

# DSL and G-fast Chips: Market Shares, Strategies, and Forecasts, Worldwide, 2014-2020

<https://marketpublishers.com/r/DA403A06B4DEN.html>

Date: October 2014

Pages: 319

Price: US\$ 3,900.00 (Single User License)

ID: DA403A06B4DEN

## Abstracts

LEXINGTON, Massachusetts (November 1, 2014) – WinterGreen Research announces that it has published a new study DSL and G.fast Chips: Market Shares, Strategy, and Forecasts, Worldwide, 2014 to 2020. The 2014 study has 319 pages, 109 tables and figures. Worldwide DSL and G.fast Chips markets are increasingly diversified, poised to achieve significant growth as broadband is used in every industry segment.

End to end broadband networks leverage a combination of optical infrastructure in the long haul and copper infrastructure in the last few meters from the distribution box to the home. Fiber has had rapid advance but does not work in the end, it is too expensive to the home. FTTH is too expensive and DSL continues to be a viable alternative, with DSL set to be replaced at the high end initially by G.fast. Copper based broadband technologies promise to last for a long long time. Though for many years FTTH has threatened to make xDSL obsolete, this has not proven to be the case.

Copper represents an installed infrastructure worth trillions and too expensive to just replace. Fiber is too expensive to use it to replace all the copper. FTTH DSL and G.fast, the copper works in many cases and does not need to be replaced. xDSL markets will be strong for some long time to come as copper remains a transport line.

Copper is everywhere in the telecommunications network. It is still the primary wireless backbone transport means, meaning it continues to be vital as new wireless systems continue to expand their markets. It predominates in the local loop, creating demand for systems that are able to support high speed signal transport over copper wire.

Copper based broadband is and will remain for the foreseeable future, the dominant broadband access technology across the globe. Broadband service providers who rely

on copper loops for broadband access have to improve broadband performance and extend its life.

Choices between DSL technologies and G.fast are based on cost. Fiber technologies are used to come to the curb. DSL and G.fast represent a hybrid rooted in a network planning.

Copper based broadband continues to be the dominant broadband access technology across the globe. Broadband service providers who rely on copper loops for broadband access have options to improve broadband performance and extend their life. Despite its throughput limitations, considerable research and development is taking place to improve DSL performance.

Cable boasts faster speed than DSL Internet i. However, cable does not always deliver on the promise in everyday practical use. Cable technology supports 30 Mbps of bandwidth, whereas most forms of DSL cannot reach 10 Mbps.

One type of DSL technology, VDSL, can match cable's performance, also supporting 30 Mbps. However, Internet service providers generally do not offer VDSL, but rather the cheaper and slower ADSL or SDSL services. Cable modem services can slow down significantly if many people in your neighborhood access the Internet simultaneously.

According to Susan Eustis, lead author of the WinterGreen Research team that prepared the study, "The opportunity to participate in DSL and G.fast Chips markets is compelling illustration of the ability to leverage seemingly outdated copper infrastructure to breathe new life into existing investment. This market is evolving as new technology and vectoring are implemented, based on breakthroughs and innovation. Technology platforms are rapidly evolving."

Consideration of DSL and G.fast chips market forecasts indicates that markets at \$939 million will reach \$4.7 billion by 2020. Growth comes as every industry achieves leveraging broadband to make social media and smart phones work to grow the business. DSL and G.fast are able to make the benefits of broadband available to consumers and support network flexibility for the modern enterprise. DSL and G.fast networks are flexible and able to reach customers on the go. Broadband is used for video and entertainment delivery.

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, electronics.ca, Bloomberg, and Thompson Financial. WinterGreen Research is positioned to help customers facing challenges that define the modern enterprises.

The increasingly global nature of science, technology and engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust wintergreen research to work alongside them to ensure the success of the participation in a particular market segment.

WinterGreen Research supports various market segment programs; provides trusted technical services to the marketing departments. It carries out accurate market share and forecast analysis services for a range of commercial and government customers globally. These are all vital market research support solutions requiring trust and integrity.

