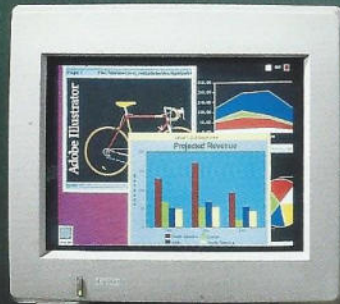digital

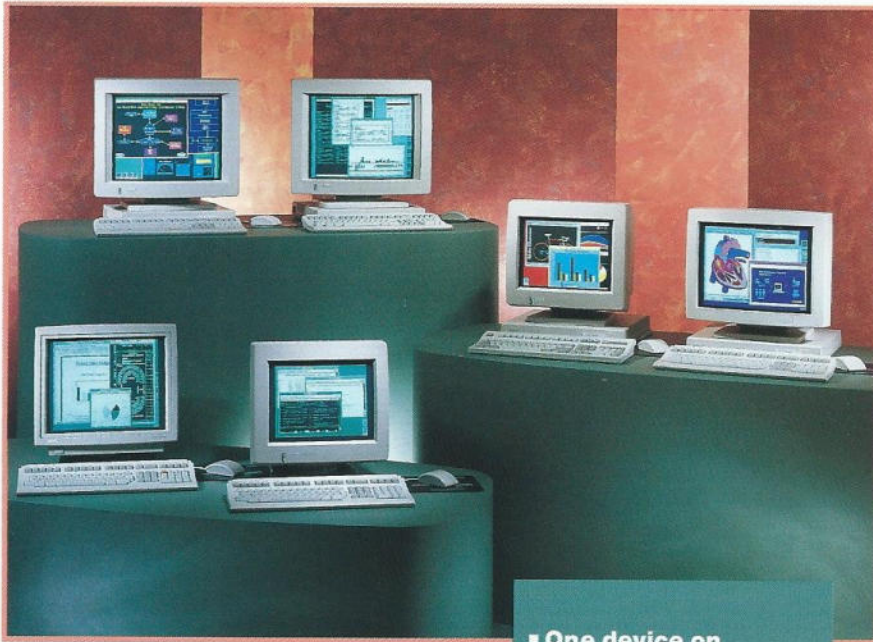**VXT 2000 Family of Windowing Terminals**

Improve the Productivity of a Broad Base of Users

Pioneer Technologies Group
1-800-227-1693

*The VXT 2000 family:
a powerful line-up to handle a
wide variety of applications —
from commercial to technical*

- **One device on
  your desk**

- **Easy access
  to applications
  anywhere on the
  network**

- **Elimination of
  desktop management
  tasks**

- **Simultaneous
  display of X, text,
  graphics, and image
  applications**

- **Open, for mixed-
  vendor environments**

- **True text terminal
  alternative**

Today, many enterprises rely on their network to deliver the computing power necessary for their business operations.
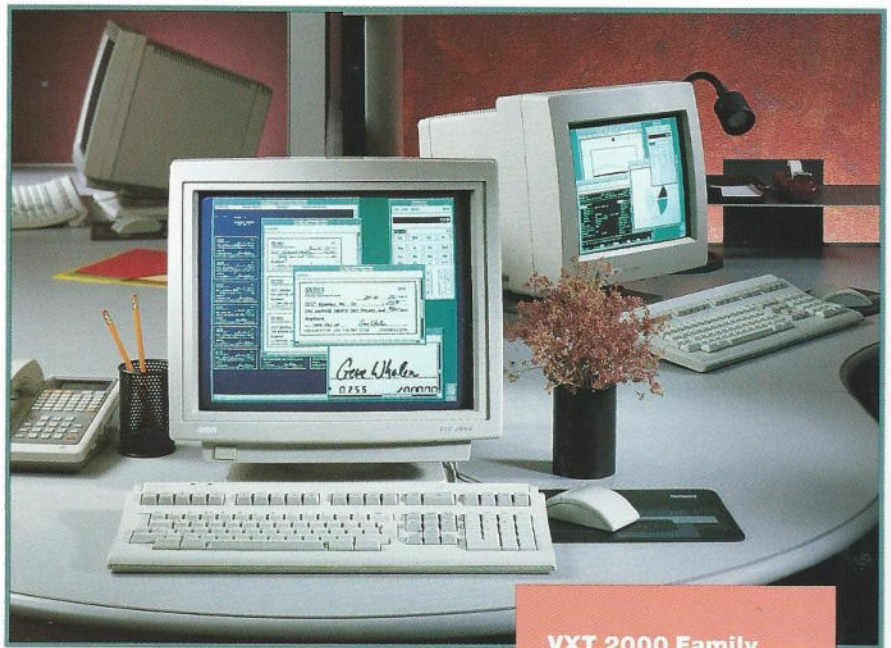
These computer networks have emerged as the quickest, most effective way to share information by allowing instant access to a wide range of applications and databases. Users are much more productive when they can interact at the same time with multiple, rather than single, applications and databases.

