



WINNF-TS-1026 6 GHz Unlicensed Metrics Specification

Working Document WINNF-TS-1026

Version V1.0.0

March 10, 2026



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Contributors

Peter Young, Comsearch, an ANDREW company

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1 Introduction

Since the introduction of commercially available 6 GHz unlicensed devices, there have been no metrics collected to assess the deployment numbers in the US and Canada. The 6 GHz Unlicensed Metrics Task Group was formed to identify 6 GHz unlicensed metrics that can be collected and establish procedures to collect deployment data. The data collected will be used to advocate for the continued growth and protection of the 6 GHz band for unlicensed use.

The following sources of 6 GHz unlicensed device metrics have been identified:

- AFC System Operators can provide metrics on standard power devices in use.
- Device Manufacturers can provide both sales numbers and metrics for devices managed by cloud-based networks management systems (NMS). The sales numbers may overestimate the actual deployment numbers. It may be difficult for sales numbers to distinguish between standard power and low power indoor numbers for Wi-Fi access points. The cloud-based NMS numbers would likely be a subset of all devices in use but can provide a rich amount of information describing use.
- Field Data Collection can collect data on both LPI and SP devices in use but is limited in both frequency of update and geography.

1.1 References

1.1.1 Normative References

- [n1] Wi-Fi Alliance AFC System to AFC Device Interface Specification, available at: <https://www.wi-fi.org/file/afc-specification-and-test-plans>
- [n2] List of US States, Counties and GIS files, available at the US [Census Bureau](#).
- [n3] Canada Census Cartographic Boundary files, available at <https://www12.statcan.gc.ca/census-recensement/2021/geo/sip-pis/boundary-limités/index2021-eng.cfm?year=21>

1.1.2 Keywords

Documents that define requirements should incorporate the following text:

The following terms are used within this document and should be interpreted as described in [RFC-2119](#):

- SHALL is a mandatory requirement (negative is SHALL NOT)
- SHOULD is recommended requirement/best practice (negative is SHOULD NOT)
- MAY is an optional requirement, i.e., something that is allowed (negative is NEED NOT)

2 AFC System Operator Metrics

The approved AFC System Operators provide available channels and powers to standard power devices in various countries. Once the devices receive the available channel and power lists, the device chooses one or more of those channels for operation. The chosen channels are not reported back to the AFC System Operator, so the AFC system cannot make assumptions on anything other than the likelihood that the device has operated. For instance, there is no assumption that can be made about the amount of bandwidth used, the power transmitted, or the throughput.

2.1 Requirements for AFC System Operator Data

2.1.1 *Conditions for collecting data*

AFC System Operators may share the data they have collected under the conditions that a neutral party collects the data and only discloses it when certain requirements are met. These conditions are:

1. Neutral Party. Wireless Innovation Forum staff shall collect AFC System Operator metrics. The staff that collect data shall not be employed by any member company of the Forum.
2. Non-Disclosure. The neutral party collecting the data should use reasonable methods to secure the data so that source-identifying information is not disclosed.
3. Minimum number of AFC System Operators. A minimum of 3 AFC System Operators shall provide data to the neutral party for each country (ruleset) being reported on. This will minimize the ability of any AFC System Operator to deduce market share of any other AFC System Operator.
4. Disclosure of AFC System Operator Names. Upon submitting data to the neutral party, the AFC System Operator shall indicate whether their AFC System Operator name may be disclosed in the report.

2.1.2 *Data Collection Frequency*

The collection of data by the neutral party should be done on a quarterly basis, but shall be done at least once per year for reporting at the WinnForum General Meeting.

2.1.3 *Data Collection Method*

The data should be provided in one of the following file formats for ease of compilation by the neutral party:

- Microsoft Excel.
- Other tabular data formats as approved by the neutral party.

2.1.4 Data to be Collected

The following defines the data to be collected.

Table 1: Data to Be Collected

Column	(R)quired/(O)ptional	Definition
Year-Quarter	R	Text: YYYY-Qx format. In calendar year quarters: <ul style="list-style-type: none"> • Q1 = January 1 to March 31 • Q2 = April 1 to June 30 • Q3 = July 1 to September 30 • Q4 = October 1 to December 31
Ruleset	R	Text: Ruleset to identify the country for the device as allowed in the AFC System to AFC Device Interface Specification[n1], currently: <ul style="list-style-type: none"> • US_47_CFR_PART_15_SUBPART_E • CA_RES DBS-06
State-Province	R	Text: Standard 2 or 3 character abbreviation for the state[n2] or province[n3] within the area covered by the Ruleset.
County-FSA	O	Text: name of US county or Canadian Forward Sortation Area (FSA) <ul style="list-style-type: none"> • US: County name[n2] • Canada: FSA name as found in the Canada Census Cartographic Boundary Files [n3]
County-FSA-ID	O	Text: code for each county or FSA <ul style="list-style-type: none"> • US: FIPS code [n2] • Canada: FSA code as found in the Canada Census Cartographic Boundary Files [n3]
Category	R	Text: The type of device, from the following: <ul style="list-style-type: none"> • Fixed Wireless Access <ul style="list-style-type: none"> ◦ Ex: WISP backhaul, last-mile • Enterprise <ul style="list-style-type: none"> ◦ Ex:enterprise Wi-Fi • Residential <ul style="list-style-type: none"> ◦ Ex: residential Wi-Fi • Unknown

Column	(R)quired/(O)ptional	Definition
Indoor	R	Text: <ul style="list-style-type: none"> • Yes <ul style="list-style-type: none"> ○ device operating indoors. Includes devices operating with FCC BX grant note, but may also include other devices. • No <ul style="list-style-type: none"> ○ device operating outdoors. • Unknown
Count	R	Number: Number of unique devices, defined by ruleset, certification ID and serial number, that made at least 1 request of the AFC during the reporting period (year-quarter).

2.2 Sample AFC System Operator Metrics

A sample of the data is in the table below.

Table 2: Sample AFC System Operator Metrics

Year-Quarter	Ruleset	State-Province	County-FSA	County-FSA-ID	Category	Indoor	Count
2024-Q4	US_47_CFR_PART_15_SUBPART_E	CA	Madera County	06039	Enterprise	Yes	12
2024-Q4	US_47_CFR_PART_15_SUBPART_E	CA	Madera County	06039	Residential	No	2
2024-Q4	US_47_CFR_PART_15_SUBPART_E	CA	Santa Clara County	06085	Fixed Wireless Access	No	973
2025-Q2	CA_RES_DBS-06	BC			Unknown	Unknown	6
2025-Q2	CA_RES_DBS-06	MB	Southwestern Manitoba	R0M	Enterprise	Unknown	12
2025-Q2	CA_RES_DBS-06	NL			Fixed Wireless Access	Unknown	6

3 6 GHz Unlicensed Device Manufacturer Metrics

The method and collection of 6 GHz device manufacturer metrics is a subject for future study.

4 6 GHz Unlicensed Field Data Collection Metrics

The method and collection of 6 GHz unlicensed field data collection metrics is a subject for future study.