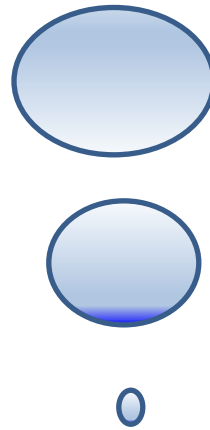




**Small Cells:
Market Shares, Strategies, and Forecasts,
Worldwide, 2019 to 2025**



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WinterGreen Research, Inc.
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CHECK OUT THESE KEY TOPICS

Small Cells Markets: Disruptive Technology that Extends Broadband into the Neighborhoods and into Buildings, Implements 5G

Small Cells Virtualization Cloud Edge Functional splits. LTE Small Cell 5G Network Densification Hybrid Ethernet Based DAS DAS	In Building Wireless Broadband Traffic In Air Interface Solutions Outdoor and Stadium Deployments Heterogeneous Network Hung On Aerial Coax, Fiber, Or Electricity Cables Distributed business Enterprise	End-To-End Integrated Small Cells Metro Cell Solution Signal Transmission ADRF Positioning Bandwidth Allocation Across enterprise boundaries
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Cloud Backup Markets:

Worldwide markets are poised to achieve continuing growth as small cells markets respond to the advantages brought by newer technologies. The quality and the customization of small cells are significant market growth drivers. Standardization of the installation process is a key efficiency tool.

Small Cell markets encompass virtualization, cloud, edge, and functional splits. 5G requires increasing sophistication from mobile operators. The challenge is to bring together a growing number of LTE and 5G radio access technologies. A range of connectivity services are needed. Associated APIs are needed in each small cell to manage connectivity to a number of customer segments.

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Figure 1. Small Cells Market Shares, Dollars, Worldwide, 2018

In Millions of Dollars			
	MM\$	% \$	Units
	2017	2017	2017
	2016	2016	2016
Company 1	XX	XX	XX
Company 2	XX	XX	XX
Company 3	XX	XX	XX
Company 4	XX	XX	XX
Company 5	XX	XX	XX
Company 6	XX	XX	XX
Company 7	XX	XX	XX
Company 8	XX	XX	XX
Company 9	XX	XX	XX
Company 10	XX	XX	XX
Company 11	XX	XX	XX
Company 12	XX	XX	XX
Company 13	XX	XX	XX
Company 14	XX	XX	XX
Total (MM\$)	XX	XX	XX

Source: WinterGreen Research, Inc.

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Figure 2. Small Cells, 3G, 4G, and 5G Dollars and Percent, Worldwide, 2018 - 2024 and 2012 to 2018

Small Cells Segments, 3G, 4G, 5G,
Dollars, Worldwide, 2018 - 2024 and 2012 to 2017
In Millions of Dollars

	2017 2012	2018 2013	2019 2014	2020 2015	2021 2016	2022 2017	2023	2024
3G (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX
4G (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX
5G (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX
Total (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX

Source: WinterGreen Research, Inc.

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Figure 3. Small Cells Market Segments, Dollars, Worldwide, 2012 to 2018, 2018-2024

Small Cells, Small, Mid Range, Large

Dollars and Percent, Worldwide, 2017 - 2024 and 2012 to 2017

In Percent

In Millions of Dollars

	2017	2018	2019	2020	2021	2022	2023	2024
Small								
% of Total Market	XX	XX	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX	XX	XX
Mid Range								
% of Total Market	XX	XX	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX	XX	XX
Large								
% of Total Market	XX	XX	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX	XX	XX
Total (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX	XX	XX

Source: WinterGreen Research, Inc.

Figure 4. Small Cells End Users, Outdoor, and Indoor, Dollars, Worldwide, 2018 - 2024 and 2012 to 2018

Small Cells End Users, Outdoor, and Indoor
 Dollars, Worldwide, 2018 - 2024 and 2012 to 2017
 In Millions of Dollars

	2017 2017	2018 2016	2019 2015	2020 2014	2021 2013	2022 2012	2023	2024
Outdoor	xx	xx	xx	xx	xx	xx	xx	xx
Indoor	xx	xx	xx	xx	xx	xx	xx	xx
End Users	xx	xx	xx	xx	xx	xx	xx	xx
Total (MM\$)	xx	xx	xx	xx	xx	xx	xx	xx

Source: WinterGreen Research, Inc.

WinterGreen Research, Inc.

Figure 5. Small Cells End Users, Community / Government, Enterprise, Dollars, Worldwide, 2018 - 2024 and 2012 to 2018

Small Cells End Users, Community / Government, Enterprise,
Dollars, Worldwide, 2018 - 2024 and 2012 to 2017
In Millions of Dollars

	2017 2017	2018 2016	2019 2015	2020 2014	2021 2013	2022 2012	2023	2024
Enterprise	XX	XX	XX	XX	XX	XX	XX	XX
Community / Government	XX	XX	XX	XX	XX	XX	XX	XX
End Users	XX	XX	XX	XX	XX	XX	XX	XX
Total (MM\$)	XX	XX	XX	XX	XX	XX	XX	XX

Source: WinterGreen Research, Inc.

WinterGreen Research, Inc.

