

**U.S. Outdoor and
Indoor DAS Forecast,
2015 – 2020: *Still
going with growth
ahead***

Market Study
Third Quarter 2016





U.S. Outdoor and Indoor DAS Forecast, 2015 – 2020: *Still going with growth ahead*

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Table of Contents

Abstract	1
Executive Summary	3
Figure A: Installed DAS Nodes, U.S. only, 2015-2020	3
Methodology.....	5
Basic Mobile Operator Network Architecture	7
Figure 1: Basic Components of Cellular Voice/Data Network	7
Devices	9
MIMO	10
Wireless Spectrum	11
Cell Sites	12
Expanding cell site capacity	13
Fronthaul & Backhaul	13
Figure 4: Cell Site Backhaul Capabilities and Use Cases, Wired and Wireless	14
Mobile Network Core	15
Figure 5: Overview of the EPC	15
Setting the Stage for Small Cells	16
Network “Pain Points”	16
Different Types of Small Cells	17
Figure 6: Het-Net Overview	18
iGR’s Definitions of Small Cells.....	19
Table 1: Different Types of Small Cells, Licensed and Unlicensed Spectrum	19
Distributed Antenna Systems (DAS)	20
Figure 7: Basic DAS Configuration	21
Figure 8: DAS, BTS Hotels, and Remote Radio Heads	22
Hybrid Antenna System	22
DAS/Small Cell Architecture	23
Distributed “Network” Systems	24
Neutral-Host DAS vs. Single Host DAS	24
Table 2: Benefits of Neutral-Host DAS	25
Changing Nature of DAS	26
Figure 9: Types of DAS.....	27
Femtocells and Picocells	27
Metrocalls	28
Remote Radio Heads	29
Difference Between RRHs and oDAS	29
Difference between RRHs and Metrocells	29
Location, Location, Location	30
In-Building Small Cells: Awareness, Pros and Cons.....	31
Enterprise Small Cell Awareness	31

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Table 3: Awareness of Enterprise Small Cell Solutions.....	31
Figure 10: Awareness of Enterprise Small Cell Solutions	32
Table 4: Interest in Enterprise Small Cell Solutions.....	32
Figure 11: Interest in Enterprise Small Cell Solutions.....	33
Benefits of Deploying In-Building Small Cells	33
Cons of Deploying In-Building Small Cells.....	34
Advantages Provided by DAS	34
Table 5: Advantages of DAS.....	34
Challenges with DAS Deployments	35
Table 6: Challenges of DAS.....	35
Commercial Buildings in the U.S.	37
Table 7: Commercial Buildings in the U.S.....	37
Table 8: Commercial Buildings in the U.S.....	38
Figure 12: Commercial Buildings in the U.S.....	40
Table 9: Commercial Buildings in the U.S.....	40
Figure 13: Buildings in the U.S.....	41
Table 10: Number of Floors per Commercial Building	42
Figure 14: Number of Floors per Commercial Building	42
Table 11: Predominant Roof Material.....	43
Figure 15: Predominant Roof Material.....	44
Table 12: Predominant Exterior Wall Material.....	45
Figure 16: Predominant Exterior Wall Material	46
Table 13: Windows and Interior Lighting Features	47
Figure 17: Windows and Interior Lighting Features	48
Housing in the U.S.	49
Table 14: Number of Housing Units by Units in Structure, U.S.	49
Figure 18: Number of Housing Units by Units in Structure, U.S.....	50
Table 15: Housing Units by Number of Floors, U.S.....	50
Figure 19: Housing Units by Number of Floors, U.S.	51
Table 16: Square Footage of Occupied Housing Units, AHS.....	51
Figure 20: Square Footage of Occupied Housing Units, AHS.....	52
Outdoor Small Deployment Issues.....	53
Small Cell deployment requirements	53
Regulatory considerations	54
Small Cell Installations.....	54
Locations for Small Cells	55
Small Cell Options: Backhaul & Fronthaul	58
Providers of Fronthaul Services.....	58
Fronthaul requirements	59
Small Cell Deployment Issues	60
Figure 21: Possible Interference Sources in a Loaded Network.....	60
X2.....	61
ICIC and eICIC	62
Synchronization.....	62
Latency	62

