



ELECTRONIC
INTERCONNECT

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NEWS

"Quality All The Time, On Time"

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From the President

Positive Signs Everywhere - as EI Goes 'Lean and Green'

Dear Friends and Customers:

Everywhere we look, there are signs of the beginnings of a recovery for the electronics manufacturing industry in the U.S. and globally. Although attendance was down at the recent Chicago area trade shows, Assembly Tech and IPC Midwest, this is less indicative of a decline in the industry and more a case of companies being frugal with their monies as they look ahead to a more promising 2010. Marketing strategies are evolving, in many ways impacting trade shows negatively. But on the positive side, new technologies, consumer and industrial demands, and shrinking inventories of electronic devices - including replacement cycles - are driving an uptick in business and we're seeing it here at EI with increasing orders for custom PCBs and especially our thermal management and metal core PCB products. On top of that, the way companies do business is changing too. EI was an early leader among PCB companies working heavily through a multi-functional web site. We were the first in our trade to offer such innovations as Zoom Prototyping and Instant Quotes all through our web site. Our web site is constantly evolving as an informational source and a business portal for our customers. It's lean, comprehensive, fast, informational, and streamlined in many ways. It saves time, energy, paper, and brings greater efficiency to specifying PCBs. I guess you could say that it's part of the new 'lean and green' way that successful companies are operating as we emerge from the downturn. Take a look yourself, www.Elconnect.com!

Pratish Patel, President and CEO



EI Offers PCBs for PV, Solar Applications

EI offers Photovoltaic (PV) product manufacturers a wide range of printed circuit board materials, constructions, and design expertise especially for high-power devices, LED, RF and Wireless electronic assemblies, including inverters and module assembly. These types of assemblies have special requirements for heat management characteristics, and this is an area that EI specializes in, according to Pratish Patel, President and CEO. "EI is UL certified for metal-clad PCBs and can work with various thicknesses of aluminum and copper metal cores, offering precise machining tolerances and high-quality fabrication services for effective thermal management and long-term board reliability." Patel adds that EI offers everything from simple to complex multilayer constructions, depending on what the customer needs. EI uses state-of-the-art materials and configurations including the T-lam thermal lamination



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- **New Reps Appointed in Texas, Southeast**
- **Multiple Certifications at EI**

EI Offers Medical Electronics PCBs, Design Engineering

EI provides specialized PCBs for medical device electronic assemblies and engineering and design services to help customers plan and develop medical electronic circuit assemblies. According to Pratish Patel, President and CEO, "Medical electronic assemblies have unique requirements that set them apart from other types of electronic devices, such as consumer electronic products."



"Often, thermal management issues must be anticipated in the design, and assemblers must conform to certain quality standards such as ISO 13485. Medical product manufacturers in many instances can benefit from the knowledge base and experience of PCB suppliers and industry players who have been through the many changes and advancements that the electronics manufacturing industry has been through in recent years."

For example, Patel says that burn-in and rigorous vacuum chamber testing are vital for medical electronics and circuit board products. Testing involves subjecting fully functional subsystem circuit boards to different temperature cycles to ensure a full simulation, as though the product were fully operational in a medical facility. Vacuum chamber testing puts the subsystem circuit

board in a real environment, with temperature ranges from -40°C to +85°C for 24 to 48 hour test cycles, and it is put into non-stop operation for periods ranging from 24 to 72 hours. "Such a circuit board could be in a remote location with temperatures over 100°F, with no air control rooms or, at the other extreme, with temperatures below room temperature or below freezing temperatures" Patel says. "Thus, such environmental cycling exposes the PCB to possible anticipated extreme conditions, ensuring 100% product reliability as well as exposing latent defects."

To achieve high reliability goals, a sound product testing strategy must be created at the prototype stage, Patel adds. "That is when both OEM and EMS provider

engineering staffs initially come together to discuss design and manufacturing objectives. In effect, the PCB prototype serves as a product R&D tool, allowing the EMS provider to increase reliability by defining and building in Design for Manufacturability (DFM) and Design for Testability (DFT) procedures within the different stages of the product development."



EI's Multiple Certifications – Your Assurance of Quality

Electronic Interconnect (EI) is proud to be ISO 9001:2000 certified, UL-approved, and an IPC member. Our multiple certifications and trade organization memberships and participation are your assurance of quality and our dedication to product excellence and industry standards and leadership. Following are brief explanations of the importance of each of these designations:

ISO 9001:2000 Certified

The International Organization for Standardization (ISO) is an organization of delegates from 157 countries whose objective is "to facilitate the international coordination and unification of industrial standards." ISO's 9000 designation is concerned with quality management of companies.

