

Plastic Optical Fiber

POFDAY **SYMPOSIUM**

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POFTO Secretariat:

IGI Group

320 Washington Street, Suite 302

Brighton, MA 02135

pofto@igigroup.com

POF Markets for Less Than 100 Meters: Active Optical Cables

Paul Polishuk, Co-Chair

Plastic Optical Fiber Trade Organization (POFTO)



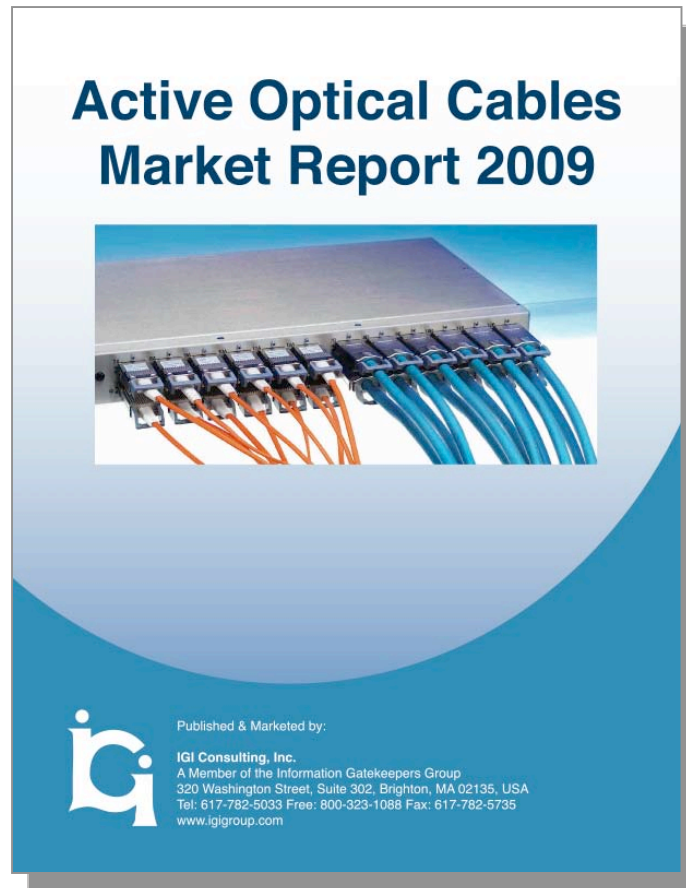
**Plastic Optical Fiber
Trade Organization**

Visit us at the
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www.pofto.com

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Active Optical Cables Market Report 2009



Active Optical Cables Market Report 2009

This material is taken from a market study on Active Optical Cables from IGI Consulting completed in January.

Report is 172 pages long, contains 166 figures, 120 tables and is available for viewing at booth 2134.

The report may be ordered directly at:

<http://igigroup.com/st/pages/aoc.html>

Definition

Active Optical Cable (AOC)

A term used to describe a cable that mates with standard electrical interfaces. It uses electrical-to-optical conversion on the cable ends to improve speed and distance performance of the cable without sacrificing compatibility with standard electrical interfaces.

Benefits of AOC

- Longer reach
- Higher bandwidth
- Independent of transceiver type
- Lower interconnection costs
- EMI Immunity
- Smaller size compared to copper cables
- Lower weight compared to copper cables

Market Drivers

- Small size
 - prevent blocking of air flow for HPCs
- Light weight
- Greater reach
- Higher bandwidth

Markets

- Mainframes/Supercomputers (HPC)
- Personal Computers (Desktop & Notebook)
- High definition Television (HDMI)
- Consumer electronics

