

# TECRA 750CDT Product Specifications

**750CDT: PA1253U-T2C**  
**5.1 Billion Bytes = 4.77 GB**

## PROCESSOR

Intel Pentium @233Mhz (1.8v/2.5v)	Yes: with MMX support
External data bus width	64 bit
External data/address bus speed	66 MHz
Integrated Coprocessor	Yes
Processor Cache (L1)	32KB: (16KB code; 16KB data)
Standards	ACPI v. 1.0 ready

## LEVEL 2 (L2) CACHE

Data Bus Width/ Data Bus Speed	Yes: 512KB 64 bit/66 MHz
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## DATA RAM:

2 Mbit Pipelined Burst Synchronous SRAM (64K x 32bit, 2.5V) x 2 -- Access Time: 8ns

## TAG-RAM:

256Kbit Asynchronous SRAM (32K x 8bit, 2.5V) x 2 -- Access Time: 14ns

## SYSTEM ARCHITECTURE

### Connecting Devices

PCI BUS (v.2.1): (32-bit, 33 MHz)	PC Card Slots, Expansion Bus, Graphics Controller, Modem DSP, Video Capture controller, CD-ROM, HDD
ISA BUS: 16-bit, 8 MHz	BIOS ROM, KBC, FDD, Sound chip

## MEMORY: 64 Mbit EDO DRAM, 3.3V

Standard/ Maximum	32 MB/160 MB
Speed	60ns
Hyper Page mode memory access	Yes
Data width/ Data Bus speed	64 bit/66 MHz

## BIOS

Standards supported	Yes: (512KB 4Mbit FLASH EEPROM, 3.3V) APM v.1.2, PnP v.1.0A, VESA 2.0, DDC2, DPMS, DMI v.2.0, ACPI v.1.0
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## STORAGE

Removable HDD (2.5" Enhanced IDE)	5.1 Billion Bytes = 4.77 GB (Read/Write: 12msec/13msec) , Buffer: 512KB
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## SELECT BAY DEVICES

### DESCRIPTION

### WEIGHT

### Second Battery

Battery Type	<i>Optional: Part# PA2446U</i> Li-Ion (10.8V, 3600mAH)	1.15 lbs.
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### Modular FDD (3.5" 1.44MB)

FDD Dimensions	<i>Included/Swappable with CD-ROM</i> 4.57"L x 3.78"W x .5"H	.60 lbs.
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### Simultaneous FDD & CD-ROM Support

FDD Adapter Dimensions	Yes: External FDD adapter included 7.0"L x 5.5"W	.25 lbs.
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### Modular HDD (2.5" Enhanced IDE)

Capacity	<i>Optional/For use in SelectBay only: Part # PA2607U</i> 4.1 billion bytes = 3.82GB (Read/Write: 13msec/14msec), Buffer: 512KB	
Weight	.55 lbs.	

### Modular CD-ROM: Toshiba XM-1602B

5.25" 20X Max. speed	<i>Installed/ For use in SelectBay only</i>	
Weight	.70 lbs	
Interface	.ATAPI (Enhanced IDE)	
Random Access Time	135 ms @ 20X Max speed	
Average Sustained Transfer Rate	3420KB/sec @ 20X Max speed; 2394KB/sec @ 14X Average speed	
Supported Disc formats	Red Book, Yellow Book, CD-ROM XA, CD-I Bridge (Photo-CD) CD-I, CD-I Ready, CD-G, Multisession (Photo-CD, CD-Extra), CD-RW	

### Modular DVD-ROM<sup>1</sup>: Toshiba SD-C2002

Operation modes	<i>Optional</i>	
Access Speed	<u>DVD-ROM</u>	<u>CD-ROM</u>
Random Access Time	2X	16X
Sustained Data Transfer rate	180ms	120ms
Storage space/disk	2,700 KB/sec	2,400 KB/sec
	4.7 GB	4.7 GB

1. Not intended for movie playback. For storage use only

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## DISPLAY

Type 13.3" Diagonal TFT Active Matrix  
 Dot Pitch .26mm x .26mm  
 Contrast Ratio 100:1 (min)