Figure 6. Small Cells Unit Analysis, Worldwide, 2018 - 2024

**Small Cells End Users, Community / Government, Enterprise,
Units, Worldwide, 2018 - 2024 and 2012 to 2017**
In Thousands of Units

	2017 2017	2018 2016	2019 2015	2020 2014	2021 2013	2022 2012	2023	2024
Enterprise	xx	xx	xx	xx	xx	xx	xx	xx
Community / Government	xx	xx	xx	xx	xx	xx	xx	xx
End Users	xx	xx	xx	xx	xx	xx	xx	xx
Total (000)	xx	xx	xx	xx	xx	xx	xx	xx

Source: WinterGreen Research, Inc.

Small Cells Regional Segments Dollars, Worldwide, 2018 - 2024 and 2012 to 2018

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In Percent

In Millions of Dollars

	2012 2018	2013 2019	2014 2020	2015 2021	2016 2022	2017 2023
US \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
Europe \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
China \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
Japan \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
South Korea	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
Taiwan \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
ROW and Southeast Asia \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
India \$	XX	XX	XX	XX	XX	XX
% of Total Market	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX
Total (MM\$)	XX	XX	XX	XX	XX	XX
% Growth	XX	XX	XX	XX	XX	XX

Source: WinterGreen Research, Inc.

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ABOUT THE COMPANY

WinterGreen Research, research strategy relates to identifying market trends through reading and interviewing opinion leaders. By using analysis of published materials, interview material, private research, detailed research, social network materials, blogs, and electronic analytics, the market size, shares, and trends are identified. Analysis of the published materials and interviews permits WinterGreen Research senior analysts to learn a lot more about markets. Discovering, tracking, and thinking about market trends is a high priority at WinterGreen Research. As with all research, the value proposition for competitive analysis comes from intellectual input.

WinterGreen Research, founded in 1985, provides strategic market assessments in telecommunications, communications equipment, health care, Software, Internet, Energy Generation, Energy Storage, Renewable energy, and advanced computer technology.

Industry reports focus on opportunities that expand existing markets or develop major new markets. The reports access new product and service positioning strategies, new and evolving technologies, and technological impact on products, services, and markets. Innovation that drives markets is explored. Market shares are provided. Leading market participants are profiled, and their marketing strategies, acquisitions, and strategic alliances are discussed. The principals of WinterGreen Research have been involved in analysis and forecasting of international business opportunities in telecommunications and advanced computer technology markets for over 30 years.

The studies provide primary analytical insight about the market participants. By publishing material relevant to the positioning of each company, readers can look at the basis for analysis. By providing descriptions of each major participant in the market, the reader is not dependent on analyst assumptions, the information backing the assumptions is provided, permitting readers to examine the basis for the conclusions.

WinterGreen Research is positioned to help customers facing challenges that define the modern enterprises. The increasingly global nature of science, technology and engineering is a reflection of the implementation of the globally integrated enterprise. Customers trust wintergreen research to work alongside them to ensure the success of the participation in a particular market segment.

WinterGreen Research supports various market segment programs; provides trusted technical services to the marketing departments. It carries out accurate market share and forecast analysis services for a range of commercial and government customers globally. These are all vital market research support solutions requiring trust and integrity.

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About The Principal Authors

Susan Eustis, President, co-founder of WinterGreen Research, is a senior analyst. She has done research in communications, healthcare equipment, and computer markets and applications. She holds several patents in microcomputing and parallel processing. She has the original patents in electronic voting machines. She has new patent applications in format varying, multiprocessing, electronic voting, and oxygen management. She is the author of recent studies of the drone and robot marketing strategies, Internet equipment, biometrics, biomaterials, a study of Internet Equipment, Artificial Intelligence, IoT, Worldwide Telecommunications Equipment, Top Ten Telecommunications, Digital Loop Carrier, Web Hosting, Web Services, and Application Integration markets. Ms. Eustis is a graduate of Barnard College. Ms. Eustis was named Top Woman CEO in 2012 by Who's Who Worldwide. She was named Top Woman Market Research Analyst in 2012, 2013, 2014, 2015, and 2016. She has been twice featured on the cover of the Women of Distinction magazine. She was cited in a recent Time Magazine article and major media articles on Youth Sports market growth. Recently she has been quoted by Bloomberg, The Wall Street Journal, The London Times, The Los Angeles Times, and others on sports markets, blockchain, and cybercurrency.

About the WinterGreen Research Team: The WinterGreen Research Team is comprised of senior analysts that prepare the market research and analysis that is offered to the client and developed using an iterative process to achieve a final study. Typical projects include providing market/viability research. The team can look at how drones can be applied to critical infrastructures safety, including: type of market existing, Barriers, Forecast demand and competitors, SWOT and competitive advantages, Price Analysis, product design recommendations (marketing orientation).

Research is typically for many different regions or localities, for example EU countries including Spain, UK, Nordic, Germany, and France. Typical projects profile the United States and areas of Asia. It is common to three representative countries from South America, Brazil, Argentina, Chile, and Mexico. Representative countries from Asia APAC typically include Japan, China, India, and Australia.

Critical infrastructure safety, including: type of market existing, barriers to entry and to faithful execution of product provision, forecast of demand, market share, SWOT, competitive advantage of major competitors, identification of new technologies and new companies, price performance analysis, product design recommendations, and marketing considerations are typical topics covered.

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