

## Mainboard Diagram



### J7F4K1G2E Mini-ITX Motherboard

- VIA CN700 Northbridge + VT8237RP Southbridge Chipsets
- Support VIA C7 Nano-BGA processor
- Support Front Side Bus 400/800MHz
- Single Channel DDR2 533 Memory DIMM
- Support 2 Serial ATA Devices with RAID 0, 1
- Dual Gigabit Ethernet LAN Supported
- AC'97 6 Channel Audio CODEC
- 17 x 17cm Mini-ITX Form Factor



## Features and Benefits

### Embedded VIA Eden Processor with 21 mm NanoBGA2 Technology

With its signature fanless operation, the VIA Eden™ processor family targets personal, business, industrial and commercial embedded computing devices that require ultra low power consumption, rock solid reliability and compatibility with standard x86 operating systems and software applications. VIA Eden processors are scalable from 400MHz to 1.5GHz all within a maximum thermal envelope of 7.5 watts, and are available with a diverse range of feature sets that enable PC functionality and connectivity from traditionally single function devices.

### VIA CN700 Digital Media Chipset and VT8237RP Southbridge Chipset

The first chipset to support the new VIA C7™ processor family, the VIA CN700 is fully optimized to provide an outstanding HD digital media experience. Featuring the all new high bandwidth V4 bus as well as support for DDR2 memory modules, the VIA CN700 delivers a highly advanced solution for developers interested in designing a wide range of powerful embedded and desktop devices. When combined with solutions such as the market-leading VIA VT8237R South Bridge and a broad array of VIA companion chips, the VIA CN700 provides a comprehensive range of storage, multimedia and connectivity features, including native Serial ATA with RAID functions, 6-channel Audio, 10 / 100 Ethernet, and USB2.0.

### MPEG-2 Decoding Acceleration

Enhanced digital media performance is ensured with support for SSE2 and SSE3 multimedia instructions and a full-speed Floating Point Unit (FPU), while all VIA C-Series mobile chipsets integrate hardware MPEG-2 decoding acceleration for flawless digital video playback and streaming, Voice over IP telephony and video conferencing, and much more.

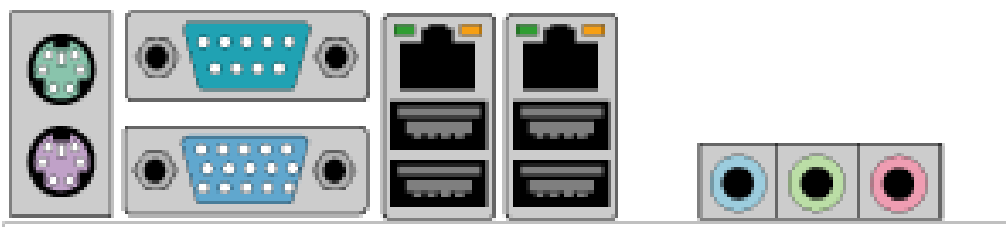
### VIA Padlock Security Engine

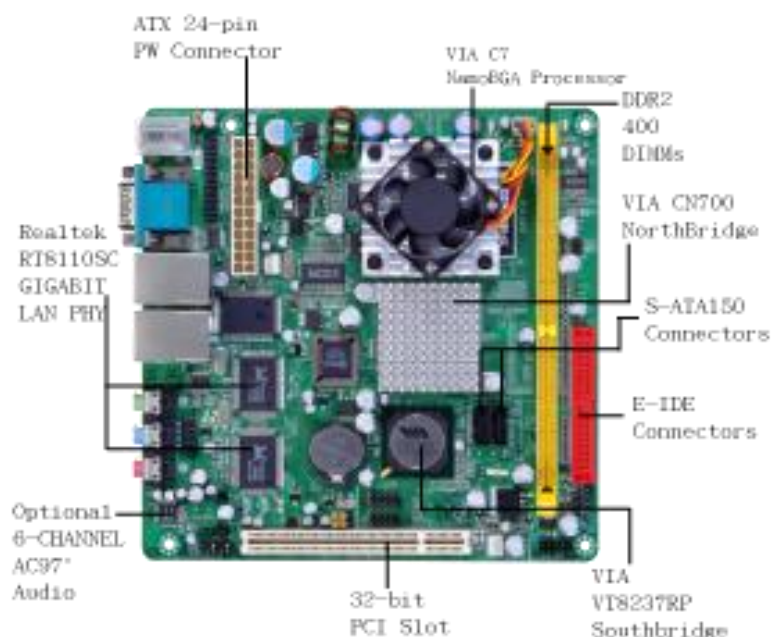
In addition to the world's best random number generator (RNG) and AES Encryption Engine in the previous processor generation, the VIA PadLock Security Engine in the VIA C7 processor adds SHA-1 and SHA-256 hashing for secure message digests, and a hardware based Montgomery Multiplier supporting key sizes up to 32K in length to accelerate public key cryptography, such as RSA™. The VIA C7 also provides NX Execute Protection, providing protection from malicious software such as worms and viruses, and is used in Microsoft® Windows® XP with SP2. Integrating security directly onto the processor die ensures speeds and efficiency many times that available in software, yet with negligible impact on processor performance.

