

FEATURE SUMMARY

- 478-pin µPGA ZIF socket for Intel® Pentium® 4 and Celeron® processors at 400MHz and 533MHz FSB
- Support for mobile Pentium 4 processor -M
- Intel® 845GV chipset (845G option)
- Up to 2GB DDR SDRAM
- Intel® Extreme Graphics
- ADD Slot (845GV)
- ADD and 4X AGP Slot (845G only)
- Single or dual Ethernet (option)
- 10/100 or Gigabit Ethernet (option)
- AC97 audio
- TCPA security (option)
- 3 PCI slots
- System management and fan control
- Power management
- Watchdog timer
- Phoenix ServerBIOS*
- 6 USB 2.0 ports
- 2 serial ports
- Parallel port
- PS/2 keyboard and mouse ports (also via internal headers)
- 13 GPIO lines (supports an LCD character display)
- 9.6" x 9.6" microATX

ADVANCED PERFORMANCE

The RadiSys BG845G expands the Endura motherboard family to deliver

a high performance embedded platform based on the latest Intel® Pentium® 4 and Celeron® processors. Featuring the Intel® 845GV chipset, the BG845G delivers cutting edge technology and versatility to meet the needs of a broad range of embedded applications such as test and measurement, industrial automation, medical, transaction terminals, gaming and Enterprise applications.

Platform enhancements feature inte-grated Intel® Extreme Graphics, greater bandwidth for high performance processors with a bus speed of 533MHz, reduced power consumption with support for mobile Pentium 4 processors, large memory support with up to 2GB of DDR SDRAM, integrated high speed USB 2.0 at 40 times the speed of USB 1.1 and support for a variety of flat panel and TV-out display interfaces using ADD cards. RadiSys has also designed a companion LVDS ADD card for use with LVDS flat panel displays.

EMBEDDED FEATURES

To address the needs of specific embedded applications, the BG845G also features a

build option for dual Ethernet ports using either 10/100 or Gigabit Ethernet controllers for the latest high bandwidth communications applications.

Support for riser cards facilitates the use in low profile chassis and internal connectors, such as keyboard and mouse, enables direct connections to the mother-board inside chassis such as used in test and measurement equipment. A build option for a write-protected BIOS, a BIOS socket and an ITP port lends the board well for use in gaming applications which are subject to regulatory control. A TCPA compliant module also enables the BG845G to be used as a secure computing platform, particularly important for transaction terminals.

EMBEDDED SUPPORT

Unlike commercial motherboards, RadiSys is able to meet the true needs of the embedded marketplace offering a superior level of support demanded by embedded equipment manufacturers. This includes long life products (up to 5 years), revision control, product life cycle management, engineering support and high quality design and manufacture. The combined benefits all serve to offer customers a low cost of ownership with Endura motherboards.



