

U.S. Transportation Buildings: Wireless and Cellular Nodes Forecast, 2019- 2024

Market Study
Fourth Quarter 2019





U.S. Transportation Buildings: Wireless and Cellular Nodes Forecast, 2019-2024

Market Study

Published Fourth Quarter 2019

Version 1.0

Report Number: 04Q2019-02

iGR

12400 W. Hwy 71

Suite 350 PMB 341

Austin TX 78738

Table of Contents

Abstract	1
Executive Summary	2
Table A: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2024	3
Figure A: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2024	3
What This Means	3
Methodology	5
Transportation Buildings	6
What is required for a Smart Transportation Building?	7
Why make transportation buildings smart?	8
5G New Radio	8
URLLC	10
Massive IoT	10
5G Services and Use Cases	11
5G and Smart Transportation Buildings	11
CBRS and Transportation Buildings	12
Forecast and Methodology	13
Building-specific assumptions	13
Table 1: Commercial Buildings in the U.S.	14
Table 2: Sub-types of Public Assembly Buildings	15
Airports	15
Rail and bus terminals/stations	16
Technology-specific assumptions	17
Table 3: Passenger-Miles by Travel Mode (in millions), 2017	19
Airports	20
Sub 6 GHz Bands	20
Table 4: Sub 6 GHz Nodes in Airports, Actuals and TAM, 2019-2024	20
Figure 1: Sub 6 GHz Nodes in Airports, Actuals and TAM, 2019-2024	21
CBRS	21
Table 5: CBRS Nodes in Airports, Actuals and TAM, 2019-2024	21
Figure 2: CBRS Nodes in Airports, Actuals and TAM, 2019-2024	22
mmWave	22
Table 6: mmWave Nodes in Airports, Actuals and TAM, 2019-2024	22
Figure 3: mmWave Nodes in Airports, Actuals and TAM, 2019-2024	23
Wi-Fi	23
Table 7: Wi-Fi Nodes in Airports, Actuals and TAM, 2019-2024	23
Figure 4: Wi-Fi Nodes in Airports, Actuals and TAM, 2019-2024	24



Quoting information from an iGillottResearch publication: external — any iGillottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from iGillottResearch. iGillottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from iGillottResearch. The use of large portions or the reproduction of any iGillottResearch document in its entirety does require prior written approval and may have some financial implications.

Rail and Bus Stations/Terminals	25
Sub 6 GHz Bands	25
Table 8: Sub 6 GHz Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	25
Figure 5: Sub 6 GHz Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	26
CBRS	26
Table 9: CBRS Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	26
Figure 6: CBRS Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	27
mmWave	27
Wi-Fi	27
Table 10: Wi-Fi Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	27
Figure 7: Wi-Fi Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024	28
Summary	29
Table 11: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2024	29
Figure 8: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2024	30
Definitions	31
Definitions Table	31
About iGR	53
Disclaimer	53



Quoting information from an iGillottResearch publication: external — any iGillottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from iGillottResearch. iGillottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from iGillottResearch. The use of large portions or the reproduction of any iGillottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2019 iGillottResearch, Inc. Reproduction is forbidden unless authorized.
FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682

Abstract

There are many thousands of airports, bus and railway stations/terminals in the U.S. Not all of these stations/terminals are candidates for in-building wireless (IBW) systems, but many are – and many already have distributed antenna systems (DAS) and Wi-Fi systems deployed to handle travelers' voice/data traffic.

This market study provides a five-year forecast for the number of Sub 6 GHz, CBRS, mmWave and Wi-Fi nodes expected to be deployed in the U.S. Five-year total addressable market forecasts for these technologies are also provided.

Key questions addressed in this study:

- What is a smart transportation building? What applications and services are enabled in a transportation building?
- What technologies are required for a smart transportation building?
- What is 5G NR?
- How does 5G NR impact transportation buildings?
- What is CBRS?
- How does CBRS impact transportation buildings?
- What is the total addressable market for Sub 6 GHz, CBRS, mmWave and Wi-Fi nodes in U.S. transportation buildings?
- How many Sub 6 GHz, CBRS, mmWave and Wi-Fi nodes are expected to be deployed in U.S. transportation buildings between 2019 and 2024?

This market study is recommended for:

- Mobile operators, particularly those servicing the U.S. market
- Mobile backhaul providers, including telcos and cable MSOs
- Wired and wireless backhaul vendors and solution providers
- Mobile OEMs, particularly those servicing the U.S. market



Quoting information from an iGillottResearch publication: external — any iGillottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from iGillottResearch. iGillottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from iGillottResearch. The use of large portions or the reproduction of any iGillottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2019 iGillottResearch, Inc. Reproduction is forbidden unless authorized.
FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682

- Wired and wireless infrastructure vendors, particularly those servicing the U.S. market
- Financial and investment analysts.



Quoting information from an *iGillottResearch* publication: external — any *iGillottResearch* information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iGillottResearch*. *iGillottResearch* reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iGillottResearch*. The use of large portions or the reproduction of any *iGillottResearch* document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2019 *iGillottResearch*, Inc. Reproduction is forbidden unless authorized.
FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682