### Targets at High Growth Markets: Digital Home / Digital Office / Digital World

- Personal electronics such as personal video recorders (PVR), set top boxes, home theatres, digital audio centers, etc.
- Mini PCs / Green clients / Quiet desktop PCs / High density servers
- Home server appliances / Public information/entertainment kiosks / Point-of-Sales systems / Intelligent displays / Edge networking devices / Hospital monitoring systems / Municipal control & monitoring systems

## Rear I / O





## Mainboard Specifications

■ CPU	<ul style="list-style-type: none"> <li>Embedded VIA NanoBGA C7 Processor @ FSB 400/800MHz</li> <li>VIA Eden 1.2 GHz Core Clock CPU and Low Voltage Edition Included</li> </ul>
■ Chipset	<ul style="list-style-type: none"> <li>VIA CN700 North Bridge Chipset + VT 8237RP South Bridge Chipset</li> </ul>
■ Memory	<ul style="list-style-type: none"> <li>1 * 240-pin DIMM Sockets for unbuffered DDR2 533 SDRAM up to 1 GB</li> </ul>
■ Expansion Slots	<ul style="list-style-type: none"> <li>1 * 32-bit PCI Slot</li> </ul>
■ Storage	<ul style="list-style-type: none"> <li>2 * Ultra DMA 133 / 100 / 66 IDE Devices Support</li> <li>Embedded VIA VT8237RP South Bridge Chipset Supports 2 Serial ATA HDDs with RAID 0, 1 Function.</li> </ul>
■ Audio	<ul style="list-style-type: none"> <li>Realtek ALC655 6-Channel AC 97' Audio CODEC</li> </ul>
■ Ethernet LAN	<ul style="list-style-type: none"> <li>Dual Realtek RTL8110SC 10 / 100 / 1000 PCI LAN PHY</li> </ul>
■ USB	<ul style="list-style-type: none"> <li>Embedded 8 * High Speed USB @ 480 Mbit / s</li> </ul>
■ Special Features	<ul style="list-style-type: none"> <li>Advanced Power Design that supports NanoBGA VIA C7 Processor</li> <li>Dual Gigabit LAN Design For Dedicated IPC Motherboard Platform</li> </ul>
■ Rear Panel I / O	<ul style="list-style-type: none"> <li>4 * High Speed USB Connectors @ 480 Mbit / s</li> <li>1 * Serial Port / 1 * D-Sub 15-pin VGA Connector</li> <li>1 * PS / 2 Mouse &amp; 1 * PS/2 Keyboard / 1 * RJ45 Connector / 1 * Audio I / O</li> </ul>
■ Internal I / O	<ul style="list-style-type: none"> <li>2 * High Speed USB Connectors @ 480 Mbit / s for 4 USB 2.0 Ports</li> <li>CPU / Chassis Fan Connectors / 26-pin Parallel Connector / 9-Pin COM2 Conector</li> <li>1 * 12V 4-pin ATX Power Connector and 1 * 24-pin ATX Power Connector</li> <li>CD / AUX Audio in &amp; SPEAK Out</li> </ul>
■ BIOS	<ul style="list-style-type: none"> <li>Award 4 MB Flash ROM</li> </ul>
■ Form Factor	<ul style="list-style-type: none"> <li>Mini-ITX Form Factor (17x17cm)</li> </ul>