



5G ECOSYSTEM REPORT  
EXECUTIVE SUMMARY

JANUARY 2021





# Executive Summary

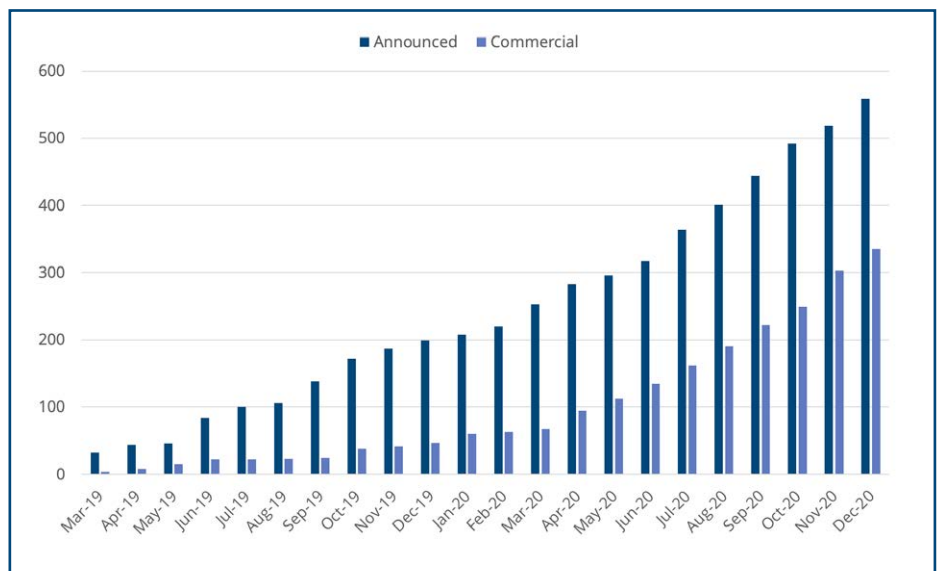
## Key facts

The number of announced 5G devices grew rapidly in 2020, accompanied by a corresponding rise in the number of commercially available 5G devices. By the end of the year, 559 5G devices had been announced, of which almost 60% were understood to be commercially available. This is an increase of 25.9% in the number of announced 5G devices in the last quarter, while the number of commercially available 5G devices has now reached 335, representing an increase of 50.9% in the last three months.

## By end-December 2020, GSA had identified:

- twenty announced form factors.
- one hundred and eight vendors who had announced available or forthcoming 5G devices.
- five hundred and fifty-nine announced devices (including regional variants, and phones that can be upgraded using a separate adapter, but excluding operator-branded devices that are essentially rebadged versions of other phones), including 335 that are understood to be commercially available:
  - two hundred and seventy-eight phones (up 27 from October), at least 233 of which are now commercially available (up 28 in a month). (Includes three phones that are upgraded to offer 5G using an adapter.)
  - one hundred and eight FWA CPE devices (indoor and outdoor, including two Verizon-spec compliant devices not meeting 3GPP 5G standards), at least 35 of which are commercially available.
  - seventy-two modules, at least 25 of which are commercially available.
  - twenty-nine industrial/enterprise routers/gateway/modem, at least 11 of which are commercially available (figure restated from last issue).
  - twenty-six hotspots (including regional variants), at least 16 of which are commercially available.
  - nine laptops (notebooks), at least one of which is commercially available.

