PFU Systems™ Plug-N-Run™ G2   System-On-Module

400/650/933MHz High Performance

Top View

Bottom View

Side View
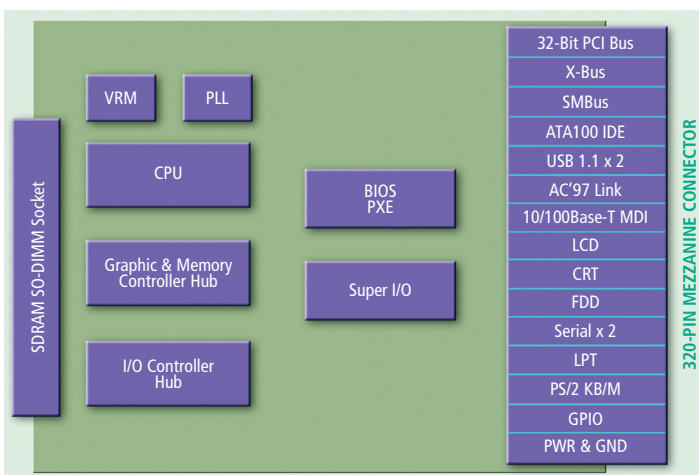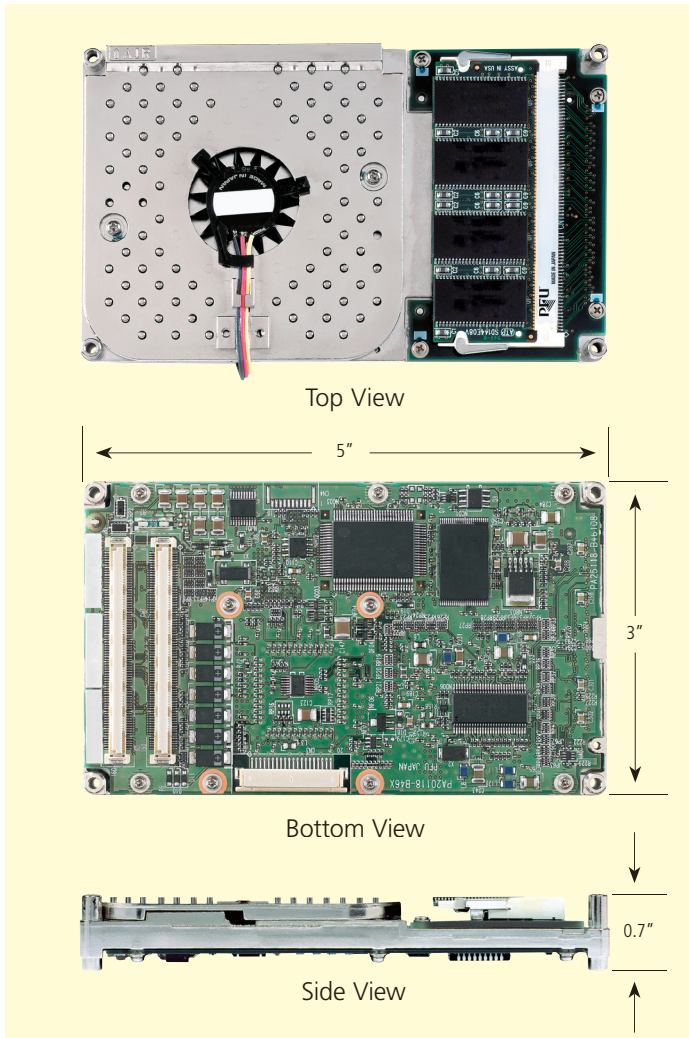

Block Diagram

Applications:

- Industrial automation
- Medical
- Transportation
- Defense
- Avionics
- Test & measurement
- Retail

Description:

The 400MHz, 650MHz and 933MHz Plug-N-Run G2 System-on-Modules achieve high performance at relatively low power dissipation through the use of Ultra Low Voltage Intel® Celeron® processors and Intel® Pentium® III processor - Low Power for embedded applications. The Plug-N-Run G2 are ultra-compact components, based on standard PC/AT architecture and built with advanced packaging technology that significantly simplify the design of embedded systems for fast time to market and lower development cost and risk. A standard mezzanine interface connector and modularization ensure scalability and long product life.

The Plug-N-Run G2 are backward compatible with the first generation Plug-N-Run modules. They offer increased performance with doubling of on-die L2 cache and lower power dissipation through reduced CPU core voltages. Other enhancements include ATA100 support, 256Mbit PC133 SDR SDRAM device support and 2D/3D graphics acceleration. Added functions include on-board AC'97 Link, 10/100Base-T Ethernet MDI with PXE support for boot-over-LAN and SMBus interface for system management. The Plug-N-Run G2 are also frame-compatible with the first generation of Plug-N-Run modules and built to withstand equivalent high shock and vibration acceleration forces.

A flexible Phoenix™ BIOS provides extensive features for broad applicability. Features include ACPI 2.0 compliant power management, CPU throttling to protect against thermal damage, MultiBoot III support for booting from a variety of boot media and password protection of BIOS setup access.

