N701
(ARTiGO A2000 Mainboard)

OPERATING GUIDE

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VIA N701 Overview

The VIA N701 is a custom Nano-ITX mainboard specifically designed for the VIA ARTiGO A2000. Its use of high quality solid capacitors enables the system to require little maintenance. Solid capacitors are known to extend the life of an electronic device up to six times.

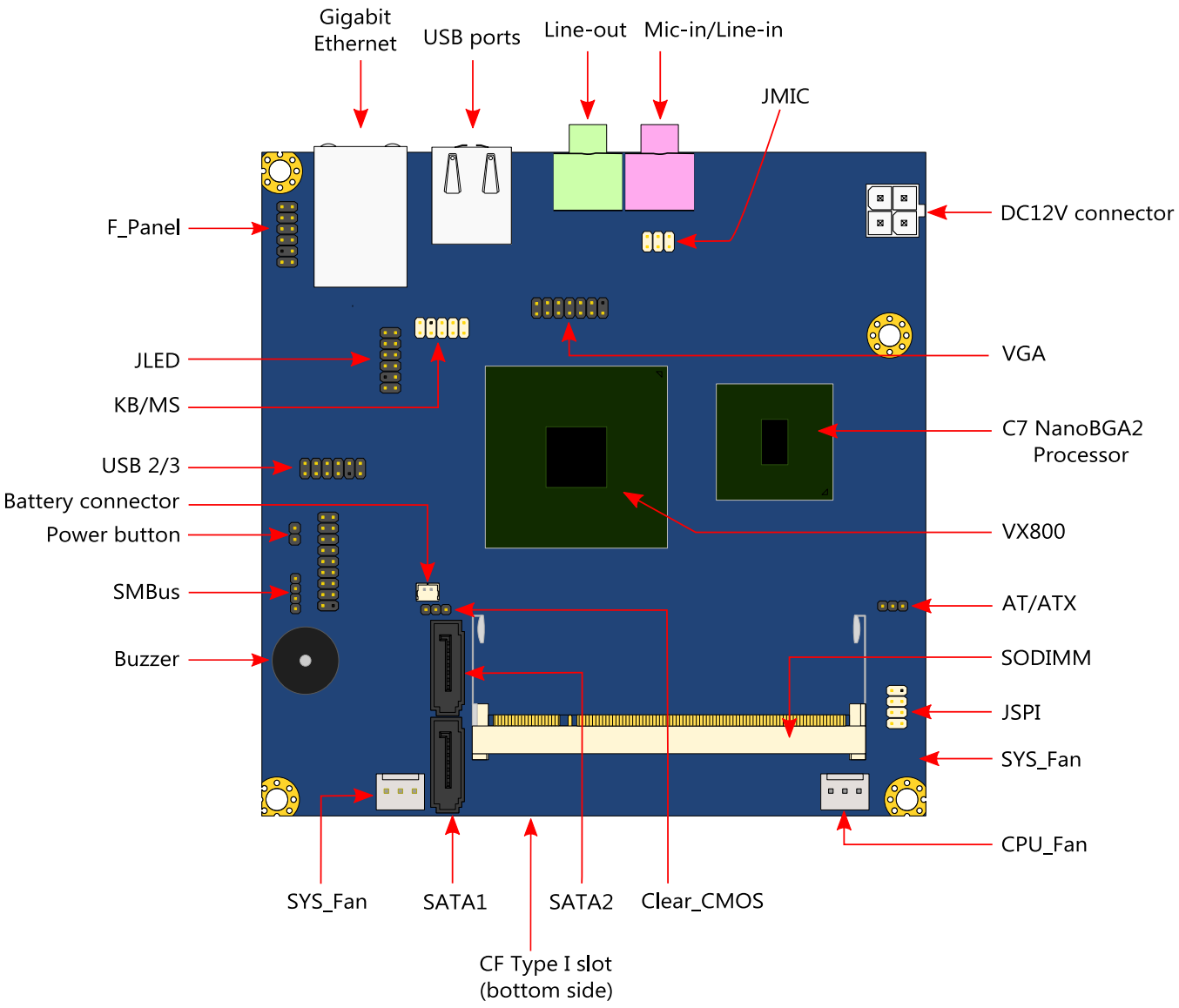
The VIA N701 mainboard is based on the VIA VX800 Unified Digital Media IGP chipset featuring the VIA Chrome9™ HC3 with 2D/3D graphics and video accelerators for rich digital media performance.