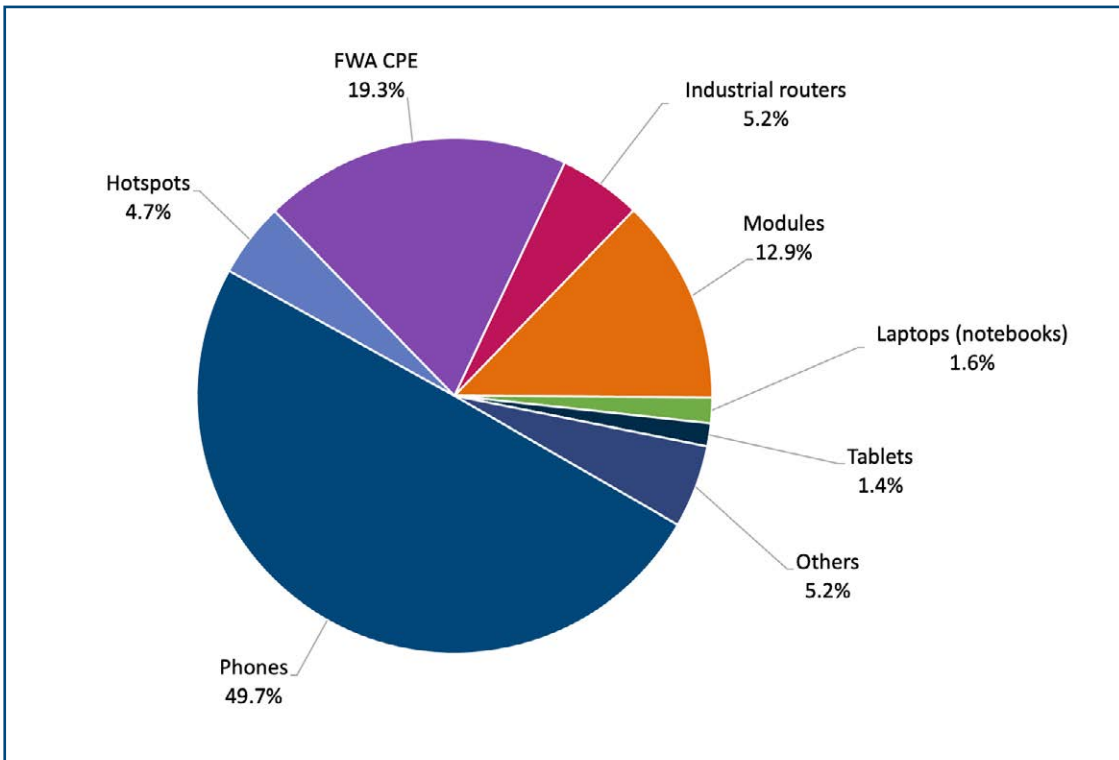
Figure 1: Growth of announced 5G devices (announced and commercially available)



- eight tablets, at least six of which are commercially available.
- twenty-nine other devices (including drones, head-mounted displays, including in vehicle routers/modems/hotspots, robots, snap-on dongles/adapters, a switch, TVs, USB terminals/dongles/modems, cameras, a vehicle OBU, a vending machine and an encoder).

Not all devices are available immediately and specification details remain limited for some devices.

Figure 2: Announced 5G devices, by form factor



## Growth of 5G phones and FWA CPE

Phones and indoor/outdoor FWA CPE continue to be the most prevalent 5G devices. The number of announced devices in each of these categories grew strongly throughout 2020. In particular, the number of announced phones rose rapidly, increasing by 39% since the end of September.

Thirty-six vendors have now produced or announced plans to produce 5G phones. Meanwhile, 56 vendors have now produced or announced plans to launch their own indoor or outdoor 5G FWA CPE devices.

