KX-TDA PBXGateway™ and EXTender™

Network satellite office and home office solution

Panasonic

ideas for life

Your worldwide office

We all know that good communication is one of the most important parts of running a successful business. In a modern company, where branch offices and home workers are often many miles apart, effective communication can be a costly problem.

The KX-TDA PBXGateway™ and EXTender™ solution from Panasonic gives your staff, regardless of their location, access to the features of your central telephone system. Whether in area offices, remote call centres or based at their homes, your people are never more than an extension call away.

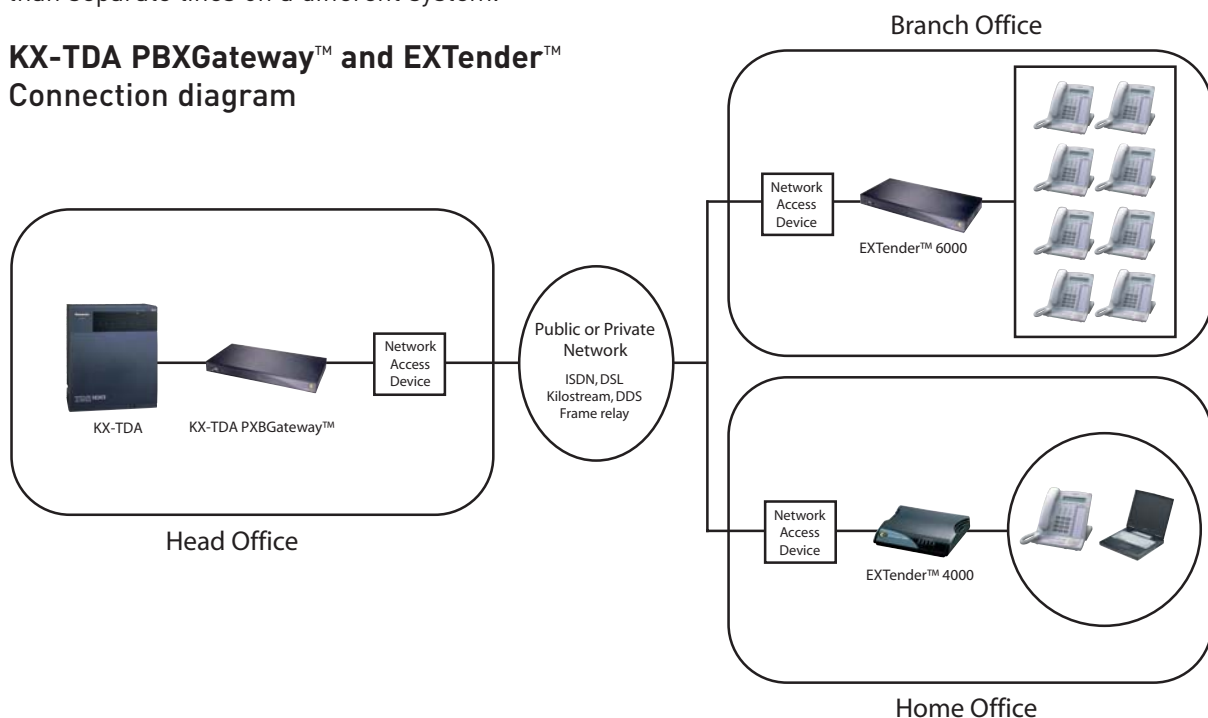## Cutting costs, improving productivity

The KX-TDA PBXGateway™ works by allowing the installation and operation of digital handsets in remote locations, all of them governed by your head office Panasonic KX-TDA telephone system. The PBXGateway™ is linked to EXTender™ units at your branch offices and home worker sites over IP WAN or broadband links.

With the KX-TDA PBXGateway™ system, callers can be transferred quickly and easily to the office that can best serve their needs, regardless of its geographical location. Your caller will be totally unaware that the second person they talk to may be many miles away from the first.

To increase efficiency, more than one location can use an extension. For example, John works his shift, connecting to extension 207. When John disconnects, his number is taken over by another worker in a different site.

Office call costs are reduced as your remote offices become extensions to your central network, rather than separate lines on a different system.

KX-TDA PBXGateway™ and EXTender™ Connection diagram

Branch Office

Network Access Device

EXTender™ 6000

KX-TDA

KX-TDA PXBGateway™

Network Access Device

Public or Private Network

ISDN, DSL
Kilostream, DDS
Frame relay

Head Office

Network Access Device

EXTender™ 4000

Home Office

KX-TDA PBXGateway™

The core of the system is the PBXGateway™, which is installed at the KX-TDA system of your head office. From here you can choose a combination of EXTender™ modules to suit your needs. The EXTender™ 6000 unit for branch offices or the EXTender™ 4000 for home based workers.