## Contents

### DSL AND G.FAST CHIPS EXECUTIVE SUMMARY

End To End Broadband Networks

DSL Set To Give Way To G.Fast

Vendor DSL and G.Fast Positioning

Data And Video Traffic Surpass Voice Traffic DSL Chip Market Shares DSL Chip Market Forecasts

### 1. DSL CHIP MARKET DYNAMICS AND MARKET DESCRIPTION

#### 1.1 Digital Subscriber Line (DSL) Chips

1.1.1 Demand for Broadband Services and Market Opportunities for Service Providers

1.1.2 High-Performance Communications Processing

1.1.3 Key Benefits of DSL Technology

1.1.4 Improving Time-To-Market With Programmable Systems-Level Products

1.1.5 DSL Provides Cost-Effective, High-Performance Transmission Over Existing Copper Lines

1.1.6 End-to-End DSL Products

#### 1.2 Stability Of Global Credit And Financial Markets

#### 1.3 DSL Design Wins

1.3.1 Semiconductor Components

#### 1.4 Communications Industry

1.4.1 Carrier Networking

1.4.2 Enterprise Networking

1.4.3 Cloud Computing

1.4.4 Increasing Demands for 'Next-Generation Networking' Integrated Circuits

#### 1.5 Communications Strategy

#### 1.6 Internet And Wireless Dominate Communications Technology

1.6.1 Optical Networks

1.6.2 Data And Video Traffic Being Added In Abundance To Voice Traffic

1.6.3 Semiconductor Companies Design DSL

#### 1.7 Storage Industry

#### 1.8 Mixed Signal Integrated Circuit Market

1.8.1 Network Access Last Mile Of Telecommunications Network

1.8.2 Metropolitan Area Networks

1.8.3 Internet

#### 1.9 Signal Processing

## 1.10 Product Positioning

## **2. DSL AND G.FAST CHIPS MARKET SHARES AND MARKET FORECASTS**

### 2.1 End To End Broadband Networks

#### 2.1.1 DSL Set To Give Way To G.Fast

#### 2.1.2 Vendor DSL and G.Fast Positioning

#### 2.1.3 Data And Video Traffic Surpass Voice Traffic

### 2.2 DSL Chip Market Shares

#### 2.2.1 Skipio G.Fast Gigabit Ultra Broadband

#### 2.2.2 Broadcom

#### 2.2.3 Ikanos

#### 2.2.4 Ikanos Shipments

#### 2.2.5 Ikanos VDSL

#### 2.2.6 Lantiq Broadband Solutions

#### 2.2.7 MediaTek / Ralink / Trendchip

### 2.3 DSL Chip Market Forecasts

#### 2.3.1 G.fast and Digital Subscriber Line (DSL) Market Forecasts

#### 2.3.2 G.fast Chip Market Shipments Forecasts

#### 2.3.1 G.fast Modem Chipsets

#### 2.3.2 Broadband DSL and G.fast Market Forecasts, Low End, Mid Range, and High End Units and Dollars

#### 2.3.3 Broadband DSL and G.fast Chip Market Forecasts, Low End, Mid Range, and High End Units and Dollars

#### 2.3.4 DSL and G.fast High-End Market Forecasts

#### 2.3.5 DSL and G.fast Chip Mid-Range Market Shipments Forecasts

#### 2.3.6 DSL and G.fast Low-End Market Forecasts

#### 2.3.7 Broadband DSL and G.fast Chip Market Forecasts, Low End, Mid-Range, and High End

#### 2.3.8 Broadband Subscriber Analysis

#### 2.3.9 DSL Subscriber Forecasts

#### 2.3.1 Digital Subscriber Line (DSL) Subscriber Markets

#### 2.3.2 U.S. Broadband Connections

#### 2.3.3 US's Providers AT&T and Verizon Begin Retracting From The DSL Market

#### 2.3.4 Impact of Fiber on DSL

#### 2.3.5 Ethernet

### 2.4 Research and Development

### 2.5 G.fast and DSL Chip Applications

### 2.6 G.Fast / DSL Chip Prices

## 2.7 DSL Chip Regional Market

- 2.7.1 DSL Regional Market Analysis
- 2.7.2 xDSL and G.fast Connections
- 2.7.3 Video Industry Is Undergoing Fundamental Changes
- 2.7.4 DSL Component Shipments by Vendor by Region
- 2.7.5 China

