

# Table of Contents – Optical Transport

	<b>Page No.</b>
<b>Executive Summary</b>	
Significant Changes .....	1
Overview .....	1
Definitions .....	7
Vendor Product Maps .....	11
Methodology .....	13
<b>Worldwide Tables (Mfg. Revenue, Units, Ports/Wavelengths, Mfg. ASP)</b>	
Table 1: Worldwide Optical Transport Market .....	1
Table 2: Worldwide Wavelength Division Multiplexer (WDM) Market .....	2
Table 3: Worldwide Wavelength Division Multiplexer (WDM) - Metro Market .....	3
Table 4: Worldwide Dense Wavelength Division Multiplexer (DWDM) - Long Haul Terrestrial Market .....	5
Table 5: Worldwide Multiservice Multiplexer Market .....	7
Table 6: Worldwide Optical Switch Market .....	9
Table 7: Worldwide Optical Packet Platform Market .....	10
Table 8: Worldwide Data Center Interconnect Market .....	11
Table 9: Worldwide Internet Content Provider Market .....	12
Table 10: Worldwide Disaggregated WDM Systems .....	13
Table 11: Regional Optical Transport Market .....	14
Table 12: Regional WDM Market .....	16
Table 13: Regional Multiservice Multiplexer Market .....	18
Table 14: Regional Optical Switch Market .....	19
<u>Supplemental Analysis</u>	
Table 15: Regional Optical Packet Platform Market .....	20
Table 16: Regional China Market .....	21
Table 17: Regional Data Center Interconnect Market .....	22
Table 18: Worldwide Coherent DWDM Wavelength Shipment – Operating Speed .....	23
Table 19: Worldwide Coherent DWDM Wavelength Shipment – Highest Speed Capable .....	24
Appendix 1: Foreign Currency Exchange Rate .....	25
Appendix 2: Manufacturer Revenues by Select Submarine Line Terminal Vendors .....	26
<b>Vendor Tables</b>	
<b>Total Optical Transport (WDM + Multiservice Multiplexer + Optical Switch)</b>	
Worldwide – Total – Mfg. Revenue .....	27
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue .....	28
<b>Total Wavelength Division Multiplexer (WDM)</b>	
Worldwide – Total – Mfg. Revenue .....	32
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue .....	33
Worldwide – Total – Wavelengths .....	37
Worldwide – <10 Gbps Wavelengths .....	38
Worldwide – 10 Gbps Wavelengths .....	39
Worldwide – 40 Gbps Wavelengths .....	40
Worldwide – 100 Gbps Wavelengths .....	41
Worldwide – 150/200/250 Gbps Wavelengths .....	42
Worldwide – 300/400/600 Gbps Wavelengths .....	43
Worldwide – 700/800 Gbps Wavelengths .....	44
<b>Wavelength Division Multiplexer (WDM) Metro</b>	
Worldwide – Total – Mfg. Revenue, Units, Port ASP .....	45
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue .....	48
Worldwide – Total – Ports .....	52

## Table of Contents – Optical Transport

	<b>Page No.</b>
Worldwide – <10 Gbps Ports.....	53
Worldwide – 10 Gbps Ports .....	54
Worldwide – 40 Gbps Ports.....	55
Worldwide – 100 Gbps Ports.....	56
Worldwide – 150/200/250 Gbps Ports.....	57
Worldwide – 300/400/600 Gbps Ports.....	58
Worldwide – 700/800 Gbps Ports.....	59
Worldwide – Other Ports.....	60
<b>Dense Wavelength Division Multiplexer (DWDM) Long Haul Terrestrial</b>	
Worldwide – Total – Mfg. Revenue, Units, Wavelength ASP.....	61
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue.....	64
Worldwide – Total – Wavelengths .....	68
Worldwide – <10 Gbps Wavelengths .....	69
Worldwide – 10 Gbps Wavelengths .....	70
Worldwide – 40 Gbps Wavelengths .....	71
Worldwide – 100 Gbps Wavelengths .....	72
Worldwide – 150/200/250 Gbps Wavelengths .....	73
Worldwide – 300/400/600 Gbps Wavelengths .....	74
Worldwide – 700/800 Gbps Wavelengths .....	75
<b>Total Multiservice Multiplexer</b>	
Worldwide – Total – Mfg. Revenue, Units, Mfg. ASP.....	76
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue.....	79
Worldwide – OC-3 / STM-1 Units .....	83
Worldwide – OC-12 / STM-4 Units .....	84
Worldwide – OC-48 / STM-16 Units.....	85
Worldwide – OC-192 / STM-64 Units.....	86
Worldwide – Total – Tributary/Line Interfaces .....	87
Worldwide – DS-1 Tributary Interfaces .....	88
Worldwide – DS-3 Tributary Interfaces .....	89
Worldwide – OC-3 / STM-1 Tributary/Line Interfaces .....	90
Worldwide – OC-12 / STM-4 Tributary/Line Interfaces .....	91
Worldwide – OC-48 / STM-16 Tributary/Line Interfaces .....	92
Worldwide – OC-192 / STM-64 Tributary/Line Interfaces .....	93
Worldwide – Other Tributary/Line Interfaces .....	94
<b>Total Optical Switch</b>	
Worldwide – Total – Mfg. Revenue, Units, Mfg. ASP.....	95
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue.....	98
Worldwide – Total – Ports.....	102
Worldwide – 2.5 Gbps Ports.....	103
Worldwide – 10 Gbps Ports.....	104
Worldwide – ≥40 Gbps Ports.....	105
Worldwide – Other Ports.....	106
<b>Optical Packet Platform</b>	
Worldwide – Total – Mfg. Revenue .....	107
Regions – (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue.....	108
Worldwide – Metro – Mfg. Revenue .....	112
Worldwide – Long Haul – Mfg. Revenue.....	113

# Table of Contents – Optical Transport

Page No.

