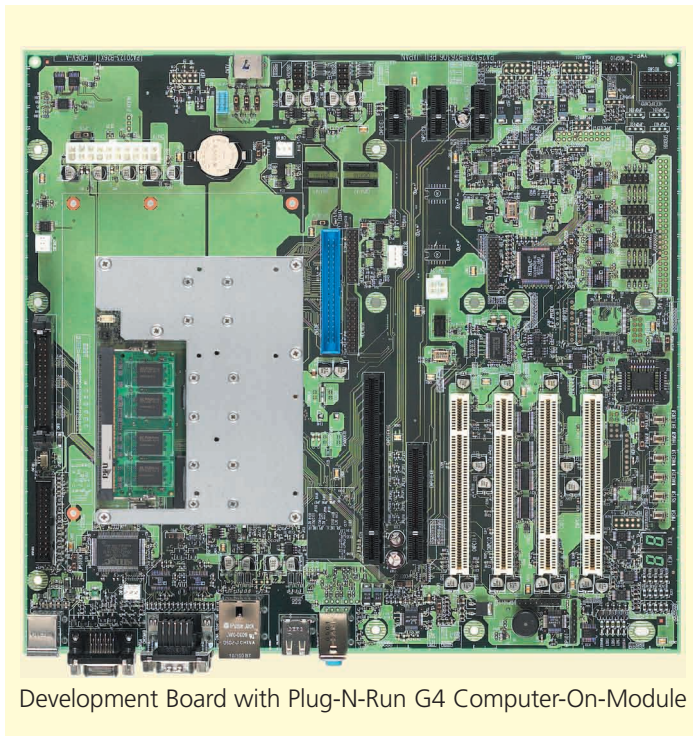


Plug-N-Run G4 Development Board



Development Board with Plug-N-Run G4 Computer-On-Module

Features:

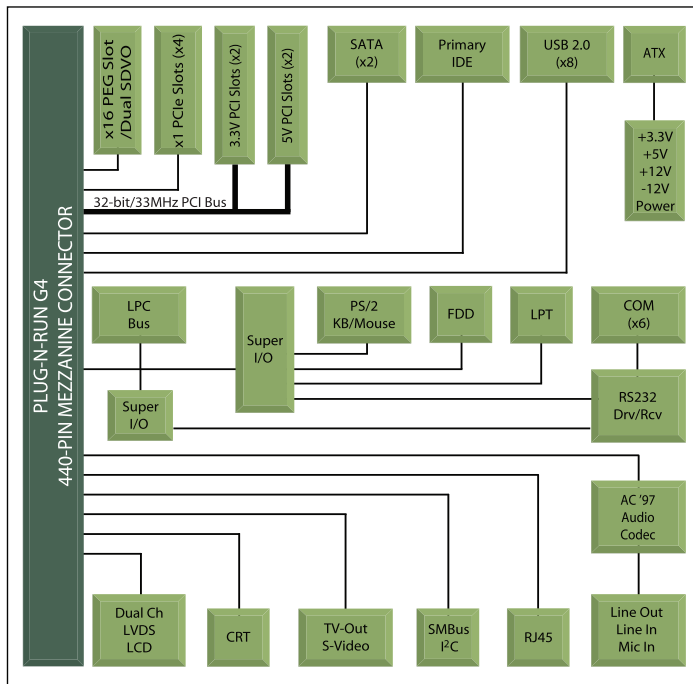
- Four x1 PCI Express® Slots
- Single x16 PCI Express Graphics Slot
- Four 32-bit/33MHz PCI Bus Slots
- LPC Bus Interface
- Dual SDVO Interfaces
- Dual Channel LVDS Interface
- CRT and TV-Out Interface
- Dual Serial ATA Hard Disk Drive Interfaces
- IDE ATA100 Hard Disk Drive Interface
- Floppy Disk Drive Interface
- 10/100Base-TX Ethernet Interface
- Eight USB 2.0 Ports
- Audio Line Out, Line In and Mic In
- Parallel Port
- Six Serial Ports
- PS/2 Keyboard and Mouse Ports
- SMBus, I<sup>2</sup>C and GPIO Interface

Description:

The Plug-N-Run G4 development board is a full-featured platform for systems development. It provides standard connectors for easy access to all of the COM Express compliant Plug-N-Run G4 Module interfaces – SATA, IDE, SDVO, LVDS LCD, CRT, TV-Out, LAN, USB, COM, FDD, LPT, PS/2, Audio, LPC bus, SMBus, I<sup>2</sup>C and GPIO. In addition to the legacy 32-bit/33MHz PCI bus expansion slots, the x1 PCI Express slots permit high bandwidth I/O expansion. The x16 PCI Express Graphics slot allows the use of external high-performance graphics hardware including SDVO-to-DVI transmitter.