## 3. DSL AND G.FAST CHIPS: PRODUCT DESCRIPTION

### 3.1 Skipio G.Fast

- 3.1.1 G.fast Chipsets Skipio Creates New Era of Affordable Gigabit Ultra Broadband
- 3.1.2 FTTH vs. G.Fast Costs for Services Providers
- 3.1.3 Skipio G.fast Devices
- 3.1.4 Lantiq Residential Gateway Reference Design Based on Skipio G.fast Solution

### 3.2 Broadcom

- 3.2.1 Broadcom BCM6519 Multi-DSL Transceiver
- 3.2.2 Broadcom BCM6529 Low Power Dual-Channel Analog Front End Device
- 3.2.3 Broadcom BCM65300 VDSL2 G.Vector Central Office SoC
- 3.2.4 Broadcom BCM65x00 Family Central Office High Density Multi-DSL Chipset
- 3.2.5 Broadcom BCM6515 High-Performance VoIP Digital Signal Processor
- 3.2.6 Broadcom xDSL CPE Solutions
- 3.2.7 BCM63168 xDSL Integrated Access Device SoC
- 3.2.8 BCM6338 ADSL2+ Router Solution
- 3.2.9 BCM6348 Single-Chip ADSL2+ CPE Chip
- 3.2.10 BCM6358 Single-Chip ADSL2+ Integrated Access Device Solution
- 3.2.11 BCM6362 Single-Chip IAD with Integrated ADSL2+, 802.11n and DECT
- 3.2.12 BCM6368 Residential VDSL2/ADSL2+ Gateway Solution

### 3.3 Lantiq

- 3.3.1 Lantiq VDSL2
- 3.3.2 Lantiq - VINAX V3 Architecture
- 3.3.3 Lantiq One Chip Solution VRX220 Carrier xDSL Entry Gateway Solution
- 3.3.4 Lantiq XWAY VRX200
- 3.3.5 Lantiq XWAY VRX288 / VRX208
- 3.3.6 Lantiq XWAY VRX268 / VRX208
- 3.3.7 Lantiq CONVERGATE
- 3.3.8 Lantiq MELT
- 3.3.9 Lantiq VINETIC-LTC
- 3.3.10 Lantiq Smart SLIC-T
- 3.3.11 Lantiq XWAY DANUBE

