

Formula Embedded System



Features:

- Ultra Compact Aluminium Chassis
- Extensive Shock & Vibration Specification
- Core 2 Duo, Core Duo, Core Solo, Pentium & Celeron M Processors
- Fan-less and Dustproof
- No Noise
- Extensive Communication Port Options
- 100% Vibration and Burn-in Tested
- Supports Windows XP, XP Embedded, Windows CE and Linux

Designed for the rigours of Mobile/Kiosk applications:

The implementation of a computer in any form of transport whether road, rail or sea will invariably impose environmental conditions far greater than most static applications. The platform needs to be robust in construction, have limited or no moving parts and be able to withstand high levels of shock and vibration. The question was how to get this technology into a small and rugged enough system to withstand 24 hour operation in harsh environmental conditions. The answer is the new ES Series Fan-less Industrial Computer designed specifically for challenging applications.

The highly compact cast aluminium chassis provides a very small footprint for space critical installation. A feature-rich environmental design offers superb resilience to shock and vibration. This system is proven to withstand 5G Vibration at 10-500 Hz (IEC-68-2-6) which is over 5 times the typical industrial PC specification. The system survives an outstanding 100G peak acceleration for 6 msecs (IEC-68-2-27) which is over 6 times the typical specification of an industrial PC platform.

A choice of processors from 600MHz Celeron/ Pentium M up to Core 2 Duo class deliver high performance with low power consumption. The Standard Compact Flash Memory Storage offers maximum resilience for the operating system and data; additionally there is also an Anti-Shock mounting for a 2.5" Hard Disk Drive.

A completely fanless design enhances reliability and state of the art heat pipe technology ensures a cool running system at all times. All communication ports, power input, power switch, etc are conveniently positioned on the front panel.

A 9-32Volts DC Wide Range Power Module (optional) protects against the voltage surges and sags normally experienced in vehicles and an OS shut down delay function makes sure the system will turn off correctly when power is lost.

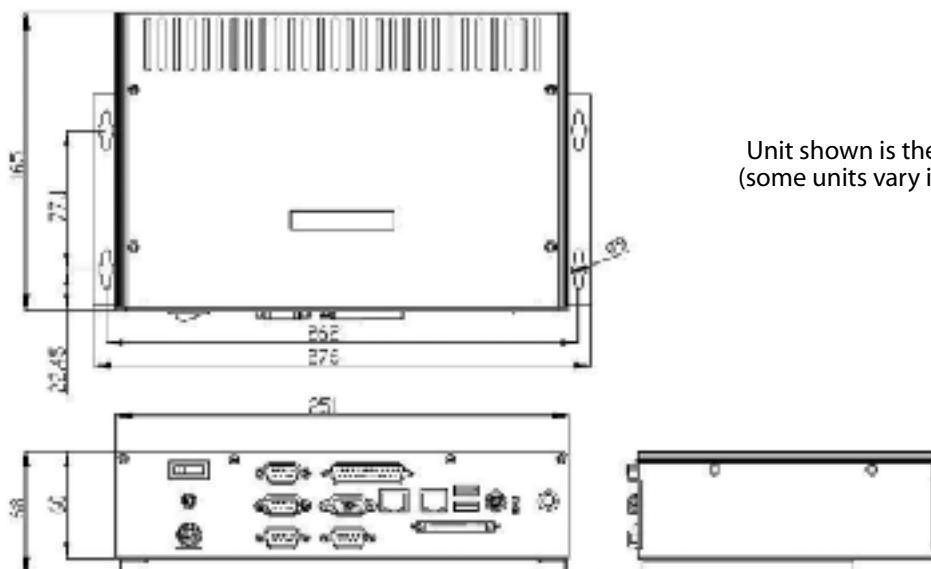
All this makes the ES Series ideal for the tough world of vehicle and marine applications.



Typical ES Specification

- **CPU**
Intel socket 478 uFC-PGA FSB 400
MHz Pentium M & Celeron M processors
- **System Chipset**
Intel 855GME + ICH4 chipset or Intel 852GM + ICH4 chipset
- **System Memory**
512 MB DDR 333 SDRAM; maximum 1GB
- **Storage Memory**
Compact Flash Type II holder
Optional 1 x ATA100 44 pin IDE connector for 2.5" HDD
Anti-shock drive bay
- **Display Support**
Graphics: Integrated Intel Chipset 852GM
Memory: Intek DVMA up to 64MB
Display: VGA/LVDS Interface
- **Front Panel**
Analogue VGA DB-15 connector
Amplified audio output
Two RJ45 LAN (10/100 M bps)
Wi-Fi Antenna
DC Input Power Connector
Two USB 2.0 Connectors
Four DB9 RS-232 Connectors
PS/2 Keyboard/Mouse Connector
DB-25 LVDS Connector (Optional DB-25 printer port)
Compact Flash Card Holder
Power Switch
Power & HDD LED
- **Internal I/O**
4 USB 2.0
8-bit GPIO
- **Expansion Module**
Optional USB Wireless Module
- **Power Supply**
Standard 60Watt AC to DC 12V power adaptor 110~240V AC input.
Lockable DC plug-in jack
Optional 9V to 32VDC input, 12VDC output power module
- **Environmental Specification**
Operating Temperature: 0°C to 60°C (32°F to 140°F) [CF]
Non-Operating Temperature: -20°C to 80°C (-4°F to 176°F)
Humidity: 5% to 95% @ 40°C (non-condensing)
Vibration: IEC 68-2-6, sine, 5G, 10 to 500 Hz, 1 Oct./min, X,Y,Z 3axes, 2 hr/axis [CF]
Shock: IEC 68-2-27, 100G peak acceleration (6 msec. Duration) [CF]
- **Operating System**
Windows XP, XP Embedded, Windows CE and Linux
- **Mechanical**
Chassis Material
Aluminum & Metal
- **Dimension**
D: 165mm W: 251 mm H: 60 mm (6.3"x9.84"x2.32")
- **CPU Thermal Module**
Fanless
Heat pipe with external heat sink
- **Certification**
CE, FCC Class A, RoHS compliant

TYPICAL ES DIMENSIONS



Unit shown is the SES0831FL
(some units vary in dimension)