

Panasonic®

CF-18

Ruggedized
Convertible PC

TOUGHBOOK 18



Our Lightest Fully Ruggedized Toughbook

***New Convertible PC Has the Power You Need
for Tough Tasks***

- Intel® Centrino™ mobile technology
 - Ultra Low Voltage Intel® Pentium® M Processor 900 MHz
 - Intel® 855 GM Chipset
 - Intel® PRO/Wireless 2100
- Field Design 10.4-type Transmissive XGA with Touchscreen (Convertible)
- 40 GB HDD
- 256 MB DDR-SDRAM Expandable to 768 MB





Quick and Easy

Convertible

Operation with the CF-18



* Belt is optional.

LAPTOP MODE

Laptop mode for text input such as e-mail.



Tablet mode for easy mobile operation.

TABLET MODE

■ Intel® Centrino™ mobile technology

- Ultra Low Voltage Intel® Pentium® M Processor 900 MHz
- Intel® 855 GM Chipset
- Intel® PRO/Wireless 2100



■ Lightweight, Ruggedized Mobility

The CF-18 is the lightest fully ruggedized model in the Toughbook range. It's robust design protects valuable data from impact, moisture, water and dust, and weighs only 2.0 kg for highly mobile use. Representing the latest advances in portable PC evolution, the CF-18 is designed to serve as your trusted partner — almost anywhere your work may take you.

* Toughbook series' lightest fully ruggedized model



* Belt is optional.

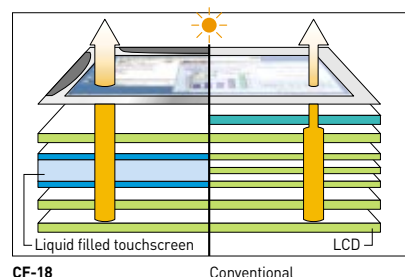
Panasonic's new CF-18 Toughbook features a revolutionary convertible LCD screen. In normal use, the CF-18 is a high-performance laptop PC. For use in the field, however, it transforms into a tablet PC. The ability to convert from clamshell to tablet creates a whole new dimension of mobile functionality.

The Intel® Centrino™ mobile technology delivers the highest level of performance required for mobile computing applications. And the CF-18's fully ruggedized body protects important data in almost any operating environment, whilst it's lightweight design of about 2.0 kg gives it increased versatility and mobility.

* Toughbook series' lightest fully ruggedized model

■ Easy viewing screen even in bright, outdoor conditions — Liquid Enclosure Type Touchscreen

The CF-18 improves light transmission by more than 21% over conventional models, while reducing glare for better viewing and easier use outdoors.



■ Wireless Ready

- **Wireless LAN (Intel® PRO/Wireless 2100)**
- **Wide-Range Wireless***

The GPRS communications option on the CF-18 achieves much faster data transfer than conventional GSM.

- **Bluetooth***

* Optional



The SIM card slot allows easy insertion for quick and easy GPRS communications. (optional)

■ Windows XP Tablet PC Edition is also available.

Panasonic recommends Microsoft® Windows® XP Professional for Business.

TOUGHBOOK

*Works Hard. Takes a Beating.
Like Any Other Field Tool.*

VIBRATION / SHOCK RESISTANCE



The hard disk drive is protected by a shock-insulating damper and the body is made of magnesium alloy with tensile strength 20 times that of resin. This gives the CF-18 its revolutionary ability to withstand impacts. Its rugged design means you can concentrate on the job even when the going gets tough.

Dust-Proof 2-Dimensional Hinge

A newly developed hinge, capable of rotating in two dimensions, gives the CF-18 its convertible capability. Incorporating innovative measures to prevent dust from entering and hindering its smooth movement, the hinge is durable enough to withstand 50 thousand opening and closing operations.



WATER / DUST RESISTANCE



The CF-18 offers outstanding practical performance under real-world conditions. Rubber packing that is 1.5 times as thick as that of conventional models complies with IP54 water- and dust-proofing standards to assure reliable operation, even in rainy or dusty field environments.

Sealed Keyboard

Keyboard circuitry is thoroughly sealed against water ingress, and integrated with the keyboard and touch pad in a single panel that is itself sealed from the PC's interior. Therefore, even if water enters via key gaps, it cannot reach the CPU and other internal circuits.



