

Index

Table of Contents

Table of Contents.....	i
List of Figures.....	vi
Executive summary.....	1
1 Introduction to wireless M2M.....	3
1.1 Introduction.....	3
1.2 Devices.....	5
1.2.1 Chipsets, modules and terminals.....	5
1.2.2 Device design and machine integration.....	9
1.2.3 Value chain.....	10
1.3 Networks.....	11
1.3.1 GSM/HSPA networks.....	12
1.3.2 CDMA networks.....	14
1.3.3 LTE networks.....	15
1.3.4 Other wireless networks.....	16
1.3.5 Wireless M2M connectivity solutions.....	18
1.4 Applications.....	19
1.4.1 Car telematics.....	19
1.4.2 Fleet management.....	20
1.4.3 Smart grids and intelligent metering.....	21
1.4.4 Fixed wireless communication.....	22
1.4.5 Remote control and monitoring.....	23
1.4.6 Consumer electronics.....	23
1.5 Solution providers and integrators.....	24
1.5.1 Device manufacturers.....	24
1.5.2 System integrators.....	25
1.5.3 Vertical ASPs.....	26
1.5.4 B2B/B2C service providers.....	27
1.5.5 OEMs.....	28

2	M2M technology providers	31
2.1	Connected device networking solutions	31
2.2	Embedded wireless module vendors in the M2M market.....	34
2.2.1	Sierra Wireless.....	37
2.2.2	Cinterion	42
2.2.3	Telit	45
2.2.4	SIMCom.....	47
2.2.5	AnyDATA	49
2.2.6	Enfora	51
2.2.7	Huawei.....	53
2.2.8	Sagemcom.....	54
2.2.9	Motorola	57
2.2.10	u-blox.....	58
2.2.11	Fusion Wireless	60
2.2.12	Asian embedded module vendors.....	60
2.2.13	Western 3G/4G embedded module vendors.....	61
2.2.14	Wireless chipset suppliers.....	62
2.2.15	SIM technology vendors	63
2.3	M2M platform and software providers.....	63
2.3.1	Amplia.....	64
2.3.2	Axeda.....	64
2.3.3	Comarch.....	65
2.3.4	Jasper Wireless	65
2.3.5	Logica.....	66
2.3.6	nPhase.....	67
2.3.7	Red Bend.....	68
2.3.8	SmartTrust.....	69
2.3.9	Wyless	69
2.4	Industry analysis.....	70
2.4.1	Profitability.....	70
2.4.2	Industry consolidation.....	72
2.4.3	New focus on M2M software and integrated solutions.....	74

- 2.4.4 Consumer devices accelerate adoption of 3G/4G wireless technologies 75
- 3 M2M communication providers 77
 - 3.1 Europe and International 78
 - 3.1.1 Vodafone 79
 - 3.1.2 Deutsche Telekom and T-Mobile 81
 - 3.1.3 Telefónica 83
 - 3.1.4 Orange 85
 - 3.1.5 Telenor 88
 - 3.1.6 Vimpelcom 90
 - 3.1.7 KPN 91
 - 3.1.8 SFR 92
 - 3.1.9 TeliaSonera 92
 - 3.1.10 M2M communication aggregators 94
 - 3.1.11 CDMA450 and alternative wireless network operators 98
 - 3.2 The Americas 99
 - 3.2.1 AT&T 100
 - 3.2.2 Verizon Wireless 103
 - 3.2.3 Sprint 105
 - 3.2.4 LightSquared 106
 - 3.2.5 Rogers Wireless, Bell Mobility and TELUS Mobility 107
 - 3.2.6 América Móvil 108
 - 3.2.7 M2M communication aggregators 109
 - 3.2.8 Satellite and alternative wireless network operators 112
 - 3.3 Asia-Pacific 115
 - 3.3.1 China Mobile 115
 - 3.3.2 NTT DoCoMo 117
 - 3.3.3 KDDI 118
 - 3.3.4 Softbank 119
 - 3.3.5 Telstra 120
 - 3.4 Industry analysis 121
 - 3.4.1 Top global telecom groups focus on embedded connectivity to drive growth 121
 - 3.4.2 Rush to deploy M2M service delivery platforms 123

3.4.3	Operator M2M organisations expand their international presence	124
3.4.4	New focus on consumer devices	125
3.4.5	Channel partners have a key role in the M2M connectivity sales process	126
4	Key vertical markets	129
4.1	OEM automotive	130
4.1.1	Automotive industry trends	130
4.1.2	OEM telematics offerings	134
4.1.3	Regional market trends	138
4.2	Aftermarket automotive	141
4.2.1	Key industry players	143
4.2.2	Enterprise solutions – fleet management	145
4.2.3	Consumer solutions – SVT and financial services	148
4.2.4	Government solutions – vehicle tax collection	150
4.3	Smart grids and intelligent metering	151
4.3.1	Metering industry trends	152
4.3.2	Smart metering initiatives	153
4.3.3	C&I and grid meters	155
4.3.4	Mobile communication technologies and smart grid and metering networks ..	155
4.4	Fixed wireless communication	157
4.4.1	POS-terminals	157
4.4.2	Security alarms	159
4.5	Consumer electronics	161
4.5.1	Media	162
4.5.2	Automotive	163
4.5.3	Healthcare	165
5	Market analysis and forecasts	167
5.1	Devices	168
5.2	Connectivity services	171
5.3	Regional markets	174
5.3.1	Europe	175
5.3.2	The Americas	177
5.3.3	Asia-Pacific	179

