

WinterGreen Research, INC.

**Digital Crosspoint Switches and Mux / DeMux: Market Shares,
Strategies, and Forecasts, Worldwide, 2012 to 2018**

**Digital Crosspoint Switches and Mux / DeMux: Transport Efficiency Needed
to Carry Broadband Signals**



Torrie The Cat in the Tulips

Picture by Susan Eustis

WinterGreen Research, Inc.

Lexington, Massachusetts

www.wintergreenresearch.com

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

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CHECK OUT THESE KEY TOPICS

Crosspoint Switch
Muxbuffer
Portable Consumer Devices
Wireless Handsets
Converged Data And Video
Automotive Crosspoint
Switch
Security Crosspoint Switch
Video Crosspoint Switch
Multimedia Crosspoint
Switch
Carrier Crosspoint Switch
Crosspoint Switch Power
Conservation
Multistage Crosspoint
Switching
High Speed Networks Drive
Crosspoint Switch Adoption
Backplane Efficiency
Ethernet Adoption at Desktop
Storage Industry Adoption of
Crosspoint Switches

Crosspoint Switch Matrix
With Input And Output
Crosspoint Switch on
Internet
Network Access
Enterprise Networks
Metropolitan Area Networks
Crosspoint Switch
Architecture
Transport Networks
Optical Transport
Digital Optical Networks
Core Networks
Metro Networks
TransNet / TransConnect
Ethernet Mobile Backhaul
Mobile Backhaul
Digital Optical Network
Photonic Integrated Circuits
Digital Line Module

OTN
ROADM
Tunable optics
Pluggable optics
ASON/GMPLS
Data switching
ODB capability
Optimized optical transport
infrastructure
100 Gigabit Ethernet
40 Gigabit Ethernet
High-Bandwidth
Fiber Transmission
Spectral Efficiency
Network Construction
Internet Protocol Traffic
Mobile Backhaul

MuxBuffer
Portable Consumer Devices
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Crosspoint Switches

Crosspoint Switch Matrix With
Input And Output
Crosspoint Switch on Internet
Network Access
Enterprise Networks
Metropolitan Area Networks

Digital Crosspoint Switches and Buffers: Addressing Device Proliferation, Broadband, and Backhaul Network Growth



Digital Crosspoint Switches and Muxes: Market Shares, Strategies, and Forecasts, Worldwide, 2012-2018

LEXINGTON, Massachusetts (October 10, 2012) – WinterGreen Research announces that it has published a new study **Digital Crosspoint Switches and Buffers: Market Shares, Strategy, and Forecasts, Worldwide, 2012 to 2018**. The 2012 study has 541 pages, 166 tables and figures. Market growth is related to the explosion of digital information and video that needs to be transported over public and private networks.

Worldwide digital communication and data center communication markets include digital signals for video as well. Digital information may represent data or voice traffic. A large number of protocols particularly those specific to the data center are supported by digital crosspoint switches. Markets are poised to achieve significant growth as equipment manufacturers find ways to design crosspoint switches and buffers into products, giving significant new functionality.

Digital crosspoint switches are used in high rate data transfer situations to support integration of information in data centers and by carriers. Broadcast quality video transport of data on the Internet is evolving new applications including those at every level of the supply chain, creating demand at the high end for crosspoint switches.

High quality, high speed data and video transport is part of the evolution of broadband networks. Data within the data center is being moved to storage devices and through networks. Data is moving across regional and international locations at a more rapid pace.

According to Susan Eustis, lead author of the WinterGreen Research team that prepared the **Digital Crosspoint Switches and Buffers** market research study, “With breakthrough 10 Gbps port capacity, the next generation digital crosspoint switch devices enable a next generation level of performance and architectural options for higher density system designs. These 10 Gbps devices are used to implement the 40 Gbps and 100 Gbps port capacity. High speed data infrastructure for 40 Gbps and 100 Gbps port capacity is being built almost exclusively from 10 Gbps crosspoint switches. The ability to achieve 40 Gbps data transport and routing devices by stringing together 4 10Gbps devices is less expensive than going to a 40 Gbps device.”

Any technology has an adoption curve. Components that start at market prices are subject to economies of scale. They are priced accordingly. Customers have shipments in 1 gig. These devices are getting mature. The price is dropping substantially. The same is happening for 10 Gbps devices.

Companies seem to feel that there is a little life left in the 10 Gbps crosspoint devices due to the recent technology breakthroughs giving some market life to these devices before 25 Gbps and 28 Gbps devices roll into full product release. Full product release is sure to drive prices down for the new units, making it attractive to use smaller crosspoint switches linked together to gain capacity.

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Communications semiconductors demand is increasing. Evolving technology for broadband access is increasing data rates. The increase in network traffic is in part because of the Internet and voice over IP. High speed video transport has become more feasible and is being used more.

A quantum increase in the quantity of data that is being transmitted has occurred. Broadband communications networks are supported in part by advanced digital crosspoint switch devices that permit interconnect functioning to be efficient. They are part of an overall market for network infrastructure equipment and communications semiconductors that offer attractive long-term growth prospects.

Networks are moving to embrace a universal Ethernet protocol. As network bandwidth requirements continue to accelerate, more systems require solutions for high-speed signal integrity problems. Crosspoint switch connectivity product lines sell into carrier and enterprise networking applications.

Products address an increasing need to transport signals at ever increasing speed. Units go across fiber, cable, and copper backplane applications. Incumbent telecommunications carriers, integrated communication service providers, cable multiple service operators, and data center managers are among those worldwide who continue to upgrade and expand legacy portions of their networks. The aim is to accommodate new service offerings. A further aim is to reduce operating costs.

The upgrade and expansion cycle requires the development of a variety of new equipment created from advanced semiconductor solutions. The development of new, next-generation networks is an ongoing effort for both service providers and enterprise data centers.

This study illustrates the digital crosspoint switch market driving forces. It describes the principal competitive factors that impact the success of digital crosspoint switches as they are used to provide chips for high speed data integration management solutions. Market opportunities are addressed in the comprehensive market study that lays out strategy considerations in considerable detail: Markets at \$260.7 million in 2011 are anticipated to reach \$901.1 billion by 2018.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Global Information Info Shop, Market Research.com, Research and Markets, Bloomberg, and Thompson Financial.

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Companies Profiled

Market Leaders

**Texas Instruments / National Semiconductor
MindSpeed**

**Analog Devices
Vitesse**

Market Participants

**Hittite
Intersil
Lattice
LSI**

**Maxim Integrated Technologies
Maxim Revenue
Micrel
Semtech**

Thinklogical

Digital Crosspoint Switches and Mux / DeMux: Market Shares, Strategies, and Forecasts, Worldwide, 2012 to 2018

Report Methodology

This is the 534th report in a series of primary market research reports that provide forecasts in communications, telecommunications, the Internet, computer, software, telephone equipment, health equipment, and energy. Automated process and significant growth potential are priorities in topic selection. 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.