### 3.4 Ikanos

3.4.1 Ikanos Chipsets for Central Office and Customer Premises Equipment

3.4.2 Ikanos Chipsets for Central Office Equipment

3.4.3 Ikanos Chipsets for Customer Premises Equipment

3.4.4 Ikanos Velocity A/VDSL CO Chipset

3.4.5 Ikanos Accelity-2+ 8-Port VDSL2 Central Office Chipsets

3.4.6 Ikanos' Accelity DA87781 VDSL2 CPE Chipset

3.4.7 Ikanos Fx-5 CO

3.4.8 Ikanos Orion Plus CX98124-11Z

3.4.9 Ikanos' Orion Plus Four-Channel Single-Pair High-Speed Digital Subscriber Line (SHDSL) Chipset

3.4.10 Ikanos Fusiv Vx185/183

### 3.5 Analog Devices

3.5.1 Analog Devices VDSL Deployment Configurations

3.5.2 Analog Devices Data Rates And Spectrum Allocation

3.5.3 Analog Devices VDSL Data Rates

### 3.6 Google

3.6.1 Google Developing Method For Operating A Vectored VDSL Line Group

3.6.2 Google Addresses DSL Vectoring

### 3.7 MediaTek xDSL(Ralink) / Trendchip

### 3.8 IXYS Integrated Circuits

## 4. DSL CHIP TECHNOLOGY

### 4.1 Google DSL Memory Efficiency

4.1.1 Google Approach to Vectoring Mitigation Of Crosstalk Inherent In Twisted-Pair DSL Networks

4.1.2 Google Approach to Changing DSL Characteristics and Operating Conditions

4.1.3 Google DSL Non-Uniform Symbol Usage Distribution

### 4.2 Gigabit (or 1,000 Mbps) FTTP Deployments

### 4.3 VDSL G.Fast and Vectoring 2.0

4.3.1 G.fast – Uses 106mhz Of Phone Wire Spectrum To Deliver Gigabit Broadband

4.3.2 G.fast – Uses 106mhz Of Wire Spectrum To Deliver Gigabit Broadband

### 4.4 Copper Pair Bonding

4.4.1 DSL Vectoring

4.4.2 G.Fast & FTTdp Model From Lantiq

4.4.3 Germany Puts Off Vectoring Another Six Months

4.4.4 G.FAST At Hundreds Of Meg Demoed By British Telecom & Huawei

4.4.5 France Telecom Wants Fiber To The Basement, Not All The Way Home



- 4.4.6 Broadcast / G.Fast Interference
- 4.4.7 Vectoring Costs From \$300 (Dense) To \$1500 (Fiber To The Farm)
- 2.8 Cost Dynamics Of Deploying Fiber
  - 4.4.8 xDSL REPEATERS
  - 4.4.9 G.fast
  - 4.4.10 Production-Ready G.hn/G.now
- 4.5 Delivering Video-Intensive Services
- 4.6 VDSL vs. Cable
- 4.7 Ikanos Technologies
  - 4.7.1 Advanced Bonding Capabilities
  - 4.7.2 Flexible Network Interfaces
- 4.8 Ikanos NodeScale Vectoring
  - 4.8.1 Ikanos Quality Video (iQV) technology
- 4.9 Telecommunications and DSL Standards Organizations
  - 4.9.1 ATIS
  - 4.9.2 Broadband Forum
  - 4.9.3 ETSI
  - 4.9.4 FSAN
  - 4.9.5 Home Gateway Initiative
  - 4.9.6 The International Telecommunications Union
  - 4.9.7 TTC
  - 4.9.8 UNH-IOL
  - 4.9.9 The FTTH Council Europe
  - 4.9.10 The FTTH Council Asia-Pacific
  - 4.9.11 The Broadband Forum
  - 4.9.12 Home Gateway Initiative
  - 4.9.13 Communications Standards Bodies:

## **5 DSL CHIP COMPANY PROFILES**

- 5.1 Analog Devices
  - 5.1.1 Analog Devices Focus On Key Strategic Markets
  - 5.1.2 Analog Devices Broad Line Of High-Performance ICs
  - 5.1.3 Analog Devices Digital Signal Processing Products
  - 5.1.4 Analog Devices Revenue
  - 5.1.5 Analog Devices Revenue Trends by End Market
  - 5.1.6 Analog Devices Industrial –
  - 5.1.7 Analog Devices Automotive –
  - 5.1.8 Analog Devices Consumer –



