



## Executive Summary

### E.1 Current Business Conditions in the Datacom Transceiver Market

The market for datacom transceivers is—for obvious reasons—tied to the state of the IT market as a whole and this is not encouraging. As the result of the worldwide economic downturn, CIR expects IT spending to decrease in 2009 and probably in 2010 with single-digit growth in 2011. We do, however, expect double-digit growth for IT spending to return after 2012, assuming an anticipated economic recovery in Q2-Q3 of 2011, and we note that some respectable economic forecasters are more optimistic than we are about this.

Nevertheless, there are technological trends that are offsetting—and will continue to offset—the gloomy economic scenario. The datacom market now has increasingly fuzzy boundaries with the consumer electronics market; in the industrialized nations it is quite normal for consumers to have sophisticated Ethernet networks in their homes and—as is typical for economic recessions—expenditures on consumer items (including consumer electronics) have not declined as rapidly as for capital items. This trend—towards “consumer datacom”—isolates datacom to some extent from a capital/IT spending meltdown and is, incidentally, a permanent feature that somewhat reduces the financial risk associated with the datacom sector as a whole.

The other technological factor that is positive for the datacom transceiver market is the shift to fiber and higher data rates. While the downturn in the economy certainly impacts this trend, it is pretty much unstoppable even in bleak economic times. The need to support video and the fact that processor I/O speeds have now reached a point (or soon will reach a point) where servers and a few high-end PCs will actually need 10-GigE interfaces. We believe that 10 GigE will start to grow very rapidly starting next year and we note that as we went to press with this report, Finisar, one of the most important suppliers of datacom transceivers, produced some fairly good quarterly sales figures (considering the economic climate) and said that product revenues from 10-Gbps modules were particularly strong in the quarter. More generally, we expect that by 2014 about two-thirds of the datacom market will be fiber compared to about XX percent now. All in all, the datacom transceiver market is expected to grow from about \$XX billion in 2009 to \$XX billion in 2014. This includes both copper and fiber connections; copper will not die easily and for very short-haul connections to servers/PCs most people seem to think that the “T” standard will be used.



## Chapter One: Introduction

### 1.1 Background to this Report

CIR has been actively producing reports on the transceiver/transponder market for more than a decade and this is the latest in the series of reports that we have published since before the optical boom and bust era. Originally, we published just a single report on this topic, but for the past few years we have broken the topic up into two volumes, one covering data communications transceivers and the other telecom transceivers/transponders. This volume is the latest iteration of the datacom product series.

Many of the issues and products discussed in this report are the same that we have discussed for years. Market demand for high-speed data com will be driven in the next few years, as it has in the past few years, by traditional growth in Internet traffic, new video services, wireless connectivity, cloud computing and virtualization. There is good reason for optimism about the future of very high-speed networks because of the advent of digital HDTV, IPTV, mobile video for cell phones and handhelds, and video-rich Web sites such as YouTube. The applications for mass market high-definition video will turn the Internet and perhaps wireless networks into primarily video delivery networks with core data rate requirements of 100 Gbps.

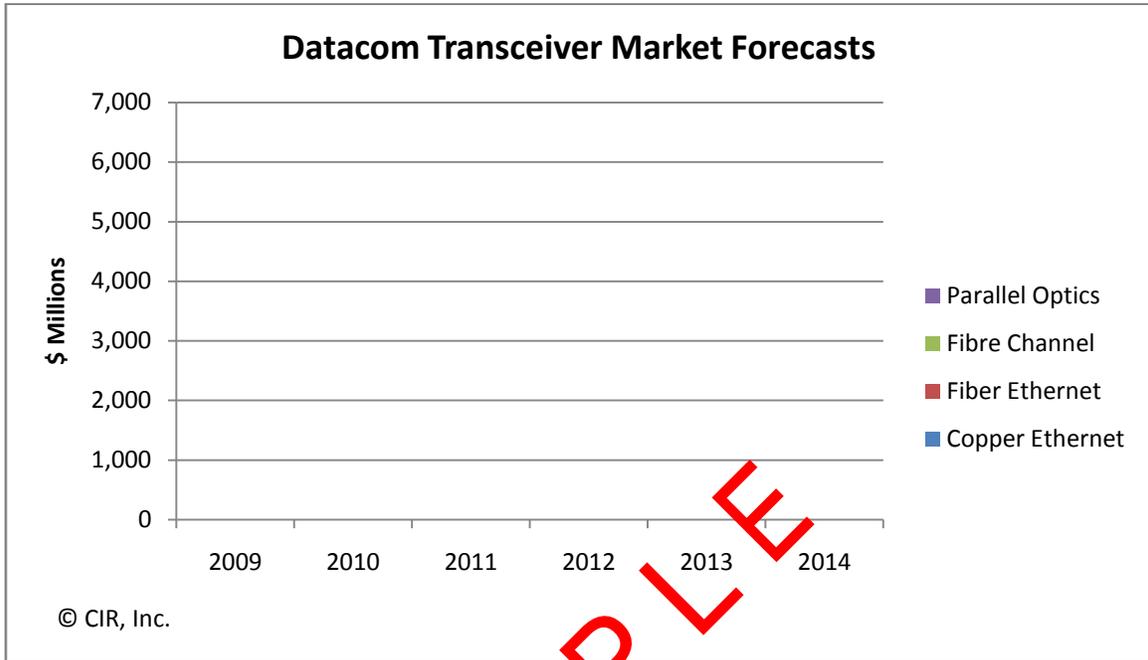
However, in this year's report a number of particular factors—both negative and positive—have risen to the fore and are discussed throughout the report. The biggest negative factor, of course, is the economy which continues to weigh down heavily on IT spending and thus on the purchases of datacom transceivers. This is mitigated by the fact that a new addressable market for high-speed data networking is rapidly emerging in the consumer electronics world and consumer electronics spending has not been hurt as much as capital spending by the downturn. 2008 seems to have been the first year when makers of optical transceivers have really begun to take the consumer market seriously.

This may, of course, simply be because of the recession and the need to turn elsewhere to get orders, but at CIR we also believe that it is an acknowledgement that with the widespread adoption of HDTV, IPTV and high-speed residential Internet services, consumers are going to need fast LANs. The other demand trend that we see as positive is that the likely growth of



Exhibit 3-12 Ethernet Market Value: Analysis						
	2009	2010	2011	2012	2013	2014
<b>10/100 Mbps</b>						
<i>Copper</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>Fiber</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>TOTAL (\$ Millions)</i>						
<b>GigE</b>						
<i>Copper</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>Fiber</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>TOTAL (\$ Millions)</i>						
<b>10 GigE</b>						
<i>Copper</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>Fiber</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>TOTAL (\$ Millions)</i>						
<b>40/100 GigE</b>						
<i>Copper</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>Fiber</i>						
Millions						
ASP (\$)						
Market Value (\$ Millions)						
<i>TOTAL (\$ Millions)</i>						
<b>Total (\$ Millions)</b>						

SAMPLE



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