Product booking trends, backlog levels and estimated turns levels are tracked to develop accurate forecasts. This information comes from distributors, vendors, and industry observers. The primary research is conducted by talking to customers, distributors and companies. The survey data is not enough to make accurate assessment of market size, so WinterGreen Research looks at the value of shipments and the average price to achieve market assessments. Our track record in achieving accuracy is unsurpassed in the industry. We are known for being able to develop accurate market shares and projections. This is our specialty.

The analyst process is concentrated on getting good market numbers. This process involves looking at the markets from several different perspectives, including vendor shipments. The interview process is an essential aspect as well. We do have a lot of granular analysis of the different shipments by vendor in the study and addenda prepared after the study was published if that is appropriate.

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 participant 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.

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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 is a central part of the study. Our research includes access to large proprietary databases. Literature search includes analysis of trade publications, government reports, and corporate literature.

Findings and conclusions of this report are based on information gathered from industry sources, including manufacturers, distributors, partners, opinion leaders, and users. Interview data was combined with information gathered through an extensive review of internet and printed sources such as trade publications, trade associations, company literature, and online databases. The projections contained in this report are checked from top down and bottom up analysis to be sure there is congruence from that perspective.

The base year for analysis and projection is 2010. With 2010 and several years prior to that as a baseline, market projections were developed for 2011 through 2017. These projections are based on a combination of a consensus among the opinion leader contacts interviewed combined with understanding of the key market drivers and their impact from a historical and analytical perspective.

The analytical methodologies used to generate the market estimates are based on penetration analyses, similar market analyses, and delta calculations to supplement independent and dependent variable analysis. All analyses are displaying selected descriptions of products and services.

This research includes reference to an ROI model that is part of a series that provides IT systems financial planners access to information that supports analysis of all the numbers that impact management of a product launch or large and complex data center. The methodology used in the models relates to having a sophisticated analytical technique for understanding the impact of workload on processor consumption and cost.

WinterGreen Research has looked at the metrics and independent research to develop assumptions that reflect the actual anticipated usage and cost of systems. Comparative analyses reflect the input of these values into models.

The variables and assumptions provided in the market research study and the ROI models are based on extensive experience in providing research to large enterprise organizations and data centers. The ROI models have lists of servers from different manufacturers, Systems z models from IBM, and labor costs by category around the world. This information has been developed from WinterGreen research proprietary data bases constructed as a result of preparing market research studies that address the software, energy, healthcare, telecommunications, and hardware businesses.

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YOU MUST HAVE THIS STUDY

Crosspoint Switch and Muxes: Market Shares, Strategies, and Forecasts, Worldwide, 2012-2018

Table of Contents

Digital Crosspoint Switch Executive Summary

The study is designed to give a comprehensive overview of the Digital Crosspoint Switch equipment market segment. Research represents a selection from the mountains of data available of the most relevant and cogent market materials, with selections made by the most senior analysts. Commentary on every aspect of the market from independent analysts creates an independent perspective in the evaluation of the market. In this manner the study presents a comprehensive overview of what is going on in this market, assisting managers with designing market strategies likely to succeed.

DIGITAL CROSSPOINT EXECUTIVE SUMMARY	ES-1
Demand for Digital Crosspoint Switches	ES-1
Using 10 Gbps Devices To Implement 40 Gbps and 100 Gbps Port Capacity	ES-1
Communications Semiconductor Demand	ES-3
Carrier Networking	ES-4
Enterprise Networking	ES-4
Crosspoint Switch Market Driving Forces	ES-4
Digital Crosspoint Switch Market Assessment by Array Size and Chip Speed	ES-10
Significant Developments In Crosspoint Switch Semiconductor Technology	ES-14
Large Array Digital Crosspoint Switch Market Shares	ES-15
Data Center Changes	ES-17

Digital Crosspoint Switch Market Description and Market Dynamics

1. DIGITAL CROSSPOINT SWITCH MARKET DYNAMICS AND MARKET DESCRIPTION	1-1
1.1 Digital Crosspoint Switch Definition	1-1
1.1.1 Digital Crosspoint Non-Linear Buffered Signal Conditioning And Switching	1-2
1.1.2 Digital Crosspoint Switch Attributes	1-3
1.2 Stability Of Global Credit And Financial Markets	1-5
1.3 Digital Crosspoint Switch Design Wins	1-6
1.3.1 Digital Switches	1-7
1.3.2 Semiconductor Components	1-7
1.4 Service Provider Communications Industry	1-8
1.4.1 Telecommunications Service Providers	1-9
1.4.2 Carrier Networking	1-10
1.4.3 Network Access Last Mile Of Telecommunications Network	1-13

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

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1.4.4	Metropolitan Area Networks	1-14
1.5	Data Centers	1-15
1.5.1	Data Center Storage	1-16
1.5.2	Cloud Computing Impact On Data Center Systems	1-18
1.5.3	Enterprise Networking	1-19
1.5.4	Increasing Demands for "Next-Generation Networking"	
	Integrated Circuits 1-21	
1.6	Communications Topology	1-22
1.7	Internet And Wireless Communications Technology	1-24
1.7.1	Optical Networks	1-25
1.7.2	Data And Video Traffic Being Added In Abundance To Voice Traffic	1-26
1.7.3	Semiconductor Companies Design Crosspoint Switches	1-27
1.8	Security Systems	1-27
1.8.1	Data Center Security Architecture	1-28
1.8.2	Carrier Network Security Architecture	1-29
1.9	Digital Crosspoint Product Positioning	1-30
1.9.1	Digital Crosspoint Switch Advantages	1-33
1.9.2	Digital Crosspoint Limitations	1-37
1.10	Digital Crosspoint Switch Functions	1-38
1.10.1	Crosspoint Switch Standards	1-38
1.10.2	Crosspoint Switch Equalization Technology	1-38
1.10.3	Channel-Isolation Capabilities	1-40
1.10.4	Power Conservation Technology	1-41
1.10.5	Built-In System Test Features	1-41

Digital Crosspoint Switch Market Shares and Market Forecasts

This section selectively describes market shares, forecasts, segments, and regional revenue. Numbers are the result of primary research in all cases. Selected companies are described from an independent analyst perspective with a thumbnail sketch or analysis of their market numbers or commentary on their strengths and weaknesses. Some of the analysis is focused on looking at the topic segment by segment, including company descriptive analyses by segment and subsegment.