If you need to access, share, and visually integrate data and applications from any number of hosts on the network, the VXT 2000 multiwindow terminal will get the job done. And it will do it quickly, easily, and cost-effectively, without disrupting your environment.

The VXT 2000 Family Sets the Standard for Ease of Use

Digital's VXT 2000 family of multi-window terminals combines superior graphics capability, exceptional ease of use, and easy application access — all in a multiwindow terminal. There's no need for different display devices for different applications on your desk! You can run both X sessions and multiple terminal sessions at the same time on the same screen. You can access data from heterogeneous hosts and operating systems no matter where that data is located on the network. You can copy and paste information from one application window to another, making it easier to share information among applications and databases. The VXT 2000 is as easy to use as an ordinary text terminal. Simply turn it on and go to work.

As the number of devices in a network increases, management becomes increasingly complex. Network loading becomes an important concern — too many devices sending data across a network can result in frustratingly slow response times. Digital has taken these important system management issues into account in the design of the VXT 2000 family. The easy-to-use Configuration Manager lets system managers manage a hundred multi-window terminals as easily as one! Network and host loading is minimized using local clients and the unique features of the VXT 2000 software.

15-inch and 17-inch single-box VXT 2000 terminals are ideal alternatives to text terminals.

A Wide Range of Models Designed for Flexibility, Cost-effectiveness, and Outstanding Performance

The VXT 2000 family includes eight models built on a similar architecture, each with a powerful floating processor and common software functionality. Choice of models includes: low-cost, small footprint single-box 15-inch and 17-inch monochrome; a 19-inch monochrome; 17-inch and 19-inch grayscale; and 15-, 17-, and 19-inch color. This gives you the flexibility to select the right VXT 2000 multiwindow terminals to meet your application needs.

If your business applications include document imaging, the DECimage Option provides a low-cost, high-performance hardware accelerator for bitonal image processing and viewing. XIE (X Image Extension) software is included free for casual users of imaging applications.

VXT 2000 Family Provides:

- **Full range of color, monochrome, and grayscale models**
- **Ease of use of a text terminal**
- **Local clients that dramatically reduce network and host loading**
- **Simultaneous access to multiple hosts and applications**
- **Easy management of groups of multi-window terminals**
- **Full Motif Window Manager**
- **Efficient font management/access**
- **Virtual memory access**
- **Monochrome and color image capability across entire family**
- **DECimage Option for accelerated bitonal document imaging**

VXT 2000 Family Highlights

- Choice of software modes for optimum flexibility in different computing environments.

- Runs multiple terminal and X Window System applications simultaneously — under UNIX, ULTRIX, and OpenVMS operating systems.

- Can be used as a multiwindow text terminal without the need for X on the host or changes to existing applications.

- Full Motif local window manager lets you customize window manager settings.

- Menu-driven Configuration Manager provides easy management of multiple VXT 2000 terminals.

- Easy access and management of a wide selection of fonts; access to customized fonts for all your application needs.

- X11 Server compliance lets you run the latest X applications.

- Local clients reduce network and host loading.

- Local clients include: Motif Window Manager, Terminal Manager, Configuration Manager, and DECterm Terminal Emulator (VT300 text, ReGIS, Sixel graphics, TELNET).

- TCP/IP, LAT, and DECnet communications protocols are supported over thick wire, ThinWire, or twisted pair Ethernet.

- Boot from any host: Digital, IBM, Sun, HP, and Santa Cruz Operations (SCO) UNIX platforms — using their media!

- XIE (X Image Extension) standard with VXT 2000 software.

