7th Edition

Global BTS Antenna Market Analysis and Forecast, 2015-2019

November 2015
TABLE OF CONTENTS

EXECUTIVE SUMMARY ................................................................. 10
2014 Review: Record Shipment Levels .................................................. 10
2015-2019 Antenna Unit Forecast ...................................................... 14
Demand Drivers for Our Forecast ....................................................... 16
2015-2019 Antenna Revenue Forecast ............................................... 17
2015-2019 Semi-Active Integrated Antenna Revenue Forecast ............... 20
2015-2019 Active Integrated Antenna Revenue Forecast ....................... 22
Summary: It's all about the ports, about the ports, about the ports .......... 23
RESEARCH METHODOLOGY ....................................................... 25
Antenna Categories .................................................................. 25
CHAPTER 1: OVERALL BTS ANTENNA MARKET PERFORMANCE .......... 27
1.1 2014: Multi-port Continues for Shipments .................................... 27
1.2 BTS Antenna Revenues Increased 49% ......................................... 34
1.3 2014 Antenna Supplier Market Share ............................................ 38
1.4 Market Issues 2015-2019 ........................................................... 40
1.5 Market Issues 2020+ and introduction of eNb-AIA ......................... 42
CHAPTER 2: GLOBAL BTS ANTENNA UNIT FORECAST ....................... 44
2015-2019 Global Antenna Unit Forecast .......................................... 44
Demand Drivers for Our Forecast .................................................... 45
2.1 Antenna Unit Forecast by Type-Passive vs. Active ......................... 45
2.2 Passive Antenna Unit Forecast by Type ....................................... 48
2.3 Active Antenna Unit Forecast by Type ........................................ 51
CHAPTER 3: GLOBAL BTS ANTENNA REVENUE FORECAST ................. 54
2015-2019 Global Antenna Revenue Forecast .................................... 54
3.1 Global Antenna Revenue Forecast by Type .................................... 56
3.2 Passive Antenna Revenue Forecast by Type ................................. 59
3.3 Semi-Active Integrated Antenna (sAIA) Revenue Forecast by Type .... 63
3.4 Active Integrated Antenna (AIA) Revenue Forecast ....................... 66
CHAPTER 4: GLOBAL TDD ANTENNA MARKET ANALYSIS & FORECAST .... 68
4.1 TDD Antenna Shipments ........................................................... 72
4.2 TDD Antenna Revenues .............................................................. 73
4.3 TDD Antenna Forecast Units ....................................................... 74
4.4 TDD Antenna Forecast Revenue ................................................ 75
4.5 TDD Antenna Forecast Units by Geographical Region ..................... 77
4.6 TDD Antenna Forecast Revenues by Geographical Region ............... 78
CHAPTER 5: BTS ANTENNA RF CONNECTOR TECHNOLOGY ................ 81
CHAPTER 6: BTS ANTENNA DIPOLE ELEMENT TECHNOLOGY ............. 85
CHAPTER 7: SEMI-ACTIVE INTEGRATED ANTENNAS ......................... 89
7.1 Global Semi-Active Integrated Antenna Shipments, 2013-2014 ........ 91
7.2 Global Semi-Active Integrated Antenna Revenues, 2013-2014 .......... 94
7.3 Antenna Vendor Analysis ........................................................... 96
7.4 Global Semi-Active Integrated Antenna Unit Forecast, 2015-2019 .... 100
7.5 Global Semi-Active Integrated Antenna Revenue Forecast, 2015-2019 103
CHAPTER 8: ACTIVE INTEGRATED ANTENNAS ............................... 106
CHAPTER 9: GEOGRAPHICAL MARKET SHARE ............................... 110
9.1 Worldwide Growth Driven by China and India LTE Networks .......... 110
TABLES

Table 1: sAIA Antenna Product Types by Port Count ................................................................. 26
Table 2: Global BTS Antenna Shipments by Type, 2013-2014 (Units) ............................................ 31
Table 3: Global BTS Antenna Shipments FDD, TDD & sAIA, 2013-2014 (Units) ................................. 33
Table 4: Global BTS Antenna Revenues by Type, 2013-2014 (mUSD) ........................................... 35
Table 5: Global BTS Antenna Revenues FDD, TDD & sAIA, 2013-2014 (mUSD) ................................. 37
Table 6: Global BTS Antenna Market Share by OEM, 2013-2014 (Units) ....................................... 39
Table 7: Global BTS Antenna Forecast by Type, 2014-2019 (Units) ............................................. 46
Table 8: Global BTS Antenna Forecast by Type, 2014-2019 (% Market Share) ................................. 49
Table 9: Global BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth) .................................... 49
Table 10: Global BTS Antenna Forecast by Type, Passive vs. Active, 2014-2019 (Units) .................... 47
Table 11: Global BTS Antenna Forecast by Type, Passive vs. Active, 2014-2019 (% Market Share) ... 47
Table 12: Global BTS Antenna Forecast by Type, Passive vs. Active, 2014-2019 (% YoY Growth) .... 47
Table 13: Global Passive BTS Antenna Forecast by Type, 2014-2019 (Units) .................................. 49
Table 14: Global Passive BTS Antenna Forecast by Type, 2014-2019 (% Market Share) ................. 49
Table 15: Global Passive BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth) ..................... 49
Table 16: Global Active BTS Antenna Forecast by Type, 2014-2019 (Units) .................................... 52
Table 17: Global Active BTS Antenna Forecast by Type, 2014-2019 (% Market Share) ..................... 52
Table 18: Global Active BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth) ....................... 52