- 5.1.9 Analog Devices Communications –
- 5.1.10 Analog Devices Markets and Applications
- 5.1.11 Analog Devices Industrial and Instrumentation Segments
- 5.1.12 Analog Devices Defense/Aerospace Segment
- 5.1.13 Analog Devices Energy Management Segment
- 5.1.14 Analog Devices Healthcare Segment
- 5.1.15 Analog Devices Automotive Segment
- 5.1.16 Analog Devices Consumer Segment
- 5.1.17 Analog Devices Communications Segment
- 5.1.18 Analog Devices Segment Financial Information and Geographic Information
- 5.1.19 Analog Devices Revenue Trends by Product Type
- 5.1.20 Analog Devices Revenue Trends by Geographic Region
- 5.2 Arris
  - 5.2.1 Arris Revenue
- 5.3 Broadcom
  - 5.3.1 Broadcom Broadband Communications Solutions
  - 5.3.2 Broadcom Mobile & Wireless (Solutions for the Hand)
  - 5.3.3 Broadcom Infrastructure & Networking (Solutions for Infrastructure)
  - 5.3.4 Broadcom Customers and Strategic Relationships
- 5.4 BroadLight
- 5.5 Cavium
  - 5.5.1 Cavium Customers and Target Markets
- 5.6 Freescale Semiconductor
  - 5.6.1 Freescale Embedded Innovation
- 5.7 Ikanos
  - 5.7.1 Ikanos Outsourcing and Value Chain
  - 5.7.2 Ikanos Net Loss
  - 5.7.3 Service Provider Platform Deployments
  - 5.7.4 Ikanos Revenue
  - 5.7.5 Ikanos Acquired from Conexant Systems, its Broadband Access Product Line
  - 5.7.6 Ikanos Product Lines
  - 5.7.7 Ikanos Solution
  - 5.7.8 Key Features of Ikanos Technology
  - 5.7.9 Ikanos Major Service Provider Customers
  - 5.7.10 Ikanos Service and Support for Customers and Service Providers
  - 5.7.11 Sales, Business Development and Product Marketing
  - 5.7.12 Ikanos Go to Market Strategy
  - 5.7.13 Ikanos / Aricent
  - 5.7.14 Ikanos / ASSIA, Inc.

- 5.7.15 Ikanos / Atheros
- 5.7.16 Ikanos / DSP Group
- 5.7.17 Ikanos / D2 Technologies
- 5.7.18 Ikanos / Gatespace
- 5.7.19 Ikanos / Jungo
- 5.7.20 Ikanos / picoChip
- 5.7.21 Ikanos / Ralink
- 5.7.22 Ikanos / SoftAtHome
- 5.7.23 Ikanos / Sunrise Telecom
- 5.7.24 Ikanos / Wintegra
- 5.8 Infineon Technologies
  - 5.8.1 Infineon Technologies Revenue
- 5.9 IXYS Integrated Circuits Division
  - 5.9.1 IXYS Integrated Circuits Distribution Channels
  - 5.9.2 IXYS Integrated Circuits / Clare
- 5.10 Lantiq
- 5.11 Marvell
- 5.12 MediaTek / Ralink Technology
  - 5.12.1 MediaTek / Ralink / Trendchip xDSL
  - 5.12.2 MediaTek xDSL(Ralink)
- 5.13 PMC-Sierra
- 5.14 Pulse
- 5.15 Sckipio
- 5.16 Shantou New Tideshine Electron
- 5.17 Shenzhen Chaoyue Electronics Co., Ltd.
- 5.18 Shenzhen Sky Foundation
- 5.19 Shenzhen Tianxiaowei Electronics Co., Ltd.
- 5.20 ZTE
  - 5.20.1 ZTE Revenue
- 5.21 Other xDSL Chip Based Products and Market Participants

## List Of Tables

### LIST OF TABLES AND FIGURES

Table ES-1 DSL G.Fast Chip Market Driving Forces

Table ES-2 Vendor DSL and G.Fast Competitive Positioning Factors

Figure ES-3 Global Voice vs. Data Traffic

Figure ES-4 DSL Chip Market Shares, Dollars, 2013

Figure ES-5 DSL and G.Fast Chip Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Figure 1-1 DSL / FTTx Speeds

Table 1-2 Highly-Integrated Chip Solutions

Table 1-3 Digital DSL Product Positioning

Table 1-4 Digital DSL Advantages

Table 2-1 DSL G.Fast Chip Market Driving Forces

Table 2-2 Vendor DSL and G.Fast Competitive Positioning Factors

Figure 2-3 Global Voice vs. Data Traffic

Figure 2-4 DSL Chip Market Shares, Dollars, 2013

Table 2-5 DSL Component Shipments Dollars, Worldwide, 2013

Figure 2-6 DSL and G.Fast Chip Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Table 2-7 Broadband DSL and G.fast Chip Market Forecasts, Dollars Worldwide, 2014-2020

