

# Data Sheet

We make sure



## ESPRIMO E7935 E-Star 4.0

### Your desktop PC without any compromises

Issue: December 2008

Fujitsu Siemens Computers is the leading European IT manufacturer. With a strategic focus on innovative mobility and the dynamic data center, we offer a unique range of products and services from notebooks and desktops to servers and IT infrastructure solutions. Famous German engineering and exceptional in-house quality testing capabilities in our test centers ensure extraordinary product quality and reliability across all product lines.

#### ESPRIMO E7935 E-Star 4.0

The ESPRIMO E7935 can be positioned vertically or horizontally - the ideal choice for your desk. Equipped with state-of-the-art Intel® technology, especially with regard to system management, this PC, made of environmentally-friendly material, operates reliably and quietly. Additionally equipped with an 80% effective power supply and with specially selected components this device has been awarded the Energy Star 4.0 certificate. Why compromise between a good conscience and top-quality equipment when you can have both at the same time?

#### Small form factor PC

Flexible desktop solution whatever the space required.

- Less than 13 litres volume; also usable as thin client

#### Environmentally compatible product

Your contribution to environmental protection for the continued existence of our planet

- Halogen-free mainboard, sophisticated product concept for the entire lifecycle

#### Quiet

Pleasant working environment due to an extremely quiet system

- Innovative hardware design, optimized cooling concept

#### System management

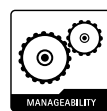
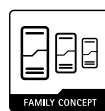
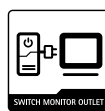
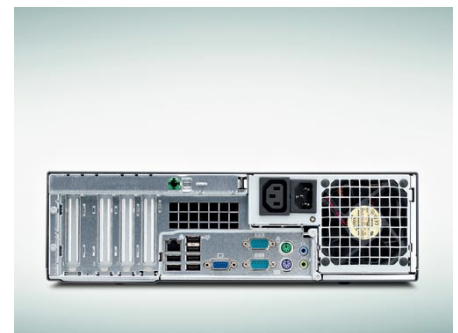
Simple system administration for complex IT infrastructures

- Latest Intel® Q45 chipset and Intel® vPro™ technology (with selected processors)

#### Energy Star 4.0

Low power consumption and costs with no loss in performance.

