# TOSHIBA PORTEGE 3020CT Specifications

| FEATURED SKU's | DESCRIPTION |
|---|---|
| PAP302U-T2W8 | P300, 10.4", 32MB, 6.4bb HDD, Modem, Windows 98 w/ dual linked Win95/98 Configuration Builder CD |
| PAP302U-T2N4 | P300, 10.4", 32MB, 6.4bb HDD, Modem, Windows NT Workstation 4.0 |

| **PROCESSOR** | Intel Pentium® 300Mhz (2.0V/2.5V) w/MMX Technology |
|---|---|
| Integrated Coprocessor | Yes |
| Processor Cache | 32KB: (16KB code; 16KB data) |
| External data bus width | 64 bit |
| External data/address bus speed | 66 MHz |

| **LEVEL 2 (L2) CACHE** | Yes: 512KB |
|---|---|
| Data Memory Type | 2 Mbit Pipelined Burst Synchronous SRAM |
| Data Bus Width | 64 Bit |
| Access Time | 8 ns |
| Local Bus Clock Speed | 66 MHz |

| **SYSTEM ARCHITECTURE** | Connecting Devices: |
|---|---|
| PCI (V.2.1) Bus: (32-bit, 33 MHz) | PC Card Slots; Infrared port; USB, KBC, Sound chip, HDD |

| **MEMORY:** 64Mbit **EDO DRAM,** 3.3V | |
|---|---|
| Standard | 32 MB |
| Maximum | 96 MB |
| Speed | 60ns |
| Hyper Page mode memory access | Yes |
| Data/address bus width | 64 bit/32 bit |
| Local Bus Clock Speed | 66 MHz |

| **BIOS** (4Mbit FLASH EPROM) | Yes: 512KB |
|---|---|
| Supported standards | APM (V.1.2); ACPI (V.1.0); PnP 1.0a ;VESA (V.2.0); DPMS, DCC, DMI (V.2.0) |

| **DISPLAY** | |
|---|---|
| Type | 10.4" Diagonal  TFT Active Matrix Color, 800 x 600 |
| Dot Pitch | 0.264mm x .264mm |
| Contrast Ratio | 150:1 (Min) |

| **VIDEO** | |
|---|---|
| Memory: **EDO-DRAM** | 2MB *(integrated into Controller chip)* |
| Speed | 50ns |
| Hyper Page mode support | Yes |
| Controller Chip | NeoMagic (2160) *w/128-bit Data Bus Width* |
| PCI Bus Architecture w/burst mode | Yes: 32-bit, 33 MHz |
| Graphics Accelerator: | Yes: supports BiTBLT, H/W Cursor, Scaling |
| Digital Video Accelerator: | Yes |
| YUV-to-RGB color space conversion | Yes |

| **INTERNAL SUPPORT** | |
|---|---|
| Full Screen (Using Stretch Utility) | 640 x 480 x 16.7M colors |
| Full Screen | 800 x 600 x 16.7M colors |
| Virtual Display mode | 1024 x 768 x 64K colors |

| **EXTERNAL SUPPORT** | Colors | Vert. Refresh Rate (Non-Interlaced) |
|---|---|---|
| 640 x 480 | 16.7M colors | 85 Hz |
| 800 x 600 | 16.7M colors | 85 Hz |
| 1024 x 768 | 64K colors | 75 Hz (interace) |

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**STORAGE**

| | |
|---|---|
| **HDD** (2.5" Enhanced IDE) | 6.4 billion bytes (13msec) |
| Height | 8.45mm |
| Buffer | 512KB |
| Burst Data Transfer Rate | Ultra DMA, PIO Mode 4 |
| **FDD (3.5" 1.44MB) -- External** | Bundled |
| **CD-ROM (Optional)** | |
| 5.25" 20X Max. speed | External using PC Card |

**KEYBOARD**

| | |
|---|---|
| 84 keys *with Windows 95/98 support* | Yes (full-size key caps; 2mm Travel) |
| Key Pitch | 18mm |
| 12 dedicated function keys | Yes |
| Cursor control (8 Keys, Inverted "T") | Yes |
| Numeric keypad (Integrated Overlay) | Yes |
| **Integrated Pointing Device** | AccuPoint™ |

**EXPANSION SLOTS**

| | |
|---|---|
| Two PC Card Slots | Yes: 1-right side & 1-left side |
| 32-bit, 3.3V PC CardBus Support | Yes |
| 16-bit, 5.0V PC Card Support | Yes |
| Internal Memory Slot (One only) | Yes |

| **EXPANSION PORTS** | **LOCATION** |
|---|---|
| One Power-in Jack | Yes: Rear of unit |
| One 132-pin expansion bus | Yes: Left side |
| One Universal Serial Bus (USB) port | Yes: Right side (Supports 127devices. Throughput Rate: 12Mbits/sec.) |
| One Fast Infrared port (IrDA2.0: 4Mbps) | Yes: Right side |
| One External Floppy Drive port | Yes: Right side |
| Microphone (3.5mm mini jack, monoaural) | Yes: Right side |
| One Headphone (3.5mm mini jack, stereo) | Yes: Right side |
| One Noteworthy security lock port | Yes: Right side |
| **I/O BAR (Port Expander)** | **(1) Standard: Connects to 132-pin expansion bus -- rear of unit** |
| One 15-Pin RGB (SVGA video) | Yes |
| One 9-Pin Serial (16550 UART compliant) | Yes |
| One 25-Pin Parallel (8 bit ECP) | Yes |
| One (PS/2) 101 Keyboard/Mouse port | Yes: Supports use of Y-cable |
| **Portege "Mini" I/O BAR Adapter** | **Connects to 132-pin expansion bus -- rear of unit** |
| One (PS/2) 101 Keyboard/Mouse port | Yes: Supports use of Y-cable |
| One 15-Pin RGB (SVGA video) | Yes |

