

## Mini-ITX Series

# VIA VB7009

Flexible Mini-ITX board with advanced multimedia, I/O, and connectivity features

## Features

- Compact 17cm x 17cm Mini-ITX form factor
- Choice of VIA Eden® X4, VIA C7®-D, and VIA C7® processors
- DX9 graphics with MPEG-2/WMV9/VC-1/H.264 decoding acceleration
- Rich I/O and connectivity features
- Supports up to six onboard COM ports



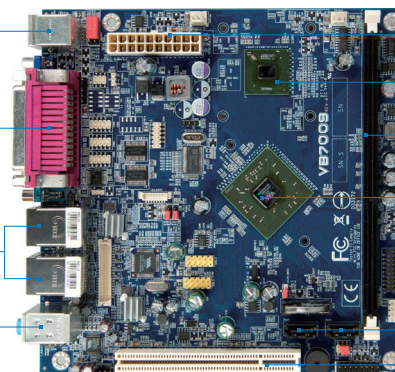
## Board Placement

PS2 Keyboard/Mouse

Parallel Port/COM/VGA

Gigabit Ethernet/USB

Audio Jacks



ATX Power Connector

VIA CPU

DDR3 DIMM

VIA VX900 Chipset

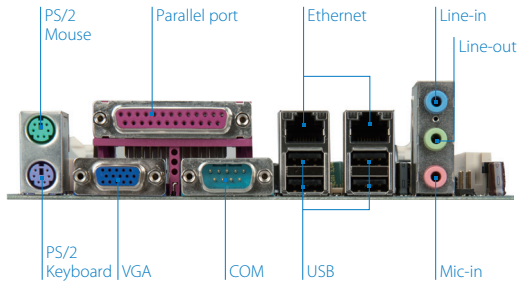
SATA

PCI

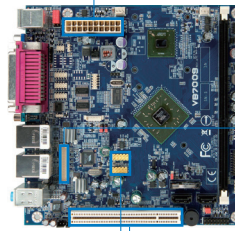
## Specifications

| Model Name                                | VB7009-12QCE   | VB7009-16                   | VB7009-10E               |
|---|--|-----------------------------|--------------------------|
| <b>Processor</b>                          | 1.2GHz VIA Eden® X4 (Fanless)  | 1.6GHz VIA C7®-D (with fan) | 1.0GHz VIA C7® (Fanless) |
| <b>Chipset</b>                            | VIA VX900 Media System Processor   |                             |                          |
| <b>BIOS</b>                               | AMI BIOS, 8Mbit Flash memory   |                             |                          |
| <b>System Memory</b>                      | 1 DDR3 1066 DIMM slot<br>Up to 4GB memory size   |                             |                          |
| <b>Storage</b>                            | 2 SATA connectors  |                             |                          |
| <b>Graphics</b>                           | Integrated VIA C-9 HD DX9 3D/2D graphics with MPEG-2, WMV9, VC-1 and H.264 video decoding acceleration   |                             |                          |
| <b>LAN</b>                                | 2 VIA VT6130 PCIe Gigabit Ethernet controllers   |                             |                          |
| <b>Audio</b>                              | VIA VT1708S High Definition Audio Codec  |                             |                          |
| <b>Super I/O</b>                          | Fintek F81865F-I   |                             |                          |
| <b>Expansion I/O</b>                      | 1 PCI slot   |                             |                          |
| <b>Onboard I/O</b>                        | 2 SATA connectors<br>2 USB 2.0 pin headers for 4 ports<br>1 Dual-channel 18/24 bit LVDS panel connector<br>1 LVDS panel power selector (5V/3.3V)<br>1 LVDS inverter pin header<br>1 LVDS inverter power selector (5V/12V)<br>5 COM port pin headers 2 optional (powered with selectable 5V/12V)<br>1 LPC pin header<br>1 SMBus pin header<br>1 S/PDIF-out connector<br>1 Digital I/O pin header (4 GPI + 4 GPO)<br>1 Front audio pin header for Line-out and Mic-in<br>2 Smart Fan pin headers for CPU and system<br>1 ATX power connector<br>1 PCI slot |                             |                          |
| <b>Back Panel I/O</b>                     | 4 USB 2.0 ports<br>1 VGA port<br>1 COM port<br>1 Parallel port<br>2 Gigabit Ethernet ports<br>3 Audio jacks: Line-in, Line-out, and Mic-in<br>2 PS/2 keyboard/mouse ports  |                             |                          |
| <b>Power Supply</b>                       | ATX power connector  |                             |                          |
| <b>Operating System</b>                   | Windows 7, WES 7, Windows CE, Linux, POSReady 7  |                             |                          |
| <b>System Monitoring &amp; Management</b> | AC power failure recovery, RTC timer to power on, Wake-on LAN, Wake-on keyboard, Wake-on mouse   |                             |                          |
| <b>Operating Temperature</b>              | 0°C ~ 60°C   |                             |                          |
| <b>Operating Humidity</b>                 | 0% ~ 95% (non-condensing)  |                             |                          |
| <b>Form Factor</b>                        | Mini-ITX (17cm x 17cm, 6.7" x 6.7")  |                             |                          |
| <b>Compliance</b>                         | CE/FCC   |                             |                          |

