

# TOUGHBOOK

## CF-52<sub>Mk2</sub>

### Semi Rugged Series



## Main Features

- Genuine Windows Vista® Business
- Desktop replacement 15.4" wide screen and latest Intel® Centrino® Processor Core™ 2 Duo
- Shock-resistant body survives 76-cm free-fall tests\*1
- Magnesium Alloy casing with easy to carry handle
- 160 GB SATA Removable Shock Mounted Removable HDD
- Moisture and Dust Resistant Keyboard and Touch Pad
- Operates with the standard battery for up to 7.5 hours\*2
- Integrated Bluetooth™ as standard
- Sealed port and connector covers for water and dust resistance
- Serial, USB 2.0 x 4 and IEEE 1394a connectors as standard
- Embedded options: 3G, Fingerprint scanner & Smart Card Reader

Panasonic recommends Windows Vista® Business

## A Semi Ruggedised, Durable, Powerful, Business PC



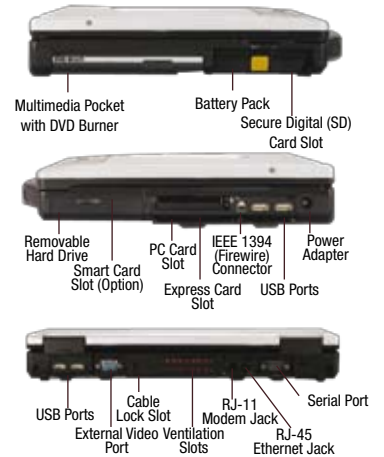
ISO 14001

We implement environment management systems in our factories worldwide and have acquired ISO14001 certification.

ECO

Lead-free solder used for PCB component mounting.

## Interface



- Genuine Windows Vista® Business (XP Downgrade DVD in box)
- Intel® Centrino® Technology:
- Intel® Core™ 2 Duo Processor (Standard Voltage version P8400): 3MB L2 cache, 2.26 GHz, 1066 MHz FSB
- Intel® Shirley Peak PRO/Wireless 4965 (802.11 a/b/g/n)
- HDD: 160 GB<sup>3</sup> SATA
- RAM: Standard 1GB<sup>4</sup> (4 GB max.<sup>5</sup>)
- 15.4" TFT / WXGA resolution



\*1 Test conducted in non-operating condition. The shock resistance, vibration resistance, dust-proof, and splash-proof specifications do not guarantee that the product can be operated without damage or malfunction. \*2 The period of battery operation time varies according to the operating environment, LCD brightness, and system settings. Measured using BatteryMark™ Ver.4.0.1" (LCD brightness Minimum). \*3 1GB = 1,000 MB, in capacity. The actual capacity may be less than displayed, depending on the OS and application software. \*4 1MB = 1,048,576 bytes in capacity. \*5 When the existing 1GB-MB DIMM is replaced with a 2-GB DIMM. \*6 1GB = 1,000 MB, in capacity. Operating system or some application software will report as fewer GB.

