

ShieldPRO

N22A

Features



High Performance

- High performance CPU installed
Intel® Core™ 2 Duo processor U7500 installed
- Bright LCD
Maximum 750cd/m² (variable 1cd/m² to 750cd/m²)
- High-capacity battery
Maximum 12 hours of life (with stamina battery)
- Proven in wide operating temperature range (-20°C to 45°C)
(during both activating battery and using AC adapter)
- Improved dust and splash resistance (IP55)
(in case of adopting dust and splash proof cable / cover corresponds to IP54)

Designed for Various Uses

- English keyboard, Silicon disk model are available
- Accommodate to customized model (only for big orders) e.g. customizing top cover color, internal GPS etc.

Software

- Self-diagnosis function
- Software RAS
- Software keyboard
- Stand-by rescue Light

Improved in Convenience

- HDD and battery are removable from the sides



- Equipped with IEEE1394 port, ExpressCard Slot
- Offer a model equipped with Bluetooth®
- Mount Touch pen on the side of LCD display
- One USB Socket is set on the right side and two are on the backside

Selection Menu Please choose specifications from the list below that suit your needs.

Series	Selection Menu				Generation Number
Body (Base)	Keyboard/OS	Memory	Disk, Battery	Wireless LAN/ Fingerprint Recognition/	
FC-N22A	<input checked="" type="checkbox"/> Japanese, Standard keyboard Windows®XP Professional Service Pack2 (Japanese)	<input checked="" type="checkbox"/> 512MB *4 (512MB×1)	<input checked="" type="checkbox"/> Standard HDD×1 (Serial ATA: 80GB) Standard battery	<input checked="" type="checkbox"/> Wireless LAN : ○ Fingerprint Recognition : × Bluetooth® : ○	
	<input checked="" type="checkbox"/> Japanese, Keyboard with backlight, Windows®XP Professional *2 Service Pack2 (Japanese)	<input checked="" type="checkbox"/> 1GB (1GB×1)	<input checked="" type="checkbox"/> Standard HDD×1 (Serial ATA: 80GB) Stamina battery	<input checked="" type="checkbox"/> Wireless LAN : ○ Fingerprint Recognition : ○ Bluetooth® : ○	
	<input checked="" type="checkbox"/> English, Standard keyboard *3 Windows®XP Professional Service Pack2 (English)	<input checked="" type="checkbox"/> 2GB *2 (2GB×1)	<input checked="" type="checkbox"/> Wide temperature HDD ×1 *1 (Ultra ATA: 40GB) Wide temperature battery	<input checked="" type="checkbox"/> Wireless LAN : ○ Fingerprint Recognition : × Bluetooth® : ○	
	<input checked="" type="checkbox"/> English, Keyboard with backlight *3 Windows®XP Professional Service Pack2 (English)		<input checked="" type="checkbox"/> Silicon disk ×1 *2 (UltraATA: 20GB) Standard battery *4	<input checked="" type="checkbox"/> Wireless LAN : × Fingerprint Recognition : ○ Bluetooth® : ×	
		<input checked="" type="checkbox"/> Silicon disk ×1 *2 (Ultra ATA: 20GB) Wide temperature battery *4	<input checked="" type="checkbox"/> Wireless LAN : × Fingerprint Recognition : × Bluetooth® : ×		

Please note your choices.

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Series _____ Model Name _____

_____ Model Number _____

* 1: It will be shipped from July, 2008. * 2: It will be shipped from September, 2008. * 3 : It will provide from October, 2008. * 4: In case of choosing Japanese OS, you can choose only Japanese keyboard. In case of choosing English OS, you can choose only English keyboard. *When products are shipped, model number and generation number will be added on the name plates and warranty. Please refer to our website about generation number. (i.e.) Order number: FC-N22A/BX3SS → mentioned on the name plates/warranty: FC-N22A/BX3SS ** (* indicates generation number.) * Microsoft® Windows® XP Professional Operating System(Service Pack 2) is installed on Windows® pre-installed model. Please note that Service Pack cannot be deleted or downgrade. (The first partation:20GB (NTFS) [Installed software occupies about 5 GB.],the second partition: the rest (NTFS))