2 DIGITAL CROSSPOINT SWITCH MARKET SHARES AND MARKET FORECASTS

		2-1
2.1	Demand for Digital Crosspoint Switches	2-1
2.1.1	Using 10 Gbps Devices To Implement 40 Gbps and 100 Gbps Port Capacity	2-1
2.1.2	Communications Semiconductor Demand	2-3
2.1.3	Carrier Networking	2-4
2.1.4	Enterprise Networking	2-4
2.1.5	Crosspoint Switch Market Driving Forces	2-4
2.1.6	Digital Crosspoint Switch Market Assessment by Array Size and Chip Speed	2-10
2.1.7	Significant Developments In Crosspoint Switch Semiconductor Technology	2-14
2.2	Large Array Digital Crosspoint Switch Market Shares	2-15
2.2.1	Digital Devices Digital Crosspoint Switches	2-18
2.2.2	Digital Devices Video Crosspoint Switch Applications	2-19
2.2.3	Vitesse	2-20
2.2.4	Vitesse Market Targets	2-24
2.2.5	Vitesse Comprehensive Crosspoint Offering	2-26
2.2.6	Vitesse Mux And Demux Devices	2-26
2.2.7	Mindspeed Customers Include Alcatel-Lucent, Cisco Systems	2-28
2.2.8	Mindspeed Offers High Performance	2-30
2.2.9	Mindspeed Addresses High-Growth Markets	2-30

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

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2.2.10	Semtech / Gennum	2-31
2.2.11	Market Segments for Large Array Size Digital Crosspoint Switch	2-32
2.2.12	Video Distribution, Broadcast, And Security	
	Large Array Digital Crosspoint Switch Market Shares	2-34
2.2.13	Carrier Communications Large Array Digital	
	Crosspoint Switch Market Shares	2-36
2.2.14	Data Center Large Array Digital Crosspoint Switches	
	Market Shares	2-36
2.3	Small Array Digital Crosspoint Switch Market Shares	2-39
2.3.1	Market Segments Small Array Digital Crosspoint	
	Switch and Buffer, Dollars, Worldwide, 2011	2-43
2.3.2	Auto And Auto Entertainment Small Array Size	
	Digital Crosspoint Switches And Buffers Market Shares	2-44
2.3.3	Video Distribution and Video Broadcast Small Array	
	Size Digital Crosspoint Switches and Buffers Market Shares	2-45
2.3.4	Computer Networking Small Array Digital Crosspoint	
	Switch and Buffers	2-46
2.3.5	Industrial And Automatic Test Equipment (ATE)	
	Small Array Size Digital Crosspoint Switches And Buffers	
	Market Shares	2-47
2.3.6	Telco and Service Provider Networking Small Array	
	Digital Crosspoint Switches and Buffers Market Shares	2-48
2.3.7	Digital Crosspoint Switch Vendor Market Positioning	2-49
2.3.8	Texas Instruments Gigabit 8 x 8 Crosspoint Switch	2-54
2.3.9	Texas Instruments / National Semiconductor LVDS –	
	Low Voltage Differential Signaling	2-54
2.3.10	Texas Instruments / National Semiconductor	
	Crosspoint Switch Description	2-56
2.3.11	Texas Instruments / National Semiconductor	
	LVDS Crosspoint Switches High-Speed Signal Switching Over	
	Lossy Printed Circuit Board Backplanes And Balanced Cables	2-56
2.3.12	Texas Instruments Crosspoint Switch	2-59
2.4	Digital Crosspoint Switch Market Forecasts	2-60
2.4.1	Industry Digital Crosspoint Switch Market Segments	2-64
2.4.2	Telecom Carrier Digital Crosspoint Switch Forecasts	2-66
2.4.3	Enterprise Data Center Networking Digital	
	Crosspoint Switches Applications	2-74
2.4.4	Broadcast, Video Distribution, and Security	
	Crosspoint Switches Video Industry Market Dollars	2-81
2.4.5	Automotive and Industrial Digital Crosspoint Switch	
	Market Forecasts	2-83
2.5	Digital Crosspoint Switch Pricing	2-90
2.5.1	Maxim Crosspoint Switch Pricing	2-92
2.6	Digital Crosspoint Switch Regional Market Segments	2-93
2.6.1	Crosspoint Switch Regional Market Segment Analysis	2-94
2.6.2	Vitesse Net Revenues Summarized By Geographic Area:	2-95
2.6.3	Digital Devices Sales by Regional Segment	2-96
2.6.4	Mindspeed Regional Revenue	2-96
2.6.5	LSI Sales by Region	2-97

Digital Crosspoint Switch Product Description

This section describes selected companies and selected products. Products for this market segment are described with attention to the most significant aspect of features and functions in this category of product. The juxtaposition of a range of different product descriptions from a single market category provides a really good way to access market directions and achieve market competitive analysis. This section is

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arranged in three pieces: immersive products, conference room products, and end point products. Company products are described in the appropriate sections, meaning a company is mentioned several times in the chapter in different places.

3. DIGITAL CROSSPOINT SWITCH PRODUCT DESCRIPTION	3-1
3.1 Mindspeed Crosspoint Switches	3-1
3.1.1 Mindspeed Crosspoint Switch High Speed Capabilities	3-2
3.1.2 Mindspeed Technologies Semiconductor Solutions For Network Infrastructure Applications	3-4
3.1.3 Mindspeed Signal Conditioners and Crosspoints	3-5
3.1.4 Mindspeed 72x72 3.2 Gbps Crosspoint Switch with Integrated CDRs, Input Equalization & Pre-Emphasis	3-8
3.1.5 Mindspeed 144x144 3.2 Gbps Crosspoint Switch with Integrated CDRs, Programmable Input Equalization, and Output Pre-emphasis	3-10
3.1.6 Mindspeed 17x17 3.2 Gbps Crosspoint Switch with Input Equalization	3-12
3.1.7 Mindspeed 4.25 Gbps Quad-Channel Backplane Driver and Adaptive Equalizer with 4x4 Crosspoint Switch	3-13
3.1.8 Mindspeed 72x72 4.25 Gbps Crosspoint Switch w/ Amplif-Eye™ Signal Conditioning	3-14
3.1.9 Mindspeed 72x72 4.25 Gbps Crosspoint Switch w/ Amplif-Eye™ Signal Conditioning	3-15
3.1.10 Mindspeed 144x144 4.25 Gbps Crosspoint Switch with Amplif-Eye™ Signal Conditioning	3-16
3.1.11 Mindspeed 34x34 3.2 Gbps Crosspoint Switch with Input Equalization	3-16
3.2 Texas Instrument / National Semiconductor	3-17
3.2.1 Texas Instruments SN65LVCP408 Status: Active 8x8 4.25Gbps Crosspoint Switch	3-21
3.2.2 Texas Instruments Mux, Linear Redriver	3-24
3.2.3 Texas Instruments Equalization for Backplanes	3-26
3.2.4 National Semiconductor LVDS Signal Conditioners	3-27
3.2.5 National Semiconductor DS25CP102Q, a 1.25 Gbps 2x2 LVDS Crosspoint	3-27
3.2.6 National Semiconductor Crosspoint Switch Description	3-29
3.2.7 National Semiconductor Cross point Switch Applications	3-30
3.2.8 National Semiconductor LVDS - Low Voltage Differential Signaling	3-31
3.2.9 TI Video Communication Endpoints	3-33
3.3 Vitesse	3-34
3.3.1 Vitesse 11.5 Gbps 16x16 Asynchronous Crosspoint Switch and Signal Conditioner	3-37
3.3.2 Vitesse Crosspoint Switch Applications	3-39
3.4 Analog Devices	3-43
3.4.1 Analog Devices Video Crosspoint Switches	3-43
3.4.2 Analog Devices Crosspoint Switch Portfolio	3-44
3.4.3 Analog Devices Digital Crosspoint Switches	3-45
3.4.4 Analog Devices Video Crosspoint Switches	3-47
3.4.5 Analog Devices AD8152 Digital Crosspoint Switches	3-48
3.4.6 Analog Devices ADV3228: 750 MHz, 8 x 8 Analog Crosspoint Switch	3-52
3.4.7 Analog Devices Applications	3-53
3.4.8 Analog Devices Functional Block Diagram for ADV3228 750 MHz, 8 x 8 Analog Crosspoint Switch	3-55
3.4.9 Analog Crosspoint Switches	3-56
3.4.10 Analog Devices Digital Crosspoint Switches	3-59
3.4.11 Analog Devices Video Crosspoint Switches	3-61