The Plug-N-Run G2 integrates a single SO-DIMM socket for memory expansion to 512MB PC100/PC133 SDRAM. The Plug-N-Run G2 are compatible with Linux®, Microsoft® Windows® 2000, XP, XP Embedded, 98 and popular real-time operating systems.

PFU Systems™

a Fujitsu company

SPECIFICATIONS SUMMARY

Feature	400MHz / 650MHz / 933MHz Plug-N-Run G2
CPU	Ultra Low Voltage Intel® Celeron® processors 400MHz, 650MHz or Intel® Pentium® III processor - Low Power 933MHz
L1 Cache	16KB instruction, 16KB write-back data cache
L2 Cache	512KB for 933MHz, 256KB for 400/650MHz
Front Side Bus	133MHz for 933MHz, 100MHz for 400/650MHz
CHIPSET	Intel® 815E chipset, Intel® 82801BA ICH2
POWER	
Power supply	3.3V, 5V, 5V–12V
Dissipation (S2D, typ, max)	6.6mW, 9.34W, 11W at 400MHz; 6.6mW, 13W, 14.6W at 650MHz; 6.6mW, 17.4W, 20.2W at 933MHz
OPERATING TEMP	
Ambient (Ta)	0 – 50°C
Case (Tc)	0 – 80°C
MEMORY	
SO-DIMM	512MB max, PC100/PC133 SDRAM, single 144-pin SO-DIMM socket, non-ECC
Flash ROM	1MB
BUS INTERFACES	
PCI Bus	32-bit/33MHz, 3.3V, 5V tolerant, PCI 2.2
X-Bus	8-bit µ-controller data bus
SMBus	I²C compatible bus
DISPLAY	
Graphics Processing Unit	Intel® 815E chipset integrated graphics with 2D/3D acceleration and MPEG-2 decode hardware motion compensation
Graphics Memory	32MB max, unified memory architecture with Intel® DVMT for dynamic video memory allocation
CRT Interface	1600 x 1200 max @ 256 colors, 1280 x 1024 max @ 16M colors, DDC support
Parallel CMOS LCD Interface	1024 x 768 max, 18-bit, TFT
PERIPHERAL I/O	
Keyboard/Mouse Interface	PS/2
FDD Interface	Single channel 1.44MB/720KB compatible
IDE Interfaces	Single channel ATA100/66/33, 2 devices
Serial Interfaces	Dual 16550A compatible UARTs
Parallel Interface	SPP/EPP/EPC IEEE 1248 compliant
USB Interfaces	Dual channel USB 1.1, UHCI compliant (1.5–12Mbps)
Ethernet Interface	10/100Base-T Ethernet MDI with PXE support built-in
AC'97 Link Interface	AC'97 2.1 audio codec interface
FIRMWARE & OPERATING SYSTEM SUPPORT	
BIOS	Phoenix™ FirstBIOS™
OS Compatibility	Microsoft® Windows® 2000, XP and 98, Linux® and popular real-time operating systems
PHYSICAL	
Dimensions (l x w x h)	127mm x 76.2mm x 18mm (5" x 3" x 0.7")
Weight	≤ 180gm
MTBF	50,000 Hours
ENVIRONMENTAL (non-operational)	
Storage Temperature	-20 – 65°C, 0 – 90% RH
Vibration	2.2G
Shock	20G

ORDERING INFORMATION:

ITEM	PART NO.
Modules	
400MHz Plug-N-Run G2	PS2PR400
650MHz Plug-N-Run G2	PS2PR650
933MHz Plug-N-Run G2	PS2PR933
Memory	
128MB / 256MB / 512MB PC100 SDRAM 144-pin SO-DIMM	PSDM128S100 / PSDM256S100 / PSDM512S100
128MB / 256MB / 512MB PC133 SDRAM 144-pin SO-DIMM	PSDM128S133 / PSDM256S133 / PSDM512S133
Reference Designs	
NomadFIRE, Starter Kit, Reference Design	PSPRNFIREBD, PSPRNFIREKIT, PSPRNFIREREF
NetCARD, Starter Kit, Reference Design	C2i-PRNET-BD, C2i-PRNET-KIT, C2i-PRNET-REF
NetCARD II Starter Kit, Reference Design	C2i-PRNETII-BD, C2i-PRNETII-KIT, C2i-PRNET-REF
SlotCARD Starter Kit, Reference Design	C2i-PRSLC-BD, C2i-PRSLC-KIT, C2i-PRSLC-REF
Development Board	
Plug-N-Run G2 Development Board	PS2PRDEVBD
Plug-N-Run G2 Development Board Kit	PS2PRDBK

SALES OFFICES

Headquarters & int'l Sales Office
PFU Systems, Inc.
1331 Lawrence Expwy, Ste. 200
Santa Clara, CA 95051-3501
Phone: 408.236.3000
Fax: 408.236.3099

Midwest Sales Office
PFU Systems, Inc.
2600 Fernbrook Lane, Ste. 130
Plymouth, MN 55447-4752
Phone: 763.551.8261
Fax: 763.551.8265

Eastern Sales Office
PFU Systems, Inc.
206 New Edition Court
Cary, NC 27511-4451
Phone: 919.319.0900
Fax: 919.319.3552

For more information or for a list of dealers and representatives near you visit: **www.PFUsystems.com** or call your nearest PFU Systems office listed at the left.