PRESS RELEASE
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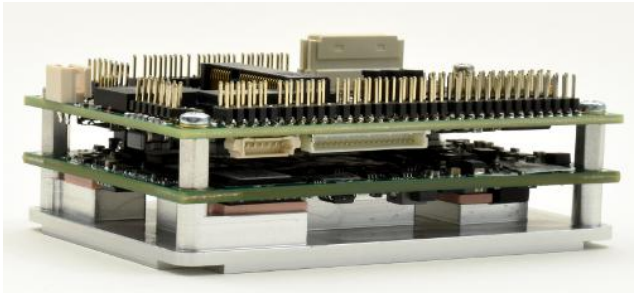
ZETA Family of Miniature COM-based SBCs Targets Applications Requiring High I/O Density, Long Lifetime, and Compact Size

Sunnyvale, California — November 14, 2017 — Today Diamond Systems Corporation, a leading global provider for rugged, I/O-rich embedded computing solutions, unveiled its ultra-small COM-based ZETA single board computer family. Highlights of the Zeta family include interchangeable COM Express COMs for scalability and long product life, ultra-compact size, and an unsurpassed level of I/O, including a complete high-quality analog and digital data acquisition subsystem.

Designed in the COM Express Mini Type 10 form factor (84 x 55mm / 3.3 x 2.2in), the Zeta family offers performance scalability due to its use of COM Express CPU modules. Three processor options are currently available:

- Intel "Bay Trail" E3825 dual-core 1.33GHz CPU with soldered 2GB RAM
- Intel "Apollo Lake" E3940 quad core 1.60GHz CPU with soldered 4GB RAM
- Intel "Apollo Lake" N4200 quad core 1.1GHz (burstable to 2.5GHz) CPU with soldered 8GB RAM

The use of interchangeable CPU modules in the increasingly popular COM Express Mini Type 10 format enables Zeta to serve applications across a wide spectrum of price and performance needs. It also offers customers the longest possible product lifetime by vastly simplifying migration to a new CPU when the current one reaches its end of life. Zeta is an excellent choice for applications with expected lifetimes of 10 or more years, including military, medical, and transportation.



Zeta's two-board COM + baseboard construction yields the highest feature density possible in a given footprint. The COM provides the core CPU functions, while the baseboard provides the "final inch" for all the system I/O plus the data acquisition subsystem, power supplies, and expansion sockets. Zeta provides as much as a 60% reduction in size compared to boards in larger form factors offering the same level of I/O.

Zeta's impressive I/O list includes the following:

- VGA display and Single-Channel LVDS port
- Dual Gigabit Ethernet
- 4 USB 2.0 Ports + 1 USB 3.0 port
- 4 RS-232/422/485 ports with software-programmable protocol and termination
- 16 digital IlO lines
- Optional complete analog and digital data acquisition system
- Integrated wide-range 6 to 36V power input circuit

Zeta is available in two I/O configurations, digital I/O only or digital + analog I/O. The DIO only circuit offers 16 DIO lines with selectable 3.3V/5V logic levels. The full circuit includes 16 channels of 16-bit A/D, 4 channels of 16-bit D/A, 27 digital I/O lines with selectable 3.3V/5V logic levels, and 8 32-bit counter/timers, all supported by Diamond's free, industry-leading Universal Driver™ data acquisition

programming library. An interactive graphical control panel for Windows and Linux is also provided to control all data acquisition features.

Zeta offers multiple options for system expansion and mass storage. It includes a PCIe Minicard / mSATA socket and a micro-SD socket. A unique expansion connector enables the installation of a daughterboard that contains an M.2 SATA SSD socket, a second PCIe Minicard socket, HD audio, and 16 additional GPIO lines.

Zeta's built-in heat spreader efficiently removes heat from the SBC to keep the processor and all internal electronics cooler for improved reliability. The bottom-side mounting configuration of the heat spreader provides a secure and convenient mounting system for the board. It also simplifies the installation of I/O expansion modules by eliminating interference or airflow problems that can occur with traditional heat sinks. All three models of Zeta are tested for operation over the full industrial temperature range of -40°C to +85°C, making Zeta an ideal choice for vehicle applications.

- CPU performance scalability with choice of COM Express COMs:
  1.33GHz Intel E3825 CPU
  1.60GHz Intel E3940 CPU
  1.1GHz Intel N4200 CPU (burstable to 2.5GHz)
- On-board I/O:
  - 2 Gigabit Ethernet ports
  - 4 USB 2.0 ports + 1 USB 3.0 port
  - 4 RS-232/422/485 ports
  - Single-channel LVDS + VGA
  - 16 digital I/O with 3.3V / 5V logic levels
- Optional professional quality data acquisition circuit:
  - 16 16-bit analog inputs
  - 4 16-bit analog outputs
  - 27 programmable digital I/O lines
  - 8 32-bit programmable counter/timers
- 6V to 36V option power input
- PCIe MiniCard / mSATA socket + daughterboard expansion socket
- COM Express Type 10 form factor (84 x 55mm / 3.3 x 2.2in)
- -40°C to +85°C (-40°F to +185°F) operating temperature

Models & Availability

Six models are currently offered, based on various combinations of CPU and baseboard:

ZETA-E3825-2GA	E3825 1.33GHz CPU, 2GB RAM	Data acquisition circuit
ZETA-E3825-2GD	E3825 1.33GHz CPU, 2GB RAM	Digital I/O circuit
ZETA-E3940-4GA	E3940 1.6GHz CPU, 4GB RAM	Data acquisition circuit
ZETA-E3940-4GD	E3940 1.6GHz CPU, 4GB RAM	Digital I/O circuit
ZETA-N4200-8GA	N4200 1.1GHz CPU, 8GB RAM	Data acquisition circuit
ZETA-N4200-8GD	N4200 1.1GHz CPU, 8GB RAM	Digital I/O circuit
ZETA-DB-01	Zeta daughterboard	M.2, PCIe minicard, Audio, GPIO

Complete development kits consisting of the selected CPU, a flashdisk with either Windows 10 or Linux OS installed, and a cable kit are available to accelerate your development effort. Contact Diamond Systems at sales@diamondsystems.com for quantity pricing and special-order options.

MEDIA RESOURCES

- Zeta SBC webpage
- Zeta SBC datasheet

About Diamond Systems

Founded in 1989 and based in Sunnyvale, California, Diamond Systems Corporation is an innovative provider of compact, rugged, board- and system-level real world embedded computing solutions to companies in a broad range of markets worldwide, including transportation, energy, aerospace, defense, manufacturing, medical equipment, industrial controls, and research. The company is recognized as an innovator of embedded I/O standards and technologies; it originated the FeaturePak I/O modules standard, was an early adopter of PC/104 module technology, and holds a patent for a unique analog I/O autocalibration technique.

Diamond's extensive product line includes compact, highly integrated single-board computers (SBCs); an extensive line of expansion modules for analog and digital I/O, wired and wireless communications, GPS, solid-state disk, and power supply functions; and complete system-level solutions. In support of performance-critical embedded application requirements, these products are engineered to operate reliably over wide operating temperature ranges, such as –40°C to +85°C, and at high levels of shock and vibration. Additionally, the company offers a comprehensive hardware, software, and system integration and customization services.

For further information, please visit www.diamondsystems.com.

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