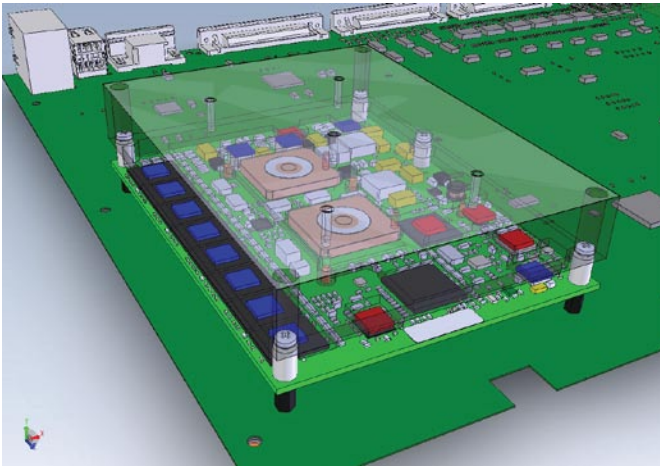


COM Express Custom Solutions

Application-Specific Carrier Board and System-Level Designs



COM Express designs offer:

- > Fast time to market
- > Scalability for easy upgrade
- > Application specific I/O
- > Flexible mechanical configuration
- > Vibration resistance
- > Extended operating temperature
- > Long-term availability
- > Superior life cycle management

Accelerate your new product design using a COM Express-based custom design from Sealevel.

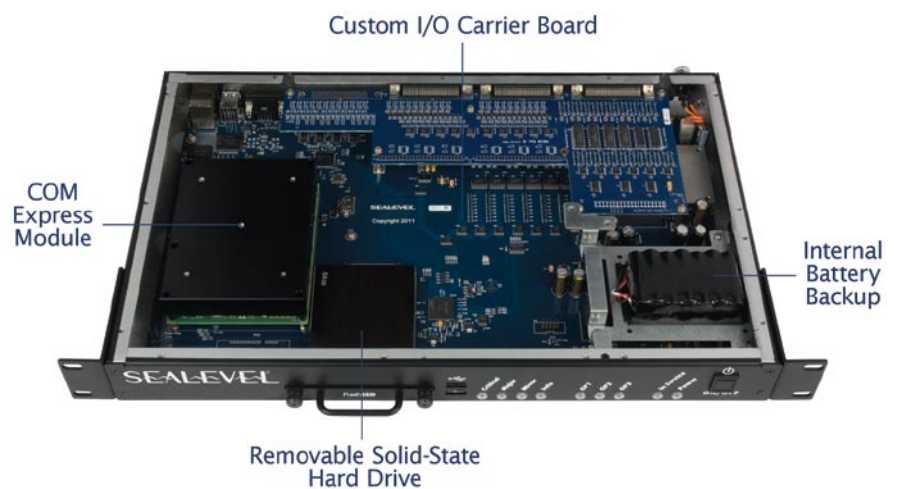
The COM Express architecture reduces the complexity, cost, and time required for custom computer system design by combining the processing, memory, video, Ethernet, and USB functionality in a small, highly-integrated module. COM Express modules are not meant to operate as stand alone, but instead install on carrier boards that provide the application specific I/O and external connectors best suited for the system requirements.

COM Express

A widely supported implementation of Computer on Module design, COM Express is based on the latest high-speed serial bus technology and incorporates PCI Express, USB 2.0, Serial ATA, LVDS, and Serial DVO interfaces. These high-speed buses combined with today's fast, low-power processors provide the bandwidth needed for a wide variety of applications. Many companies provide modules that conform to the COM Express PICMG standard, enabling form-fit-function interchangeability and scalability.

COM Express modules offer a variety of processor choices including powerful Core 2 Duo and popular ATOM designs. Low power designs eliminate the need for cooling fans, even with the fastest processors, greatly enhancing system reliability. Extended temperature models are available offering -40°C to +85°C operational temperature range.

Custom 1U Rackmount Computer Using COM Express



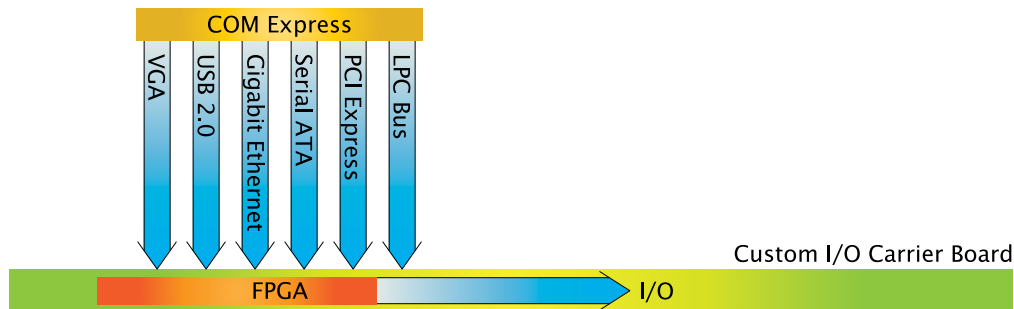
SEALEVEL®

www.sealevel.com > Tel: 864.843.4343 > sales@sealevel.com

COM Express Custom Solutions

Custom Carrier Board

Meeting technical specifications with off-the-shelf products may not be possible or may result in unacceptable performance, size, or cost constraints. A carrier board is tailored to meet all of the required system functionality to complement the core features supplied by the COM Express module. The signals necessary to interface the I/O are brought down from the COM Express board via mating connectors, and the carrier board's functionality and mechanical footprint are designed to best fit the application. Since low voltage differential signaling is used for the bus signals, COM Express designs offer advantages over traditional parallel bus designs, including improved noise immunity and fewer traces for easier signal routing.



Common I/O carrier board features include serial, analog, and digital I/O, all of which can be designed to exactly meet the I/O count, voltage ranges, and connector types for the signals to be interfaced. This flexibility is especially useful when connecting to legacy or proprietary equipment that cannot easily be changed.

CUSTOM SOLUTIONS

Sealevel has the in-house engineering expertise to accomplish custom carrier board design through full system design and testing. We work with our customers to create a Statement of Work and project schedule that may include:

Electrical Design

Our engineers use advanced electrical schematic capture, layout and routing, and modeling tools from Altium. Over the years, we have developed an extensive library of parts and reference designs that allow new product designs to be produced reliably and quickly to improve your time to market.

Mechanical Design

Using advanced 3D modeling tools from SolidWorks, complex mechanical projects are accomplished with amazing speed and accuracy. Every aspect of the design is modeled, including board and connector placement, so there are no surprises when prototypes arrive.

Software Design

Sealevel's staff of software engineers, computer engineers, and computer scientists are adept in solving the most complex embedded software challenges. Our engineers use industry-standard software development processes to ensure the highest quality deliverables.



Our engineers work with your team from conception to completion to develop a product that meets your specifications.

Product Compliance and Certification

Using a "design for certification" approach, Sealevel can manage the entire process of custom product development certified to many military and commercial standards.

Advantages of Custom Convenience of COTS.

Visit our Custom Solutions portal to read case studies, see the latest technologies in our Design Center, and learn more about our custom capabilities. sealevel.com/9223/custom

