



5G DEVICE ECOSYSTEM
REPORT
EXECUTIVE SUMMARY

AUGUST 2020

GSA 



Executive Summary

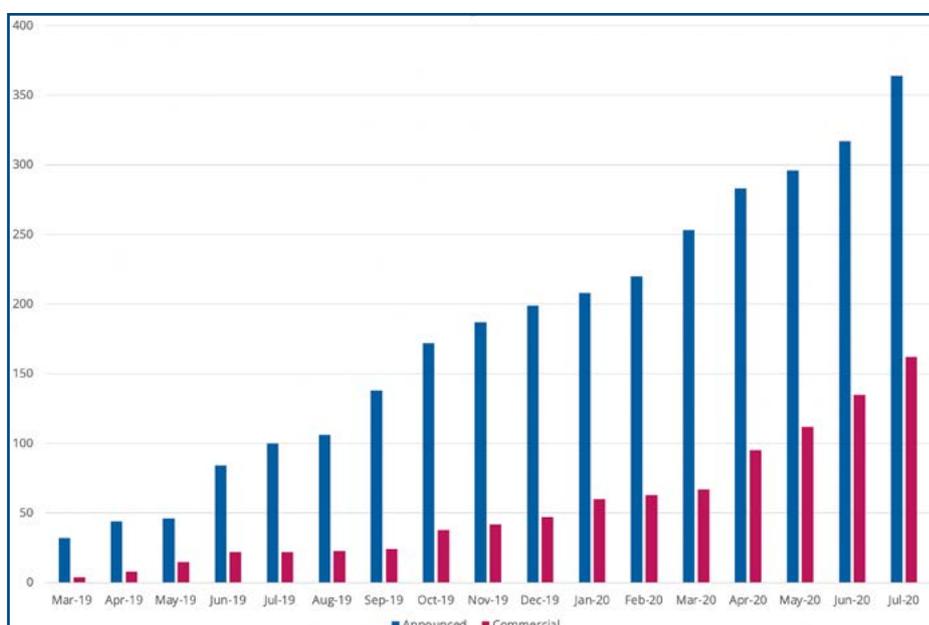
Key facts

The number of announced 5G devices has continued to climb swiftly, accompanied again this month by a continued rapid rise in the number of 5G devices that are commercially available. In January 2020, the number of announced 5G devices exceeded 200 for the first time; by end-July 364 devices had been announced, of which 162 were understood to be commercially available (up from 135 at the end of June).

By end July 2020, GSA had identified:

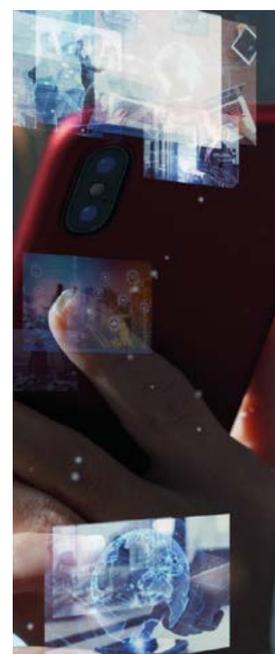
- eighteen announced form factors (phones, head-mounted displays, hotspots, indoor CPE, outdoor CPE, laptops/notebooks, modules, snap-on dongles/adapters, industrial grade CPE/routers/gateways/modems, drones, robots, tablets, TVs, cameras, USB modems, a switch, a vehicle OBU and a vending machine).
- ninety-one vendors who had announced available or forthcoming 5G devices.
- three hundred and sixty-four 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 162 that are understood to be commercially available:
 - one hundred and sixty-two phones, (up 27 from June), at least 113 of which are now commercially available (up 18 in a month). Includes three phones that are upgraded to offer 5G using an adapter.
 - ninety-four CPE devices (indoor and outdoor, including two Verizon-spec compliant devices not meeting 3GPP 5G standards, and enterprise grade CPE/routers/gateways).
 - fifty-five modules.
 - twenty-three hotspots (including regional variants).