The development board offers a stable platform for software development in parallel with hardware design to shorten development time. The Ethernet LAN interface allows easy network connections for quick software installation. Numeric-LED indicators provide POST readout for BIOS and facilitate debug and troubleshooting during firmware development.

A development board starter kit with adapters, cables and power supply is available separately. To help accelerate hardware development, PFU Systems provides development board reference design documentation, which includes schematics and bill of materials. Through our ProDeS<sup>SM</sup> professional services group, PFU Systems provides custom and turnkey product design services. To learn how our ProDeS team can help accelerate your product design goals and objectives, please contact a PFU Systems sales representative.



Block Diagram

## SPECIFICATIONS SUMMARY

FEATURE	SPECIFICATION
<b>MODULE</b> Compatibility Interface	Plug-N-Run G4 COM Express™ compliant Basic and Extended form factor modules 440-pin mezzanine connector, COM Express type 2 pin-out
<b>PERIPHERAL I/O</b> Super I/O Audio Codec PC Speaker	SMSC DME1737 and SMSC SIO10N268 Realtek ALC880, AC '97/Intel® High Definition Audio Piezoelectric buzzer
<b>I/O CONNECTORS &amp; HEADERS</b> x1 PCI Express x16 PCI Express Graphics ExpressCard® 32-bit/33MHz PCI Bus LPC Bus SMBus and I²C Serial ATA IDE USB 2.0 LAN SDVO LVDS LCD LCD Inverter Power CRT TV-Out Audio – Stereo Line Out, Stereo Line In and Mono Mic In FDD Parallel Serial Keyboard Mouse GPIO CMOS Backup Battery Fan Power Supply	3x 36-pin card-edge slots, 1x 98-pin card-edge slot 1x 164-pin card-edge slot (shared with SDVO) 1x 10-pin header 2x 3.3V PCI card-edge slots, 2x 5V PCI card-edge slots 1x 20-pin header 1x 10-pin header 2x 7-pin connectors 1x 40-pin primary IDE header 4x Type A connectors (4 ports), 2x 10-pin headers (4 ports) 1x RJ45 connector 1x 164-pin card-edge slot (shared with x16 PCI Express Graphics) 2x 20-pin headers (dual channel LVDS) 1x 4-pin header (+5V, +12V, GND) 1x 15-pin D-Sub connector 1x 7-pin mini-DIN S-Video connector 3x 3.5mm jacks 1x 34-pin header 1x 26-pin header 2x 9-pin D-Sub RS-232 connectors (2 ports), 4x 10-pin RS-232 headers (4 ports) 1x 6-pin mini-DIN PS/2 connector 1x 6-pin mini-DIN PS/2 connector 1x 10-pin header 1x CR2032 populated socket 4x 3-pin headers 1x 20-pin ATX header (+3.3V, +5V, +5VB +12V, -12V, GND)
<b>INDICATORS &amp; SWITCHES</b> POST HDD Access Power Status Thermal Sensor Alarm Module Type Alarm LAN Activity Power On/Off Reset Battery Low Wake-up Thermal	Numeric LED blocks LED LED LED LED LED Momentary switch Momentary switch Momentary switch Momentary switch Momentary switch
<b>OPERATING CONDITIONS</b> Temperature Humidity	0°C – 50°C 20% – 80%, non condensing
<b>STORAGE CONDITIONS</b> Temperature Humidity	-20°C – 65°C 0% – 90%, non condensing
<b>DIMENSIONS (LxW)</b>	304.8mm x 284.0mm (12" x 11.2")

## ORDERING INFO

ITEM	PART NUMBER
<b>Development Board</b> Plug-N-Run G4 Development Board Plug-N-Run G4 Development Board Kit	PS4PRDEVBD PS4PRDBK
<b>Computer-On-Modules</b> 2.0 GHz Plug-N-Run G4 (Intel® Pentium® M 760, L2 2MB, FSB 533MHz) 1.5 GHz Plug-N-Run G4 (Intel® Celeron® M 370, L2 1MB, FSB 400MHz) 1.4 GHz Plug-N-Run G4 (Intel® LV Pentium® M 738, L2 2MB, FSB 400MHz) 1.0 GHz Plug-N-Run G4 (Intel® ULV Celeron® M 373, L2 512KB, FSB 400MHz) Other Speed Grades – †Contact your PFU Systems sales representative for details.	<b>COM Express – Basic Type 2</b> PS4PR020B2 PS4PRC015B2 PS4PR014B2 PS4PRC010B2
	<b>COM Express – Extended Type 2</b> PS4PR020X2 PS4PRC015X2 PS4PR014X2

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