- Power supply up to 85% efficiency and specially selected components



## Components

|   |  |
|---|--|
| <b>Processor</b>                                    | Intel® Core™2 Quad Q9550 (2.83 GHz, 12 MB, 1333 MHz)<br>Intel® Core™2 Quad Q9400 (2.66 GHz, 6 MB, 1333 MHz)<br>Intel® Core™2 Quad Q8200 (2.33 GHz, 4 MB, 1333 MHz)<br>Intel® Core™2 Duo E8600 (3.33 GHz, 6 MB, 1333 MHz)<br>Intel® Core™2 Duo E8500 (3.16 GHz, 6 MB, 1333 MHz)<br>Intel® Core™2 Duo E8400 (3.0 GHz, 6 MB, 1333 MHz)<br>Intel® Core™2 Duo E7400 (2.8 GHz, 3 MB, 1066 MHz)<br>Intel® Core™2 Duo E7300 (2.66 GHz, 3 MB, 1066 MHz)<br>Intel® Pentium® Dual-Core E5300 (2.6 GHz, 2 MB, 800 MHz)<br>Intel® Pentium® Dual-Core E5200 (2.5 GHz, 2 MB, 800 MHz)<br>Intel® Pentium® Dual-Core E2220 (2.4 GHz, 1 MB, 800 MHz)<br>Intel® Pentium® Dual-Core E2200 (2.2 GHz, 1 MB, 800 MHz)<br>Intel® Celeron® Dual-Core E1400 (2.0 GHz, 512 KB, 800 MHz)<br>Intel® Celeron® Dual-Core E1200 (1.6 GHz, 512 KB, 800 MHz) |
| <b>Memory modules</b>                               | 2 GB (1 module(s) with 2 GB, DDR2), 800 MHz<br>1 GB (1 module(s) with 1 GB, DDR2), 800 MHz   |
| <b>Hard disk drives (internal)</b>                  | SATA II, 7200 rpm, 500 GB, 3.5-inch S.M.A.R.T.<br>SATA II, 7200 rpm, 250 GB, 3.5-inch S.M.A.R.T.<br>SATA II, 7200 rpm, 160 GB, 3.5-inch S.M.A.R.T.   |
| Hard disk notes                                     | Supporting NCQ and 3 GBit  |
| <b>Graphics add on cards (optional)</b>             | DVI Adapter<br>NVIDIA® Geforce® 9300GE low profile 256 MB<br>NVIDIA® Geforce® 9300GE low profile 512 MB<br>NVIDIA® Geforce® 9500GS low profile 512 MB<br>NVIDIA® Quadro NVS 290 low profile 256 MB   |
| <b>Modular bay options</b>                          | 1.44 MB Floppy, standard<br>Blu-ray Disc Triple Writer<br>DVD-ROM<br>DVD Super Multi<br>MultiCard Reader 15in1, 3,5-Inch   |
| <b>Interface add on cards/components (optional)</b> | Parallel Interface<br>FireWire PCI-Card IEEE1394<br>eSATA Interface<br>Dual serial card PCI LP   |
| <b>Base unit</b>                                    | <b>ESPRIMO E7935 E-Star4</b>   |
| <b>Mainboard</b>                                    |  |
| Mainboard type                                      | D2828  |
| Formfactor  | proprietary  |
| Chipset   | Intel® Q45   |
| Processor socket                                    | LGA 775  |
| Processor quantity maximum                          | 1  |
| System bus (FSB / HT / QPI)                         | up to 1333 MHz   |
| Memory slots  | 4 DIMM (DDR2)  |
| Supported capacity RAM (max.)                       | 16 GB  |
| Memory frequency                                    | 800 MHz  |
| Memory notes  | With future modules.<br>Dual channel support.<br>For dual channel performance, identical memory modules in each channel are necessary (minimum 2 modules).   |
| LAN   | 10/100/1000 MBit/s Intel® 82567LM  |
| BIOS version  | Phoenix 6.0  |
| BIOS features                                       | BIOS Flash EPROM update by software<br>Recovery BIOS   |
| Audio codec   | Realtek ALC663   |
| Audio features                                      | Internal speaker supports audio playback, High Definition audio  |
| <b>I/O controller on board</b>                      |  |
| Serial ATA total                                    | 4  |
| thereof eSATA                                       | 2 (optional)   |
| Controller functions                                | Serial ATA II<br>NCQ and 3 GBit<br>AHCI<br>Raid 1/0  |
| <b>Interfaces</b>                                   |  |
| Audio: line-in                                      | 1  |
| Audio: line-out                                     | 1  |
| Front audio: headphone                              | 1  |
| Front audio: microphone                             | 1  |
| USB 2.0 total                                       | 12   |
| USB front   | 2  |
| USB rear  | 6  |

| <b>Interfaces</b>       |  |
|-------------------------|--|
| USB internal            | 4  |
| VGA                     | 1  |
| DVI                     | optional                                 |
| Serial (RS-232)         | 2 (9pin, 16 byte FIFO, 16550 compatible) |
| Mouse / Keyboard (PS/2) | 2  |
| Ethernet (RJ-45)        | 1  |
| Parallel                | optional (25pin with EPP and ECP)        |

| <b>Input device / components</b> |  |
|----------------------------------|--|
|                                  | Optical USB tilt wheel mouse               |
|                                  | Optional: Optical USB/PS2 tilt wheel mouse |

| <b>Drive bays</b>       |  |
|-------------------------|--|
| Drive bays total        | 3                                      |
| 3.5-inch internal bays  | 1                                      |
| 3.5-inch external bays  | 1                                      |
| 5.25-inch external bays | 1                                      |
| Drive bay notes         | optional external bay as internal 3,5" |

| <b>Slots</b>                 |   |
|------------------------------|---|
| PCI-Express x16              | 1 x (210 mm) low profile  |
| PCI-Express x4 (mech. x8)    | 1 x (210 mm) low profile  |
| PCI (32-bit / 33 MHz)        | 2 x (190 mm) low profile  |
| Slots optional configuration | or 1x PCI Express x16 low profile (190mm) and via Riser 2 x PCI full heigh (174 / 210 mm) |

