Small cell vs. macro cell

What is the difference?

A critical part of every communications service provider's (CSP) business is improving network performance to meet the ever-increasing demand for mobile data. According to Ericsson's November 2019 Mobility Report, mobile data traffic grew 68% between the third quarter of 2018 and the third quarter of 2019. One way CSPs meet that demand is by densifying their networks, or adding more cell sites.

Cell sites transmit radio-frequency signals to mobile devices and play a key role in how a wireless network operates and delivers a reliable signal to wireless customers. It's important to know the different types of cell sites that are available so you can better understand how networks are being deployed today.

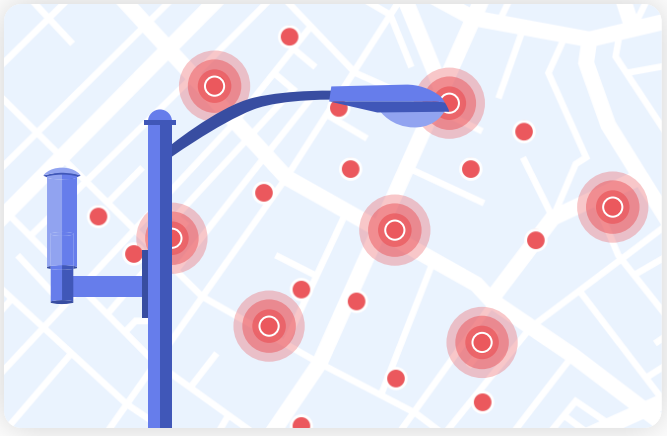
What is a cell site?

Infrastructure that links a wireless network together

Range of sizes

Provide different levels of wireless coverage

What is a small cell?



- "Umbrella" term for operator-controlled, low-powered radio access node
- Use either licensed or unlicensed spectrum
- Serve a smaller area — typical range between 30 and several hundred feet
- Can be deployed indoors and outdoors
- Can be used to increase capacity and improve coverage
- Frequently found in high traffic areas that are not well served by the existing network

Why are small cells important?

Help wireless operators enhance their existing networks and add capacity and coverage in high usage areas (e.g., airports, shopping centers, college campuses, downtown areas)

Help ease the demands on wireless networks

Extend handset battery life by reducing power consumption

What is a macro cell/site?

- Essentially, a cell tower (what most people envision when they hear the term "cell site")
- Can be 200 feet high or greater
- Cover large geographic areas — provide "blanket coverage," transmitting wireless signal up to 30-40 miles away
- Accompanied by base station equipment such as backup power generators and transceivers, which enable the transmission of the radio signals through the antennas
- Usually attached to buildings that house their electrical power and fiber connection

Now that you're familiar with the differences between small cells and macro cells, schedule a demo to see how we geolocate various cell sites and how they're being used in network deployments.