## Supplemental Analysis

### **Data Center Interconnect (DCI) Application**

Worldwide – DCI Application – Total (Metro and Long Haul) – Mfg. Revenue .....	114
Worldwide – DCI Application – Total (Metro and Long Haul) – ≤ 40 Gbps Wavelengths.....	115
Worldwide – DCI Application – Total (Metro and Long Haul) – 100 Gbps Wavelengths .....	116
Worldwide – DCI Application – Total (Metro and Long Haul) – 150/200/250 Gbps Wavelengths.....	117
Worldwide – DCI Application – Total (Metro and Long Haul) – 300/400/600 Gbps Wavelengths.....	118
Worldwide – DCI Application – Total (Metro and Long Haul) – 700/800 Gbps Wavelengths.....	119
Regions – DCI Application – Total (North America, EMEA, Asia Pacific, CALA) – Total – Mfg. Revenue .....	120
Worldwide – DCI Application – Metro – Mfg. Revenue.....	124
Worldwide – DCI Application – Metro – ≤ 40 Gbps Wavelengths .....	125
Worldwide – DCI Application – Metro – 100 Gbps Wavelengths .....	126
Worldwide – DCI Application – Metro – 150/200/250 Gbps Wavelengths .....	127
Worldwide – DCI Application – Metro – 300/400/600 Gbps Wavelengths .....	128
Worldwide – DCI Application – Metro – 700/800 Gbps Wavelengths .....	129
Worldwide – DCI Application – Long Haul – Mfg. Revenue .....	130
Worldwide – DCI Application – Long Haul – ≤ 40 Gbps Wavelengths.....	131
Worldwide – DCI Application – Long Haul – 100 Gbps Wavelengths .....	132
Worldwide – DCI Application – Long Haul – 150/200/250 Gbps Wavelengths .....	133
Worldwide – DCI Application – Long Haul – 300/400/600 Gbps Wavelengths .....	134
Worldwide – DCI Application – Long Haul – 700/800 Gbps Wavelengths .....	135
Worldwide – ICP Customer – Mfg. Revenue .....	136
Worldwide – ICP Customer – ≤ 40 Gbps Wavelengths.....	137
Worldwide – ICP Customer – 100 Gbps Wavelengths .....	138
Worldwide – ICP Customer – 150/200/250 Gbps Wavelengths.....	139
Worldwide – ICP Customer – 300/400/600 Gbps Wavelengths.....	140
Worldwide – ICP Customer – 700/800 Gbps Wavelengths .....	141

### **Subsea Application**

Worldwide – Mfg. Revenue.....	142
-------------------------------	-----

### **Cable MSO**

Worldwide – Mfg. Revenue.....	143
-------------------------------	-----

### **Disaggregated WDM Systems**

Transponder Units – Total – Mfg. Revenue.....	144
Transponder Units – Total – Wavelengths.....	145
Transponder Units – Total – 100 Gbps Wavelengths .....	146
Transponder Units – Total – 150/200/250 Gbps Wavelengths .....	147
Transponder Units – Total – 300/400/600 Gbps Wavelengths .....	148
Transponder Units – Total – 700/800 Gbps Wavelengths .....	149
Transponder Units – Metro – Mfg. Revenue .....	150
Transponder Units – Long Haul – Mfg. Revenue.....	151

### **China Optical Market**

Total Optical – Mfg. Revenue .....	152
Total WDM – Mfg. Revenue .....	153
Total Multiplexer – Mfg. Revenue .....	154

### **Europe Optical Market**

Total Optical – Mfg. Revenue .....	155
Total WDM – Mfg. Revenue .....	156
Total Multiplexer – Mfg. Revenue .....	157

## Table of Contents – Optical Transport

	<b>Page No.</b>
<b>India Optical Market</b>	
Total Optical – Mfg. Revenue .....	158
Total WDM – Mfg. Revenue .....	159
Total Multiplexer – Mfg. Revenue .....	160
<b>Japan Optical Market</b>	
Total Optical – Mfg. Revenue .....	161
Total WDM – Mfg. Revenue .....	162
Total Multiplexer – Mfg. Revenue .....	163
<b>Coherent DWDM Wavelength Shipment – Highest Speed Capable</b>	
Worldwide – Total – Wavelengths .....	164
Worldwide – 100 Gbps Capable Wavelengths .....	165
Worldwide – 200/250 Gbps Capable Wavelengths .....	166
Worldwide – 400 Gbps Capable Wavelengths .....	167
Worldwide – 600 Gbps Capable Wavelengths .....	168
Worldwide – 800 Gbps Capable Wavelengths .....	169