## VIDEO

Memory: 8Mbit SGRAM, 3.3V 4 MB  
 Access Speed 83 MHz *with Hyper-page mode support*  
 Data Bus Width/Clock Speed 64-bit/33 Mhz  
 Graphic Controller  
 PCI Bus Architecture w/burst mode Yes: 32-bit, 33 MHz  
 Standards supported DPMS, PnP v.1.0A, VESA 2.0  
 DuoView™ Device support<sup>2</sup> Allows display of different images (or the same image) on following screen combinations: notebook/external monitor; notebook/TV; external monitor/TV  
 Controller Chip S3 Virge MX 3D (= 86C260)  
 64-bit BitBLT Engine Yes  
 2D Supported Features BitBLT, LINEdraw, H/W Cursor, DirectDraw  
 3D Supported Features  
 Modeling Fogging  
 Shading Flat shading, Gouraud shading  
 Rendering Bilinear/Trilinear texture mapping , Anti-aliasing, MIP mapping, Z-buffering  
 Direct3D support Yes  
 OpenGL Yes  
 Digital Video Accelerator  
 YUV Color Space Conversion Off-loads conversion from CPU for higher performance full motion video without compromising picture quality or frame rate.  
 Scaling/ Interpolation Yes: vertical & horizontal  
 Zoomed Video Port Support Yes: vertical & horizontal  
 DirectVideo support Yes:w/Game SDK driver fr/Microsoft  
 DirectMPEG Yes  
 TV Encoder support Yes: NTSC/PAL video out, and S-Video out with flicker reducing filter

## INTERNAL VIDEO SUPPORT

		<u>Colors</u>	<u>Refresh Rate (Non-Interlaced)</u>
Smaller Image	640 x 480	24-bit (16.7M)	N/A
Smaller Image	800 x 600	24-bit (16.7M)	N/A
Full Screen	1024 x 768	24-bit (16.7M)	N/A
Virtual Display Mode	1280 x 1024	16-bit (64K)	N/A
Virtual Display Mode	1600 x 1200	8-bit (256)	N/A

## EXTERNAL VIDEO SUPPORT (CRT)

		<u>Colors</u>	<u>Refresh Rate (Non-Interlaced)</u>
	640 x 480	24-bit (16.7M)	85 Hz
	800 x 600	24-bit (16.7M)	85 Hz
	1024 x 768	24-bit (16.7M)	85 Hz
	1280 x 1024	16-bit (64K)	75 Hz
	1600 x 1200	8-bit (256)	42 Hz (Interlaced)

## SOUND SYSTEM

Chipsets: Yamaha 3D sound effect-enabled OPL3-SA3 and Wavetable-enabled OPL4-ML2  
 Functions supported  
 Sound formats supported: SoundBlaster Pro™ v.3.01, MIDI, Windows Sound System v.2.0  
 16 bit stereo audio playback/record Yes: w/48kHz maximum sampling rate  
 Full duplex function Yes: including simultaneous playback and record  
 Mixing CD-ROM audio, Zoomed Video audio (stereo), CardBus audio (monaural)  
 DirectSound support Yes: with Windows 95 Game SDK driver from Microsoft  
 Volume control Yes  
 Speaker system: Two top-mounted stereo speakers (28mm, 16 Ω)

2. Future operating systems may support simultaneous display of different resolutions on multiple devices.

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## 750CDT: PA1253U-T2C

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<b>INTERNAL MODEM (All models)</b>	K56 Flex Upgradeable with DSVD, V.34 and V.80 support for Video Conferencing
Data support	
Protocols supported	Bell-103/212A, CCITT-V.21/V.22, V.23, V.22bis, V.32, V.32bis, V.34
Error correction	MNP 1-4
Data compression	MNP 5 for upto 2X data compression, CCITT V.42 bis for upto 4X data compression
Fax support	Fax class 1, Class 1 ECM
Protocols supported	V.21 ch2, V.27 ter, V.29, V.17
Cellular support	<i>US Cellular support under Windows 95 only</i>
Protocols supported (Phone)	Bell-103/212A, CCITT-V.21/V.22, V.23, V.22bis, V.32, V.32bis, V.34
Protocols supported (Fax)	V.21 ch2, V.27 ter, V.29, V.17
Fax class	Fax class 1, Class 1 ECM
Phones supported <sup>3</sup>	Motorola Micro TAC (DPC550, Alpha, Lite, and Ultralite) and Motorola Elite <i>only</i>
Telephony Functions ( <i>Windows 95 only</i> )	
Standard software	Ring Zero RingCentral telephony software Speaker phone, Telephony Answering Machine, Ring Wake-up Resume Incoming Call Discrimination, Caller ID
DSVD protocols supported	ITU-T V.70, V.75, V.76, G.729, V.80, V.25terA, V.34, V.8bis
Video Conferencing ( <i>Windows 95 only</i> )	
Standard software	Intel Video Phone with Proshare Technology 2.0 and Microsoft Netmeeting 2.0
Protocols supported	<b>ITU-T H.323 (Internet video conferencing); H.324 (POTS video conferencing);</b> H.245; H.223; G.723; H.263; <b>V.80</b> ; V.25terA; <b>v.34</b> ; V.8bis
Data sharing support	T.121; T.122; T.123; T.124; T.125; T.126; T.127