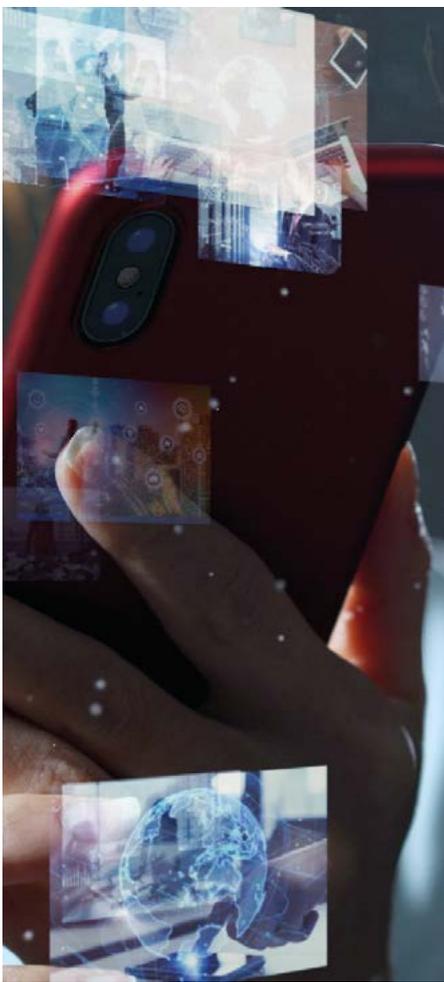
Figure 1: Growth of announced 5G devices (announced and commercially available)



- five laptops (notebooks).
- twenty-five other devices (including drones, head-mounted displays, robots, snap-on dongles/adapters, a switch, tablets, TVs, USB terminals/dongles/modems, cameras, a vehicle OBU and a vending machine).

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





Growth of 5G phones and FWA CPE

The most prevalent 5G devices are phones and FWA CPE. The number of announced devices in each of these categories has grown strongly over the past 18 months. The number of announced 5G phones has more than doubled since the end of 2019 and is up by 86% over the last four months.

Thirty-one vendors have now produced or announced plans to produce 5G phones. Meanwhile, 54 vendors have now launched or announced plans to launch their own 5G CPE devices (indoor, outdoor or enterprise grade CPE/routers/gateways).

