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

Market Study Second Quarter 2020



Ö

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

Market Study

Published Second Quarter 2020 Version 2.0 Report Number: 02Q2020-03

*iG*R 12400 W. Hwy 71 Suite 350 PMB 341 Austin TX 78738

## **Table of Contents**

**i**(

iR

Abstract	1
Executive Summary	
Table A: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2	024 4
Figure A: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2	20244
What This Means	5
Methodology	6
Transportation Buildings	7
What is required for a Smart Transportation Building?	
Why make transportation buildings smart?	
5G New Radio	9
URLLC	
Massive IoT	
5G Services and Use Cases	
5G and Smart Transportation Buildings	
CBRS and Transportation Buildings	13
Forecast and Methodology	14
COVID-19 Impact	14
Building-specific assumptions	
Table 1: Commercial Buildings in the U.S.	
Table 2: Sub-types of Public Assembly Buildings	
Airports	
Rail and bus terminals/stations	
Technology-specific assumptions	
Table 3: Passenger-Miles by Travel Mode (in millions), 2017	
Airports	
Sub 6 GHz Bands	
Table 4: Sub 6 GHz Nodes in Airports, Actuals and TAM, 2019-2024	
Figure 1: Sub 6 GHz Nodes in Airports, Actuals and TAM, 2019-2024	
Table 5: CBRS Nodes in Airports, Actuals and TAM, 2019-2024      Figure 2: CBRS Nodes in Airports, Actuals and TAM, 2010-2024	
Figure 2: CBRS Nodes in Airports, Actuals and TAM, 2019-2024 mmWave	
Table 6: mmWave Nodes in Airports, Actuals and TAM, 2019-2024	
Figure 3: mmWave Nodes in Airports, Actuals and TAM, 2019-2024	
Wi-Fi	
Table 7: Wi-Fi Nodes in Airports, Actuals and TAM, 2019-2024	

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch 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 *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2020 /GillottResearch, Inc. Reproduction is forbidden unless authorized. FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682 1

Figure 4: Wi-Fi Nodes in Airports, Actuals and TAM, 2019-2024
Rail and Bus Stations/Terminals 27   Sub 6 GHz Bands 27
Table 8: Sub 6 GHz Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024
27. Figure 5: Sub 6 GHz Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-2024 
CBRS
Table 9: CBRS Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-202428 Figure 6: CBRS Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-202429
mmWave
Table 10: Wi-Fi Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-202429 Figure 7: Wi-Fi Nodes in Rail and Bus Stations/Terminals, Actuals and TAM, 2019-202430
Summary
Table 11: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-2024 .31 Figure 8: Cellular/Wireless Nodes Deployed in U.S. Transportation Buildings, 2019-202432
<b>Definitions</b>
About <i>iG</i> R55 Disclaimer55



Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch 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 *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2020 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized. FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682 2

## 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.

## This version 2.0 of the market study provides an updated forecast based on the expected impact of the global virus COVID-19, as *iGR* understands it today.

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?

1

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



Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch 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 *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

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



Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch 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 *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Copyright © 2020 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized. FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682