| <b>Graphic on board</b>                          |  |
|--|--|
| Graphics brand name                              | Intel® GMA 4500  |
| Shared video memory                              | Up to 256 MB   |
| Refresh rate 1024 x 768<br>(recommended / max.)  | 85 Hz / -  |
| Refresh rate 1280 x 1024<br>(recommended / max.) | 85 Hz / -  |
| Refresh rate 1600 x 1200<br>(recommended / max.) | 85 Hz / -  |
| TFT resolution (VGA)                             | 1360 x 768 pixel<br>1440 x 900 pixel<br>1680 x 1050 pixel<br>1920 x 1200 pixel   |
| TFT resolution (DVI)                             | 1360 x 768 pixel<br>1440 x 900 pixel<br>1680 x 1050 pixel<br>1920 x 1200 pixel   |
| Graphic notes                                    | Tested resolutions, depending on display type additional resolutions and frequencies possible<br>Shared memory depending on main memory size<br>Resolution (color depth up to 32 Bit/pixel)<br>For TFT we recommend to use 60Hz. |

| <b>Electrical values</b>             |  |
|--------------------------------------|--|
| Power efficiency note                | power supply efficiency (at 230V; 20% / 50% / 100% load) : 82% / 85% / 83% |
| Rated voltage range                  | 100 - 240 V  |
| Rated frequency range                | 50 - 60 Hz   |
| Operating voltage range              | 90 - 264 V   |
| Operating line frequency range       | 47 - 63 Hz   |
| Max. output of power supply          | 300 W  |
| Power factor correction/active power | active   |
| Monitor outlet                       | Switched   |

| <b>Power consumption</b>   |   |
|----------------------------|---|
| Power consumption note     | see white paper Energy Consumption  |
| Link to Energy White Paper | <a href="http://docs.fujitsu-siemens.com/dl.aspx?id=001a2066-ed23-40d2-bd53-8696eb91a175">http://docs.fujitsu-siemens.com/dl.aspx?id=001a2066-ed23-40d2-bd53-8696eb91a175</a> |

| <b>Heat dissipation</b> |                                    |
|-------------------------|------------------------------------|
| Heat dissipation notes  | see white paper Energy Consumption |

| <b>Noise for standard configuration (HDD, ODD, FDD)</b>          |   |
|--|---|
| Noise emission   | According to ISO9296  |
| Related Processors for noise                                     | Intel® Core™2 Duo E8600   |
| Noise Operation mode 1: ODD load<br>(Blue angel requirement)     | 5.0 B / 36 dB(A)  |
| Noise Operation mode 2: HDD load<br>(Blue angel requirement)     | 3.5 B / 19 dB(A)  |
| Noise Operation mode 3: CPU 90%<br>load (Blue angel requirement) | 3.5 B / 18 dB(A)  |
| Noise Operation mode 4: High load                                | 3.5 B / 19 dB(A)  |
| Noise Operation mode 5: Office<br>applications                   | 3.5 B / 19 dB(A)  |
| Idle mode (Blue Angel requirement)                               | 3.5 B / 19 dB(A)  |
| Noise notes / description  | A weighted sound power level Lwad (in B) / workplace related A-weighted sound pressure level LpAm (in dB(A)),<br>Bystander position |

| <b>Dimensions / Weight / Environmental</b> |                    |
|--|--------------------|
| Dimension (W x D x H)                      | 340 x 380 x 100 mm |

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**Dimensions / Weight / Environmental**

|                               |  |
|-------------------------------|--|
| Operating position            | Vertical / horizontal (no feet needed)             |
| Weight                        | approx. 10 kg                                      |
| Weight notes                  | Weight may vary depending on actual configuration. |
| Operating ambient temperature | 15 - 35°C  |