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

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3.5	Semtech / Gennum	3-62
3.5.1	Gennum's Crosspoint Asynchronous Switch, the GX4002	3-64
3.5.2	Gennum Corporation Crosspoint Switches Address	
	Broadcast Equipment Manufacturer Requirements	3-65
3.5.3	Gennum Family Of Crosspoint Switches 3Gb/s	
	Crosspoint Enables Larger Broadcast Equipment Designs	3-66
3.5.4	Gennum's Crosspoint Sophisticated Support For	
	Multiple Data Rates And Formats	3-67
3.5.5	Gennum's Crosspoint End-to-End Portfolio of	
	Broadcast Video Products Optimized for Crosspoint Switch	3-69
3.5.6	Gennum's Crosspoint Pricing and Availability	3-69
3.5.7	Gennum Family Of Six Crosspoint Devices	3-70
3.5.8	Gennum Targets Studios	3-72
3.6	Maxim	3-78
3.6.1	Maxim Crosspoint Switch	3-79
3.6.2	Maxim Crosspoints and Multiplexers	3-80
3.6.3	Maxim MAX9675 Video Crosspoint Switches	3-81
3.6.4	Maxim Crosspoint Switch MAX9675	3-83
3.6.5	Maxim MAX4359/MAX4360/MAX4456 low-Cost	
	Video Crosspoint Switches	3-86
3.6.6	Maxim MAX4456 Digitally Controlled 8x8 Switch Matrix	3-87
3.7	Intersil	3-89
3.7.1	Intersil Crosspoint Switch	3-89
3.7.2	Intersil Low Power, 8x8 Video	3-91
3.8	LSI	3-92
3.9	Fairchild Semiconductor	3-96
3.9.1	Fairchild Semiconductor Crosspoint Switch Applications	3-99
3.10	Zarlink	3-99
3.10.1	Zarlink MT8816 8x16 Analog Switch Array	3-100
3.11	Switch Fabric ASIC for Modular LAN/SAN Switch	3-101
3.12	Intel and Numonyx Stacked, Cross Point Phase Change Memory	3-102
3.13	IBM Phase Change Memory	3-107

Digital Crosspoint Switch Technology

4. DIGITAL CROSSPOINT SWITCH TECHNOLOGY	4-1	
4.1	Standards for 40G and 100G Enhanced Forward Error Correction	4-1
4.2	Data Center Fabric Computing Network Innovation	
	With Crosspoint Switches	4-1
4.2.1	Data Center Ethernet and Other Protocols	4-2
4.3	What is Jitter?	4-3
4.4	Crosspoint Switch Extends Moore's Law	4-4
4.5	Topologies For Backplane Architecture	4-5
4.5.1	Primary Traffic Patterns In A Backplane Environment	4-5
4.5.2	Multi-Point Architecture And Point-To-Point Architectures	4-7
4.5.3	Crosspoint Switch Device That Has Multiple Ports In	
	Which Any Input Port Can Be Connected To Any Output Port	4-8
4.5.4	Point-To-Point Switched Backplane	4-9
4.5.5	Star Topology	4-9
4.5.6	Out-Of-Band And In-Band Switch Control	4-10
4.5.7	Mesh Backplane	4-11
4.5.8	Point-To-Point	4-12
4.5.9	Multi-Point Backplane	4-13
4.5.10	Switching From Multi-Point Architecture	4-15
4.6	Low Voltage Differential Signaling LVDS Standard	4-16
4.7	LVDS Offered By A Variety Of Vendors	4-21

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

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4.7.1	National Semiconductor BLVDS (Bus LVDS) –	4-22
4.7.2	BLVDS Has Addressed A Wide Market Space	4-23
4.7.3	National Semiconductor GLVDS	4-24
4.8	Intersil Video Crosspoint Delivers Black-Level Accuracy	4-24
4.9	Communications Adoption Of Broadband Applications	4-25
4.9.1	T/E & SONET/SDH	4-28
4.9.2	Consumer/Industrial	4-30
4.10	Serial Communications	4-30
4.10.1	Power Management	4-32
4.10.2	Storage	4-33
4.11	Ideal Switch	4-34
4.11.1	Switch With Virtual Output Queues On The Ingress Side	4-36
4.11.2	Switch With Shared Memory in Switch Fabric	4-38
4.11.3	Buffered Crossbar Switch Architecture	4-39
4.12	Development of 10 Gbit/s Ethernet Supports 40Gbit/s and 100 Gbits/s	4-42
4.12.1	Cisco Metro Ethernet Services	4-43
4.12.2	Enterprise Applications	4-44
4.13	Scheduling, Quality of Service (QoS), and Arbitration	4-45
4.13.1	Scheduling	4-45
4.13.2	Arbitration	4-46
4.13.3	Quality of Service (QoS)	4-46
4.13.4	Frames	4-47
4.14	Redundancy	4-48
4.14.1	Passive Redundancy (1:1, N:1)	4-49
4.14.2	Load-Sharing Redundancy (N+1, N-1, N+N)	4-49
4.14.3	Active Redundancy (1+1)	4-50

Digital Crosspoint Switch Company Profiles

This section selectively describes company strategies, partners, acquisitions, and revenue by segment and regional revenue when available. Companies are described by looking at what is most interesting about that company. The descriptions collectively give a sense of market directions within the industry segment. The alphabetical listing of company thumbnail sketches provides an accessible way to find out what is going on in any particular company.