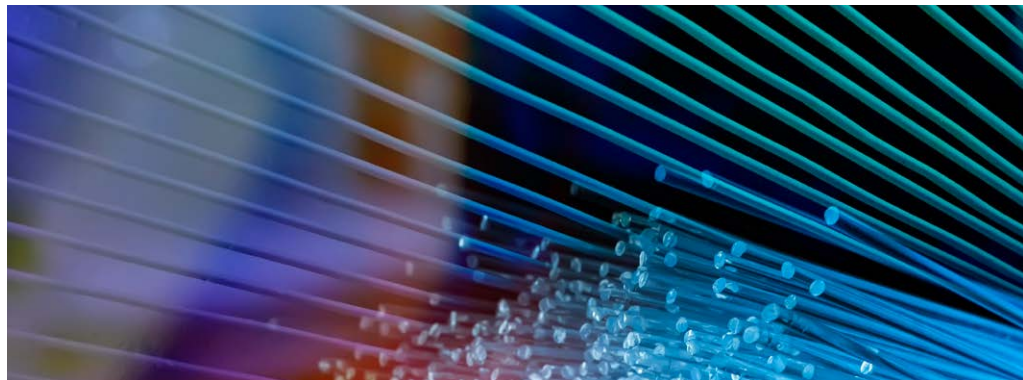
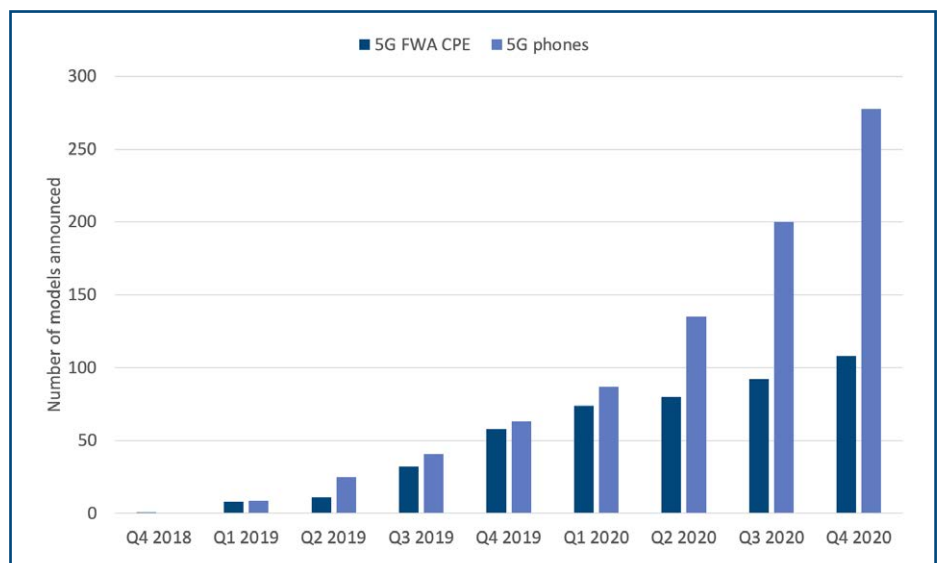


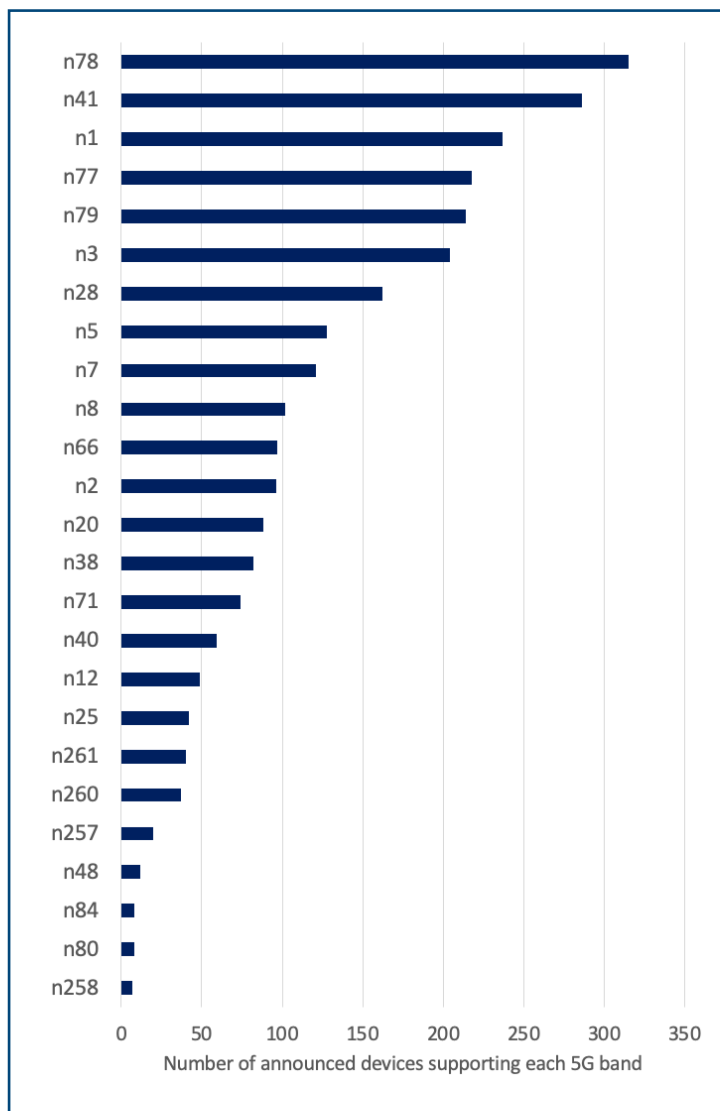
Figure 3: Number of announced 5G phones and 5G FWA CPE devices