## Back Panel I/O



## Accessories



**PWB-M120**  
120W DC-DC power board,  
voltage range from 12V~24V



**LPC-01/02/04**  
Up to 4 additional COM ports



**EXT-PCI**  
One to two PCI riser card



**EMIO-1533 USB Wi-Fi Module**  
802.11b/g/n standards



**EMIO-5531 USB Wi-Fi + BT Module**  
802.11b/g/n standards  
Bluetooth 2.1 + EDR specification

## Ordering Information

| Model Name   | CPU Frequency         | Description  |
|--------------|-----------------------|--|
| VB7009-12QCE | VIA Eden® X4 @ 1.2GHz | Mini-ITX Board with 1.2GHz VIA Eden® X4 E-Series CPU with VGA, LVDS, 8 USB 2.0, 6 COM, 2 Gigabit Ethernet, 2 SATA, PCI slot, ATX connector |
| VB7009-16    | VIA C7®-D @ 1.6GHz    | Mini-ITX Board with 1.6GHz VIA C7®-D CPU with VGA, LVDS, 8 USB 2.0, 4 COM, 2 Gigabit Ethernet, 2 SATA, PCI slot, ATX connector             |
| VB7009-10E   | VIA C7® @ 1.0GHz      | Mini-ITX Board with 1.0GHz VIA C7® CPU with VGA, LVDS, 8 USB 2.0, 4 COM, 2 Gigabit Ethernet, 2 SATA, PCI slot, ATX connector               |

## Optional Accessories

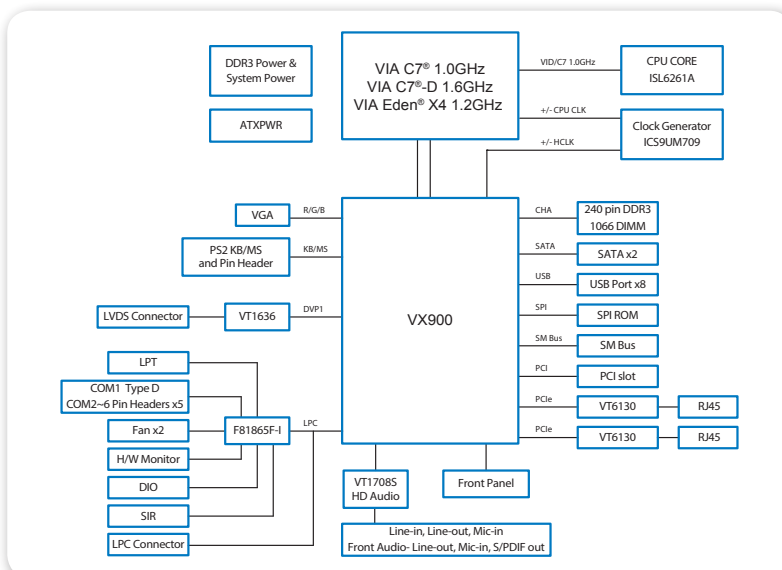
### I/O Expansion Cards

| Part Number | Description  |
|-------------|--|
| LPC-01      | Expansion module for four COM ports                    |
| LPC-02      | Expansion module for four COM ports (5V or 12V)        |
| LPC-04      | Expansion module for two or four COM ports (5V or 12V) |
| PWB-M120    | 120W DC-DC power board, voltage range from 12V~24V     |
| EXT-PCI     | One to two PCI riser card                              |

### Wireless Modules

| Part Number    | Description   |
|----------------|---|
| EMIO-1533-00A2 | VNT9271 IEEE 802.11b/g/n USB Wi-Fi module with assembly kit and antenna               |
| EMIO-5531-00A1 | VAB-820-W IEEE 802.11b/g/n USB Wi-Fi & Bluetooth module with assembly kit and antenna |

## Block Diagram



## Packing List

| Items        |
|--------------|
| VB7009 board |
| SATA cable   |
| I/O bracket  |