DIAMOND SYSTEMS CORPORATION

## FeaturePak Module Features 96 Programmable Digital I/O Lines

Tiny, snap-in module provides programmable digital I/O and timing functions for COM baseboards, SBCs, and full-custom electronic designs

April 26, 2010; San Jose, Calif. -- Diamond Systems Corp., a leading supplier of ruggedized single-board computers (SBCs) and I/O expansion modules targeting real-world applications, today unveiled the industry's first digital I/O module compatible with the recently-introduced FeaturePak embedded I/O expansion standard.

Despite its diminutive size (see actual size photo at right), the FP-GPIO96 integrates 96 buffered, programmable digital I/O lines with byte-wide and bit-wide port direction control, eight 32-bit counter/timers, four 24-bit pulse-width modulation circuits with 0-100% duty cycle, and a watchdog timer with system reset capability. It interfaces to host systems via the FeaturePak host interface's high-speed PCI Express bus interface.

The FP-GPIO96 is shipped in a standard configuration, based on the "personality" pre-programmed into its on-board FPGA. Alternate personalities may be downloaded at no charge from Diamond's website and programmed into the board using a Diamond-supplied software utility.

The FP-GPIO96 also supports -40°C to +85°C extended temperature operation.
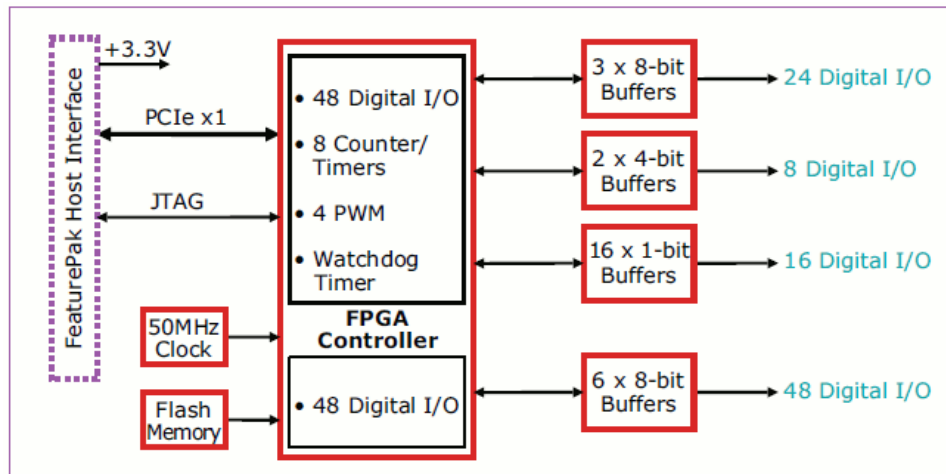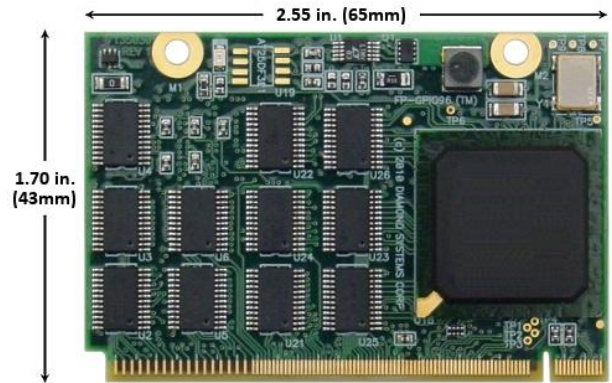
FP-GPIO96 architecture (standard personality shown)

Software Support

Diamond supplies a Universal Driver software toolkit at no extra charge with the FP-GPIO96 digital I/O FeaturePak module, to ease the task of supporting its data acquisition functions in applications under Linux, Windows XP, Windows Embedded Standard, and Windows Embedded CE. The toolkit also includes demo programs and example code for each supported OS, to further accelerate application development.

– more –

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About the FeaturePak I/O Module Standard

The FeaturePak specification defines tiny, application-oriented personality modules – three-fifths the size of a credit card – that snap into low cost, low profile, highly reliable sockets on single board computers (SBCs), computer-on-module (COM) baseboards, and full-custom electronic circuit boards. FeaturePak modules interface to the host system via a single low cost, high density, 230-pin connector, which carries PCI Express, USB, I^{2}C, and several other host-interface signals, plus up to 100 points of application I/O per module. The FeaturePak host interface is CPU agnostic and is compatible with both Intel- and RISC-architecture systems. Additionally, the modules can easily be integrated into embedded designs along with Qseven, COM Express, Mobile-ITX, SUMIT, PCI/104-Express, EBX, and EPIC. For more information, visit www.featurepak.org.

Pricing and Availability

Small quantities of the FP-GPIO96 digital I/O FeaturePak module are available in 60 days, priced at $150.

About Diamond Systems

Founded in 1989, Diamond Systems Corporation is a leading supplier of compact, rugged, wide-temperature embedded computing solutions for a wide range of applications in fixed and mobile environments. The company is the originator of the FeaturePak I/O modules standard, was an early adopter of PC/104 technology and today is one of the leading worldwide suppliers of embedded I/O modules and highly integrated single board computers combining CPU and data acquisition on a single board. Diamond's extensive product line includes A/D, D/A, digital I/O, serial communications, wired and wireless networking, and power supply modules as well as single-board computers and enclosures. Diamond also offers a full range of system solutions, including the capability to customize boards or systems to meet the needs of a particular application. The privately held company is based in Mountain View, California, in the heart of Silicon Valley. For more information, visit www.diamondsystems.com or call 1-800-36-PC104.

MEDIA RESOURCES

- FP-GPIO96 web page
- FP-GPIO96 hi-res photo (jpg)
- FP-GPIO96 with dimensions (jpg)
- FP-GPIO96 block diagram (jpg)