5. DIGITAL CROSSPOINT SWITCH COMPANY PROFILES	5-1
5.1 Analog Devices	5-1
5.1.1 Analog Devices Focus On Key Strategic Markets	5-2
5.1.2 Analog Devices Broad Line Of High-Performance ICs	5-3
5.1.3 Analog Devices Digital Signal Processing Products	5-4
5.1.4 Analog Devices Revenue	5-4
5.1.5 Analog Devices Revenue Trends by End Market	5-6
5.1.6 Analog Devices Industrial –	5-7
5.1.7 Analog Devices Automotive –	5-7
5.1.8 Analog Devices Consumer –	5-8
5.1.9 Analog Devices Communications –	5-8
5.1.10 Analog Devices Markets and Applications	5-8
5.1.11 Analog Devices Industrial and Instrumentation Segments	5-9
5.1.12 Analog Devices Defense/Aerospace Segment	5-10
5.1.13 Analog Devices Energy Management Segment	5-11
5.1.14 Analog Devices Healthcare Segment	5-12
5.1.15 Analog Devices Automotive Segment	5-13
5.1.16 Analog Devices Consumer Segment	5-16
5.1.17 Analog Devices Communications Segment	5-16
5.1.18 Analog Devices Segment Financial Information and Geographic Information	5-17

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

5.1.19	Analog Devices Revenue Trends by Product Type	5-17
5.1.20	Analog Devices Revenue Trends by Geographic Region	5-18
5.1.21	Analog Devices Sales by Regional Segment	5-18
5.2	Hittite	5-20
5.2.1	Hittite High Performance Analog, Digital & Mixed Signal ICs, Modules, Subsystems & Instrumentation	5-21
5.2.2	Hittite Microwave Commitment to Innovation, Design & Quality Products	5-22
5.2.3	Hittite Microwave Broad Product Portfolio	5-23
5.2.4	Hittite Microwave Supporting Digital, RF, Microwave & Millimeterwave Applications Across Eight Markets	5-24
5.3	Integrated Device Technology, Inc. (IDT)	5-26
5.3.1	Integrated Device Technology, Inc. (IDT) Market Focus	5-27
5.3.2	Integrated Device Technology, Inc. (IDT) Communication Timing Products:	5-30
5.3.3	Integrated Device Technology (IDT) Digital Logic Products:	5-30
5.4	Intersil	5-32
5.4.1	Intersil Crosspoint Switch	5-32
5.4.2	Intersil Switches/MUXs/Crosspoints	5-33
5.5	Lattice ispGDX2	5-45
5.6	LSI 5-48	
5.6.1	LSI Sold External Storage Systems Business	5-48
5.6.2	LSI Acquires SandForce	5-49
5.6.3	LSI First Quarter 2012 Revenue	5-49
5.6.4	LSI First Quarter 2012 Highlights	5-50
5.6.5	LSI Information about Geographic Areas	5-52
5.6.6	LSI LinkXpress Crosspoint Switch	5-53
5.6.7	LSI LinkXpress Crosspoint Switch	5-56
5.7	Maxim Integrated Technologies	5-60
5.7.1	Maxim Revenue	5-63
5.8	Micrel	5-64
5.8.1	Micrel Quality Management System	5-67
5.8.2	Micrel Revenue	5-67
5.8.3	Micrel Leading Manufacturer of IC Solutions	5-69
5.9	Mindspeed Technologies	5-69
5.9.1	Mindspeed Customers	5-72
5.9.2	Mindspeed Revenue	5-73
5.9.3	Mindspeed Reports Fiscal Third Quarter 2012 Results	5-73
5.9.4	Mindspeed Technologies Revenue Fiscal Third Quarter 2012	5-74
5.9.5	Mindspeed Strategy	5-78
5.9.6	Mindspeed Amplif-Eye(TM) Signal-Conditioning Solutions for High-Definition Video Applications	5-81
5.9.7	Mindspeed Extends Family of Reconfigurable Crosspoint Switches	5-84
5.9.8	Mindspeed Number One Position In Deployed Small Cell Processors Worldwide	5-86
5.9.9	Mindspeed Scalable System-on-Chip Solutions for Next-Generation Mobile Networks	5-87
5.9.10	Mindspeed Product Portfolio For Enabling Large Broadcasters And Video Production Facilities To Create, Transmit, And Deliver Content	5-88
5.10	ON Semiconductor	5-90
5.10.1	ON Semiconductor Revenue	5-91
5.11	Semtech 5-92	
5.11.1	Gemtech GX4002 2x2 14.025Gb/s Crosspoint Switch	5-92
5.11.2	Semtech / Gennum Corporation	5-95
5.12	Texas Instruments	5-96

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

5.12.1	TI Analog	5-98
5.12.2	TI Embedded Processing	5-100
5.12.3	TI Wireless	5-100
5.12.4	TI Other	5-101
5.12.5	TI Product Cycle Market Characteristics	5-103
5.12.6	TI Competitive Landscape	5-104
5.12.7	TI Customers	5-105
5.12.8	TI Revenue	5-105
5.13	Thinklogical Digital Crosspoint Switch	5-106
5.13.1	Thinklogical Digital Crosspoint Switch Series	5-109
5.13.2	Thinklogical Controlling the Digital Crosspoint Switch DCS	5-110
5.14	Vitesse 5-116	
5.14.1	Vitesse Strategy	5-118
5.14.2	Vitesse Targets Large and Growing Markets	5-119
5.14.3	Vitesse Focus on Networks in Transformation	5-120
5.14.4	Vitesse Develop and Leverage Differentiating Technology in Market Leading Products	5-122
5.14.5	Vitesse Product Overview	5-125
5.14.6	Vitesse Ethernet Switching Product Line	5-125
5.14.7	Vitesse Carrier Ethernet Switch Engines:	5-126
5.14.8	Vitesse Enterprise Ethernet Switches:	5-126
5.14.9	Vitesse Ethernet Media Access Controllers ("MACs"):	5-128
5.14.10	Vitesse Gigabit Ethernet Copper and Dual- Media Transceivers: 5-129	
5.14.11	Vitesse Gigabit Ethernet Copper and Dual-Media Transceivers with 1588v2 Packet Timing And Synchronization:	5-129
5.14.12	Vitesse Connectivity Product Line	5-130
5.14.13	Vitesse Crosspoint Switches:	5-132
5.14.14	Vitesse Signal Integrity Devices:	5-132
5.14.15	Vitesse Transport Processing Product Line	5-133
5.14.16	Vitesse Switches:	5-134
5.14.17	Vitesse Market Overview	5-135
5.14.18	Vitesse Strategy	5-136
5.14.19	Vitesse Product Revenues	5-137
5.15	Selected Digital Crosspoint Switch Market Participants	5-142