UL Approved

Underwriters Laboratory, Inc. (UL) is an independent, not-for-profit product-safety testing and certification organization. UL has been testing products for more than 100 years and is recognized as a reputable conformity assessment provider internationally. EI's wiring, printed components have passed UL's strict requirements for a component to bear the UL logo. To ensure continued compliance with UL standards UL representatives audit a manufacturer periodically.

ITAR Registered

EI is now International Traffic in Arms Regulations (ITAR) registered (registration code M217407), granting them the right to manufacture qualified military products for export.

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El Appoints New Reps in Texas area, US Southeast

NOAH Industries named new Rep in Southeast; Holden Technologies Appointed Texas Area Rep

El has entered into new partnerships with two manufacturer's representative firms in the U.S. Southeast and Southwest. These experienced sales firms will represent El's PCB products and services in those territories.



NOAH Industries, Inc. will represent El's printed circuit board fabrication services and products in the territories of Florida, West Virginia, Maryland, and Virginia. NOAH Industries, Inc. was established by Reeder Ward, an electrical engineer whose accomplishments in electronics have also extended into key support technologies such as optics, mechanics, acousto-optics, ultrasonics, and fiber optics.

NOAH has developed a range of products in the areas of fiber optics, palm technology, and telecommunications. In addition to products, NOAH provides design services, project management, custom fiber optics, PC board layout and packaging, wireless Ethernet, optical scanning, antenna design, and software design. Contact information: NOAH Industries, Inc. 751 North Drive, Suite 1, Melbourne, FL 32934, Tel. (321) 255-2775; web site: www.noahcorp.com.

El also recently announced the appointment of Holden Technologies to represent El in the territories of Texas, Louisiana, Oklahoma, Arkansas, and the Mexico border. Holden Technologies maintains offices in the Houston and Dallas Fort Worth areas. For more than a decade, Holden Technologies has represented top quality lines of Cable, Connector, and Board-level products, including RoHS-compliant products. For more information about the company, visit <http://www.holden-tech.com/>.

Find out more at www.eiconnect.com

In making the announcement, Pratish Patel, President and CEO of El, said, "We are pleased to partner with Reeder Ward and NOAH Industries, and Holden Technologies, to bring our quality custom board fabrication, engineering, and customer support services to these critical US territories. These partners are well-positioned and know their territory and customer base well; we look forward to growing together. Holden Technologies will bring our quality custom board fabrication, engineering, and customer support services to the critical Texas and southwest markets, including the re-emerging Mexican border area. I look forward to working with these new team partners."



PCBs for PV, Solar

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system, which includes T-Preg thermally conductive dielectric/ Prepreg, DSL or double-sided metal core laminate, and IMPCB's, insulated metal printed circuit boards. Other constructions include 2-layer T-lam, hybrid IMPCBs with FR-4/T-preg, multilayer metal base construction, and multilayer FR-4/T-preg hybrids.

"Whether the customer is building a more powerful central inverter for a solar installation, or needs a board with more LED density capability, El has the materials, the manufacturing expertise, and the design and engineering know-how and assistance needed to make the project a success" Patel said, in making the announcement. "In addition, we perform and provide a thermal analysis for them of their planned designs and provide feedback that helps them ensure proper and efficient function as well as long-term product reliability" he added.



El News is the quarterly newsletter of Electronic Interconnect Inc. (EI), a professional printed circuit board manufacturer located in the Chicago area, and manufacturing printed circuit boards in the U.S. since 1985. El serves design engineers and contract assemblers, providing all types of PCBs from single-sided to complex multilayer boards from prototype through production. Our state-of-the-art manufacturing facilities offer precise craftsmanship through production and testing. Located near the world's busiest airport, Chicago-O'Hare, El offers same day shipping in many cases. For more information, visit www.eiconnect.com, or contact the company at 2700 W. Touhy Avenue, Elk Grove Village, IL 60007, Tel. 800-364-4844. For more information, visit www.eiconnect.com. ©Copyright 2009.

EI's Multiple Certifications – Your Assurance of Quality

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Companies receiving ITAR certification demonstrate they have the knowledge and understanding to fully comply with the Arms Export Control Act (AECE) and International Traffic in Arms Regulations, as well as having corporate procedures and controls in place to ensure compliance.

IPC Member

Electronic Interconnect has been a member of IPC – Association Connecting Electronic Industries for 25 years. IPC is a global trade association with more than 2,300 member companies. It is the only organization that brings together a wide variety of industry members such as, designers, board manufacturers, assembly companies, suppliers, and original equipment manufacturers.

Chicago Minority Business Development Council

The Chicago Minority Business Development Council, Inc. (CMBDC) is a premier organization for increasing business opportunities between major buying organizations and minority-owned businesses. The Chicago Minority Business Development Council, Inc. (CMBDC) is one of the nation's premier organizations for minority business development in the nation.