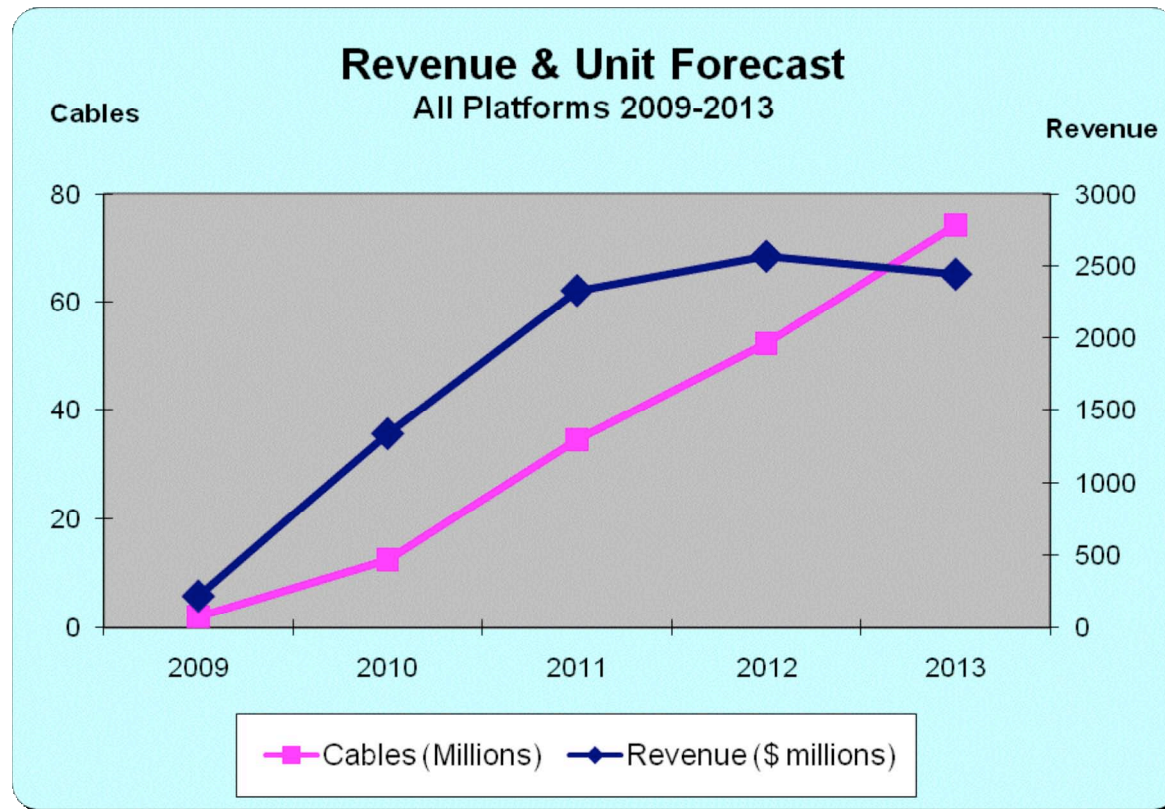
AOC Protocols

- Infiniband
- USB
- HDMI
- DisplayPort

Market Size and Trends

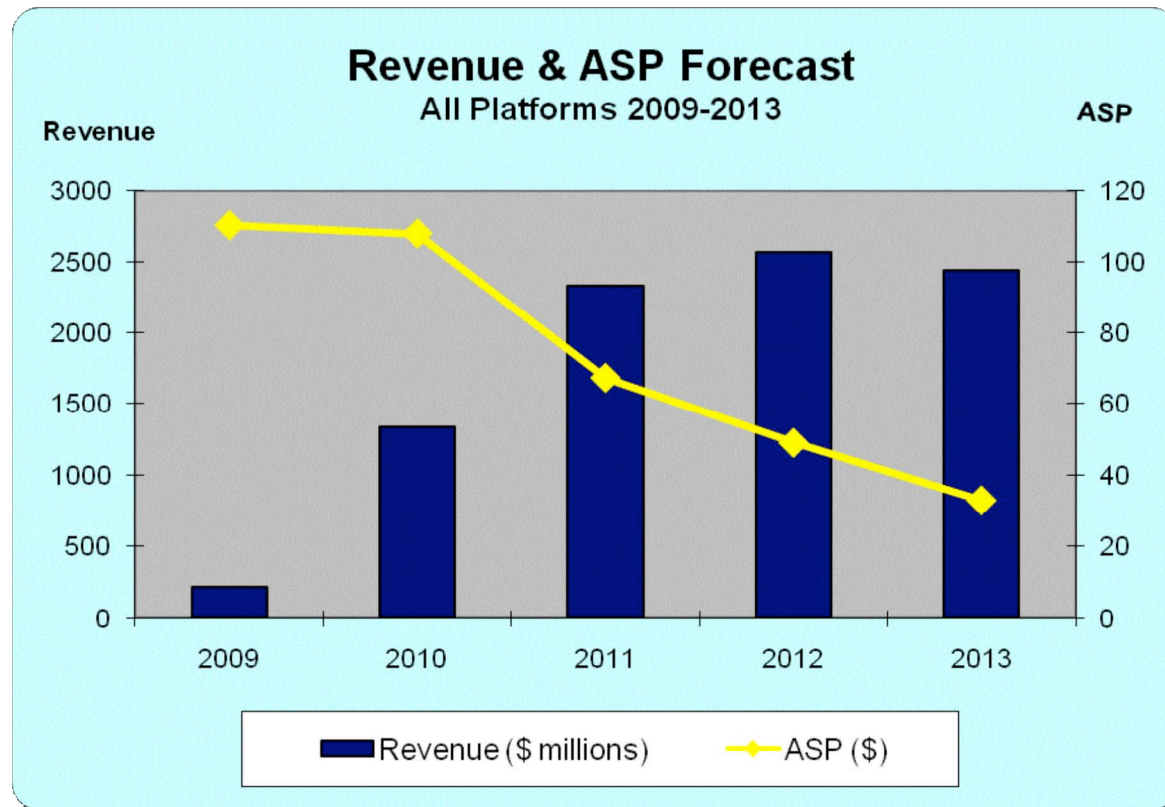
- The AOC Market is estimated to be \$221 million in 2009 growing to over \$2.4 billion in 2013
- The average selling price in 2009 is \$100.00 per AOC decreasing to \$33.00 in 2013
- Two million units are forecasted to be shipped in 2009, rising to 74 million in 2013
- The total optical fiber length is 47 million meters in 2009 to nearly 1.1 billion in 2013
- VCSEL shipments across all speed range from 7.9 million in 2009 to over 200 million by 2013.

