U.S. Outdoor Small Cells Forecast, 2017 – 2022: 5G Begins

Market Study
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Abstract

Over the past few years, the outdoor small cell market in the U.S. has grown substantially and, as this report shows, *iG*R forecasts a healthy future for it.

The main barriers facing the outdoor small cell market continue to have little to do with the technology itself and more to do with actual installation issues – power, backhaul, regulations, timelines and overall cost.

The vast majority of the cost of an outdoor small cell is related to providing everything except the actual "small cell" – which *iG*R defines as either a metrocell, RRH deployed as a small cell (RRHaSC) or an outdoor DAS (oDAS). Definitions follow in the body of the report.

Accessible sites – actual, physical locations – are the scarcest resource with respect to small cell installation. There are only so many poles, building sides and roofs in a given area, and there is only so much useable space on them. Using that space comes at a premium.

In general, these various issues, among others, have conspired to slow down the deployment of small cells by U.S. operators. However, *iG*R believes that small cells – and many of them – are inevitable, particularly as carriers march quickly down the road to 5G. That is, networks need to become "more dense" to support not only the initial mmWave-based 5G deployments but also to support the scaling capacity requirements of the network as 5G NR moves from the high bands to the sub-6 GHz bands.

In this market study, *iG*R presents a total addressable market forecast and an "actual" forecast for U.S. outdoor small cell nodes installed: metrocells, remote radio heads as small cells and outdoor DAS. The study also includes a forecast for capital expenditures (capex or network spending) and operational spending (OpEx) on actual small cell deployments

The assumptions underlying *iG*R's outdoor small cell forecasts are explained in this market study. The forecasts are further based on *iG*R's global connections forecast market study and *iG*R's mobile data forecast market study, as well as *iG*R's primary and secondary research, and various other sources.

Key questions addressed in this market study include:

- What is an outdoor small cell? What are metrocells, RRHs and oDAS?
- Why do the mobile networks need outdoor small cells to meet bandwidth demand?
- How do outdoor small cells fit into operators' evolving networks?

- 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?
- What is the role of CPRI with outdoor small cells?
- 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 is the total addressable market in the U.S. for outdoor small cells?
- How does the forecast for actual outdoor small cells deployments in the U.S. compare to the U.S. outdoor small cell total addressable market forecast?
- What is the forecast for capital expenditures and operational spending on actual outdoor small cell deployments?

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.