Digital Crosspoint Switch Examples

Digital Crosspoint Switch Descriptions	6-1
Analog Devices	6-1
Texas Instruments	6-1
Marvell 6-1	
Mindspeed Technologies	6-1
Maxim Integrated Products	6-5
Texas Instruments	6-7
Texas Instruments 2x2	6-10
Texas Instrument / National Semiconductor	6-14
3x3 National Semiconductor	6-16
Mindspeed Technologies 48X48	6-17
Texas Instruments 2x2	6-17
20x20	6-18
3x3 Analog Devices	6-19
Mux / DeMux Analog Devices	6-19
4x4 Analog Devices	6-20
12x12 Analog Devices	6-21
16x16 Analog Devices	6-22
2x2 National Semiconductor	6-22

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

2x2 Fairchild Semiconductor	6-24
160x160 Mindspeed	6-30
Eight-Port Crosspoint Switch Mindspeed	6-30
16x4 Crosspoint Switch Mindspeed	6-31
Mindspeed	6-31
20X20 Mindspeed	6-32
24X24Mindspeed	6-32
72 X 72 Mindspeed	6-33
80X80 Mindspeed	6-33
48X48 Mindspeed	6-33
144X144 Mindspeed	6-34
288X288 Mindspeed	6-35
36X36 Mindspeed	6-35
Texas Instruments	6-36
2x2 Texas Instruments	6-36
2x2 Texas Instruments	6-39
8x4 Texas Instruments	6-41
8 x 8 crosspoint or a 16 x 4 cross- point Texas Instruments	6-41
16x8 Texas Instruments	6-41
2x2 Texas Instruments	6-42
4x4 Texas Instruments	6-44
32x16 Texas Instruments	6-46
4x1 Texas Instruments	6-46
ANALOG Devices	6-47
32 x 17 ANALOG Devices	6-47
34 x34 ANALOG Devices	6-48
3 x 3 ANALOG Devices	6-50
4 x 4 ANALOG Devices	6-50
12 x 12 ANALOG Devices	6-51
8 x 8 ANALOG Devices	6-54
16 x 16 ANALOG Devices	6-55
40 x 40 ANALOG Devices	6-56
Mux demux	6-56
On Semiconductor	6-57

List of Tables and Figures

Digital Crosspoint Switch Executive Summary

Table ES-1	ES-5
Digital Crosspoint Switch Market Aspects	
Table ES-2	ES-6
Digital Crosspoint Switch Market Driving Forces	
Table ES-3	ES-11
Digital Crosspoint Switches Market Array Size, Dollars, Worldwide, 201ES-2018	
Table ES-4	ES-13
Digital Crosspoint Switch Chip Speed, Dollars, Worldwide, 201ES-2018	
Table ES-5	ES-14
Significant Developments In Crosspoint Switch Semiconductor Technology	
Figure ES-6	ES-16
Large Array Digital Crosspoint Switch Market Shares, Dollars, 2011	

Digital Crosspoint Switch Market Description and Market Dynamics

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Table 1-1	1-30
Digital Crosspoint Switch Product Positioning	
Table 1-2	1-31
Digital Crosspoint Switch Target Markets	
Table 1-3	1-33
Digital Crosspoint Switch Applications	
Table 1-4	1-35
Digital Crosspoint Switch Advantages	
Table 1-5	1-36
Key Crosspoint Switch Architectural Advantages	
Table 1-6	1-39
Crosspoint Switch Functions	
Table 1-7	1-42
Crosspoint Switch Testing Features	

Digital Crosspoint Switch Market Shares and Market Forecasts

Table 2-1	2-5
Digital Crosspoint Switch Market Aspects	
Table 2-2	2-6
Digital Crosspoint Switch Market Driving Forces	
Table 2-3	2-11
Digital Crosspoint Switches Market Array Size, Dollars, Worldwide, 2012-2018	
Table 2-4	2-13
Digital Crosspoint Switch Chip Speed, Dollars, Worldwide, 2012-2018	
Table 2-5	2-14
Significant Developments In Crosspoint Switch Semiconductor Technology	
Figure 2-6	2-16
Large Array Digital Crosspoint Switch Market Shares, Dollars, 2011	
Table 2-7	2-17
Large Array Digital Crosspoint Switch Market Shares, Dollars, 2011	
Table 2-8	2-19
Digital Devices Digital Crosspoint Switch Applications	
Table 2-9	2-24
Vitesse Crosspoint Switch Applications	
Table 2-10	2-31
MindSpeed Crosspoint Switch Applications	
Table 2-11	2-33
Large Array Size Digital Crosspoint Switch Market Shares, Dollars, Worldwide, 2011	
Table 2-12	2-35
Video Distribution, Broadcast, and Security Large Array Digital Crosspoint Switch Market Shares Dollars, Worldwide, 2011	
Table 2-13	2-38
Large Array Digital Crosspoint Switches Data Center Market Shares Dollars, Worldwide, 2011	
Figure 2-14	2-40
Small Array Digital Crosspoint Switch and Buffer Market Shares, Dollars, Worldwide, 2011	
Table 2-15	2-41

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Small Array Size Digital Crosspoint Switch and Buffer Shipments Market Shares, Dollars, Worldwide, 2011 Table 2-16	2-43
Small Array Size Digital Crosspoint Switch and Buffer Market Segments, Dollars, Worldwide, 2011 Table 2-17	2-44
Auto and Auto Entertainment Small Array Size Digital Crosspoint Switches and Buffers Market Shares, Dollars, Worldwide, 2011 Table 2-18	2-45
Video Distribution and Video Broadcast Small Array Size Digital Crosspoint Switches and Buffers Market Shares, Dollars, Worldwide, 2011 Table 2-19	2-46
Computer Networking Small Array Digital Crosspoint Switch and Buffers Market Shares, Dollars, Worldwide, 2011 Table 2-20	2-47
Small Array Size Digital Crosspoint Switches and Buffers Industrial and Automatic Test Equipment (ATE) Market Shares, Dollars, Worldwide, 2011 Table 2-21	2-48
Telco and Service Provider Networking Small Array Digital Crosspoint Switches and Buffers Market Shares, Dollars, Worldwide, 2011 Table 2-22	2-49
Digital Crosspoint Switch Vendor Market Positioning Table 2-23	2-52
Digital Crosspoint Switch Principal Competitive Factors Table 2-24	2-53
Vendor Position To Compete Favorably in Crosspoint Switch Markets Table 2-25	2-57
Texas Instruments / National Semiconductor Crosspoint Switch Features Table 2-26	2-58
Texas Instruments / National Semiconductor Crosspoint Switch Applications Table 2-27	2-59
Texas Instruments Crosspoint Switch Applications Figure 2-28	2-61
Digital Crosspoint Switch Market Shipments Forecasts Dollars, Worldwide, 2012-2018 Table 2-29	2-62
Digital Crosspoint Switch Market Forecasts Dollars, Worldwide, 2012-2018 Table 2-30	2-65
Digital Crosspoint Switch Market Total Industry Segments Dollars, Worldwide, 2012-2018 Figure 2-31	2-66
Digital Crosspoint Switch Market Telco Carrier and Service Provider Segments Forecasts, Units and Dollars, Worldwide, 2012-2018 Table 2-32	2-69
Crosspoint Switch Vendor Market Positioning Table 2-33	2-72
Carrier Networking Equipment Market Rapid Growth Factors Figure 2-34	2-75