Revenue & Unit Forecast (2009-2013 All Platforms)



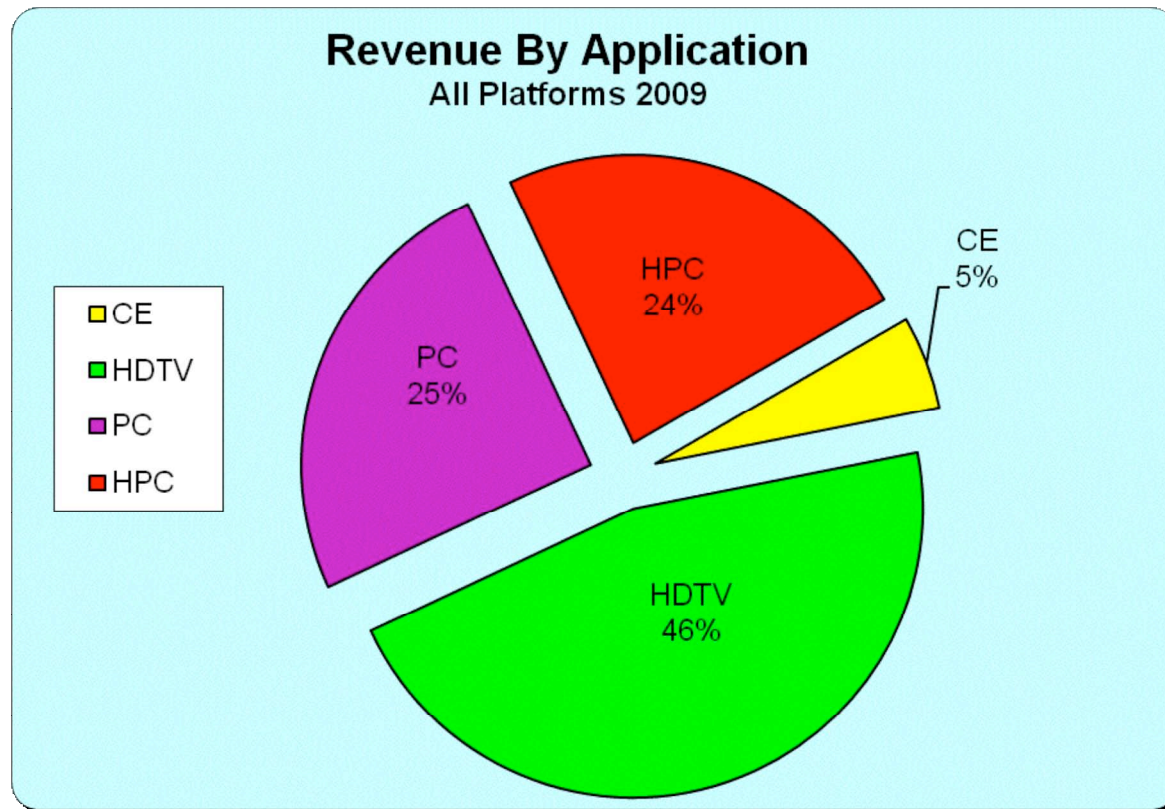
Source: Solutions By Design (c) 2009

Revenue & ASP Forecast (2009-2013 All Platforms)



