

**Backplane Transceiver Market Opportunities, Strategies,  
and Forecasts, 2007 to 2013**

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**Backplane Transceiver**

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*Picture by Susie Eustis*

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**WinterGreen Research, Inc.  
Lexington, Massachusetts**

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**CHECK OUT THESE KEY TOPICS**

*BACKPLANE TRANSCEIVER MARKET FORECASTS*  
*Backplane Transceiver Market Shares*  
*Backplane Transceiver Market Driving Forces*  
**Global Communications Industry**

Increasingly Sophisticated Systems  
Communications IC Opportunity  
*GIGABIT ETHERNET (GbE) TRANSITION*  
*CHANGING BACKPLANES*  
***RAPIDIO™ ARCHITECTURE***  
*VCSEL (VERTICAL CAVITY SURFACE EMITTING LASER)*  
*ADVANCED TELECOM COMPUTING ARCHITECTURE*  
*BACKPLANE TRANSCEIVER DEVICES*  
**STAR TOPOLOGY**  
**MESH BACKPLANE**  
*MULTI-POINT BACKPLANE*  
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## **Backplane Transceiver Market Opportunities, Market Forecasts, and Market Strategies, 2007-2013**

Demand for Internet services, the implementation of broadband and InfiniBand are major backplane transceiver market driving forces. The copper based transceivers are extending their technology life by implementing equalization flexibility to meet conditions needed to extend copper based backplane technology because is less expensive.

The backplane transceiver technology market includes copper based technologies, QSFP (Quad Small Form-Factor Pluggable) transceiver modules for InfiniBand, physical serial products, Xaui, and VCSEL based backplane transceiver products used for the support of network bandwidth growth. The demand for broadband is impacting wireless transport, creating demand for different types of backhaul.

For the moment the copper based products are superior in the market to the VCSEL technology. The nanosecond latency and 125 MHz programming rate make transceivers suitable for system designs with tight timing budgets. Integrated programmable equalization (EQ) is designed to tame tough signal integrity challenges in backplanes and short-reach copper cabling. Vitesse integrated signal equalization in cross point switches are used by key technology patents. A portfolio offers dozens of products.

Backplane transceiver markets impact the entire network architecture for communications. These markets address the issue of how to move packets across the backplane. The circuit switch architecture depended on one clock in Denver to create simultaneity for all the logic in all the proprietary circuit switch hardware.

With the Internet cloud architecture, the one clock is gone and all the switches that move packets have different clocks. The shift in architecture puts more stress on the components that create switching capability in the network. These units have to operate at higher speeds and with more flexibility to handle the traffic that is being generated by the Internet.

Combined voice, video, and data traffic is moving across the same switches at the same time, creating demand for new types of switch IC. The transfer of information from the line card or motherboard to the backplane is moving from a parallel to serial architecture. This in turn gives rise to demand for new types of IC.

**Blade servers are replacing old circuit switches and the proprietary PBX hardware. Mainframe systems are entering the picture with five nines of reliability in server environments. They are used to implement applications. Clustered blade servers with carrier grade Linux operating systems create computer industry hardware that can be used with proprietary software.**

**Market growth is expected to be spurred by demand for storage and video capable networks. Higher speeds complement existing infrastructure. Gigabit Ethernet IC markets will drive demand for high-speed communications. Asynchronous IC communications capability provided by crosspoint switches permits design flexibility. Different protocols are supported.**

**Different solutions address the same issue, how to move packets across the backplane. Backplane transceivers are a significant aspect of the issue. Significant market shifts are occurring. These units have to operate at higher speeds and with more flexibility to handle the traffic that is being generated by the Internet. Combined voice, video, and data traffic is moving across the same switches at the same time, creating demand for new types of switch IC.**

**In addition, the transfer of information from the line card or motherboard to the backplane is moving from a parallel to serial architecture. This in turn gives rise to demand for new types of IC.**

**Backplane transceiver markets in dollars at \$95.3 million in 2006 are expected to reach \$929.5 million by 2013. This growth is in part a result of the fact that the quantity of information is doubling every 7 months. Voice over IP (VoIP), video over IP, mobile telephone backhaul, and storage market growth bring the need for faster backplanes using the newer technologies.**

## Companies Profiled

### Market Leaders

Vitesse  
Mindspeed

### Market Participants

Accelerant Networks

Analog Devices

AMCC

BiRa

Conexant Systems

Dune Networks

Fairchild

Infineon

Intel

Marvell

National Semiconductor

PMC-Sierra

Teradyne

Zarlink

Agere Systems

Aeluros

Avago

Broadcom

Dallas Semiconductor

EXAR

Hitachi/Maxwell

IDT

Lattice Semiconductor

Maxim Integrated Products

On Semiconductor

Siemens/Dasan Networks

Triquint

# Backplane Transceiver Strategies and Forecasts, 2007-2013

## REPORT METHODOLOGY

THIS IS THE 299TH REPORT IN A SERIES OF MARKET RESEARCH REPORTS THAT PROVIDE FORECASTS IN COMMUNICATIONS, TELECOMMUNICATIONS, THE INTERNET, COMPUTER, SOFTWARE, TELEPHONE EQUIPMENT, HEALTH EQUIPMENT, AND ENERGY. THE PROJECT LEADERS TAKE DIRECT RESPONSIBILITY FOR WRITING AND PREPARING EACH REPORT. THEY HAVE SIGNIFICANT EXPERIENCE PREPARING INDUSTRY STUDIES. FORECASTS ARE BASED ON PRIMARY RESEARCH AND PROPRIETARY DATA BASES. FORECASTS REFLECT ANALYSIS OF THE MARKET TRENDS IN THE SEGMENT AND RELATED SEGMENTS. UNIT AND DOLLAR SHIPMENTS ARE ANALYZED THROUGH CONSIDERATION OF DOLLAR VOLUME OF EACH MARKET PARTICIPATION IN THE SEGMENT. INSTALLED BASE ANALYSIS AND UNIT ANALYSIS IS BASED ON INTERVIEWS AND AN INFORMATION SEARCH. MARKET SHARE ANALYSIS INCLUDES CONVERSATIONS WITH KEY CUSTOMERS OF PRODUCTS, INDUSTRY SEGMENT LEADERS, MARKETING DIRECTORS, DISTRIBUTORS, LEADING MARKET PARTICIPANTS, OPINION LEADERS, AND COMPANIES SEEKING TO DEVELOP MEASURABLE MARKET SHARE. OVER 200 IN DEPTH INTERVIEWS ARE CONDUCTED FOR EACH REPORT WITH A BROAD RANGE OF KEY PARTICIPANTS AND INDUSTRY LEADERS IN THE MARKET SEGMENT. WE ESTABLISH ACCURATE MARKET FORECASTS BASED ON ECONOMIC AND MARKET CONDITIONS AS A BASE. USE INPUT/OUTPUT RATIOS, FLOW CHARTS, AND OTHER ECONOMIC METHODS TO QUANTIFY DATA. USE IN-HOUSE ANALYSTS WHO MEET STRINGENT QUALITY STANDARDS. INTERVIEWING KEY INDUSTRY PARTICIPANTS, EXPERTS AND END-USERS. OUR RESEARCH INCLUDES ACCESS TO LARGE PROPRIETARY DATABASES. LITERATURE SEARCH INCLUDES ANALYSIS OF TRADE PUBLICATIONS, GOVERNMENT REPORTS, AND CORPORATE LITERATURE.

**YOU MUST HAVE THIS STUDY**

# Backplane Transceiver Market Opportunities, Strategies, and Forecasts, 2007 to 2013

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