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Digital Crosspoint Switch Market Data Center Industry Segments, Dollars and Units, Worldwide, 2012-2018 Table 2-35	2-77
Aspects of Crosspoint Switch Technologies Developed To Solve High-Speed Optical Networking Challenges Table 2-36	2-81
Digital Crosspoint Switch Market, Video Distribution, Broadcast Video, and Security Systems Segments, Dollars and Units, Worldwide, 2012-2018 Table 2-37	2-84
Automotive and Industrial Small Array Digital Crosspoint Switch Market Segments Dollars and Units, Worldwide, 2012-2018 Table 2-38	2-92
Maxim Crosspoint Switch Pricing Figure 2-39	2-93
Digital Crosspoint Switch Regional Market Segments, Dollars, 2011 Table 2-40	2-94
Digital Crosspoint Switch Regional Market Segments, 2011	

Digital Crosspoint Switch Product Description

Table 3-1 Mindspeed Signal Conditioners and Crosspoints	3-5
Table 3-2 Mindspeed Signal Conditioners and Crosspoints	3-7
Table 3-3 National Semiconductor DS25CP102 LVDS 2x2 Crosspoint Switch	3-18
Figure 3-4 Texas Instruments SN65LVCP408 Status: Active 8x8 4.25Gbps Crosspoint Switch	3-21
Table 3-5 Texas Instruments Gigabit 8 x 8 Crosspoint Switch SN65LVCP408 Description	3-22
Table 3-6 Texas Instruments Crosspoint Switch Applications	3-23
Table 3-7 National Semiconductor Crosspoint Switch Features	3-28
Table 3-8 National Semiconductor Cross point Switch Applications	3-30
Figure 3-9 Vitesse LAN and WAN Technologies Positioning	3-35
Table 3-10 Vitesse Carrier Ethernet Crosspoint Switches	3-36
Figure 3-11 Vitesse Crosspoint Switch	3-38
Figure 3-12 Vitesse Crosspoint Switch Specifications	3-38
Figure 3-13 Vitesse Crosspoint Switch Applications	3-39
Figure 3-14 Vitesse Crosspoint Switch Highlights	3-40

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Figure 3-15	3-40
Vitesse Crosspoint Switch Applications	
Table 3-16	3-41
Vitesse VSC336 Line Card Application	
Table 3-17	3-44
Analog Devices Video Crosspoint Switch Routing	
Table 3-18	3-44
Analog Devices Video Crosspoint Switch Applications	
Table 3-19	3-45
Analog Devices' X-stream™ Digital Switches Uses	
Figure 3-20	3-46
Crosspoint Switch Multit I/O Applications	
Table 3-21	3-51
Analog Devices Digital Crosspoint Switch Pricing	
Table 3-22	3-53
Analog Devices Crosspoint Switches Routing Functions	
Table 3-23	3-54
Analog Devices' X-stream™ Digital Switches Uses	
Table 3-24	3-56
Analog Crosspoint Switches	
Table 3-25	3-59
Analog Devices' Digital Crosspoint Switches	
Table 2-26	3-61
Analog Devices Video Crosspoint Switch Routing	
Table 3-27	3-74
Gennum GX4002 Crosspoint Switch Applications	

GENNUM GX4002 CROSSPOINT SWITCH APPLICATIONS

Next-generation networking

Next-generation data center

Next-generation storage

Next-generation telecommunications applications

Next-generation video formats

Address broadcast equipment manufacturer requirements

Broadcasters

Networks

Play out centers

Source: WinterGreen Research, Inc.

Table 3-28

3-76

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

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WinterGreen Research, INC.

Gennum GX4002 Crosspoint Switch Applications	
Table 3-29	3-78
Maxim Crosspoint Switch	
Table 2-30	3-79
Maxim Crosspoint Switch Applications	
Table 3-31	3-81
Maxim Active Crosspoint Switches	
Table 3-32	3-82
Maxim MAX9675 Key Features	
Table 3-33	3-84
Maxim MAX9675 Features	
Table 3-34	3-84
Maxim MAX9675 Applications	
Table 3-35	3-86
Maxim MAX4357 Key Features	
Table 3-36	3-88
Maxim MAX4456 Key Features	
Table 3-37	3-89
Maxim MAX4456 Key Applications	
Table 3-38	3-92
LSI LinkXpress™ Crosspoint Switch Features	
Table 3-39	3-93
LSI LinkXpress™ Crosspoint Switch Benefits	
Table 3-40	3-93
LSI Crosspoint Switch Applications	
Figure 3-41	3-95
LSI PCI Express Multi-Root Backplane Switch ASIC Functions	
Figure 3-42	3-96
Fairchild Semiconductor Video Switch Matrices	
Table 3-43	3-97
Fairchild Semiconductor Analog Crosspoint Matrices Features	
TABLE 3-44	3-97
Fairchild Semiconductor Analog Crosspoint Matrices Benefits	
Table 3-45	3-98
Fairchild Semiconductor Analog Crosspoint Matrices Applications	
Table 2-46	3-99
Fairchild Semiconductor Crosspoint Switch Applications	
Table 3-47	3-100
Zarlink MT8816 8x16 Analog Switch Array Features	
Table 3-48	3-101
Zarlink Typical Crosspoint Switch Applications	
Figure 3-49	3-103
Intel and Numonyx Stacked, Cross Point Phase Change Memory	
Figure 3-50	3-104
Comparison of High Density Memory Technologies	
Table 3-51	3-105
PCM vs. DRAM and NAND Functions	
Figure 3-52	3-109
IBM Phase Change Memory Technology	
Figure 3-53	3-110
IBM Phase Change Memory Signal Processing to Multilevel Storage	

Digital Crosspoint Switch Technology

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Figure 4-1	4-4
Crosspoint Switch as Way to Extend Moore's Law	
Table 4-2	4-6
Primary Traffic Patterns In A Backplane Environment	
Table 4-3	4-6
Primary Traffic Variables In A Backplane Environment	
Table 4-4	4--10
Star Topology	
Table 4-5	4-12
Mesh Topology	
Table 4-6	4-14
Multipoint Topology	
Table 4-7	4-16
Low Voltage Differential Signaling LVDS Standard Benefits	
Table 4-8	4-17
Common Types Of Bus Configurations	
Figure 4-9	4-18
Crosspoint Switch Bus Configurations	
Figure 4-10	4-19
Crosspoint Switch Multidrop Bus Configurations	
Figure 4-11	4-20
Crosspoint Switch Three Node Multidrop Bus Configurations	
Table 4-12	4-21
Bus Configurations vs. Standard Comparison Table	
Figure 4-13	4-27
Types of Communications ICs Used in Networking Equipment	
Figure 4-14	4-35
Switch Architecture	
Figure 4-15	4-37
Switch With Virtual Output Queues On The Ingress Side	
Figure 4-16	4-38
Shared Memory in Switch Fabric	
Figure 4-17	4-40
Buffered Crossbar Switch Architecture	
Figure 4-18	4-41
Arbitrated Crossbar Crosspoint Switching	
Table 4-19	4-44
Business Requirements Of Interconnect For Emerging Environment	
Table 4-20	4-46
Switch Fabric Scheduling Algorithms	
Table 4-21	4-49
Switch Chipset Redundancy	
Table 4-22	4-51
Significant Developments In Crosspoint Switch Semiconductor Technology	