<b>EXPANSION SLOTS</b>	<b>LOCATION</b>
Two Stacked PC Card Slot <sup>4</sup>	Yes: Left side ( <i>CardBus &amp; ZV Card Ready</i> )
32-bit, 3.3V PC CardBus Support	Yes
16-bit, 5.0V PC Card Support	Yes
<b>Two</b> Internal Memory Slots	Yes: Below left-half of the palm rest (above main HDD)

<b>EXPANSION PORTS</b>	<b>LOCATION</b>
One 9-Pin Serial (16550 UART compliant)	Yes: Rear of unit
One 15-Pin RGB (SVGA video)	Yes: Rear of unit
One Expansion Bus	Yes: Rear of unit ( <i>for use with Docking Station or Port Replicator</i> )
One 25-Pin Parallel (8 bit ECP)	Yes: Rear of unit
One DC IN port	Yes: Rear of unit
Noteworthy security lock port	Yes: Rear of unit
Microphone (3.5mm mini jack, monoaural)	Yes: Rear of unit
Headphone (3.5mm mini jack, stereo, 16Ω min)	Yes: Rear of unit
Line-in (3.5mm mini jack, stereo, 2V rms)	Yes: Rear of unit
Line-out (3.5mm mini jack, stereo, 0.7V rms)	Yes: Rear of unit
One (PS/2) 101 Keyboard/Mouse port	Yes: Rear of unit ( <i>supports "Y" Connector</i> )
One S-Video out port	Yes: Rear of unit
One NTSC/PAL out port	Yes: Rear of unit
Two Fast Infrared ports (front and back)	Yes: Rear of unit ( <i>IrDA 1.1:4 Mbps compatible</i> )
One External Floppy Drive port	Yes: Left side
Two Universal Serial Bus (USB) ports	Yes: Left side ( <i>Supports 127 devices. Throughput Rate: 12Mbits/sec.</i> )
One Power switch	Yes: Left side
One Reset Button	Yes: Left side
Noteworthy security lock port	Yes: Left side ( <i>Use when docked</i> )
One RJ-11 port for internal modem (supplied)	Yes: Right side
One Cellular Modem port	Yes: Right side
One External Camera port	Yes: Right side ( <i>Proprietary 26-pin connector</i> )

3. Requires the purchase of appropriate cellular cable: NWMICROTAC or NWELITE. 4. Slot supports two Type II PC Cards or one Type III PC Card.

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<b>CAMERA</b>	Dimensions: 5.63"L x 1.14"W x .79"D Weight: .25 lbs.
Type	1/4-inch CCD with 640 x 480 effective pixels
Lens (Manual Focus)	F2.8, f = 4.6 mm
Focusing range	> 10 cm, by manual focus
Viewing angle of Center	Horizontal: ±22.5 degrees (45° total); Vertical: ±16.9 degrees (33.8° total)
Minimum illumination	40 luxes
Tilting angle	-50 to +50 degrees
Panning angle	-45 to +225 degrees (horizontal)
Interface cable length	50cm
Automatic Light Control (ALC)	Yes: AGC (0 db~ +12db); ELC (1/60 ~ 1/10,000 sec)
White Balance ATW	Yes

<b>KEYBOARD</b>	
84keys, 3mm Travel	Yes: 12 dedicated function keys; Cursor control (8 Keys, Inverted "T")
Numeric keypad (Integrated Overlay)	Yes

<b>Integrated Pointing Device</b>	AccuPoint™
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<b>Enhanced Port Replicator II (Optional)</b>	Part# PA2716U
Two Type III CardBus ready PC Card slots	Yes: each slot supports one card
Supported Interfaces	Serial, parallel, PS/2 keyboard, PS/2 mouse, DC in, SVGA monitor, FDD port, lock slot, joystick/MIDI, audio line-in, line-out, headphone, microphone

