

FT650 FT650-TE

FT650 is a panel PC, with elegant front aluminium frame, based on the ASEM 1021 motherboard that supports Intel® Celeron Dual Core, Pentium Dual Core and Core® 2 Duo processors with 45 nanometer technology. Available with 12.1", 15", 17" and 19" LCD display, also touchscreen, the FT650 systems ensure high computing power and graphics capabilities. The expandability is provided by different PCI/PCIe slot configurations, where ASEM NETcore® X communication cards can be installed. The integration with the Premium HMI 4 software platform and CODESYS SoftPLC allows the creation of visualization and control applications.


















Photo 1: Version without the keyboard

Photo 2: 4 PCI/PCIe slots in the H4 version

Photo 3: Intel® Core 2 Duo microprocessors and 965GME chipset

FEATURES PLUS

- ✓ INTEL® CORE 2 DUO UP TO 2.5GHZ
- ✓ INTEL® 965GME CHIPSET AND INTEL® GMA X3100 GRAPHIC ACCELERATOR
- ✓ VERSION WITH EXPANDED KEYBOARD (FT650-TE)
- ✓ RAID CONTROLLER INTEGRATED - RAID 0,1 - H2 VERSION
- ✓ H3 AND H4 VERSIONS FOR PCI/PCIE EXPANSIONS
- ✓ OPTIONAL FRONT OR REAR DVD/FDD
- ✓ OPTIONAL TRUEFLAT FRONT PANEL IN STAINLESS STEEL
- ✓ FT650 ALSO WITH 19" FRONT PANEL