Specifications

		FC-N22A	
CPU		Intel® Core™ 2 Duo Processor Ultra Low Voltage U7500 (Extended Intel SpeedStep® technology) [1.06GHz]	
Cache memory	Primary	32KB × 2 for instruction / 32KB × 2 for data (Built-in CPU)	
	Secondary	2048KB (Internal CPU)	
System bus		533MHz (Memory bus: 533MHz)	
Chip set		Mobile Intel® GME965 Express Chip set, ICH8-M	
Security chip		TPM v1.2 compliant	
Memory		Max: 4GB SO-DIMM slot × 2 DDR2-SDRAM (PC2-4200 (DDR2-533))	
Display functions	Display device	12.1", TFT LCD(XGA) (LCD dead pixels: below 0.0003%)	
	Graphic accelerator	Internal Mobile Intel® GME965 Express chip set (Video RAM: Max 384MB (using main memory))	
	Resolution/display/colors	LCD: Max 1024×768 pixels (1677million colors) External monitor: Max 1600×1200 pixels (1677million colors)	
Auxiliary memory device	Floppy disk drive	[Option] FC-FD002U capable (USB connection)	
	CD-ROM drive	[Option] FC-CW002U / FC-DV002W capable (USB connection)	
	Stabilized disk drive	[Selection] 80GB (Serial ATA spec) or 40GB (Wide temperature: Ultra ATA spec)	
	Silicon disk drive	[Selection] 20GB (Ultra ATA spec)	
Input device	Keyboard	[Selection] Standard keyboard with backlight, (Japanese/English , Key pitch: 17.55mm, Key stroke 2.4mm/2.0mm)	
	Pointing device	Touchpad, Touchpanel	
	Tablet button	Possible to arrange based on the requirement (Max. 10 buttons)	
Interface	USB	3 ports (including 1 port that enhanced plug life), USB2.0 compatible	
	IEEE1394	1(4 pin), IEEE1394a compatible	
	Serial	Max. 115,200bps D-sub9 pin×1 (male)	
	Display	External monitor connector (Analogue RGB) Mini D-sub 15 pin (female)	
	Network	Built-in LAN	1 port RJ45 (1000BASE-T/ 100BASE-TX/ 10BASE-T) LAN connector
		Wireless LAN	[Selection] Internal triple wireless LAN, IEEE802.11a/b/g compliant (11a: W52/W53/W56 compatible) WEP compatible [encryption key 64/128 bit (user-setting key 40/104 bit), WPA-PSK (TKIP/AES) compatible, WPA2-PSK (AES) compatible
	Bluetooth®	[Selection] Internal, Bluetooth Ver.2.0+EDR compliant (Class 2)	
	Audio-related	Built-in PCM record/replay feature and monaural speaker (front-side), Microphone input (stereo, mini jack) and output common to headphone/line (stereo, mini jack)	
Card slot	Memory card slot	Type / ×1 slot (Type use not supported), PC Card Standard compliant, CardBus compatible	
	PC card slot	1 slot, SD/SDHC memory card compatible	
	Express Card slot	1 slot, ExpressCard/54 slot × 1, ExpressCard Standard Release 1.0 compliant	
RAS functions		Self-diagnosis function loaded, Software RAS attached	
Security functions		Pre-installed Security soft (DeviceProtector, Hard disk encryption utility, Hard disk data erasing function)	
	Fingerprint sensor	[Selection] Built-in (Line type) Possible to recognize by fingerprint in logging on to OS, unlocking screen saver	
Power management		Automatic or discretionary setting possible (CPU control, hard disk control, monitor power-saving function, suspend (standby) function, hibernation function)	
Power	Boot-up voltage	16V ± 5%	
	Battery	[Selection] Standard Temperature Battery: approx.8 hours, Charging time (switched ON/OFF): approx. 4 hours/approx. 4 hours, Weight: 0.4kg Wide Temperature Battery: approx.9 hours, Charging time (switched ON/OFF): approx. 4.5 hours/approx. 4.5 hours, Weight: 0.5kg Stamina Battery: life: approx.12 hours, Charging time (switched ON/OFF): approx. 4.5 hours/approx. 4.5 hours, Weight: 0.55kg	
	AC adapter	AC100 ~ 240V ± 10%, 50/60Hz [Appropriate cord is necessary for using in abroad.]	
	Car adapter	[Option] FC-VA01N capable (12V Car(7A) / 24VCar(3.5A) compatible Connection: Cigar socket)	
Standards		Conforming to RoHS directive, VCCI class B and EMC direction (EN55022, EN61000-6-2)*, and designed based on Low Voltage directive (EN60950-1)* standard *Required as standard for CE marking	
Power consumption		Approx. 25W (Max. approx. 60W)	
Energy consumption efficiency (achieving energy-saving)		Target FY FY2007: I section 0.000392 (AAA)	
Dimensions		290 (W) × 255 (D) × 47 (H) mm (Excluded protruding section and bumper section)	
Mass		Approx. 2.5 kg (Included a standard battery)	
OS Install		[Selection] Windows®XP Professional (Service Pack 2) Japanese/English	