5.3.4 Middle East & Africa 180
Glossary 181

Index

List of Figures

Figure 1.1: Core elements of wireless M2M solutions.....	4
Figure 1.2: Cost versus time diagram for wireless technology integration	6
Figure 1.3: Examples of wireless M2M modules	7
Figure 1.4: Examples of wireless M2M terminals	8
Figure 1.5: System architecture for an end-to-end M2M solution	9
Figure 1.6: M2M device value chain overview	10
Figure 1.7: Top global GSM/HSPA operators by subscriber base (H1-2010)	12
Figure 1.8: Top global CDMA operators by subscriber base (H1-2010).....	14
Figure 1.9: Examples of mobile operators committed to LTE by region.....	15
Figure 2.1: Form factor and technology market share for connected devices (2009)	32
Figure 2.2: Top ten global suppliers of connected device networking solutions (2009)	33
Figure 2.3: Top embedded wireless module vendors, by estimated sales (World 2010).....	35
Figure 2.4: Sierra Wireless embedded modules and terminals	39
Figure 2.5: Cinterion embedded modules and terminals.....	43
Figure 2.6: Telit embedded modules and terminals.....	46
Figure 2.7: SIMCom embedded modules (H2-2010)	48
Figure 2.8: AnyDATA embedded modules and terminals (H2-2010)	50
Figure 2.9: Enfora N4A intelligent devices (H2-2010).....	52
Figure 2.10: Sagemcom wireless M2M modules	55
Figure 2.11: u-blox embedded wireless modules (H2-2010)	58
Figure 2.12: M2M module vendor customers of major wireless chipset suppliers	62
Figure 2.13: Operating data for some wireless M2M module vendors (H1-2010)	71
Figure 2.14: Financial data for key embedded wireless module vendors (FY 2009/2010).....	73
Figure 3.1: Mobile operators by M2M subscription base (World Q3-2010)	77
Figure 3.2: Top five M2M communication providers in Europe (Q3-2010)	78
Figure 3.3: Top five M2M communication providers in the Americas (Q3-2010).....	99
Figure 3.4: Examples of manufacturers of M2M devices certified by AT&T.....	102
Figure 3.5: Sprint M2M Collaboration Center partners.....	106

Figure 3.6: M2M solution provider partnerships of mobile operators in Canada..... 107

Figure 3.7: Top five M2M communication providers in Asia-Pacific (Q3-2010) 115

Figure 3.8: M2M subscriber data for the top ten global telecom operators (Q3-2010)..... 122

Figure 3.9: M2M platform selection by mobile operators (Q4-2010) 124

Figure 4.1: Motor vehicle production, by region and country (World 2009) 131

Figure 4.2: Top automobile manufacturers by vehicle output (2009) 132

Figure 4.3: Estimated motor vehicle sales in major markets (2010) 133

Figure 4.4: Top OEM telematics services by estimated subscriber base (2010) 134

Figure 4.5: Estimated vehicle population in major countries (2008/2009) 142

Figure 4.6: Financial data for key players in aftermarket telematics (FY2009/2010)..... 144

Figure 4.7: Major providers of fleet management solutions by installed base (2010) 147

Figure 4.8: Energy meter population, by region (World 2009)..... 151

Figure 4.9: Energy meter shipments, by region (World 2010) 152

Figure 4.10: Major power utilities deploying smart meters in Europe and North America 154

Figure 4.11: POS-terminal shipments and installed base, by region (World 2009) 158

Figure 4.12: Top providers of monitored security alarms (World 2010)..... 160

Figure 4.13: Examples of consumer devices with wireless connectivity (2010) 161

Figure 4.14: Amazon Kindle and Barnes & Noble nook..... 162

Figure 5.1: Cellular M2M communication market forecast (World 2009–2015) 167

Figure 5.2: Cellular M2M device shipments forecast (World 2009–2015) 168

Figure 5.3: Cellular M2M device shipments forecast by application (World 2009–2015) 169

Figure 5.4: Cellular M2M device deployment forecast by region (World 2009–2015) 170

Figure 5.5: Cellular M2M connections forecast (World 2009–2015) 172

Figure 5.6: Cellular M2M connections forecast by application (World 2009–2015)..... 173

Figure 5.7: Cellular M2M connections forecast by region (World 2009–2015) 173

Figure 5.8: M2M subscriber data for key world regions (H1-2010) 174

Figure 5.9: Country M2M subscriber data for EU and Western Europe (H1-2010) 176

Figure 5.10: Country M2M subscriber data for North America and Asia-Pacific (H1-2010)... 178