**POWER**

| | | |
|---|---|---|
| **Autosensing External AC Adapter: PA2501U** | 3.94''L x 1.97''W x .98''D--- .46 lbs | |
| Input (Voltage/Frequency) | 100-240V; 50-60Hz | |
| Output (Voltage/Amps) | 15 VDC; 2.0A | |
| Power Output (Watts) | 30W | |
| Battery Type: Li-Ion | High Capacity Battery (Bundled) | Lightweight Battery (Optional) |
| Part Number | PA2458UR | PA2457UR |
| Capacity | 10.8V, 2600mAh | 10.8V, 1300mAh |
| Battery Life (Full/Low) | 2.6 hrs./3.8 hrs | 1.3 hrs./1.9 hrs |
| Recharge Time (Computer Off/On) | 6 hrs./12 hrs. | 3 hrs./6 hrs. |
| Dimensions | 8.16"(L)x1.6"(H)x.79"(W) | 8.16"(L)x.86"(H)x.79"(W) |
| Power Saving Features | APM v.1.2 BIOS, Processing speed change, Auto Resume, Hibernation, LCD Brightness switch (software) | |

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| PC Card MODEM (Bundled) -- (All Models) | 3Com-Noteworhty 56K PC Card Modem (XJ1560) |
|---|---|
| Data support | |
| Protocols supported | Bell-103 & 212A, V.21, V.23, V.22, V.22bis, V.32, V.32bis, V.34, V.34+, **V.90** |
| Error correction | V.42 |
| Data compression | V.42 bis |
| Fax support | Group 3, EIA Class 1, EIA Class 2.0 |
| Protocols supported | V.17, V.21 Channel 2, V.27 ter, V.29 |
| Features | X-Jack Connector, Flash DSP/Flash ROM, Digital Line Guard, Hot Swapping, Intelligent Auto Install |

| SOUND SYSTEM | Yamaha Sound System |
|---|---|
| Chipsets: | Yamaha OPL3-SA3 |
| 16-bit stereo audio playback/record | Yes |
| Maximum Sampling Rate | 44.1 kHz |
| FM Synthesis support | Yes |
| Full duplex support | Yes |
| Built-in Speaker | Yes (monaural, located on left side under palm rest) |
| Built in Microphone | Yes (monaural, located on right side) |
| 3D Sound support | Yes: when connected to stereo speakers |
| Sound formats supported: | SoundBlaster Pro™ V3.01, MIDI, Windows Sound System V2.0 |

| DIMENSIONS | 10.12"W x .78"H x 8.5"D |
|---|---|
| WEIGHT | 2.9 lbs. (with Enhanced battery) |

**BUNDLED SOFTWARE** (Windows 98 models)

Windows 98; Ring Zero Ring Central; Toshiba Controls (Power Saver, Hibernation, Quick Hibernation, Hotkey, HW Setup); Direct X 6.0; America On Line Update; AT&T WorldNet® Service; Yahoo; Quicken Basic 99; Intel Indeo Video; Microsoft NetMeeting; Symantec Norton Antivirus Scanner; User's Guide

*Additional Software on Configuration Builder CD:* DMI utility; SMS Connect

*CD's Included: Dual-Linked Windows 98/95 Configuration Builder CD*

**BUNDLED SOFTWARE** (Windows NT models)

Windows NT 4.0, Service Pack 3; Yamaha Audio Rack; Microsoft Internet Explorer v.3.02 (export version); Puma IntelliSync 97; Intel Indeo Video Interactive (32-bit, v.4.1); SystemSoft Card Wizard v.5.0; Toshiba Utilities (FN-Esse, Power Saver, HW Setup)

*Additional Software on Configuration Builder CD:* Intel LANDesk Client Manager 3.3; Electronic manual; Microsoft Internet Explorer v4.01 (export version)

**CD's Included:** Configuration Builder CD --- *Allows HDD restore, Create custom pre-install, &/or install of individual drivers, applications, or utilities.*

| SECURITY | Miscellaneous | Screen blank (by Hotkey), keyboard (by Hotkey) |
|---|---|---|
| | Lock mechanisms | Noteworthy cable lock |
| | Password security | Power-on, supervisor, HDD |

| WARRANTY | 1 YR Parts & Labor (1 YR Battery) |
|---|---|

**ENVIRONMENTAL SPECIFICATIONS**

| | **Operating** | **Non-operating** |
|---|---|---|
| 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.) | N/A | N/A |
| Relative Humidity | 20% to 80% non-condensing | 10% to 90% non-condensing |
| Altitude: | -197 to 9,843ft. (-60 to 3000m) | -197 to 32,808ft. (-60 to 10,000m) |
| Shock: | 10G; 1.5G w/CD-ROM installed | 60G; 50G w/CD-ROM installed |
| Vibration: | 0.5G; 0.25G w/CD-ROM installed | 1G; 1G w/CD-ROM installed |