NEC Industrial Computer

E21A・E18M

Compact size and fast performance, Saving space and cost, are suitable for the embedded system users.

High Performance

- **High performance CPU**
  E21A : Intel® Core™ 2 Duo Processor T7400 (2.16GHz)
  E18M: Intel® Celeron® M Processor 440 (1.86GHz)
- **Mirroring Feature is available (Selection)**

Long Term Supply / Maintenance

- **Maintain the system long**
  - Product supply until Aug 2012
  - Long Term maintenance until Aug 2019

24 Hours Operation

- **Good for the users who require reliability for continuous operation**

Pre-Installed OS

- **Windows® 7 or Windows® XP (Selection)**

UPS Model is available (Selection)

- **Power supply would be backed up even in case of power failure**

PCI Slot

- **PCI x 3 slots (Short Size)**
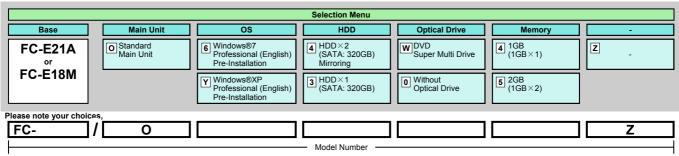
Very Compact Size

- **Saving Space and Cost for Embedded System Users**
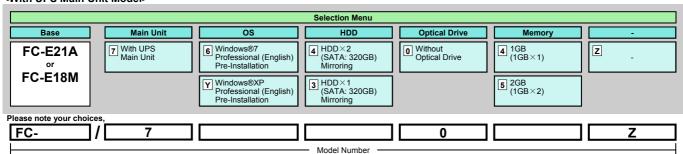
Easy Maintenance

- **Easy replacement of HDD, FAN and Battery by front access**
- **HDD Hot Swap (if mirroring model)**

- **Selection Menu**   The following combinations are available in accordance with your demands.

<Standard Main Unit Model>

Selection Menu						
Base	**Main Unit**	**OS**	**HDD**	**Optical Drive**	**Memory**	**-**
FC-E21A or **FC-E18M**	O Standard Main Unit	6 Windows®7 Professional (English) Pre-Installation	4 HDD×2 (SATA: 320GB) Mirroring	W DVD Super Multi Drive	4 1GB (1GB×1)	Z -
		Y Windows®XP Professional (English) Pre-Installation	3 HDD×1 (SATA: 320GB)	0 Without Optical Drive	5 2GB (1GB×2)	

Please note your choices,

FC-	/	O					Z

— Model Number —

<With UPS Main Unit Model>

Selection Menu						
Base	**Main Unit**	**OS**	**HDD**	**Optical Drive**	**Memory**	**-**
FC-E21A or **FC-E18M**	7 With UPS Main Unit	6 Windows®7 Professional (English) Pre-Installation	4 HDD×2 (SATA: 320GB) Mirroring	0 Without Optical Drive	4 1GB (1GB×1)	Z -
		Y Windows®XP Professional (English) Pre-Installation	3 HDD×1 (SATA: 320GB) Mirroring		5 2GB (1GB×2)	

Please note your choices,

FC-	/	7			0		Z

— Model Number —

Notes:
The configuration cannot be changed after purchase.
The mirroring function cannot be added after purchase.
For Widows® XP pre-installed model, Microsoft® Windows® XP professional operation system (Service Pack2) is installed. Please note that Service Pack cannot be deleted or downgraded.

■ Specifications

			E21A•E18M	
			Mirroring model	**Single disk model**
CPU		E21A	Intel® Core™ 2 Duo processor T7400 [2.16GHz] (Enhanced Intel SpeedStep® technology mounted)	
		E18M	Intel® Celeron® M processor 440 [1.86GHz]	
Cache memory	Primary		For instruction 32KB / For data 32KB (CPU embedded)	
	Secondary	E21A	4MB (CPU embedded)	
		E18M	1MB (CPU embedded)	
System bus		E21A	667MHz (Memory bus:533MHz)	
		E18M	533MHz (Memory bus:533MHz)	
Chipset			Mobile Intel® 945GME Express Chipset, ICH7-M	
Memory			Max: 2GB DDR2-SDRAM (PC2-4200 (DDR2-533)), no ECC function [SO-DIMM slot x 2]	
Display functions			Mobile Built-in Intel® 945GME Chipset, Max resolution: 1920 x 1200 (WUXGA, 16.77 million colors), dual display functions supported	
Optical drive			Selection: DVD super multi-drive x1 *1	
Built-in HDD			Standard equipped: 320GB drive x2 (for mirroring support)	Standard equipped: 320GB drive (1 more drive bay is available)
Interface	USB *2		4 ports (2 on front and 2 on rear of the unit), USB2.0 compatible	
	Parallel		D-sub 25-pin connector (female)	
	Serial		Up to 115,200 bps, D-sub 9-pin connector x2 (male)	
	PS/2		Mini DIN 6-pin connector x2 (for PS/2 keyboard and mouse)	
	Monitor		Analog RGB: Mini D-sub 15-pin (female) connector, Digital RGB: DVI-D 24-pin (female) connector	
	Network		RJ45 (1000BASE-T, 100BASE-TX, 10BASE-T) LAN connector x1 RJ45 (100BASE-TX, 10BASE-T) LAN connector x1, Remote Power ON/OFF functions supported	
	Audio devices		Line IN (stereo, mini jack), Line OUT (stereo, mini jack), Mic IN (monaural, mini jack), built-in monaural speaker	
Expansion Slots			3 slots (PCI only), short size	
RAS function			Software RAS	
Standards, etc.			Designed in accordance with RoHS directives. Power supply (AC power) is designed in accordance with EMC directives (EN55022 and EN61000-6-2)*and Low-voltage directives (EN60950-1)*	* Required for CE marking
Power consumption *3		E21A	82W (Max: 210W)	72W (Max: 210W)
(Approximately)		E18M	67W (Max: 195W)	57W (Max: 195W)
Apparent power *3		E21A	88VA (Max: 225VA)	78VA (Max: 225VA)
(Approximately)		E18M	72VA (Max: 209VA)	61VA (Max: 209VA)
Calorific power *3		E21A	295kJ (Max: 756kJ)	261kJ (Max: 756kJ)
(Approximately)		E18M	241kJ (Max: 702kJ)	205kJ (Max: 702kJ)
Dimension			100 (W) x 360 (D) x 310 (H) mm (including rubber feet, excluding connectors, and protrusions)	
Weight (Approximately) *3			9.7kg	8.9kg