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Figure 22: How Latency Adds Up.....	63
CPRI	64
General Trends / Assumptions around Outdoor DAS	65
Gap between bandwidth demand and supply	65
Outdoor small cell deployment.....	67
Drivers.....	68
Barriers.....	68
General Trends / Assumptions around Indoor DAS	70
Indoor densification	70
Residential	70
Enterprise	71
Wi-Fi.....	72
Other assumptions	73
DAS: Actual Deployments.....	75
Assumptions and trends	75
U.S. Installed DAS Nodes	77
Table 17: U.S. Installed DAS Nodes, 2015-2020	77
Figure 23: Actual U.S. Outdoor Small Cells Deployments by Type, 2015-2020	78
U.S. DAS Systems.....	78
Table 18: U.S. DAS Systems, 2015-2020	79
Figure 24: U.S. DAS Systems, 2015-2020.....	80
DAS Costs – Indoor and Outdoor	81
Figure 25: iDAS Installation Cost Matrix.....	82
Table 19: Assumed Network Spending per Square Foot for iDAS, 2015-2020.....	82
Figure 26: Assumed Network Spending per Square Foot for iDAS, 2015-2020.....	83
Table 20: Assumed Operational Spending per Square Foot for iDAS, 2015-2020.....	83
Figure 27: Assumed Operational Spending per Square Foot for iDAS, 2015-2020	84
Outdoor DAS Deployment Costs	84
Table 21: Assumed oDAS Network Spending, 2015-2020	87
Figure 28: Assumed oDAS Network Spending per Node, 2015-2020.....	88
Table 22: Assumed oDAS Operational Spending per Node, 2015-2020.....	88
Figure 29: Assumed oDAS Operational Spending, 2015-2020	89
Table 23: Network Spending on DAS, 2015-2020.....	89
Figure 30: Network Spending on iDAS and oDAS, 2015-2020	90
Table 24: Operational Spending on DAS, 2015-2020	90
Figure 31: Network Spending on iDAS and oDAS, 2015-2020	91
DAS Vendor Profiles	92
Advanced RF Technologies, Inc. (ADRF).....	92
Bandwidth Logic	93
Betacom Incorporated	94
Black Box Network Services	94
BTI Wireless.....	96
C Squared Systems (C² Systems)	98
Cobham Wireless.....	99

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Comba Telecom	103
CommScope	104
Connectivity Wireless Solutions	109
Corning	111
Crown Castle	113
Dali Wireless.....	116
Ethertronics	119
ExteNet Systems.....	121
Galtronics	123
iBwave Solutions (Corning Incorporated).....	125
SOLiD.....	128
Solutelia	130
Westell Technologies.....	132
Whoop Wireless	134
Zinwave.....	136
Definitions	140
General	140
Device Types.....	140
Services	141
Network Technology.....	142
About <i>iGR</i>	146
Disclaimer	146

Abstract

DAS began years ago with passive systems, donor antennas and coaxial cable. Today's DAS may look a bit different – with remote units, fiber, maybe even a CPRI connection or a small cell as the radio source, but the function is unchanged. That is, provide coverage inside a building (iDAS) or in an outdoor area (oDAS).

Most venues that need DAS – stadiums, hotels, airports, etc., – already have it. *iGR* believes that the market for oDAS is a fading market because "RRH as small cells" provides a similar level of coverage/capacity with better future flexibility (moving toward baseband hoteling and/or CRAN). Also, mobile operators need coverage/capacity in different places in an urban/metro area so, as compared to indoors where shared antennas enable lower costs, that same model may not work quite as well.

iGR splits the DAS market by indoor and outdoor and then further divides the indoor market into commercial buildings and residential (multiple dwelling units or MDUs). *iGR*'s oDAS forecast grows out of its "outdoor small cell" model and report while its iDAS forecast grows out of its "indoor small cell" model and report. This report highlights the DAS-specific portions of those models and reports. The commercial building segment is where *iGR* believes most of the DAS growth will occur over the next five years.

This report provides a brief overview of the different types of small cells, including DAS, and the goals around future iDAS and oDAS deployments. The report then provides an explanation of the methodology used to create the actual iDAS and oDAS forecasts, both for nodes and DAS systems.

Key questions addressed in this report include:

- What is an outdoor small cell? What are metrocells, RRHs and oDAS?
- What is an indoor small cell? What are femtocells, picocells and iDAS?
- What is a DAS?
- Why do the mobile networks need iDAS and oDAS?
- How does DAS fit into operators' evolving networks?
- What are the issues with deploying DAS in the U.S.? How do these issues impact the number of small cells in the market?
- What is the role of CPRI with iDAS and oDAS?
- How is DAS changing/evolving?
- Where are DAS nodes most likely to be located? What's their role?

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Who should read this report?

- Mobile operators
- Infrastructure OEMs
- Small cell product and solution vendors
- Backhaul service providers and equipment OEMs
- Financial analysts and investors.