EXTender™ 6000

For sales offices, satellite call centres, retail operations and any other facility that requires multiple handsets, the EXTender™ 6000 is a key piece of equipment. Each unit is connected through an IP router, has simple plug-and-play installation and supports up to eight handsets. The EXTenders™ can also be remotely managed from your main site. Application scenarios include:

• Sales offices
• Satellite call centres
• Retail operations
• Franchise outlets
• Banking or financial institutions
• Government or local authority departments
• Manufacturing operations
• Schools and Local Education Authorities
• Healthcare networks

EXTender™ 4000

The EXTender™ 4000 is designed for remote users working from home who only require a single handset. It utilises the worker's existing IP connection or broadband modem to link in to your corporate system. The 4000 provides both a key phone port and PC port for connection to the network.

The KX-TDA PBXGateway™ EXTender™ system provides an ideal communication solution for the modern business. Delivering high-quality voice over your IP network, it offers a flexible, cost effective and easily maintained system to keep you connected.

KX-TDA PBXGateway™

Key benefits
Flexibility
Mix and match remote modules up to a total of 8 users per PBXGateway™ unit.

Increased productivity
Remote employees are able to use the same digital sets as their KX-TDA system, giving them access to features such as voicemail and messaging.

Network efficiency
• A choice of network topologies and variable compression rates minimises communications costs
• Leverage IP data network infrastructure for both voice and data traffic
• Simple to use configuration tools enable virtual management of remote users from a central location

Key features
• Encrypted username and password allocated by system administrator to each port
• Support for IP Precedence and DiffServ QoS mechanisms
• When running Remote Voice Protocol over IP (RVPoIP) the gateway connects to a network access device via the LAN port
• Minimal setup programming required, accomplished via Telnet, HTML, RS232 console interface or inband RVP

Voice protocols
• Choice of voice compression standards:
  - G.729A (8 kbps)
  - G.726 (24 or 32 kbps ADPCM)
  - G.711 (64 kbps PCM)
• G.165 echo canceller software, with proprietary double-talk detection enhancement
• Remote Voice Protocol over IP
• IP voice packets are tagged for network prioritisation using IP Precedence or Diffserv

Hardware
• Form Factor: Low profile, 1U rack mountable unit
• Internal power supply
• Line voltage: 100-240v
• Maximum power consumption: 75 watts

Dimensions
• Size: 432mm x 203mm x 44mm
• Weight: 3kg

EXTender 6000™

Key benefits
Increased productivity
Branch office users get fully featured digital sets and all corporate KX-TDA, messaging, call accounting and ACD features.

Network efficiency
Leverages existing KX-TDA and data networking resources. Variable compression rates minimises communications cost.

Plug and play installation. Corporate and remote management tools provide flexible administration.

Key features
• Call blocking
• Encrypted username and password allocated by system administrator to each port
• Support for IP Precedence and Diffserv QoS mechanisms

Software support
• TCP/IP protocol support for IP traffic and management access
• RVPoIP used UDP/IP protocol for voice transmission
• Management and utilities – Telnet, RS-232 console interface and HTML

Operating system and upgrades
• Wind River's VxWorks® operating system
• Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the EXTender™ 6000 and KX-TDA PBXGateway™

Operating environment
• Temperature: 32˚-130˚F (0˚-55˚C)
• Relative humidity: 5 to 95% (non-condensing)

Voice protocols
• See KX-TDA PBXGateway™ voice protocols

Hardware
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• Internal power supply
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• Size: 432mm x 203mm x 44mm
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EXTender 4000™

Key features
• Auto Connect Mode
• Comfort Noise Generation
• Dynamic and Static IP Addressing
• Support for IP Precedence and DiffServ QoS mechanisms

Voice protocols
• See KX-TDA PBXGateway™ voice protocols

Hardware
• Form Factor: Small footprint, desktop or wall mountable unit
• Connectors included on unit:
  - One RJ-45 port for digital telephone set
  - One RJ-45 10 Base-T Ethernet for PC connection
  - One RJ-45 10 Base-T Ethernet for LAN or WAN connection
  - One power supply
• External power supply adapter (included)

Dimensions
• Size: 160mm x 136mm x 34.25mm
• Weight: 0.3kg

For full details of a KX-TDA PBXGateway™ and EXTender™ solution to suit your business, please contact your local Panasonic dealer.

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