| System characteristics | | | | | | | | | |
|-------------------------------|------------------------|---|------------------------------|---|----------------------|---|-------------|----------|------|
| Display | Size | 12,1" | 15" | 17" | 19" | | | | |
| | Type | Color LCD TFT | Color LCD TFT | Color LCD TFT | Color LCD TFT | | | | |
| Touchscreen | Resolution | 800 x 600 (SVGA) | 1024 x 768 (XGA) | 1280 x 1024 (SXGA) | 1280 x 1024 (SXGA) | | | | |
| | Colors | 16M | 16M | 16M | 16M | | | | |
| | Pixel pitch | 0,307 x 0,307mm | 0,297 x 0,297mm | 0,264 x 0,264mm | 0,294 x 0,294mm | | | | |
| | Backlight | LED | LED | CCFL 2 lamps | CCFL 2 lamps | | | | |
| | Luminance | 500cd/m ² | 450cd/m ² | 300cd/m ² | 300cd/m ² | | | | |
| | Contrast | 800:1 | 700:1 | 1000:1 | 1000:1 | | | | |
| | Viewing angle L/R/U-L | 80°: 80°/80°: 60° | 80°: 80°/70°: 70° | 160° H, 160° V | 160° H, 160° V | | | | |
| | Lifetime (min.) | 100.000h | 35.000h | 50.000h | - | | | | |
| | Motherboard | Technology | 5 wires – analog - resistive | | | | | | |
| | | Light transmission | 80% ±2% | | | | | | |
| CPU | Lifetime | 35min activations | | | | | | | |
| | Linearity deviation | < 1 % | | | | | | | |
| Raid | Interface | Serial | | | | | | | |
| | Glass Film Glass | Optional | | | | | | | |
| Motherboard | Model | All-in-one, ASEM MB1021/GA | | | | | | | |
| | HW monitor | Voltages and temperatures monitor | | | | | | | |
| CPU | Watch-dog | Time programmable | | | | | | | |
| | Processor | Intel® Core 2 Duo | | | | | | | |
| Raid | FSB | T6400 2GHz | | | | | | | |
| | Cache | 800MHz | | | | | | | |
| Graphic | Socket | 2MB L2 | | | | | | | |
| | Chipset | Socket P | | | | | | | |
| Raid | Controller | Intel® 965GME + ICH8EM | | | | | | | |
| | Raid mode | Integrated in version H2, optional for H3-H4 | | | | | | | |
| Graphic | Controller | GMA X3100 integrated in Intel® 965GME | | | | | | | |
| | Memory | Shared – up to 256MB system selectable | | | | | | | |
| System memory | Type | DDR2 PC5300 | | | | | | | |
| | Size | 1 GB, 2 GB, 4GB | | | | | | | |
| Video interfaces | Socket | 2 x SODIMM module | | | | | | | |
| | Type | 1 x VGA (DB15F - max resolution 2048x1536QXGA 60Hz) , 1 x DVI-D (single link – max resolution 1600x1200 UXGA) | | | | | | | |
| Serial interfaces | Type | 2 x RS232 (DB9M) | | | | | | | |
| | UART | 16550 compatible (FIFO 16 byte) | | | | | | | |
| Optional (note 1) | Transfer rate | 115Kbps max | | | | | | | |
| | Optoisolation | No | | | | | | | |
| Parallel interfaces | Type | 1 x RS-232/422/485 (DB15M) | | | | | | | |
| | Optional | 16550 compatible (FIFO 16 byte) | | | | | | | |
| PS/2 interfaces | Connection | 115Kbps max | | | | | | | |
| | Type | No / Yes | | | | | | | |
| Ethernet interfaces | Connection | 1 x SPP, EPP, ECP bidirectional | | | | | | | |
| | Type | DB25M | | | | | | | |
| USB interfaces | Type | 1 x PS/2 Keyboard, 1 x PS/2 Mouse | | | | | | | |
| | Transfer rate | 2 x 10/100/1000Mbps (RJ45) | | | | | | | |
| Compact Flash slots | Controller | Intel 82566MM, Intel 82574L | | | | | | | |
| | Type | 4 x USB 2.0 (rear, TYPE-A, host port, protected), 2 x USB 2.0 (front, TYPE-A, host port, protected), 2 x USB 2.0 (internal pin strip, host port, protected) | | | | | | | |
| Mass storage interfaces | Transfer rate | Up to 480Mbit/s (high speed) | | | | | | | |
| | Type | 1 x Type II (external access) | | | | | | | |
| Optical device interfaces | Serial | 3 x SATA 2 3Gb/s | | | | | | | |
| | Parallel | 1 x ATA/100 Master/Slave (dedicated for CF Slot) | | | | | | | |
| Expansion slots | Type | H1 / H2 | | H3 / H4 / H1-TE / H2-TE / H3-TE / H4-TE | | | | | |
| | Type | H1 / H1-TE / H2 / H2-TE | | H3 / H3-TE | | H4 / H4-TE | | | |