The VIA N701 includes a VIA C7®-D 1.5 GHz processor with 400 MHz front side bus. Powerful, secure, and efficient, the VIA processor includes the VIA Padlock Security Engine, VIA CoolStream™ Architecture, VIA StepAhead™ Technology Suite, and VIA TwinTurbo™ technology.

The VIA N701 supports up to 2 GB of 667/533 MHz DDR2 SODIMM memory. The VIA N701 also provides support for high fidelity audio with its included VIA VT1708B High Definition Audio codec. In addition it supports two SATA 3Gb/s storage devices. Other supported storage includes CompactFlash Type I.

The VIA N701 is fully compatible with most Microsoft® and Linux operating systems.

VIA N701 Layout



VIA N701 Specifications

Model Name	- N701
Processor	- VIA C7®-D 1.5 GHz NanoBGA2 processor (400 MHz FSB)
Chipset	- VIA VX800 Unified Digital Media IGP Chipset
System Memory	- 1 x DDR2 533/667 SODIMM slot - Up to 2 GB memory size
VGA	- Integrated VIA Chrome9™ HC3 DX9 3D/2D Graphics and unified video decoding acceleration
Onboard LAN	- 1 x VIA VT6130 PCIe Gigabit LAN controller
Onboard Audio	- VIA VT1708B High Definition Audio Codec
Onboard I/O	- 2 x SATA port connectors - 2 x Fan connectors for CPU and system fans - 1 x USB pin header for 2 additional USB 2.0 ports (one with WLAN support) - 1 x CF (Compact Flash) type I connector (shared with IDE) - 1 x SMBus pin header (with 5V input) - 1 x LED indicator pin header - 1 x SPI pin header - 1 x Digital I/O pin headers - 1 x KB/MS pin header - 1 x Front Panel connector - 1 x Power-on pin header - 1 x +12V power input connector - 1 x MIC-in/Line-in switch header - 1 x Buzzer
Back Panel I/O	- 1 x Audio Jack for Line-out & Mic-in - 1 x RJ-45 LAN port - 2 x USB 2.0 ports
Supported Storage	- 2 x SATA 3Gb/s connectors - 1 x CF Type I
Onboard Jumpers	- AT/ATX power mode - Clear CMOS
BIOS	- Award BIOS - SPI 4/8 Mbit flash memory
Operating System	Windows 2000/XP/Vista, Linux
System Monitoring & Management	- CPU voltage monitoring - Fan speed detection - Wake-on-LAN, Keyboard power-on, RTC Timer power-on, Watch Dog Timer - System power management and temperature monitoring - AC Power failure recovery
Operating Temperature	0˚C ~ 50˚C
Operating Humidity	0% ~ 95% (relative humidity; non-condensing)
Dimensions	- Nano-ITX - 12 cm x 12 cm

Note: This specification is subject to change without prior notice.