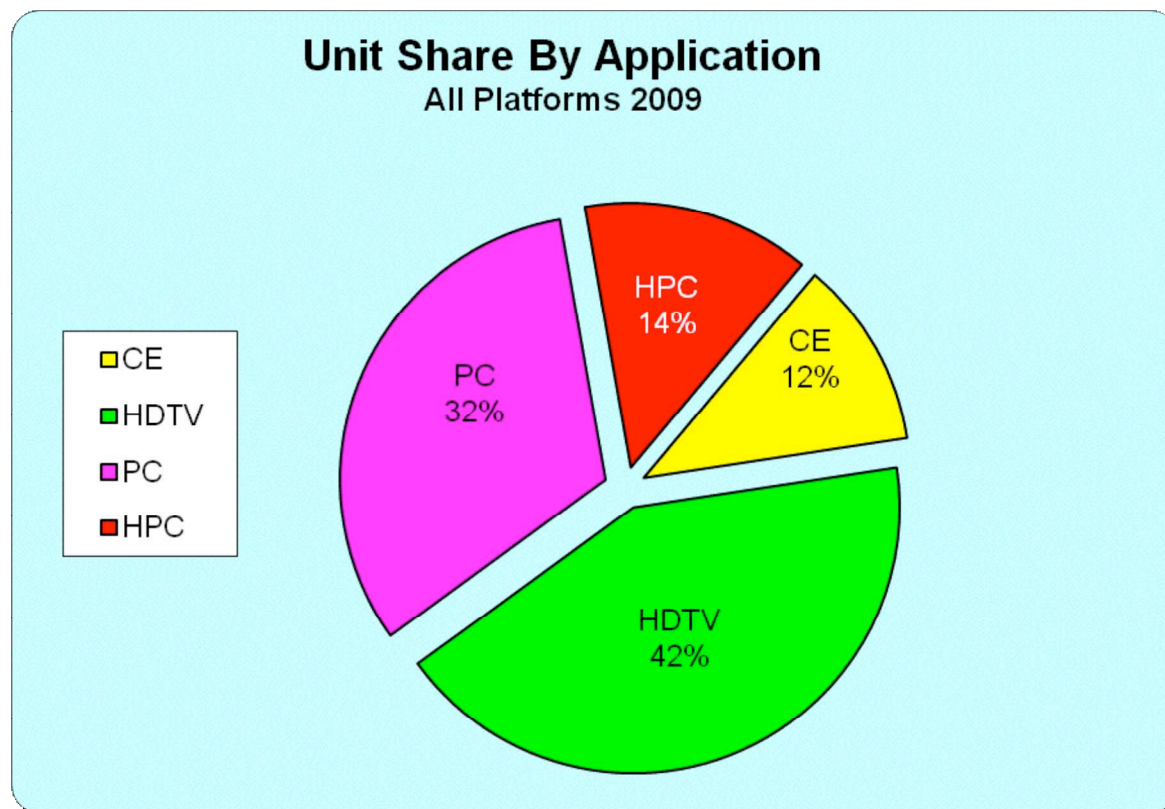
Source: Solutions By Design (c) 2009

Revenue by Application Type (2009 All Platforms)



Source: Solutions By Design (c) 2009

Unit Share by Application (2009 All Platforms)



Source: Solutions By Design (c) 2009

Speed Trends

- In 2009, 10 Gbps AOC will dominate with 70% market share
- By 2013, 20 Gbps AOC will dominate with a 75% market share
- Bulk of the AOC business is centered on the 10-20Gbps
- For 40 Gbps and above, AOC usage is expected to dominate copper cable share

Cable Suppliers by Protocol

Cable Type	Optical OEM Suppliers
InfiniBand	EMCORE (formerly Intel ICC), Luxtera, Reflex, Zarlink
USB	Numerous
HDMI	Opticis, OwlLink, Hoya-xPonent
DisplayPort	Luxtera

Component Suppliers

Core Component	OEM Suppliers
VCSELs & PIN Diodes	Analog Devices, Avago, EMCORE, Finisar, Fuji-Xerox, JDS Uniphase, Zarlink
Optical Cable	Corning, HanWei, Hitachi Cable, Mitsubishi, others
Connectors	FoxConn, Japan Aerospace Electronics (JAE), Molex, Tyco
Cabling	

Summary

- AOC is one of the most rapidly growing optical fiber markets
– first shipments in 2007
- High Performance computers are the main driver
- Now market is moving towards HDMI and consumer electronics
- More companies expected to enter the market
- AOC represents a "Killer APP" for fiber optics