Environmental Conditions* 1

Items	Conditions		
	Standard Hard disk / Standard Battery, Standard Hard disk / Stamina Battery, Silicon Disk / Standard Battery	Wide Temperature Hard disk / Wide Temperature Battery, Silicon Disk / Wide Temperature Battery	
Temperature	During operation ²	5℃ to 45℃	
	Note	-20℃ to 45℃	
	Tablet	5℃ to 40℃	
Non-operation		-40℃ to 70℃	
Assessment criteria		IEC 68-2-1,2,14 / MIL-STD-810F, Method 501.4 502.4	
Humidity	During operation	5% to 95% RH (no condensation)	
	Non-operation	5% to 95% RH (no condensation)	
	Assessment criteria	IEC 68-2-30 / MIL-STD-810F, Method 507.4	
Altitude	During operation	15,000ft (4,572m)	
	Non-operation	40,000ft (12,190m)	
	Rate of change	2,000 ft/min (609.6m/min)	
	Assessment criteria	IEC 68-2-13 / MIL-STD-810F, Method 500.4	
Shock Resistance ³	During operation	147m/s ² , 11ms, half-sine wave	
	Non-operation	490m/s ² , 11ms, half-sine wave	
	Assessment criteria	IEC 68-2-27 / MIL-STD-810F, Method 516.5	
Vibration Resistance ³	During operation	[Sine wave] Frequency 10 to 55Hz:0.075mm(0-P) Frequency 55Hz to 500Hz:9.8m/s ² (0-P)	
	Non-operation	[Sine wave] Frequency 10 to 55Hz:0.15mm(0-P) Frequency 55Hz to 500Hz:19.6m/s ² (0-P) [Random wave] Frequency 20Hz to 1000Hz:0.04G ² /Hz Frequency 1000Hz to 2000Hz:-6dB/Octave	
	Assessment criteria	During operation	Sine wave oscillation : IEC68-2-6
		Non-operation	Sine wave oscillation : IEC68-2-6 Random wave oscillation: MIL-STD-810F, Method 514.5 Category 24 FIGURE 514.5C-17

Peripherals

Model Name	Product Name
FC-UG-M014	Expansion RAM module (512MB, PC2-4200)
FC-UG-M015	Expansion RAM module (1GB, PC2-4200)
FC-UG-M016	Expansion RAM module (2GB, PC2-4200) ²
FC-HD80KN/S	Hard disk drive (Standard)
FC-HD40KN/S	Hard disk drive (Wide temperature range) ¹
FC-SD20KN/S	Silicon disk drive ²
FC-FD002U	External 3.5" floppy disk drive
FC-CW002U	External CD-R/RW with DVD-ROM drive
FC-DV002U	External DVD super multi drive ¹
FC-BP01N	Replacement battery (Standard type)
FC-BP01N/W	Replacement battery (Stamina type)
FC-BP01N/L	Replacement battery (Wide temperature type) ¹
FC-AA01N	AC adapter
FC-AC01N	AC code(Japan only)
FC-BC01N	Battery charger ²
FC-VA01N	Car adapter ²
FC-SC01N	Dust and splash proof cable (for LAN)
FC-SC02N	Dust and splash proof cable (for serial)
FC-SC03N	Dust and splash proof cable (for USB)
FC-SC04N	Dust and splash proof cover (for adapter connector)
FC-SC05N	Dust and splash proof cover (for card slot)
FC-N019	Protective film
FC-BL01N/S	Belt
FC-BL01N/L	Shoulder belt ¹
FC-RK02N	Fastening metal fitting (VESA compatible) ¹
FC-KC01N/JP	Keyboard cover(Japanese) ¹
FC-KC01N/US	Keyboard cover(English) ³

* 1: Continuous operation under the above environmental conditions is not guaranteed. Also, for PC model numbers with internally installed commercially available optional components, the environmental conditions are considered to be the environmental conditions of the internally installed options. The internal clock may lose accuracy if the computer stored under temperatures below 0℃ or above 50℃. Please set the clock to the concern time before using.
* 2: The usable temperature range of the included AC adapter is 5℃ to 40℃ (Non-operation).
* 3: This does not constitute a guarantee of withstanding sympathetic vibrations encountered when approaching the natural frequency of this

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