
Description: 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.

Broadband Internet is used in all corners of the world. It is set to be used by everyone by 2025. There is a lot left to be done. Networking services company Akamai says the second quarter of 2014 marks the first time the global average broadband speed jumped over the 4-megabit mark.

South Korea occupies the top broadband user category in both average bandwidth (24.6 megabits) and proportion of the population on a broadband connection (95 percent, tied with Bulgaria). Smaller islands, the Philippines, countries with lots of rural areas, like India, are struggling to deliver useful speeds.

The U.S. falls behind East Asia, ranking somewhere in the middle, with the Nordic countries, in terms of broadband speed and penetration. Inside the U.S., Delaware appears well equipped with broadband — the Mid-Atlantic state ranked first in every category: average speed, peak speed, connectivity and even "4K readiness," referring to the 15 megabit speed that can handle ultra high-def broadcasts. The slowest US state is Arkansas.

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 re3placed. xDSL markets will be strong for some long time to come as copper remains a transport line.

G.fast leverages copper infrastructure that is everywhere in the telecommunications network. Copper provide connectivity to all residences. Copper 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.

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 G.fast provides the ability to leverage outdated copper infrastructure to breathe new life into existing investment.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

Consideration of G.fast chips market forecasts indicates that markets at $31 million in 2014 will reach $2.9 billion by 2020. Growth comes as every industry achieves leveraging broadband to make social media and smart phones work to grow the business. G.fast is able to make the benefits of broadband available to consumers and support network flexibility for consumers, data centers, and cell tower backbone communications. G.fast networks are flexible and support broadband that is able to reach.

Key Topics:
- G.fast
- G.fast Vectoring
You Must Have This Study:

- New technology is evolving
- G.fast is poised for rapid adoption
- Copper networks are needed to supplement fiber communications

Market Opportunity:

- G.fast is 10 times less expensive than DSL chips
- G.fast is working
- G.fast mature faster than suppliers expected

Market Challenges:

- DSL is set to dominate at the low end
- G.fast needs improvements at the high end for vectoring
- G.fast needs more development in the basic technology
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 Sckipio 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 Sckipio G.Fast
3.1.1 G.fast Chipsets Sckipio Creates New Era of Affordable Gigabit Ultra Broadband
3.1.2 FTTH vs. G.Fast Costs for Services Providers
3.1.3 Sckipio G.fast Devices
3.1.4 Lantiq Residential Gateway Reference Design Based on Sckipio 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 VDSL
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.
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 Skcipio  
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 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
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