- DECimage hardware option provides low-cost, high-performance acceleration for bitonal document imaging.

- Four megabytes of DRAM standard memory; expandable to 16 megabytes.

- SNMP for remote terminal management.

- Autostart capability provides quick access to frequently used hosts and applications.

- Host print queue capability, via LAT, to printers attached to VXT 2000 serial or parallel printer port.

- Fully international product family.

- Optional PC-style keyboard for UNIX users who prefer a PC-style layout.

Choice of Software Modes: Host or Server

The VXT 2000 offers a choice of software modes — giving you the flexibility to choose the one that best meets your needs. And you can easily move from one to the other if your requirements change.

- Host-based software mode — a VXT 2000 multiwindow terminal with local physical memory that boots from a UNIX, ULTRIX, or OpenVMS host system on the network.

- Server-based software mode — a VXT 2000 multiwindow terminal with virtual memory access, font management, and configuration management capability.

The VXT 2000 handles a wide range of business applications requiring simultaneous display of multiple screens of information. Shown here is the 19-inch color system.

Highlights of Server-based Software Mode

- **Configuration management services for remote customization of multiple VXT 2000 terminals by work group**

- **Simplified font management**

- **Host systems are off-loaded from booting and font access**

- **Virtual memory support eliminates out-of-memory conditions**

- **Password access for work group control, security, and user convenience**

- **Host-independent connectivity**

- **Standalone X display system**

- **Localizes multi-window terminal services, network traffic**

Host-based Software Mode: Enhanced X Terminal Capability

The host-based software mode is consistent with standard X terminal execution modes, but offers increased capability. In this mode, the VXT 2000 terminal is booted from a host — UNIX, ULTRIX, or OpenVMS (see diagram) — which loads VXT 2000 software into the terminal's physical memory.

Local client applications are loaded into the VXT 2000 multiwindow terminal, where they run locally. These local clients perform routine tasks in the terminal, rather than on the host, so network and host loading are reduced.

These local clients are a Motif Window Manager; a DECterm Terminal Emulator for LAT, DECnet, or TELNET terminal sessions; and a Terminal Manager for customizing the user environment and connecting to hosts on the network.
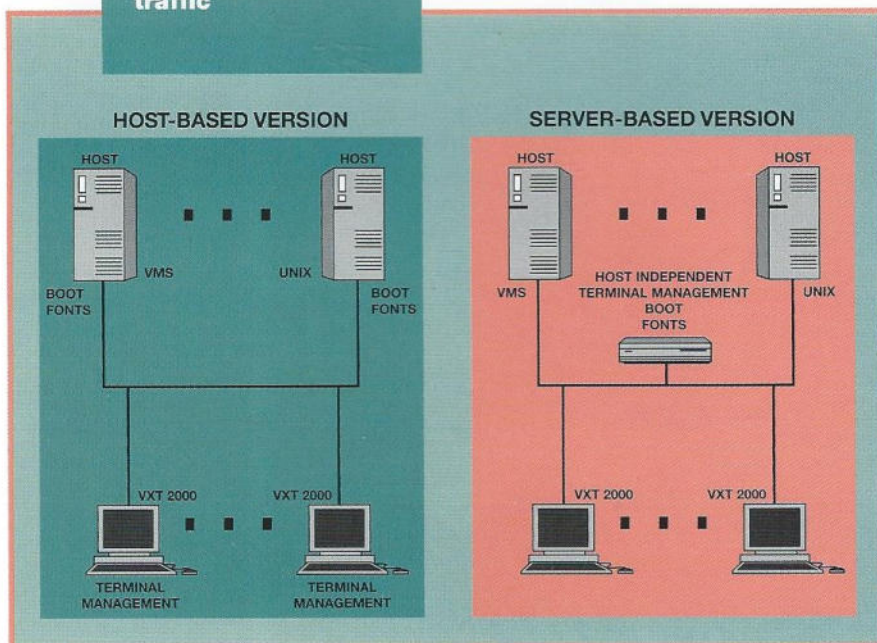
Server-based Software Mode: A Unique New Approach

The server-based software mode of operation offers capabilities not available in X environments until now. The server-based software mode incorporates all the functionality of the host-based software mode, and then goes a step beyond, simplifying the management and control of groups of multiwindow terminals. This makes the system manager's job much easier and provides faster, more convenient support to users.