Figure 2-8 DSL Chip Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Figure 2-9 DSL Chip Unit Forecasts, Number, Worldwide, 2014-2020

Table 2-10 Broadband DSL and G.fast Copper Broadband Infrastructure Market Forecasts, Units Worldwide, 2014-2020

Figure 2-11 G.fast Chip Market Shipments Forecasts Dollars, Worldwide,

Figure 2-12 G.fast Chip Unit Forecasts, Number, Worldwide, 2014-2020

Table 2-13 Broadband DSL and G.fast Market Forecasts, Low End, Mid Range, and High End Units and Dollars Worldwide, 2014-2020

Table 2-14 Broadband DSL and G.fast Market Forecasts, Low End, Mid Range, and High End Units Worldwide, 2014-2020

Figure 2-15 DSL and G.fast Chip High End Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Figure 2-16 DSL and G.fast High-End Market Forecasts, Units, Worldwide,

Figure 2-17 DSL and G.fast Chip Mid-Range Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Figure 2-18 DSL and G.fast Mid-Range Market Forecasts, Units, Worldwide,

Figure 2-19 DSL and G.fast Chip Low End Market Shipments Forecasts Dollars, Worldwide, 2014-2020

Figure 2-20 DSL and G.fast Low-End Market Forecasts, Units, Worldwide, 2014-2020

Table 2-21 Broadband DSL and G.fast Chip Market Forecasts, Low End, Mid-Range, and High End Units Worldwide, 2014-2020

Table 2-22 Broadband DSL and G.fast Market Forecasts, Low End, Mid Range, and High End Units and Dollars Worldwide, 2014-2020

Table 2-23 Broadband DSL and G.fast Market Forecasts, Low End, Mid Range, and High End Units and Dollars Percent of Total Shipments Worldwide, 2014-2020

Table 2-24 Broadband DSL and G.fast Market Forecasts, Low End, Mid-Range, and High-End Units and Dollars Percent of Total Shipments Worldwide, 2014-2020

Figure 2-25 DSL and G.fast Copper Infrastructure Subscriber Forecasts, Number, Worldwide, 2014-2020

Figure 2-26 G.fast Copper Infrastructure Subscriber Forecasts, Number, Worldwide, 2014-2020

Figure 2-27 DSL Subscriber Forecasts, Number, Worldwide, 2014-2020

Table 2-28 Broadband DSL, Cable Modem, Wireless Device, and Fiber to the Home Subscribers Worldwide, 2014-2020

Table 2-29 Ethernet Market Aspects

Figure 2-30 Explosion of Protocols

Figure 2-31 Broadband Services Typical Speed in Mbps

Table 2-32 Broadband Fiber Cost Per Household to Build Out

Table 2-33 DSL Chip Applications

Figure 2-34 DSL Regional Market Segments, 2013

Table 2-35 DSL Regional Market Segments, 2013

Table 2-36 DSL Component Shipments by Vendor by Region Dollars, Worldwide, 2013

Figure 3-1 FTTH vs. G.Fast Costs for Services Providers

Table 3-2 Broadcom DSL Products

Table 3-3 Broadcom BCM6519 Multi-DSL Transceiver Features

Table 3-4 Broadcom BCM6529 Low Power Dual-Channel Analog Front End Device Features

Table 3-5 Broadcom BCM65300 VDSL2 G.vector Central Office SoC Features

Table 3-6 Broadcom's new BCM65x00 Family Central Office SoC Features

Table 3-7 Broadcom BCM6515 High-Performance VoIP Digital Signal Processor Features

