

# U.S. Outdoor Small Cells: A Five Year TCO

Market Study  
Third Quarter 2018





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## Market Study

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## Abstract

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This market study presents a total cost of ownership model for 4G LTE outdoor small cell deployments in the U.S. using leased dark fiber and attaching to existing poles. It estimates both capital and operational costs. The model presents an "average" view of the national U.S. market but could be refined to estimate smaller markets.

The model presents four different iterations of costs for both dark fiber and attachment rates: low, medium, high and extreme. Increasing costs are assigned to each of those categories in order to estimate how greatly deployment and operational costs might vary. The model includes other cost estimates, as well, including technology costs, labor, permits, and power.

Key questions addressed in this market study include:

- What is an outdoor small cell? What are metrocells, RRHs and oDAS?
- What are the issues with deploying outdoor small cells in the U.S.? How do these issues impact the number of small cells in the market?
- What are the differences between oDAS, metrocells and remote radio heads?
- Where are outdoor small cells most likely to be located? What's their role?
- How important is location to the effectiveness of an outdoor small cell?
- What are the main drivers of outdoor small cell deployment costs?
- Do these cost drivers vary by region?
- How much does it cost to deploy outdoor small cells?

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.