Digital Crosspoint Switch Company Profiles

Table 5-1	5-2
Analog Devices Embedded In Electronic Equipment	
Table 5-2	5-10
Analog Devices Industrial And Instrumentation Market Applications	
Table 5-3	5-11

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Analog Devices Defense/Aerospace Products Table 5-4	5-12
Analog Devices Energy Management Segment Products Table 5-5	5-13
Analog Devices Healthcare Segment Innovative Crosspoint Switch Technologies Table 5-6	5-14
Analog Devices Green Automotive Segment Table 5-7	5-15
Analog Devices Safety Automotive Segment Table 5-8	5-15
Analog Devices Comfort Automotive Segment Table 5-10	5-17
Analog Devices Communications Segment Systems Table 5-11	5-19
Analog Devices Crosspoint Switches Figure 5-12	5-22
Hittite Microwave Collection of ICs Modules, an Subsystems from CD-110 GHz Table 5-13	5-23
Hittite Microwave Broad Product Portfolio, Thirty-Five Product Lines Figure 5-14	5-25
Hittite Microwave Range Of Wireless And Wired Communications Applications Table 5-15	5-33
Intersil Switches/MUXs/Crosspoints Products Table 5-16	5-34
Intersil Products Table 5-17	5-35
Intersil Products Table 5-18	5-36
Intersil Voltage Products Table 5-19	5-36
Intersil Products Table 5-20	5-47
Lattice ispGDX2 Features Table 5-21	5-54
LSI LinkXpress Crosspoint Switch Features Table 5-22	5-57
LSI LinkXpress™ Crosspoint Switch Features Table 5-23	5-57
LSI LinkXpress™ Crosspoint Switch Benefits Table 5-24	5-58
LSI Crosspoint Switch Applications Figure 5-25	5-59
LSI PCI Express Multi-Root Backplane Switch ASIC Functions Table 5-26	5-61
Maxim Major End-Market Target Market Segments Figure 5-27	5-65
Micrel Crosspoint Switch Table 5-28	5-71
Mindspeed Products Sold To Original Equipment Manufacturers (OEMs) For Network Infrastructure	

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

WinterGreen Research, INC.

Table 5-29	5-93
Gemtech GX4002 2x2 14.025Gb/s Crosspoint Switch Features	
Table 5-30	5-94
Gemtech GX4002 2x2 14.025Gb/s Crosspoint Switch Applications	
Table 5-31	5-102
Applications for TI Devices	
Table 5-32	5-111
Thinklogical Digital Crosspoint Switch DCS Series Features	
Table 5-33	5-112
Thinklogical Digital Crosspoint Switch DCS Series On-Board Diagnostics Features	
Table 5-34	5-113
Thinklogical Digital Crosspoint Switch DCS Series Cable Management Features	
Table 5-35	5-114
Thinklogical Digital Crosspoint Switch DCS Series Graphical User Interface Features	
Table 5-36	5-115
Thinklogical Digital Crosspoint Switch DCS Series Data Center Design Features	
Table 5-37	5-116
Thinklogical Digital Crosspoint Switch DCS Series Data Center Solutions	
Table 5-38	5-127
Vitesse Enterprise Switches	

REPORT # SH25349991

541 PAGES

166 TABLES AND FIGURES

2012

\$3,700 SINGLE COPY -- \$7,400 WEB SITE POSTING

ABOUT THE COMPANY

WinterGreen Research, research strategy relates to identifying market trends and growth through a deep understanding of change in markets and innovation. Innovation trends are understood by reading about and interviewing opinion leaders. Proprietary information is developed by interviewing companies and opinion leaders. By using analysis of SEC published materials, interview material, private research, detailed research, social network materials, blogs, and electronic analytics, the market size, shares, and trends are identified. Analysis of the published materials and interviews permits WinterGreen Research senior analysts to learn a lot more about markets. Discovering, tracking, and thinking about market trends is a high priority at WinterGreen Research. As with all research, the value proposition for competitive analysis comes from intellectual input.

WinterGreen Research, founded in 1985, provides strategic market assessments in telecommunications, communications equipment, health care, Software, Internet, Energy Generation, Energy Storage, Renewable energy, Nanotechnology, and advanced computer technology.

Industry reports focus on opportunities that expand existing markets or develop major new markets. The reports access new product and service positioning strategies, new and evolving technologies, and technological impact on products, services, and markets. Innovation that drives markets is explored. Market shares are provided. Leading market participants are profiled, and their marketing strategies, acquisitions, and strategic alliances are discussed. The principals of WinterGreen Research have been involved in analysis and forecasting of international business opportunities in telecommunications and advanced computer technology markets for over 30 years.

The studies provide primary analytical insight about the market participants. By publishing material relevant to the positioning of each company, readers can look at the basis for analysis. By providing descriptions of each major participant in the market, the reader is not dependent on analyst assumptions, the information backing the assumptions is provided, permitting readers to examine the basis for the conclusions.

About The Principal Authors

Ellen T. Curtiss, Technical Director, co-founder of WinterGreen Research, conducts strategic and market assessments in technology-based industries. Previously she was a member of the staff of Arthur D. Little, Inc., for 23 years, most recently as Vice President of Arthur D. Little Decision Resources, specializing in strategic planning and market development services. She is a graduate of Boston University and the Program for Management Development at Harvard Graduate School of Business Administration. She is the author of recent studies on worldwide telecommunications markets, the top ten internet equipment companies, the top ten contract manufacturing companies, and the Top Ten Telecommunications market analysis and forecasts.

Susan Eustis, President, co-founder of WinterGreen Research, is a senior analyst. She has done research in communications, healthcare equipment, and computer markets and applications. She holds several patents in microcomputing and parallel processing. She has the original patents in electronic voting machines. She has new patent applications in format varying, multiprocessing, and electronic voting. She is the author of recent studies of the Regional Bell Operating Companies' marketing strategies, Internet equipment, biometrics, a study of Internet Equipment, Worldwide Telecommunications Equipment, Top Ten Telecommunications, Digital Loop Carrier, Web Hosting, Web Services, and Application Integration markets. Ms. Eustis is a graduate of Barnard College.

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