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**Compliance**

|                 |  |
|-----------------|--|
| Germany         | Blauer Engel / Blue Angel in progress<br>GS optional   |
| Europe          | CE<br>Nordic Swan in progress  |
| USA/Canada      | FCC Class B<br>UL<br>CSA   |
| Global          | RoHS (Restriction of hazardous substances)<br>WEEE (Waste electrical and electronic equipment)<br>Microsoft Operating Systems (HCT / HCL entry / WHQL)<br>Energy Star 4.0<br>EPEAT in progress |
| Compliance link | <a href="https://sp.fujitsu-siemens.com/sites/certificates/default.aspx">https://sp.fujitsu-siemens.com/sites/certificates/default.aspx</a>  |

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**Operating system**

|  |  |
|--|--|
| Operating system optional preinstalled | Microsoft® Windows Vista® Home Basic<br>Microsoft® Windows Vista® Home Premium<br>Microsoft® Windows Vista® Business 32bit<br>Microsoft® Windows Vista® Business 64bit<br>TwinLoad Microsoft® Windows® XP Professional (DVD) |
| Operating system compatible            | Linux  |

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**Additional Software**

|                                    |  |
|------------------------------------|--|
| Additional software (preinstalled) | Nero Essentials (burning software)   |
| Additional software (optional)     | Recovery DVD (Windows® XP / Windows Vista®)<br>Drivers & Utilities DVD (DUDVD) Windows Vista®<br>Drivers & Utilities DVD (DUDVD) Windows® XP |

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|                         |  |
|-------------------------|--|
| Spare part availability | Keyboard on (Fujitsu Siemens Computers keyboard required)<br>Thermal management<br>5 years |
|-------------------------|--|

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**Compatibility (references)**

DMI 2.0  
PC 2001  
WMI 1.5  
USB 2.0

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**Manageability**

|                        |   |
|------------------------|---|
| Manageability features | ASF 2.0 (Alert Standard Format)<br>DeskUpdate Driver management<br>DeskView Migrate (optional)<br>DeskView Control (optional)<br>PXE 2.1 Boot code<br>BootP Boot Code including Bootmanage Administrator Software (tested)<br>Wake up from S5 (off mode)<br>Intrusion switch (optional)<br>iAMT 5.0 |
| Manageability type     | DeskView 10.x client management including:  |
| DeskView features      | On/Offline remote client management<br>Detailed system inventory management and reports<br>BIOS Management<br>Remote power management<br>System notifications<br>Advanced alerts (ASF implementation)<br>Security Remote Control<br>DeskView Helpdesk Integration<br>WoL (Wake on LAN)              |
| Manageability link     | <a href="http://www.fujitsu-siemens.com/manageability">http://www.fujitsu-siemens.com/manageability</a><br><a href="http://www.altiris.com/fsc">http://www.altiris.com/fsc</a>  |

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**Security**

|                   |   |
|-------------------|---|
| Physical security | Kensington Lock support<br>Eye for padlock<br>Optional: Integrated cabinet lock   |
| System security   | Boot sector virus protection<br>Write protect option for the Flash EPROM<br>Embedded security (TPM 1.2) - Infineon<br>Control of all USB interfaces<br>External USB interfaces detachable separately<br>Boot protection for floppy disk / CD drive and write protection for floppy disk drive<br>Control of external interfaces |
| User security     | User and supervisor BIOS password<br>SystemLock 2 BIOS SmartCard Security<br>Hard disk password<br>Optional: Access protection via external SmartCard reader<br>Optional: Access protection via internal SmartCard reader   |

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**Serviceability**

FlexySlot  
EasyFix  
EasyChange for HDD  
EasyChange for optical drives

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**Packaging information**

Packaging dimension 500x290x540 mm  
Max. quantity / pallet 24  
Material - Weight (g) Carton 1270 g  
Material - Weight (g) EPS / PS 230 g  
Material - Weight (g) PE appr. 60 g  
Packaging notes printed user documentation is bleached in chlorine free process

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**Warranty****Maintenance and Support Services - the perfect extension**

Recommended Service 5x9, Response Time: Next Business Day  
Spare Parts availability 5 years  
Service Weblink [www.fujitsu-siemens.com/Supportservice](http://www.fujitsu-siemens.com/Supportservice)

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Information about environmental care, policies, programs and our Environmental Guideline FSC 03230:

<http://www.fujitsu-siemens.com/aboutus>

Take back and Recycling information:  
<http://www.fujitsu-siemens.com/recycling>

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