TCO: A Key Factor in Choosing Your Next Notebook

In a study of 350 companies using notebook PCs, an IDC (International Data Corporation) survey showed:

- Damage rates reported as high as 34%
- The total cost of a company using 1,000 notebooks is more than \$100,000 from damaged notebooks.
- Average damage cost of \$1,400 per incident

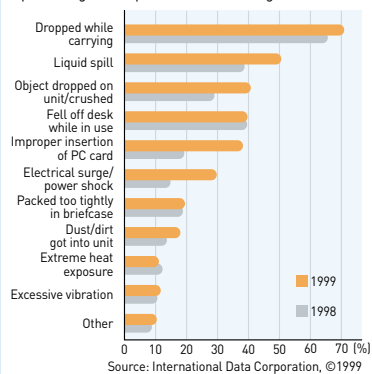
(Source: International Data Corporation, ©1999)

Notebook PCs are prone to dropping, bumping and other accidents (see graph). Heading the list of damaged components are expensive LCD display screens and hard disk drives holding valuable data. As businesses increasingly switch to notebooks for critical tasks, this double punch of parts replacement and data loss must be factored into the total cost of ownership. In other words, reduced TCO depends heavily on robust notebook construction.

Panasonic ToughBook Series Means Reduced TCO!

Causes of Damage

(percentage of respondents mentioning case)

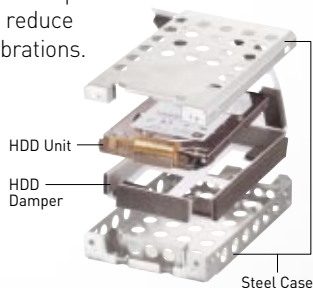


Full Magnesium Casing

The front and back of the LCD and keyboard cases are made of ultra-strong magnesium alloy. In addition, an internal damper protects the display, absorbing impact and preventing torque. The surface of the LCD screen is water-resistant, and a rubber seal around all screen edges protects the unit even if water should contact the LCD.

Shock-Damped HDD

The CF-18's hard disk drive is wrapped in a newly developed damper to reduce external vibrations.



Its silver case suppresses excessive temperature rise in the LCD panel when used in direct sunlight, and minimizes the possibility of pixel blackouts on the LCD.

The CF-18 is tested with the following standards

Drip test

Test standard: **IEC529 IPX4 JIS C0920 (MIL-STD-810F 506.4-III (Drip) level)**

Spray water from an oscillating tube at 200 mm distance, ±180° from vertical.

- Water flow rate: 0.07 l/min ±5% per spray hole
- Duration of test: 10 minutes
- Test temperature: 15–35°C
- Relative humidity: 25–75%

Gravity-drop test

Test standard: **MIL-STD-810F 516.5**

- Drop height: 3 feet (90cm)
- Drop surface: Plywood
- Number of drops: 1 (drop test conducted on a total of 26 surfaces, edges, and corners)

Vibration resistance test

Test standard: **MIL-STD-810F 514-5 Category 24**

- Target: Subjected to vibrations simulating those generated during transportation by a person and in a vehicle.
- Test environment: 20 to 1000 Hz 0.04 G²/Hz
1000 to 2000 Hz -6dB/octave
1 hour/axis (X,Y,Z)

Dust test

Test standard: **IEC529 IP5X JIS C0920 (MIL-STD-810F 510.4-I level)**

- Dust type: Talc dust
- Dust quantity: 2 kg/m³
- Test temperature: 15–35°C
- Relative humidity: 25–75%
- Test time: 8 hours

Double Packing

A double waterproof structure around the interior of the casing, both top and bottom, uses 50% thicker than standard packing rubber to ensure a tight, durable seal. The CF-18 passes a 10-minute water resistance test under IPx4-rated environmental conditions.

Water-Resistant Pressure-Sensing Touch Pad

Integrated with the keyboard, this pointing device is water resistant. It operates in response to pressure, so you can control the cursor even with wet hands, whilst wearing gloves.

Magnesium Alloy Port and Jack Covers

A magnesium-alloy cover and rubber seal protect each interface. This prevents dust and water from entering, and also protects against accidental impact or drops.