## CF-52 Mk2

## CF-52GCMBVAM

<b>Operating System</b>		Genuine Windows Vista® Business (xP Downgrade DVD in box)
<b>CPU</b>		Intel® Centrino® Core 2 Duo Processor P8400 (2.26 GHz, 3 MB <sup>1</sup> L2 cache, 1066 MHz FSB)
<b>Chipset</b>		Intel® GM45
<b>Memory<sup>1</sup></b>		1 GB (4 GB Max.)
<b>Video Memory<sup>1,2</sup></b>		UMA (384 MB Max.)
<b>Hard Disk Drive<sup>3</sup></b>		160 GB SATA
<b>Display Method</b>		15.4" TFT/WXGA 200 nit
<b>Wireless LAN</b>		Intel® ShirleyPeak 802.11 a/b/g/n
<b>Bluetooth</b>		Version 2.0+EDR
<b>LAN</b>		IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000 Base T (10/100/100)
<b>Modem</b>		Data: 56 kbps (V.92) FAX: 14.4 kbps
<b>Sound</b>		WAVE and MIDI playback, Monaural speaker, Intel® High Definition Audio subsystem support
<b>Security Chip</b>		TPM (TCG V1.2 compliant) <sup>4</sup>
<b>Card Slot</b>	PC Card ExpressCard HCSD Memory Card Smart Card Reader	Type I or Type II x 1 (3.3 V: 400 mA, 5 V: 400 mA) ExpressCard/34 or ExpressCard/54 x 1 HCSD x 1, Data transfer rate = 8 MB per second <sup>5</sup> x 1 Optional
<b>RAM Module Slot</b>		200-pin, 1.8 V, SO-DIMM, DDR2 SDRAM, PC2-4200 Compliant
<b>Interface</b>		USB port (4-pin, USB 2.0) x 4, Serial Port (Dsub 9-pin male), Modem port (RJ-11), LAN port (RJ-45), External display port (Mini Dsub 15-pin female), IEEE1394a Interface Connector (4-pin x 1), Microphone Jack (Miniature jack, 3.5 DIA, Stereo), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2, Stereo) Setup Utility, Hard Disk Data Erase Utility*
<b>Keyboard / Pointing Device</b>		87 keys Water Resistant / Touch Pad
<b>Power Supply</b>		AC adaptor, DC adapter or Battery pack
<b>AC Adaptor</b>		Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 16.0 V DC, 3.75 A
<b>Battery Pack</b>	Operating Time <sup>6</sup> Charging Time <sup>6</sup> (Power off)	Li-ion 9 cell 11.1v 7800mAh Approx. 7.0 hours to 7.5 hours <sup>7</sup> (Approx. 7.5 hours <sup>8</sup> ) Approx. 4.5 Hours
<b>Power Consumption<sup>9</sup></b>		Approx. 26 W <sup>10</sup> / Approx. 55 W (Maximum when recharging in the on state)
<b>Physical Dimensions (W x H x D)</b>		355.7 mm x 286.3mm x 8 x 50.7mm - 51.9mm with handle
<b>Weight</b>		Approx. 3.35 kg
<b>Operating Environment</b>		Temperature: 5°C to 35°C Humidity: 30% to 80% RH (No condensation)
<b>Storage Environment</b>		Temperature: -20°C to 60°C Humidity: 30% to 90% RH (No condensation)
<b>Utility Programs</b>		DML Viewer, Adobe Reader, PC Information Viewer, SD Utility, Icon Enlarger, Loupe Utility, WinDVD™ 5 (OEM Version), B's Recorder GOLD8 BASIC, B's CLIP 6, Intel® PROSet/Wireless Software <sup>11</sup> , Bluetooth™ Stack for Windows® by TOSHIBA <sup>12</sup> , Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Infineon TPM Professional Package <sup>13</sup> , Recover Pro™ <sup>13</sup> , Setup Utility / Hard Disk Data Erase Utility <sup>14</sup> / PC-Diagnostic Utility <sup>14</sup>

\*1 1 GB = 1,000 MB

\*2 A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user.

\*3 1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

\*4 For information on TPM, click [start] - [Run] and input "c:\util\drivers\tpm\README.pdf", and refer to the Installation Manual of "Trusted Platform Module (TPM)".

\*5 Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 32 GB.

The transfer rate using the SD Memory Card slot on this computer is 8 MB per second. (This is a theoretical value, and differs from actual speeds.)

The transfer rate is 8 MB per second even if you use an SD Memory Card that supports high-speed transfer rates.

Operation on other SD equipment is not guaranteed.

This computer is not compatible with Multi Media Cards. Do not insert these kinds of cards.

\*6 Varies depending on usage

\*7 Measured using BatteryMark. Version 4.0.1 (LCD brightness: Maximum - Minimum)

\*8 Measured using MobileMark. 2005 (LCD brightness: 60 cd/m<sup>2</sup>)

\*9 26 W when the battery pack is fully charged (or not being charged) and the computer is OFF.

Approx. 1.2 W when the Wake up from LAN has been enabled.

\*10 Rated power consumption 23-E-1

\*11 Only for model with wireless LAN Approx.

\*12 Only for model with Bluetooth

\*13 You need to install to use the feature.

\*14 The Product Recovery DVD-ROM is required.

Panasonic reserves the right to change design and specifications with out notice.

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