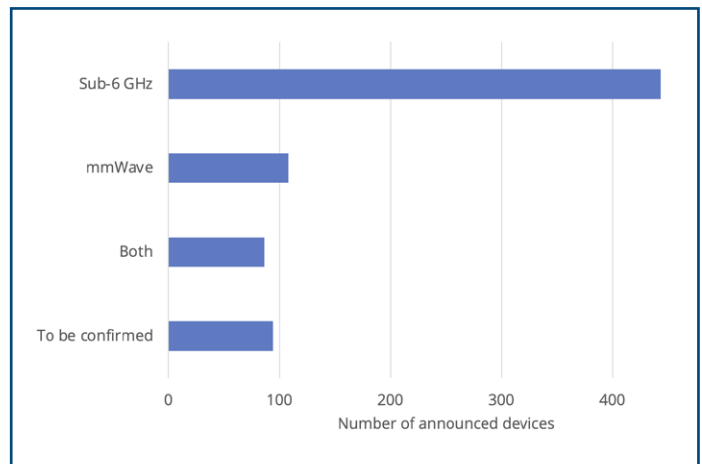
# Spectrum band support of 5G devices

Availability of information about spectrum support is improving as a greater number of devices become commercially available. GSA has identified some spectrum support information for over 83% of all announced devices: 79.2% of all announced 5G devices are identified as supporting sub-6 GHz spectrum bands, while 19.3% are understood to support mmWave spectrum and 15.4% of all announced devices are known to support both mmWave and sub-6 GHz spectrum bands.

**Figure 5: Announced devices with known spectrum support, by broad category (data not available for all devices)**



**Figure 4: Announced devices with known spectrum support, by broad category (data not available for all devices)**



Fifty-eight of the commercially available devices (17.3%) are understood to support services operating in mmWave spectrum, but 89.6% of the commercially available devices are known to support sub-6 GHz spectrum.

The bands known to be most supported by all announced 5G devices are n78, n41 and n1. The number of announced devices with support for Band n78 has surpassed 300 for the first time, rising to 315 devices, and Bands n41 and n1 are supported by 286 and 237 devices respectively. Meanwhile the numbers of announced devices identified as supporting Bands n77, n79 and n3 are not far behind: there are now 218 announced devices with support for Band n77, 214 devices with support for Band n79 and 204 devices with support for Band n3.

We can expect the device ecosystem to continue to grow quickly and for more information about announced devices to become available as they reach the market. Based on vendors' previous statements and recent rates of device release, we might expect to see the number of commercial devices surpassing the 400 mark by the end of Q1 2021. GSA will be tracking and reporting regularly on these 5G device launch announcements. Its GAMBoD database contains key details about device form factors, features and support for spectrum bands. Summary statistics are released in this regular monthly publication.

Full list of 5G Devices can be found in Annex 1, available for Members and Associates.



# ABOUT GSA

GSA is the voice of the global mobile ecosystem and has been representing mobile suppliers since 1998.

## GSA GAMBoD Database

Reports are based on data contained in the GSA GAMBoD databases which is a resource available to GSA Members and Associates. Companies and policy makers can subscribe as a GSA Associate to the database to gain insights into the source data behind reports for their own research purposes.

Discounted annual subscription are available to regulators, government agencies and mobile operators.

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