Figure 2: Announced 5G devices, by form factor

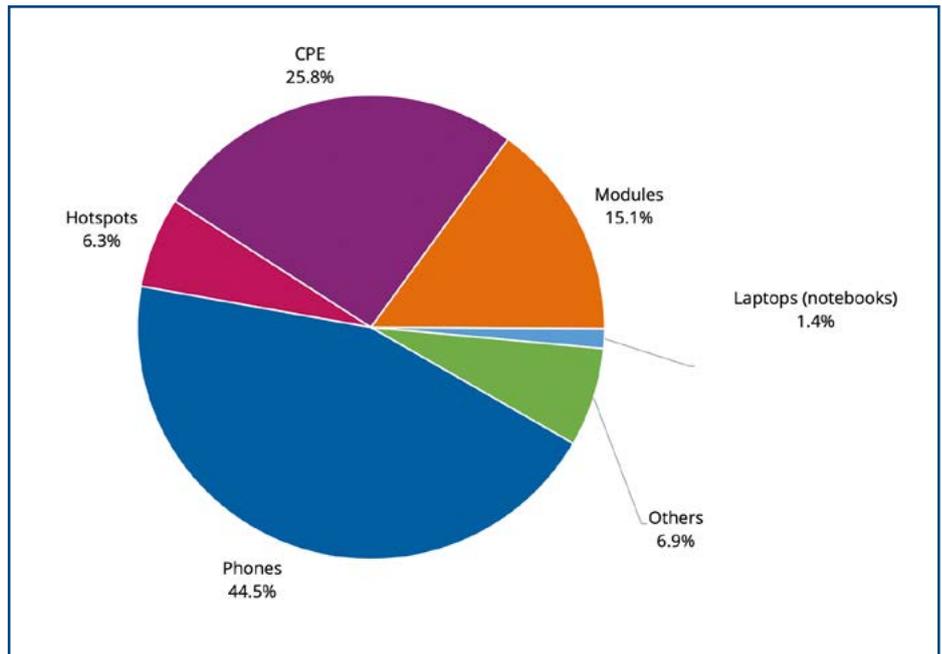
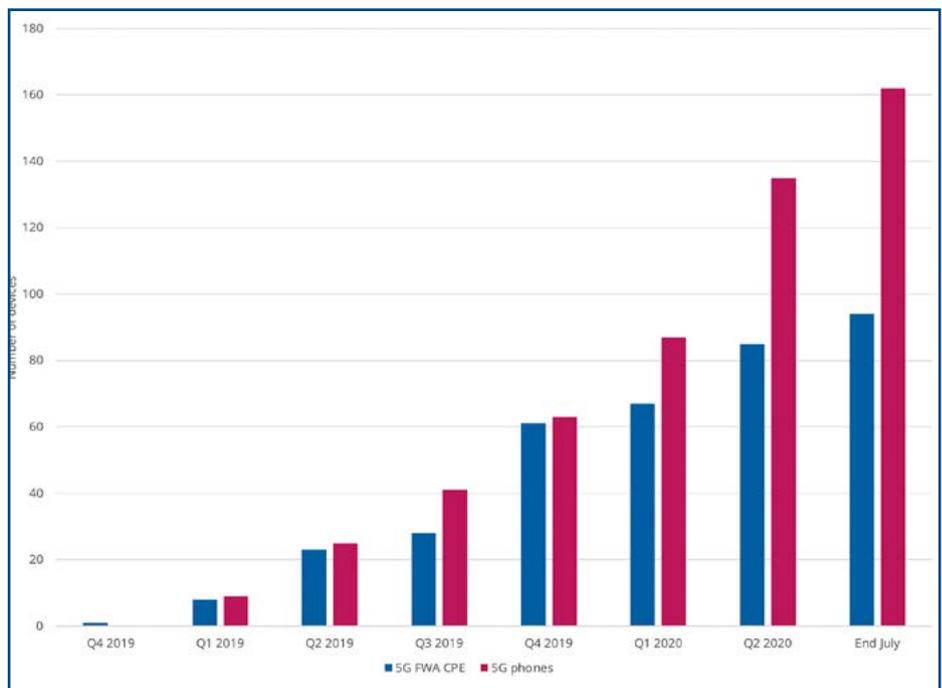


Figure 3: Number of announced 5G phones and 5G FWA CPE devices





Spectrum band support of 5G devices

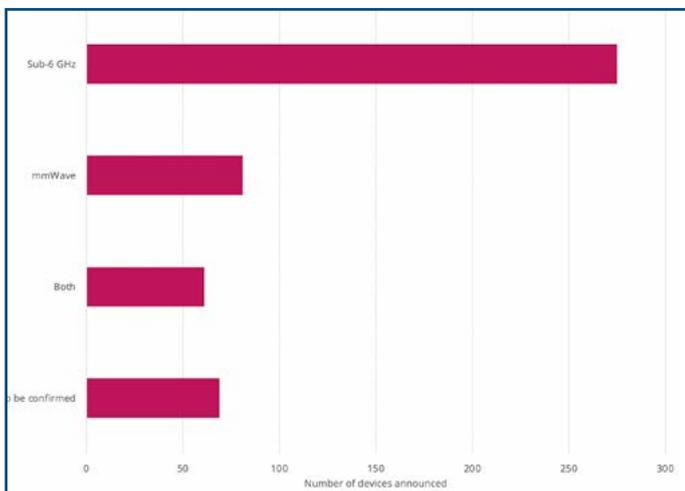
Availability of information about spectrum support is improving as a greater number of devices become commercially available. GSA has identified some spectrum support information for just over 81% of all announced devices: 75.5% of all announced 5G devices are identified as supporting sub-6 GHz spectrum bands while 22.3% are understood to support mmWave spectrum. Just 16.8% of all announced devices are known to support both mmWave and sub-6 GHz spectrum bands. (The number of devices supporting mmWave spectrum bands has been restated, as a number of devices were initially announced as supporting both sub-6 GHz and mmWave spectrum bands, but have subsequently been launched – initially, at least – with only sub-6 GHz support.)