Table 3-8 Broadcom Applications

Table 3-9 Lantiq VINAX V3 Key Features

Table 3-10 Lantiq VDSL Products

Table 3-11 Lantiq Cost-Optimized Design Functions

Figure 3-12 Ikanos 496pix_Velocity_Chipset2	
Table 3-13 Ikanos Communications Processors	
Table 3-14 Ikanos DSL Chipsets	
Figure 3-15 Ikanos Velocity Chip Architecture	
Table 3-16 Ikanos Velocity A/VDSL CO Chipset Key Features	
Figure 3-17 Ikanos Accelity-2+ AD11008	
Table 3-18 Ikanos Accelity-2+ AD11008 Key Features	
Table 3-19 Ikanos Accelity-2+ AD11008 Applications	
Table 3-20 Ikanos Accelity DA87781 Applications	
Table 3-21 Accelity DA87781 Family Product Key Features	
Figure 3-22 Ikanos Central Office Architecture	
Figure 3-23 Ikanos DSL System Architecture Block Diagram	
Figure 3-24 Ikanos Orion Plus Block Diagram	
Table 3-25 Ikanos Orion Plus CX98124-11Z Key Features	
Table 3-26 Ikanos Fusiv Vx185/183 Key Features	
Figure 3-27 Ikanos Fusiv Vx185 System Architecture	
Table 3-28 Analog Devices Very-High-Speed Digital Subscriber-Line (VDSL) Technology Issues	
Figure 3-29 Analog Devices Deployment of VDSL Limited To A Loop Length	
Table 3-30 Analog Devices VDSL Data Rates And Spectrum Allocation	
Figure 3-31 Analog Devices VDSL Frequency Plan For North America	
Figure 3-32 Analog Devices Magnitude Response Of A Bridged-Tap Loop	
Table 3-33 Google Addresses DSL Vectoring	
Table 3-34 MediaTek Product Advantages	
Table 3-35 MediaTek / Ralink Comprehensive Product Portfolio	
Figure 4-1 Network Configurations	
Figure 4-2 Innovation In Copper Supports Fiber to Curb Rollout Leveraging Endpoints Using G.fast	
Figure 4-3 G.fast Vectoring	
Figure 4-4 Fiber to the Distribution Point Architecture	
Figure 4-5 Typical DSL Downstream Broadband Capability	
Figure 4-6 G.fast Copper Network Solution	
Figure 4-7 Broadband Services Typical Speed in Mbps	
Table 4-8 Ikanos NodeScale Vectoring Product Key Features	
Table 4-9 Ikanos Quality Video (iQV) technology Key Features	
Table 5-1 Analog Devices Embedded In Electronic Equipment	
Table 5-2 Analog Devices Industrial And Instrumentation Market Applications	
Table 5-3 Analog Devices Defense/Aerospace Products	
Table 5-4 Analog Devices Energy Management Segment Products	

Table 5-5 Analog Devices Healthcare Segment Innovative Technologies

Table 5-6 Analog Devices Green Automotive Segment

Table 5-7 Analog Devices Safety Automotive Segment

Table 5-8 Analog Devices Comfort Automotive Segment

Table 5-9 Analog Devices Consumer Segment Products

Table 5-10 Analog Devices Communications Segment Systems

Table 5-11 Analog Devices Revenue by Region

Table 5-12 Broadcom Broadband Communications Solutions

Table 5-13 Broadcom Customers and Strategic Relationships

Table 5-14 Ikanos Product Lines

Table 5-15 Ikanos Works Directly With Various Major Service Providers

Figure 5-16 MediaTek Revenue

Table 5-17 MediaTek Industry Leadership

Figure 5-18 MediaTek Product Portfolio

Table 5-19 MediaTek Product Advantages

Table 5-20 MediaTek / Ralink Comprehensive Product Portfolio

## I would like to order

Product name: DSL and G-fast Chips: Market Shares, Strategies, and Forecasts, Worldwide, 2014-2020

Product link: <https://marketpublishers.com/r/DA403A06B4DEN.html>

Price: US\$ 3,900.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/DA403A06B4DEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970