Table 19: Global BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD) ............................... 56
Table 20: Global BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share) ................. 58
Table 21: Global BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth) .................... 57
Table 22: Global BTS Antenna Revenue Forecast by Type, Passive vs. Active, 2014-2019 (mUSD) ...... 58
Table 23: Global BTS Antenna Revenue Forecast by Type, Passive vs. Active, 2014-2019 (% Market Share) .................................................................................................................. 58
Table 24: Global BTS Antenna Revenue Forecast by Type, Passive vs. Active, 2014-2019 (% YoY Growth) .................................................................................................................. 58
Table 25: Global BTS Passive Antenna Revenue Forecast by Type, 2014-2019 (mUSD) ..................... 60
Table 26: Global BTS Passive Antenna Revenue Forecast by Type, 2014-2019 (% Market Share) ...... 61
Table 27: Global BTS Passive Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth) ........ 61
Table 28: Global BTS Passive Antenna Revenue Forecast by Type, FDD vs. TDD, 2014-2019 (mUSD) ... 61
Table 29: Global BTS Passive Antenna Revenue Forecast by Type, FDD vs. TDD, 2014-2019 (% Market Share) .................................................................................................................. 61
Table 30: Global BTS Passive Antenna Revenue Forecast by Type, FDD vs. TDD, 2014-2019 (% YoY Growth) .................................................................................................................. 61
Table 31: Global BTS Semi-Active Integrated Antenna Revenue Forecast by Type, 2014-2019 (mUSD) ... 64
Table 32: Global BTS Semi-Active Integrated Antenna Revenue Forecast by Type, 2014-2019 (% Market Share) .................................................................................................................. 64
Table 33: Global BTS Semi-Active Integrated Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth) .................................................................................................................. 65
Table 34: Global BTS TDD Antenna Shipments by Type, 2013-2014 (Units) ...................................... 72
Table 35: Global BTS TDD Antenna Revenues by Type, 2013-2014 (mUSD) ...................................... 73
Table 36: Global BTS TDD Antenna Forecast by Type, 2014-2019 (Units) ........................................ 74
Table 37: Global BTS TDD Antenna Forecast by Type, 2014-2019 (% Market Share) ......................... 74
Table 38: Global BTS TDD Antenna Forecast by Type, 2014-2019 (% YoY Growth) ......................... 74
Table 39: Global BTS TDD Antenna Revenue Forecast by Type, 2014-2019 (mUSD) ......................... 75
Table 40: Global BTS TDD Antenna Revenue Forecast by Type, 2014-2019 (% Market Share) .......... 76
Table 41: Global BTS TDD Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth) .......... 76
Table 42: Global BTS TDD Antenna Forecast by Region, 2014-2019 (Units) .................................... 77
Table 43: Global BTS TDD Antenna Forecast by Region, 2014-2019 (% Market Share) ..................... 77
Table 44: Global BTS TDD Antenna Forecast by Region, 2014-2019 (% YoY Growth) ....................... 77
Table 45: Global BTS TDD Antenna Revenue Forecast by Region, 2014-2019 (mUSD) ...................... 78
Table 46: Global BTS TDD Antenna Revenue Forecast by Region, 2014-2019 (% Market Share) ...... 78
Table 47: Global BTS TDD Antenna Revenue Forecast by Region, 2014-2019 (% YoY Growth) ........ 78
Table 48: BTS Antenna RF Connector Shipments by Type, 2013-2014 (Units) .................................... 81
Table 49: BTS Antenna RF Connector Forecast by Type, 2014-2019 (Units) ....................................... 83
Table 50: BTS Antenna RF Connector Forecast by Type, 2014-2019 (% Market Share) ....................... 83
Table 51: BTS Antenna RF Connector Forecast by Type, 2014-2019 (% YoY Growth) ....................... 83
Table 52: Global BTS Antenna Shipments by Dipole Technology, 2013-2014 (Units) ......................... 85
Table 53: Global BTS Antenna Forecast by Dipole Technology, 2014-2019 (Units) ............................ 86
Table 54: Global BTS Antenna Forecast by Dipole Technology, 2014-2019 (% Market Share) .......... 86
Table 55: Global BTS Antenna Forecast by Dipole Technology, 2014-2019 (% YoY Growth) .......... 86
Table 56: Global BTS Antenna Dipole Element Shipments, 2013-2014 (Units) ................................. 87
Table 114: Western Europe BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 115: Western Europe BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 116: Western Europe BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 117: Western Europe BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 118: Western Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 119: Western Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 120: Western Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 121: Eastern Europe BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 122: Eastern Europe BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 123: Eastern Europe BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 124: Africa BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 125: Africa BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 126: Africa BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 127: Africa BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 128: Africa BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 129: Africa BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 130: Africa BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 