Only 31 of the commercially available devices (19.1% of them) are understood to support services operating in mmWave spectrum, but 87.0% 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, n79, n77, n1 and n3. At the end of July, the number of announced devices known to support Bands n1 and n77 had passed the 100 mark for the first time, reaching 107 and 110 devices respectively. Meanwhile the number of announced devices supporting Band 79 had reached 120, the number of announced devices supporting Band n41 had reached 152 and the number of announced devices supporting Band n78 had reached 176.

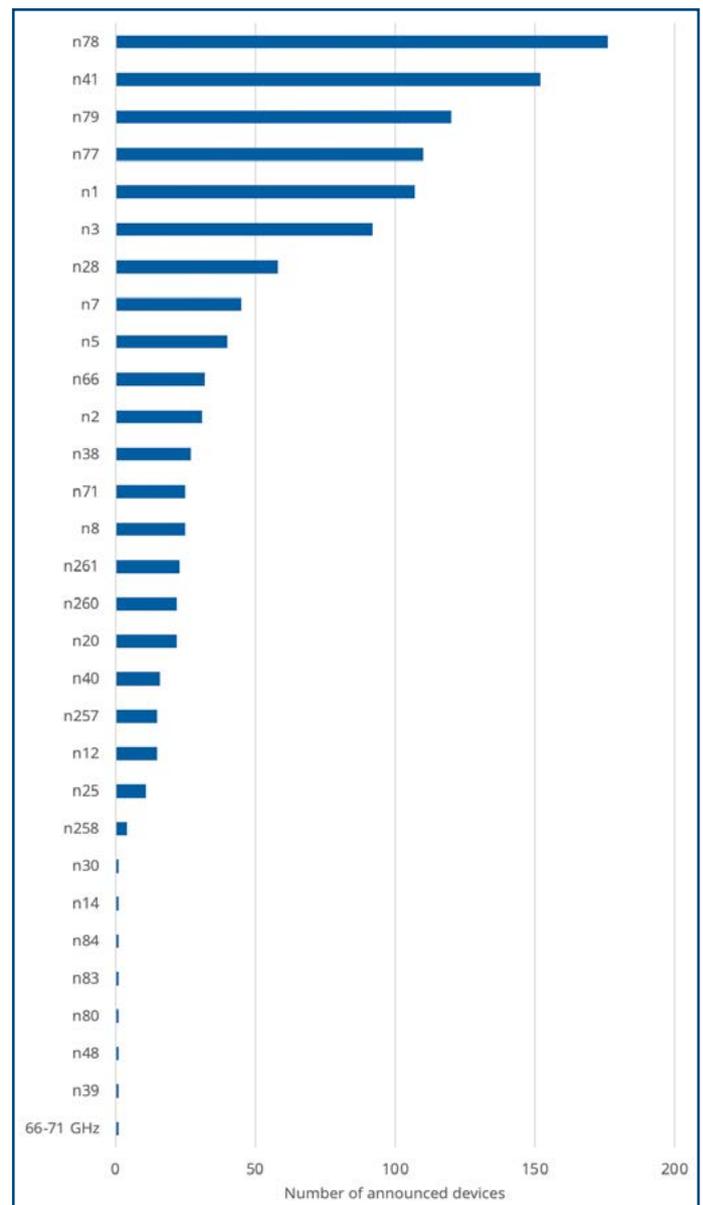
We can expect the device ecosystem to continue to grow quickly and for more information about announced devices to become available as they reach the market. Based on vendors' previous statements and recent rates of device release, we might expect to see the number of commercial devices approaching the 200 mark by the end of Q3 2020 (although many device launch timetables were announced before COVID-19 had an impact on businesses worldwide, so there is potential for the number of new launches to be lower than

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



this). 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.

Figure 5: Announced devices with known spectrum support, by specific band (data not available for all devices)



A complete list of devices is available for GSA Members and Associates in the full report.

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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