A unique new approach, the server-based software works in conjunction with Digital's InfoServer 150VXT to eliminate the need for host resources for booting, terminal management, font access, and font storage. These services are provided independent of any host in your environment — *that's open!*

Manage Many X Terminals as Easily as One!
With server-based software mode, it's as easy to manage many VXT 2000 terminals as it is to manage one. VXT 2000 system management features include boot, configuration management, and font management/ access services.

HOST-BASED VERSION

HOST — HOST
BOOT FONTS — VMS — UNIX — BOOT FONTS
VXT 2000 — VXT 2000
TERMINAL MANAGEMENT — TERMINAL MANAGEMENT

SERVER-BASED VERSION

HOST — HOST
VMS — HOST INDEPENDENT TERMINAL MANAGEMENT BOOT FONTS — UNIX
VXT 2000 — VXT 2000

This diagram shows host-based and server-based software modes of operation.

The Configuration Manager provides simplified, menu-driven customization capabilities that let you add terminals to a work group easily and efficiently, configure them, and manage them remotely. The Font Manager lets you select and load standard and customized fonts into the InfoServer 150VXT's font storage area. This local font storage and caching gives individual users the fonts they need — when they need them.

The Advantage of Virtual Memory Access

The InfoServer 150VXT provides fast, unlimited memory access. It operates as a shared memory resource, transparent to the user or application. Users are freed from worrying about whether there's enough memory to run several applications.

This adds greatly to the robustness of the multiwindow terminal environment, allowing for more active applications and local clients, now or in the future, without the need for additional physical memory.

High-Performance, Lightning-fast Multiwindow Terminal Services

The InfoServer 150VXT uses LASTport, a high-performance protocol for communications with VXT 2000 terminals. Digital developed this protocol to answer the need for faster protocols to support virtual memory operation and multiwindow terminal services.

VXT 2000 19-inch and 17-inch color models displaying imaging applications.

Powerful Document Imaging Capabilities

The VXT 2000 family comes with software that provides for the display of color, grayscale, and bitonal (black-and-white) images, using XIE. XIE supports scaling, rotation, zooming, and decompression of images. Because the image processing is carried out locally, rather than at the host, you get much faster response time and minimized host and network loading.

For higher-performance bitonal imaging, Digital recommends adding the DECimage hardware accelerator option to your VXT 2000. The DECimage Option allows VXT 2000 terminals to decompress and paint image data on the screen within a second of being called up from the host.

The DECimage Option is customer installable on all two-box VXT 2000 terminals, as well as the 17-inch monochrome single-box model. Digital's "scale to gray" process is used in the DECimage Option to enhance image quality on grayscale and color VXT 2000 multiwindow terminals.

For more information on the DECimage Option refer to the DECimage Option for VXT 2000 information sheet, part number EC-F1779-56.
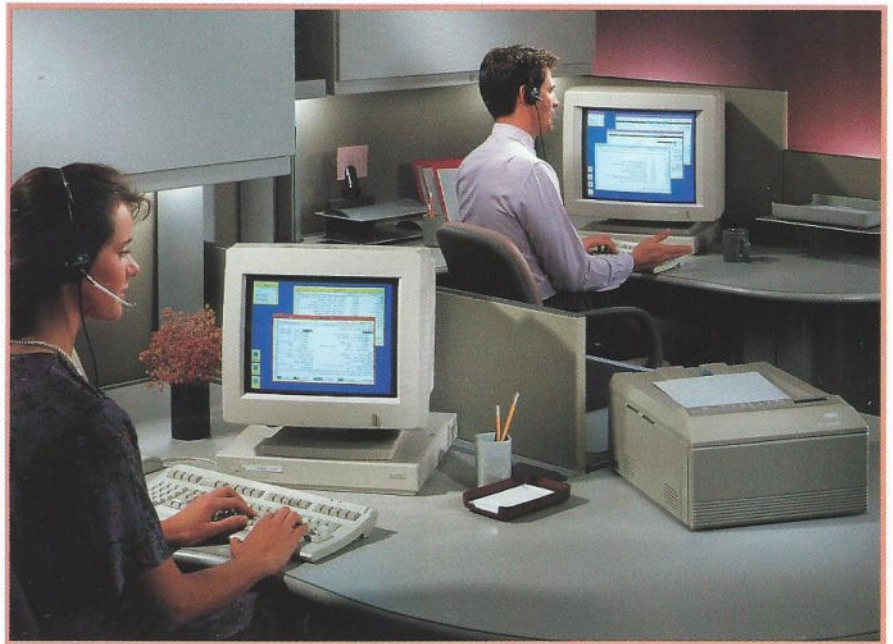
The VXT 2000 Family at Work