| Battery | alternative | - | | 2 x PCI half size | | 3 x PCI, 1 x PCI-e x4 half size on riser card | | | |
| | Type | 1 x PCI, 1 x PCI-e x4 half size on riser card | | 2 x PCI, 1 x PCI-e x4, 1 x PCI-e x1 half size on riser card | | | | | |
| Buttons, leds and keys | Reset button | Yes | | | | | | | |
| | LEDs | Power, HDD activity, LAN, Alarm fans/temperature | | | | | | | |
| Electrical characteristics | | | | | | | | | |
| Power supply | Type | Auto ranging | | | | | | | |
| | Input voltage | 110÷230VAC 140W | | | | | | | |
| Power consumption | Power consumption | 18÷36 VDC 140W (optional) | | | | | | | |
| | | 65W @ FT650 H1, 15", T/S, Core 2 Duo 2,4GHz, 1GB RAM, CF | | | | | | | |
| Mechanical characteristics | | | | | | | | | |
| Case | Type | Panel mount | | | | | | | |
| | Material | Steel, nickel treatment | | | | | | | |
| Front panel (note 2) | Protection | IP65 | | | | IP66K | | | |
| | Construction | Aluminum with polycarbonate foil | | | | Stainless Steel True Flat with polyester foil | | | |
| Keyboard module | Color | PANTONE 429C | | | | RAL 7035 | | | |
| | Type | Membrane, alphanumeric | | | | | | | |
| TE version | Layout | US-International | | | | | | | |
| | Function keys | F1-F12, directions and control keys | | | | | | | |
| Measurements | Dimensions (W x H x D) | | | | | | | | |
| | mm | | FT650 | FT650-TE | Stainless Steel | Cutout (W x H) | Weight (Kg) | | |
| H1(H2) | 12,1" | 355 x 270 x 81 (99) | 360 x 400 x 81 (99) | - | 335 x 250 | 335 x 380 | FT650 | FT650-TE | |
| | 15" | 425 x 305 x 81 (99) | 425 x 440 x 81 (99) | - | 405 x 285 | 405 x 420 | 6,0 | 9,0 | |
| | 17" | 455 x 355 x 81 (99) | 455 x 485 x 81 (99) | 455 x 355 x 81 | 435 x 335 | 435 x 465 | 7,9 | 11,0 | |
| | 19" | 490 x 388 x 91 (109) | - | 490 x 388 x 91 | 470 x 368 | - | 8,9 | 13,0 | |
| | | | | | | | 9,9 | - | |
| | H3 | 12,1" | 355 x 270 x 137 | 360 x 400 x 137 | - | 335 x 250 | 335 x 380 | 7,6 | 10,5 |
| | | 15" | 425 x 305 x 137 | 425 x 440 x 137 | - | 405 x 285 | 405 x 420 | 9,5 | 12,0 |
| | | 17" | 455 x 355 x 137 | 455 x 485 x 137 | 455 x 355 x 137 | 435 x 335 | 435 x 465 | 10,5 | 14,0 |
| | | 19" | 490 x 388 x 147 | - | 490 x 388 x 147 | 470 x 368 | - | 11,5 | - |
| | H4 | 12,1" | 355 x 270 x 175 | 360 x 400 x 175 | - | 335 x 250 | 335 x 380 | 8,8 | 11,7 |
| | | 15" | 425 x 305 x 175 | 425 x 440 x 175 | - | 405 x 285 | 405 x 420 | 10,7 | 13,2 |
| | | 17" | 455 x 355 x 175 | 455 x 485 x 175 | 455 x 355 x 175 | 435 x 335 | 435 x 465 | 11,5 | 15,2 |
| 19" | | 490 x 388 x 185 | - | 490 x 388 x 185 | 470 x 368 | - | 12,5 | - | |
| Environmental characteristics | | | | | | | | | |
| Temperature | Operation | 0° ÷ +50°C without HDD, 0° ÷ +45°C with HDD | | | | | | | |
| | Storage | -20° ÷ +60°C | | | | | | | |
| Humidity | Operation/Storage | 80% (non-condensing) | | | | | | | |
| Warranty & Approvals | | | | | | | | | |
| CE | Emission | Conforms to EN 55022 Information technology equipment – Radio disturbance characteristics | | | | | | | |
| | Immunity | Conforms to EN 61000-3-2 – Limits for harmonic current emissions | | | | | | | |
| UL | Safety | Conforms to EN 61000-3-3 – Limits of voltage fluctuation and flicker | | | | | | | |
| | Marks | Conforms to EN 55024 Information technology equipment – Immunity characteristics | | | | | | | |
| Warranty | Management | Conforms to EN 60950-1 – Information technology equipment – Safety | | | | | | | |
| | Standard | | | | | | | | |
| Extended | Standard | Conforms to UL-60950-1 – Information technology Equipment - Safety | | | | | | | |
| | Extended | 20120524-E315863 | | | | | | | |
| Notes | Management | By ASEM headquarters | | | | | | | |
| | Standard | 12 months | | | | | | | |
| Extended | Extended | 18 / 24 / 36 months (optional) | | | | | | | |