



High performance artificial intelligence assisted imaging and servo systems hosted by OTEC's carrier boards reach for the heavens.



"On time, on budget, and meeting all our performance goals. We thought this would take so much longer, but Rev A prototypes worked the first time!"

– Engineering Manager,
AI Computing Division



**ORCHID TECHNOLOGIES
ENGINEERING & CONSULTING, INC.**

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COM Express Type 6 and 7 Carrier Boards

Com Express carrier boards allow the system designer to embed high performance computing into any desired form factor. The use of standard type motherboards always dictates product form. Standard type motherboards are subject to whims of design change and availability especially in products with life expectancy beyond ten years. The custom carrier board and computer module provides a reliable, alternative to the severe restrictions of implementing standard type motherboard solutions. OTEC custom carrier boards support all high speed interfaces in a form factor that may be adapted for each use case.

PCI Express Interconnect

High speed PCI Express Generation 3 interfaces on type 6 and 7 carrier boards and high speed PCI Express Generation 4 and 5 interfaces on HPD carrier boards make demanding video and AI processing interfaces a reality. Multilane data transfer ensures reliable high speed information transfer.

Dual 10G Ethernet over Copper

Embedding dual 10G Ethernet over copper interfaces is possible with multilane PCI Express Gen 3 connectivity. COM Express modules provide multiple lane configurations, custom lane configurations, and lane swapping and switching features.

DisplayPort Video Outputs

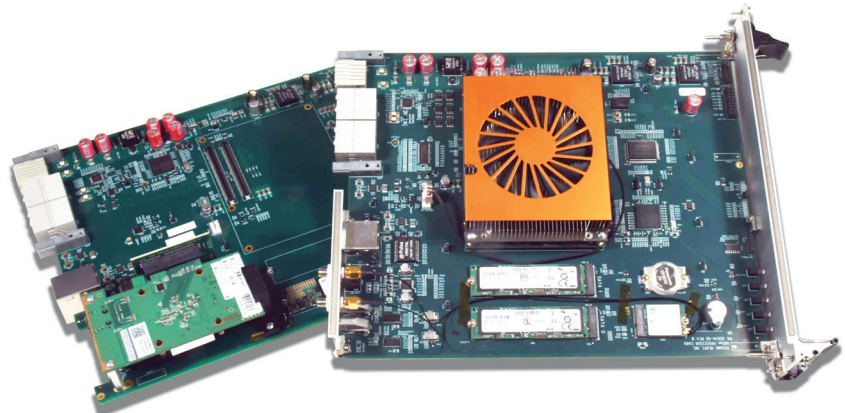
Dual DisplayPort video outputs allow multi-monitor video system design. On Board USB3, dual solid state drives, WiFi, and standard RS232, CAN, and RS485 interfaces make this board extremely flexible. Smart power sequencing and fault monitor control is provided by a separate ARM Cortex-M 32bit microcontroller. The microcontroller independently monitor power and system fault functions for secure operation.

Protection from Obsolescence

Carrier board design with COM Express form-factor modules protects a product from design obsolescence. COM Express modules are long lasting and track updates to core processor technology. Changes in chip design are mitigated by using standard modules. Multiple vendors provide modules which adhere to the same standards. This provides the OEM with purchasing power and choice.

Orchid Technologies: Carrier Board Design

The development of custom electronic products for our OEM clients is OTEC's entire business. The design of custom COM Express carrier boards with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



Custom Engineering From Concept to Production

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