The VXT 2000 family is ideally suited to a broad range of functions and applications — in all kinds of businesses. From offices to laboratories, from the factory floor to the customer service desk, the versatile VXT 2000 provides superior performance and improved user productivity.

Multiple Tasks, Multiple Windows
As a cost-effective means to run applications that require the display of multiple windows on one screen, the VXT 2000 is hard to beat. For instance, office jobs often include desktop publishing, spreadsheets, and electronic mail; information is created, merged with other data, and sent throughout an organization.

Online transaction processing requires access to multiple databases — as in telemarketing applications, where a customer service representative must provide a price quote, check product inventory levels, create shipping instructions, perform a credit check, and take an order — all during the course of a brief telephone conversation.

The VXT 2000 can manage such complex transactions easily and effectively, making it an invaluable productivity tool.

A Partner in the Workstation Environment

The VXT 2000 can work alongside the workstations on your network. It provides the same graphical user interface and productivity gains that workstation users have come to enjoy, at a fraction of the cost. By limiting the need for additional workstations, the VXT 2000 allows you to reduce the cost-per-seat and enhance the work group expense/performance ratio simultaneously.

A Commitment to World-class Service

Digital supports your investment. When you purchase Digital products, you're backed by one of the largest support and service organizations in the world. We offer a high level of quality and dedication to all our customers, large and small. And we've developed flexible warranty and service plans to meet your needs.

In a telemarketing environment, the VXT 2000 terminal's ability to access multiple data sources and display information in multiple windows helps provide fast response to customers.
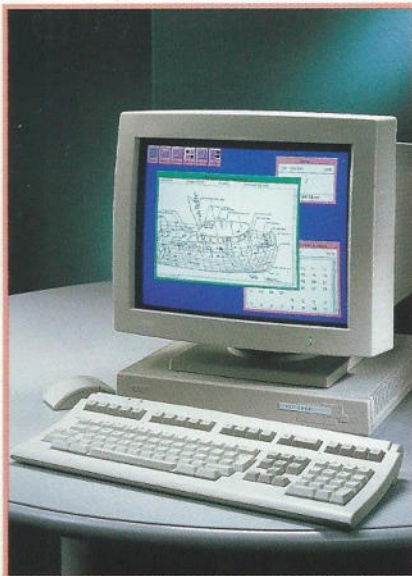
Ordering Information

The VXT 2000 family consists of eight members, all with resolution of 100 dots per inch and a flicker-free refresh rate of 72 hertz. For communications, the VXT 2000 terminals provide a choice of Ethernet connectors: thick wire, ThinWire, or twisted pair (10BaseT).

Four keyboards are available: the Digital standard keyboard, the Digital WPS keyboard, a UNIX keyboard, and a PC-style keyboard.

The VXT 2000 family is a fully international set of products, available worldwide. For more information on the VXT 2000, or to place an order, contact your local Digital sales representative or your Authorized Digital Reseller.

Part Number	Description
	VXT 2000 X Window terminal, Ethernet interface, system box, keyboard, documentation, with:
VX215-**	Color 15-inch monitor
VX217-**	Color, or grayscale 17-inch monitor
VX219-**	Monochrome, color, or grayscale 19-inch monitor
VX225-**	Monochrome single-box 15-inch monitor
VX227-**	Monochrome single-box 17-inch monitor
VX20X-MA	2 Mbyte memory, with controller
MS200-AA	2 Mbyte memory, without controller
MS200-BA	4 Mbyte memory, without controller
VX20A-OP	DECimage Option for VXT 2000
VX20C-OP	DECimage Option for 17-inch single-box VXT 2000
SEACV-AA	InfoServer 150VXT with 1 CD Reader
SEACW-AA	InfoServer 150VXT with 2 CD Readers
QL-XNGA9-AA	VXT 2000 Terminal Software License — one for each terminal
QA-XNGAF-HM	VXT 2000 Server Software kit
QA-XNGAB-HA	VXT 2000 Host Software kit
VX20D-AA	Thick wire/ThinWire NI Card with pkg.
VX20D-BA	Thick wire/Twisted Pair NI Card with pkg.
DW29-AA	Thick wire/ThinWire Ethernet adapter
VSXXX-HA/HB	DECwand bar code reader, 6 or 8 mil aperture, for accurate data entry