SPECIFICATIONS

FEATURE	FUNCTION	DESCRIPTION
---------	----------	-------------

Processor	Socket	478-pin µPGA socket for Pentium 4 processors ITP port (build option)	
	FSB	400MHz and 533MHz	
	Chipset	-	
Memory	Sockets	Two 184-pin DIMM sockets for DDR SDRAM (PC1600 and PC2100)	
	Capacity	Maximum 2GB	
	ECC/Parity	Not supported	
Video	VGA	Integrated Intel® Extreme graphics with 48MB dynamic memory	
	Resolution	1600 x 1200 pixels with 32-bit color support	
	ADD	AGP Digital Display card support with dual DVO channels for TMDS (PanelLink) LVDS and TV-out interfaces	
		AGP 4X 1.5V cards supported with 845G chipset only	
	AGP	ADD cards supported with 845GV and 845G chipsets	
Audio	AC97	Analog Devices AD1885 CODEC for AC97 v2.1	
	Rear Connectors	Mic, Line Out and Line In (dependent on SKU) jacks on rear panel	
	On-board Connectors	CD In, AUX In, Line Out ATAPI connectors on-board	
Network	Controllers	Single or dual Intel® 82551ER controllers for 10/100 Ethernet Single or dual Intel® 82540EM controllers for Gigabit Ethernet IEEE 802.3 10Base-T, 100Base-TX, 1000Base-T compatible	
		Rear Connectors	Two RJ45 rear panel connectors each with two LEDs to indicate line activity, link integrity and line speed with on-board header to connect to external duplicate LEDs
		Remote/Wake-up	Remote boot and wake-up supported by 82540EM controller
	IDE	Devices	Two Ultra ATA/100 interfaces via 40-way boxed header
Floppy	Drive Types	Supports ATAPI, LS120 and ZIP drives	
	Types	Supports standard 3.5" and 3-mode floppy drives	
Mechanical	Dimensions	9.6" x 9.6", 4-layer PCB, microATX compliant	
I/O	VGA	Via 15-way D-type	
	Parallel Port	25-pin D-type supporting bi-directional, EPP and ECP modes	
	Serial Ports	COM1 on 9-pin D-type, COM2, via 10-way header	
	USB	4 rear panel USB 2.0 ports (also supports 1.1), 2 USB 2.0 ports on internal headers	
	Keyboard & Mouse	Swappable PS/2 connectors, on-board header connectors	
	Front Panel	Connectors for power control and status, Reset, IDE activity, LED, speaker and intrude detect	
	GPIO	13 GPIO lines via header (also supports an LCD character display)	
	Expansion Slots	PCI	3 dedicated bus master 32-bit PCI 2.2 slots
Riser Support		PCI riser extension on Slot 2, multi-slot riser support on Slots 2, 3 and 4	
System Management	Monitoring	Voltage, temperature and fans Automatic CPU fan speed control (O/S independent) Anti-tamper security	
		Watchdog	Watchdog timer SMBus connector
		Security	-
	Power Management	-	TCPA compliant TPM module
Power Supply	-	PCI PME, ACPI 1.0b, APM 1.2	
	Type	Support for hard- and soft- switched power supplies	
Battery	Power Consumption	91W with a 2.8GHz Pentium 4 and 57W with a 1.7GHz Pentium 4-M with 1GB SDRAM, measured running Windows* 2000 power stress software	
	-	Lithium coin cell (5 years operating life typical)	
BIOS	Type	Based on Phoenix ServerBIOS 3.0	
	Special Features	Customizable defaults, customer logo, silent boot, QuickBoot, automatic configuration, Universal Console Redirection	
Drivers	Operating Systems	Windows 2000, NTe, XP, XPe, Linux, Microware OS-9, others on request	
Safety Compliance	-	Evaluated in accordance with UL60950, EN60950 and IEC60950	
EMC Compliance	-	Evaluated in accordance with EN55022, EN55024 and FCC Part 15 Class B	
Environment	Operating Temperature	0°C to 55°C	
	Storage Temperature	-40°C to 85°C	
	Relative Humidity	5% to 95% non-condensing	

ORDERING INFORMATION

Call for pricing and availability.
Refer to the order codes below.

DESCRIPTION:

The following base configurations are available with embedded Pentium 4, Celeron and mobile Pentium 4 processors.

Intel® 845GV Chipset (Embedded):

Single 10/100 Ethernet

ORDER CODE: BGGV1L00-0-0

Dual 10/100 Ethernet

ORDER CODE: BGGV2L00-0-0

Dual Gigabit Ethernet

ORDER CODE: BGGV2G00-0-0

Intel® 845G Chipset (Non-Embedded):

Single 10/100 Ethernet

ORDER CODE: BGG1L00-0-0



©2004 RadiSys Corporation. RadiSys is a registered trademarks of RadiSys Corporation. *All other trademarks are the properties of their respective owners. All specifications within this document are subject to change without notice. 07-1232-03 0504

RadiSys
THE POWER OF WE

World Headquarters
5445 NE Dawson Creek Drive
Hillsboro, OR 97124 USA
Phone: 503-615-1100
Fax: 503-615-1121
Toll-Free: 800-950-0044
www.radisys.com
info@radisys.com

International Headquarters
10 Centech Park
Fringe Meadow Road, Redditch
Worcestershire, B98 9NR
United Kingdom
Phone: +44 (0) 1527 588800
Fax: +44 (0) 1527 588801