131: Asia Pacific BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 132: Asia Pacific BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 133: Asia Pacific BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 134: Asia Pacific BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 135: Asia Pacific BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 136: Asia Pacific BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 137: Asia Pacific BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 138: Asia Pacific BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 139: Asia Pacific BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 140: Asia Pacific BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 141: The Middle East BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 142: The Middle East BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 143: The Middle East BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 144: The Middle East BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 145: The Middle East BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 146: The Middle East BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 147: The Middle East BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 148: The Middle East BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 149: The Middle East BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 150: The Middle East BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 151: Eastern Europe BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 152: Eastern Europe BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 153: Eastern Europe BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 154: Eastern Europe BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 155: Eastern Europe BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 156: Eastern Europe BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 157: Eastern Europe BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 158: Eastern Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 159: Eastern Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 160: Eastern Europe BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 161: China BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 162: China BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 163: China BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 164: China BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 165: China BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 166: China BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
Table 167: China BTS Antenna Forecast by Type, 2014-2019 (% YoY Growth)
Table 168: China BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)
Table 169: China BTS Antenna Revenue Forecast by Type, 2014-2019 (% Market Share)
Table 170: China BTS Antenna Revenue Forecast by Type, 2014-2019 (% YoY Growth)
Table 171: India BTS Antenna Shipments by Type, Active vs. Passive, 2013-2014 (Units)
Table 172: India BTS Antenna Shipments by Type, 2013-2014 (Units)
Table 173: India BTS Antenna Revenues by Type, Active vs. Passive, 2013-2014 (Units)
Table 174: India BTS Antenna Revenues by Type, 2013-2014 (mUSD)
Table 175: India BTS Antenna Forecast by Type, 2014-2019 (Units)
Table 176: India BTS Antenna Forecast by Type, 2014-2019 (% Market Share)
<table>
<thead>
<tr>
<th>Exhibit</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit 123</td>
<td>Asia Pacific BTS Antenna Forecast, 2014-2019, (Units)</td>
<td>179</td>
</tr>
<tr>
<td>Exhibit 124</td>
<td>Asia Pacific BTS FDD Passive Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>181</td>
</tr>
<tr>
<td>Exhibit 125</td>
<td>Asia Pacific BTS TDD Passive Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>182</td>
</tr>
<tr>
<td>Exhibit 126</td>
<td>Asia Pacific BTS Semi-Active Integrated Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>182</td>
</tr>
<tr>
<td>Exhibit 127</td>
<td>Asia Pacific BTS Antenna Revenue Forecast, 2014-2019, (mUSD)</td>
<td>183</td>
</tr>
<tr>
<td>Exhibit 128</td>
<td>Asia Pacific BTS FDD Passive Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>185</td>
</tr>
<tr>
<td>Exhibit 129</td>
<td>Asia Pacific BTS TDD Passive Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>186</td>
</tr>
<tr>
<td>Exhibit 130</td>
<td>Asia Pacific BTS Semi-Active Integrated Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>186</td>
</tr>
<tr>
<td>Exhibit 131</td>
<td>China BTS Passive Antenna Shipments by Type, 2014 (Units)</td>
<td>189</td>
</tr>
<tr>
<td>Exhibit 132</td>
<td>China BTS Antenna Forecast, 2014-2019, (Units)</td>
<td>190</td>
</tr>
<tr>
<td>Exhibit 133</td>
<td>China BTS FDD Passive Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>192</td>
</tr>
<tr>
<td>Exhibit 134</td>
<td>China BTS TDD Passive Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>193</td>
</tr>
<tr>
<td>Exhibit 135</td>
<td>China BTS Antenna Revenue Forecast, 2014-2019, (mUSD)</td>
<td>194</td>
</tr>
<tr>
<td>Exhibit 136</td>
<td>China BTS FDD Passive Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>196</td>
</tr>
<tr>
<td>Exhibit 137</td>
<td>China BTS TDD Passive Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>197</td>
</tr>
<tr>
<td>Exhibit 138</td>
<td>India BTS Antenna Shipments by Type, 2014 (Units)</td>
<td>200</td>
</tr>
<tr>
<td>Exhibit 139</td>
<td>India BTS Antenna Forecast, 2014-2019, (Units)</td>
<td>201</td>
</tr>
<tr>
<td>Exhibit 140</td>
<td>India BTS Antenna Forecast by Type, 2014-2019 (Units)</td>
<td>203</td>
</tr>
<tr>
<td>Exhibit 141</td>
<td>India BTS Antenna Revenue Forecast, 2014-2019, (mUSD)</td>
<td>204</td>
</tr>
<tr>
<td>Exhibit 142</td>
<td>India BTS Antenna Revenue Forecast by Type, 2014-2019 (mUSD)</td>
<td>206</td>
</tr>
</tbody>
</table>