Note: The asterisks (**) in the part number indicate that there is a choice of keyboard, connector, and voltage options. The appropriate letters for your option choices replace the ** when you place your order.

17-inch color monitor, with DECimage Option, displaying multiple windows — image and text — on screen

Specifications

Hardware Prerequisites	An OpenVMS, UNIX and/or ULTRIX system connected to an Ethernet network
Software Prerequisites	OpenVMS Version 5.4.2 or later; ULTRIX Version 4.2; HP-UX Version 8.05; IBM Version RS6000 AIX 3.1 or AIX 3.2; SunOS Version 4.1.1 or 4.1.2; SCO UNIX Version 3.3.2; InfoServer software Version 2.0 or later (for server-based software mode); VXT 2000 software Version 1.2
Network Protocols	TCP/IP, DECnet, LAT, LATmaster, LASTport
Memory	4 Mbyte standard, expandable to 16 Mbyte in 2 or 4 Mbyte increments (Three SIMM slots; SIMMs can be installed in any combination)
Power Requirements	Line voltage 120 V/240 V Voltage tolerance — RMS 88–132 V/176–264 V Frequency tolerance 50–60 Hz Power consumption 80 watts
Operating Environment	Temperature 10°C to 40°C (50°F to 104°F) Relative humidity 10% to 90% noncondensing Max. operating altitude 2.4 km (8,000 ft)
Physical Characteristics System box	Height: 6.1 cm (2.4 in); Width: 39.1 cm (15.45 in); Depth: 36.8 cm (14.50 in); Weight: 4.6 kg (10.15 lb)
Display Monitors	
15-inch monochrome single box	Height: 36.9 cm (14.5 in); Width: 37.5 cm (14.75 in); Depth: 38.2 cm (15 in); Weight: 14.6 kg (32 lb;) Resolution: 1024 × 768
17-inch monochrome single box	Height: 41.9 cm (16.5 in); Width: 40.6 cm (16 in); Depth: 39.4 cm (15.5 in); Weight: 20 kg (44 lb); Resolution: 1280 × 1024
17-inch grayscale	Height: 41.9 cm (16.5 in); Width: 40.6 cm (16 in); Depth: 37.6 cm (14.8 in); Weight: 16.8 kg (37 lb); Resolution: 1280 × 1024
19-inch monochrome or grayscale	Height: 46 cm (18 in); Width: 49.5 cm (19.5 in); Depth: 40.1 cm (15.8 in); Weight: 21.8 kg (48 lb); Resolution: 1280 × 1024
15-inch color	Height: 38.2 cm (15 in); Width: 38.2 cm (15 in); Depth: 39.6 cm (15.6 in); Weight: 17.2 kg (38 lb); Resolution: 1024 × 768
17-inch color	Height: 43.3 cm (17 in); Width: 14.3 cm (16.2 in); Depth: 43.6 cm (17.1 in); Weight: 25 kg (55 lb); Resolution: 1024 × 768
19-inch color	Height: 46.0 cm (18 in); Width: 49.5 cm (19.5 in); Depth: 45.2 cm (17.8 in); Weight: 29 kg (64 lb); Resolution: 1280 × 1024
DPI (dots per inch)	100 dpi
Video Attributes	Reverse video, underline, bold, and blinking (can be used individually or in any combination); 1-plane monochrome or 8-plane color/grayscale capability

Input Devices
   Keyboards
   Mouse
	
	DEC standard (LK401); DEC WPS (Gold Key); UNIX (LK424); PC (LK443/LK444)
	Three-button mouse, 200 pulses per linear inch

d|i|g|i|t|a|l

Applications displayed in this brochure
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of Pennsylvania, VI Corporation, and Xerox
Computer Services.