More Possibilities for Expanded Performance



- | | |
|--|--------------------|
| ① SIM Card Slot (optional) | ⑦ DC In Jack |
| ② Headphone Jack | ⑧ USB Ports |
| ③ Microphone Jack | ⑨ Modem Port |
| ④ Infrared Communication Port (optional) | ⑩ LAN Port |
| ⑤ External Display Port | ⑪ PC Card Slots |
| ⑥ Serial Port | ⑫ Touch Pen Holder |

SPECIFICATIONS for CF-18

CPU Ultra Low Voltage Intel® Pentium® M Processor 900 MHz
L2 Cache 1 MB On-die
Chipset Intel® 855 GM Chipset
RAM 256 MB DDR266 (expandable to 768 MB)
VRAM Max 64 MB (UMA)
HDD 40 GB
LCD 10.4-type Transmissive XGA with Touchscreen,
 Convertible
 FL Backlight and AR Coating
 1024 x 768 Dot Pixels
 16 M Colors
 (A 16 M color display is achieved by using the dithering function.)

LCD Cabinet Full Magnesium alloy
Wireless LAN Intel® PRO/Wireless 2100 network connection,
 Supporting 802.11b

LAN 100 BASE-TX/10 BASE-T
Modem Internal 56 kbps V.92 Compliant
 14.4 kbps Fax Class 1

Sound WAVE and MIDI playback
 Software Control of Sound Volume
 (Fn + F5/F6 keys)

Speaker Built-in
Internal Slots PC Card slot: Type II x 2
 Optional RAM Module: DIMM x 1

Keyboard 82 Keys for US (AT 101 keyboard Compatible)
 83 Keys for Europe (AT 102 keyboard Compatible)

Pointing Device Touchscreen (Liquid enclosure type)
Indicators 6 LEDs (Power, Battery, HDD, NumLK, CapsLK, ScrLK)

Interface USB: 4-pin x 2 (USB 2.0)
 Modem: RJ11 Jack
 LAN: RJ45 Jack
 Serial (16550A Compatible): Dsub 9-pin
 External Display: Dsub 15-pin
 Microphone: Mini Jack
 Headphone: Mini Jack
 DC IN: Jack
 Port Replicator: 100 pin x 1
 Infrared Communication Port*

*Factory Option IrDA v1.2 compliant
Power Battery: Li-ion 6 cell Pack [48.8 Wh]
 Battery Life: Approx. 7.5 Hours
 Varies depending on conditions
 Charging Time: 3 Hours/OFF, 5.5 Hours/ON
 Varies depending on conditions

Power Management Software Standby Function, Hibernation Function, ACPI BIOS
 Microsoft® Windows® XP Professional with
 Service Pack1/Microsoft® Windows® 2000 Professional
 with Service Pack 3, Setup Utility, DMI Viewer,
 Adobe® Acrobat® Reader, On-Line Reference Manual,
 Software Keyboard, Panasonic Hand Writing,
 Display Rotation Tool

AC Adaptor AC 100 V-240 V 50/60 Hz, Auto Sensing/Switching
 DC 16 V 2.5 A

Security Feature Password Security
 (Supervisor Password, User Password, Hard Disk Lock)

Dimensions (W x H x D) 271 mm {10.7"} x 48 mm {1.9"} x 216 mm {8.5"}
 * Excluding protrusions

Weight 2.0 kg {4.4 lb.}

OPTIONS	RAM Module	200-pins, SO-DIMM, DDR-SDRAM (PC2100)
	* For recommended RAM modules, consult your Panasonic dealer.	
	Battery Pack	CF-VZSU30
	Battery Charger	CF-VCBTB1
	External Combo Drive	CF-VDRRT1
	AC Adaptor	CF-AA1623A

Specification and configuration may vary depending on country.
 Consult a sales office near you for more details.



As an ENERGY STAR® Partner, Matsushita Electric Industrial Co., Ltd. has determined that this product meets the ENERGY STAR® guidelines for energy efficiency. Active Matrix color display conforms to industry standards. Some displays may contain isolated illuminated or dark pixels as an artifact of the manufacturing process [Effective pixels: Minimum 99.998%]. ToughBook is a trademark of Matsushita Electric Industrial Co., Ltd. Intel, Pentium and Centrino are either registered trademarks or trademarks of Intel Corporation or its subsidiaries in the United States and/or other countries. Microsoft and Windows are registered trademarks of Microsoft Corporation of the United States and/or other countries. Adobe and Acrobat are either registered trademark of Adobe Systems Incorporated. All rights Reserved.



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The IT Products Division has received ISO 14001 certification for its environmental management system.