*1 For UPS model, you cannot select optical drive.
*2 The initial keyboard setting for pre-installed model is PS/2 interface. And for UPS model, one of the USB connector is not available.
*3 The indicated number is for Standard model.

■ Environmental Conditions *1

Item	When HDD is operating (Optical drive is NOT operating or mounting)	When HDD is operating	When HDD is operating (for UPS model)
Ambient temperature *2	5 to 45 degrees C (5 to 40 degrees C)	5 to 40 degrees C (5 to 35 degrees C)*3	5 to 35 degrees C (5 to 30 degrees C)
Storage temperature *4	-20 to 60 degrees C		-20 to 60 degrees C (excluding battery unit)
Humidity (no condensation)	20 to 80%		
Storage humidity (no condensation)	20 to 80%		20 to 80% (excluding battery unit)
Floating dust *5	Not particularly severe.[0.3mg/m^3] No conductivity or hygroscopic dust		
Corrosive gas	None		
Vibration resistance *6	Continue 2.0m/S^2 Short time 4.9m/S^2	Continue 1.0m/S^2 Short time 2.0m/S^2	Continue 2.0m/S^2 Short time 4.9m/S^2
Shock resistance *6	Energized 19.6m/S^2, Not energized 98m/S^2		
Power voltage *7	AC100 to 240V ±10% (90 to 264 V AC)		
Power frequency	50/60Hz±3Hz		
Power noise	1kV$_{p-p}$ 50 ns to 1 μs pulse		
Insulation resistance value	20MΩ (500V DC)		
Withstand voltage	AC 1.5kV, for 1 minute		
Leakage current	Less than 1 mA		
Static electricity-proof stress	6kV(Contact discharge),8kV(air discharge), EN61000-4-2 Level3		
Momentary power interrupt	Less than 20ms(at rated voltage)		3 minutes by using of UPS function in case of power failure*8
Grounding	Class D		

*1 When file devices with PC part numbers or commercially available file devices are installed, installation environment conditions are environmental conditions of the expanded options. The internal main unit may deviate when stored in the location below 0 degree C ambient temperatures, so reset when used.
*2 Information in parentheses ( ) is when attached dust –proof filter (for front side) or optical dust –proof filter (FC-FL007) is installed.
*3 The operating temperature range is 5 to 35 degrees C when it is selected on the menu that DVD super multi drive id mounted.
*4 The storage temperature for keyboard and mouse is -20 to 60 degrees C for FC-KB005 / FC-MS003.
*5 Please store in a dust-proof rack or air-tight case, etc, when used in a dusty location or in an environment with metal frequency.
*6 There is no guarantee of resistance against resonance effects that may occur when at or near this units characteristic frequency.
*7 The built-in power supply unit in the main unit has an improved power factor.
*8 The environmental conditions for installing the model with a built-in UPS power supply differ. For details, refer to Supplementary manual of the model with a built-in UPS power supply.

■ Peripherals

Model Name	Product Name
FC-KB005	PS/2 Keyboard
FC-MS003	PS/2 mouse with Scroll function
FC-UG-M013	Extended RAM board, PC2-4200
FC-UG-X008	LAN Board (1000 BASE-T interface board)
FC-DV002UA	External DVD Super Multi Drive
FC-HD320KS	320GB hard disk drive
FC-FL007	Dust-proof filter
FC-E21AE18M-UE	User's Manual (in English)
FC-FN001	Cooling Fan (for Replacement)
FC-BT001	Calendar Battery (for Replacement)
FC-BP001	UPS Battery (for Replacement)

Contact us

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