

Macnica Americas is a fully franchised semiconductor distributor covering North America with expertise in design services, IP, applications support, and logistics. We are a division of Macnica Inc, a \$2.5B global leader in semiconductor distribution and design services.

**Altera FPGA Design Services**

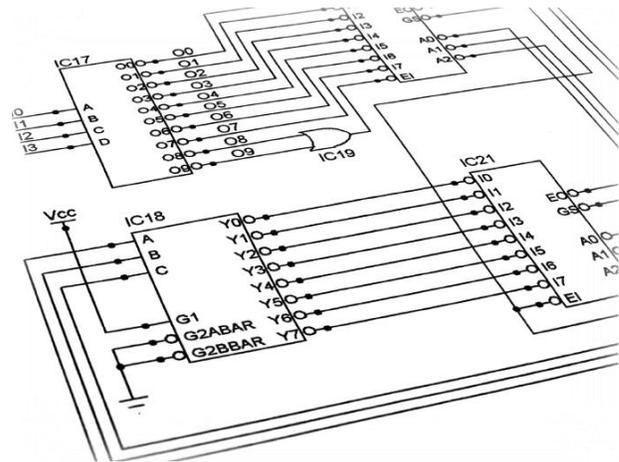
- High speed networking
- Broadcast video
- PCI Express
- Embedded processor firmware development

**Complex PCB Design and Analysis Services**

- Gigahertz level design and above
- Power and Signal integrity analysis
- Micro-via and buried via board design

**Broadcom Design Services**

- XGS switch design
- Bluetooth Low Energy (WICED Smart)
- WiFi for embedded systems (WICED)



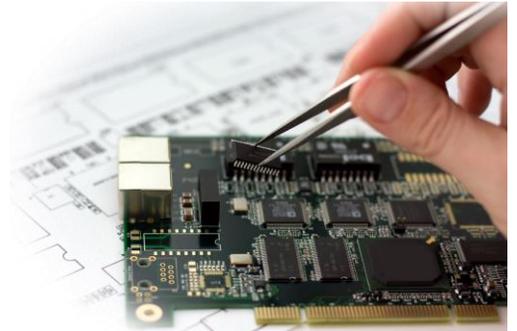
**The Macnica Americas Advantage in Design Services**

Macnica Americas Advantage	Customer Benefits
Company Size	A part of the \$2.5B Macnica Group, Macnica Americas will be here for you now and in the future, giving you the advantage of being able to plan your design tasks across multiple product generations without worry that your services partner may not be available in the future.
Supplier Relationships	A franchised distributor for the products they use in designs, Macnica Americas has access to confidential supplier information and internal supplier support personnel so we can solve your tough design issues.
Supplier of Services and Silicon	Macnica Americas supplies both services and production silicon devices enabling customer support before, during, and after your design is done and in production.
Applications Expertise	Macnica Americas has a proven history of getting results for difficult applications like 10G video transport, high speed networking, and embedded software applications.

## Design Services Success

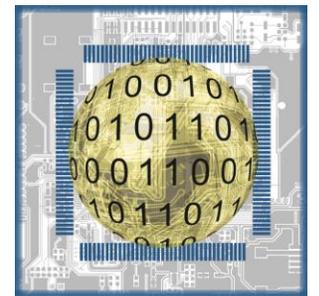
### Satisfied Repeat Customers

Following a successful broadband network design, Macnica implemented a second design for the same customer involving a standards-based timing protocol, which included a VCXO interface. Macnica delivered a complete Cyclone FPGA solution that helped the customer realize their targets for a cost sensitive product while allowing them to focus their team resources on their core competency and not have to worry about the FPGA implementation.



### Integrated Hardware and Software Design

Having both hardware and software expertise, Macnica Americas can deliver full turnkey designs that meet customer specifications. For a storage device production tester design, Macnica Americas used an Altera FPGA with an on-chip processor to meet the customer's requirements. The design implemented multiple TCP/IP sockets for full remote access over a network while meeting performance and cost targets.



### Complex IP For Leading-Edge Applications

Macnica leverages their IP products in customer designs enabling the addition of new features and product marketability. Macnica developed a complete 10Gbps SMPTE 2022 Forward Error Corrected (FEC) video-over-IP transport solution which can be run on Altera Stratix IV & Stratix V FPGAs. This SMPTE 2022 IP has allowed multiple customers to add customized cutting edge video transport features to broadcast video products while still complying with the SMPTE 2022 standard.



### Getting Started

Getting started with Macnica Americas design services is easy. Just contact your local Macnica representative or design center and schedule an initial project call. After a short call to determine your project requirements, Macnica Americas will respond with estimates and the next steps to start the project.