<b>Desk Station V Plus (Optional)</b>	Part# PA2710U
Supported Interfaces	(2) Full length 32-bit PCI/16-bit ISA slots; (1) Half Length 32-bit PCI slot; (2) Type III PC Card slots; (1) SCSI II; (1) 5.25" half height drive bay; (1) Select Bay for Modular FDD or CD-ROM
Ports	Serial, parallel, PS/2 keyboard, PS/2 mouse, DC in, SVGA monitor, FDD port, lock slot, joystick/MIDI, audio line-in, line-out, headphone, microphone
Other features	Designed for Windows 95 and PNP; Hot Docking Support

<b>POWER</b>							
<b>60W Autosensing External AC Adapter</b>	5.51"L x 2.95"W x .98" --- .90 lbs. (Part#:NW2444U)						
Input (Voltage/Frequency)	100-240V; 50-60Hz						
Output (Voltage/Amps)	15 VDC; 4.0A (max)						
Battery Type: Li-Ion (3.6V 1200mAh, 12 cells)	Yes: Part# PA2445UR						
Battery Life: (One battery/two batteries)	3.5+ hrs. max./ 7.0+ hrs. max.						
Recharge Time: Main Battery <sup>4</sup> (Computer Off/On)	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><u>Notebook alone</u></td> <td style="text-align: center;"><u>Docked In Port Replicator</u></td> <td style="text-align: center;"><u>Docked In Desk Station</u></td> </tr> <tr> <td style="text-align: center;">2.5 hrs./3.2 hrs.</td> <td style="text-align: center;">3.5 hrs./3.2~3.5 hrs.</td> <td style="text-align: center;">3.5 hrs./ 4.1~7.3 hrs.</td> </tr> </table>	<u>Notebook alone</u>	<u>Docked In Port Replicator</u>	<u>Docked In Desk Station</u>	2.5 hrs./3.2 hrs.	3.5 hrs./3.2~3.5 hrs.	3.5 hrs./ 4.1~7.3 hrs.
<u>Notebook alone</u>	<u>Docked In Port Replicator</u>	<u>Docked In Desk Station</u>					
2.5 hrs./3.2 hrs.	3.5 hrs./3.2~3.5 hrs.	3.5 hrs./ 4.1~7.3 hrs.					
Power Savings	MaxTime®; APM v.1.2 BIOS support						

<b>DIMENSIONS</b>	11.95"W x 9.45"D x 2.13"H
<b>WEIGHT (includes 1.1 lbs. battery)<sup>5</sup></b>	7.94 lbs. (with FDD installed); 8.03 lbs. (with CD-ROM installed)

**BUNDLED SOFTWARE:** Windows 95; RingZero RingCentral v.1.0 Telephony application; Internet Explorer 3.0; Puma Intellisync 97; Microsoft VidCap software; Sarnoff Video Brush scanning software; Microsoft Netmeeting 2.0 Intel Video Phone with Proshare Technology 2.0 and Toshiba custom utilities (MaxTime; magiCDisc, Fn-Esse)  
**CD included:** Sony Music Screeners; America OnLine; CompuServe; LANDesk Client Manager 3.0, Cardsoft

<b>SECURITY</b>	Lock slot, Password:power-on, supervisor, HDD access, Docking station eject
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<b>WARRANTY</b>	3 YR Parts & Labor (battery 1 year)
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<b>ENVIRONMENTAL SPECIFICATIONS</b>	<b>Operating</b>	<b>Non-operating</b>
Temperature:	41°F (5°C) to 95°F (35°C)	-4°F (-20°C) to 149°F (65°C)
Thermal Gradient 20° C per hour (max.)	--	--
Relative Humidity: Operating	20% to 80% non-condensing	10% to 90% non-condensing
Altitude: Operating	-197 to 9,843ft. (-60 to 3000m)	-197 to 32,808ft. (-60 to 10,000m)
Shock: Operating	10G (11ms); 1.5G w/CD-ROM installed	60G (11ms); 50G w/CD-ROM installed
Vibration: Operating	0.5G; 0.25G (5~500Hz) w/CD-ROM	1G; 1G (5~500Hz) w/CD-ROM

4. Recharge time may be longer than indicated, depending on condition of battery, and consumption of power for function performed during recharge: eg. use of LCD, HDD/CD-ROM, sound and modem, CardBus card in Port Replicator or PCI card in Desk Station V Plus. 5. Optional 2nd battery PA2446UR weights 1.15 lbs.