VIA N701 Dimensions

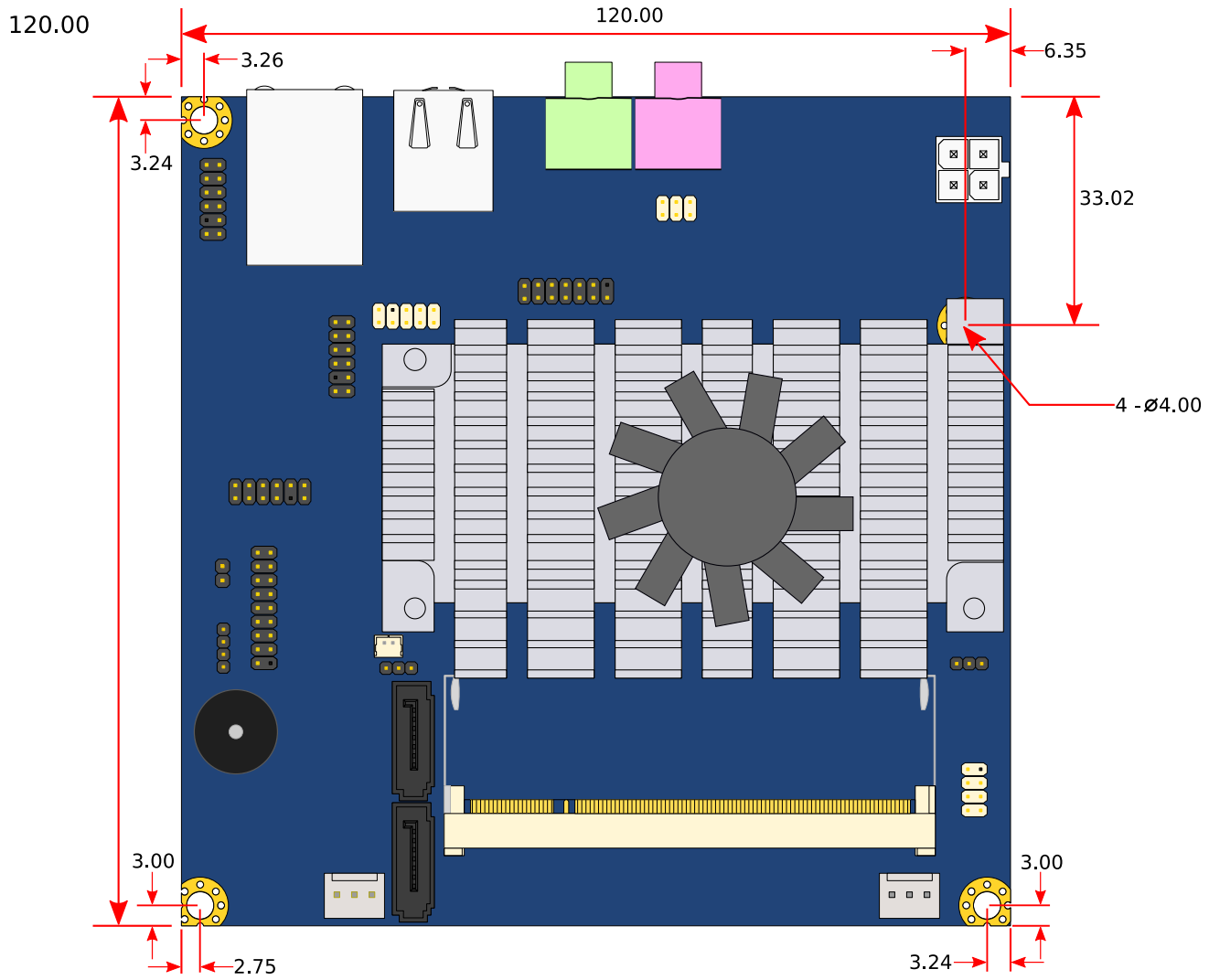


Figure 1: N701 dimensions

Power Consumption

Power consumption tests were performed on the VIA N701. The following tables show the voltage, amp and wattage values while running common applications in the Windows XP environment.

VIA N701 C7_D 15000

A. Copying data

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.098	2.888	34.939
		Total Power Consumption	34.939

B. Playing MP3 – Media Player

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.093	3.003	36.315
		Total Power Consumption	36.315

C. Running Network Application – Files Copy

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.108	2.593	31.396
		Total Power Consumption	31.396

D. Idle

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.115	2.416	29.270
		Total Power Consumption	29.270

E. Running C.C. Winstone 2004

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.090	3.083	37.273
		Total Power Consumption	37.273

F. S3 mode

	Measured Voltage	Measure Amp	Watts
DC Input +12V	12.200	0.166	2.025
		Total Power Consumption	2.025

VIA N701 Microsoft and Linux Driver Support

MICROSOFT DRIVER SUPPORT

The VIA N701 is compatible with Microsoft operating systems. The latest Windows 2000 and Windows XP drivers can be downloaded from the VEPD website at http://a2000.viatech.com.

LINUX DRIVER SUPPORT

The VIA N701 is highly compatible with many Linux distributions.

Support and drivers are provided through various methods including:

- Drivers provided by VIA
- Using a driver built into a distribution package
- Visiting VIA Arena website at http://a2000.viatech.com for latest updates on a monthly basis
- Installing a third party driver (such as the ALSA driver from the Advanced Linux Sound Architecture project for integrated audio)

For OEM clients and system integrators developing a product for long term production, other code and resources may also be made available. You can submit a request either through the Developers portal at VIA Arena, or through your VEPD support contact. Alternatively, VIA can work further towards providing additional drivers to fit your specific needs.

Contact

For more information on the VIA N701 contact your sales representative or visit our website at http://a2000.viatech.com

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