p>1. In June 2004, Panasonic announced a new two-year warranty for KX-TDA IP PBX systems and KX-T7600 Series proprietary wired telephones. New KX-TDA50, 100 and 200 Digital Hybrid IP PBX Systems and KX-T7600 Series phones may be returned for up to two years from the date of purchase if defects in materials or workmanship are found.</p> <p>2. The KX-TDA200 basic shelf uses the L-Type or M-type Power Supply, while the KX-TDA100 basic shelf uses the M-type Power Supply; however, Panasonic advises using their Power Supply Sizing Chart to determine the actual Power Supply needed. An S-type Power Supply is available for small KX-TDA100 basic shelf configurations.</p>

Data extracted on: 02 24 2010