

C-Band Auction Snapshot

Prepared by GSA based on data from the GSA 5G
Spectrum Auction Tracker

January 2020

C-Band auction/allocation trends

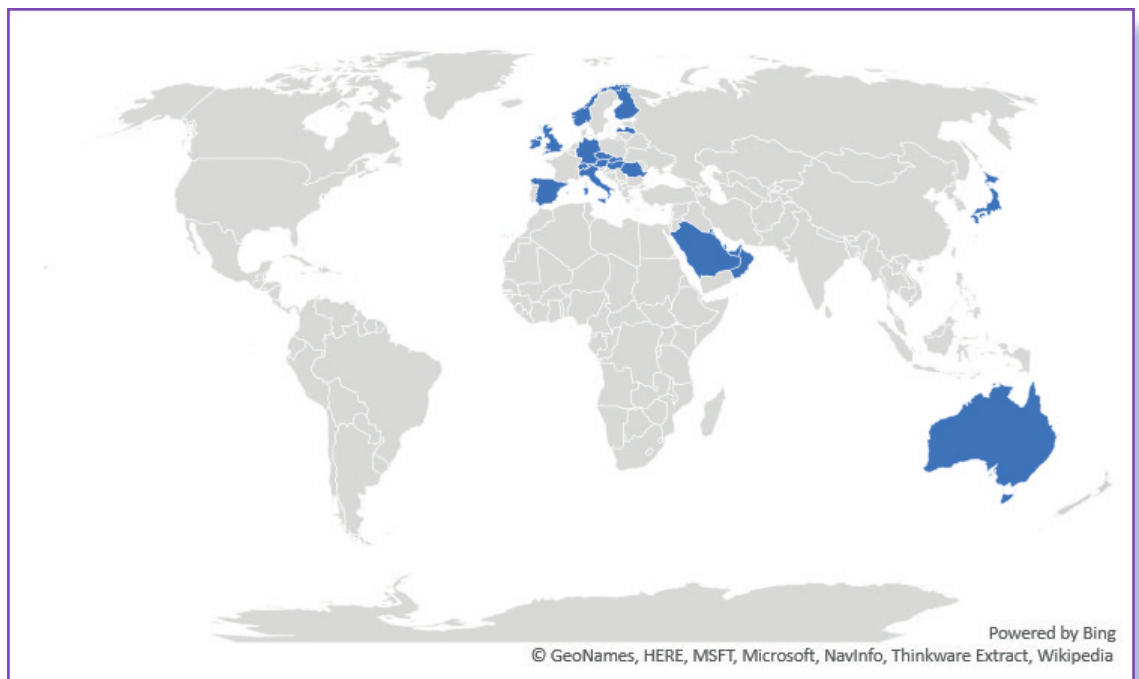
Auctions and allocations of C-Band spectrum (3300–4200 MHz) have come thick and fast over the last couple of years, as regulators have sought to open up access to what has become – initially at least – the most important spectrum band for 5G.

C-Band spectrum has historically been made available around the world for fixed wireless services using legacy technologies, or has been allocated for satellite or government/military use. In a few countries, portions of C-band spectrum have been made available for LTE.

With the advent of 5G, however, access to C-Band spectrum is being opened up to support mobile broadband services, often specifically including 5G.

GSA has been tracking the allocation and auction of C-Band spectrum in its regular report *5G Spectrum for Terrestrial Networks: Licensing Developments Worldwide*. Since 2015 it has identified 23 countries that have auctioned or allocated C-Band spectrum with the intention of opening up the frequency range for mobile broadband and 5G usage.

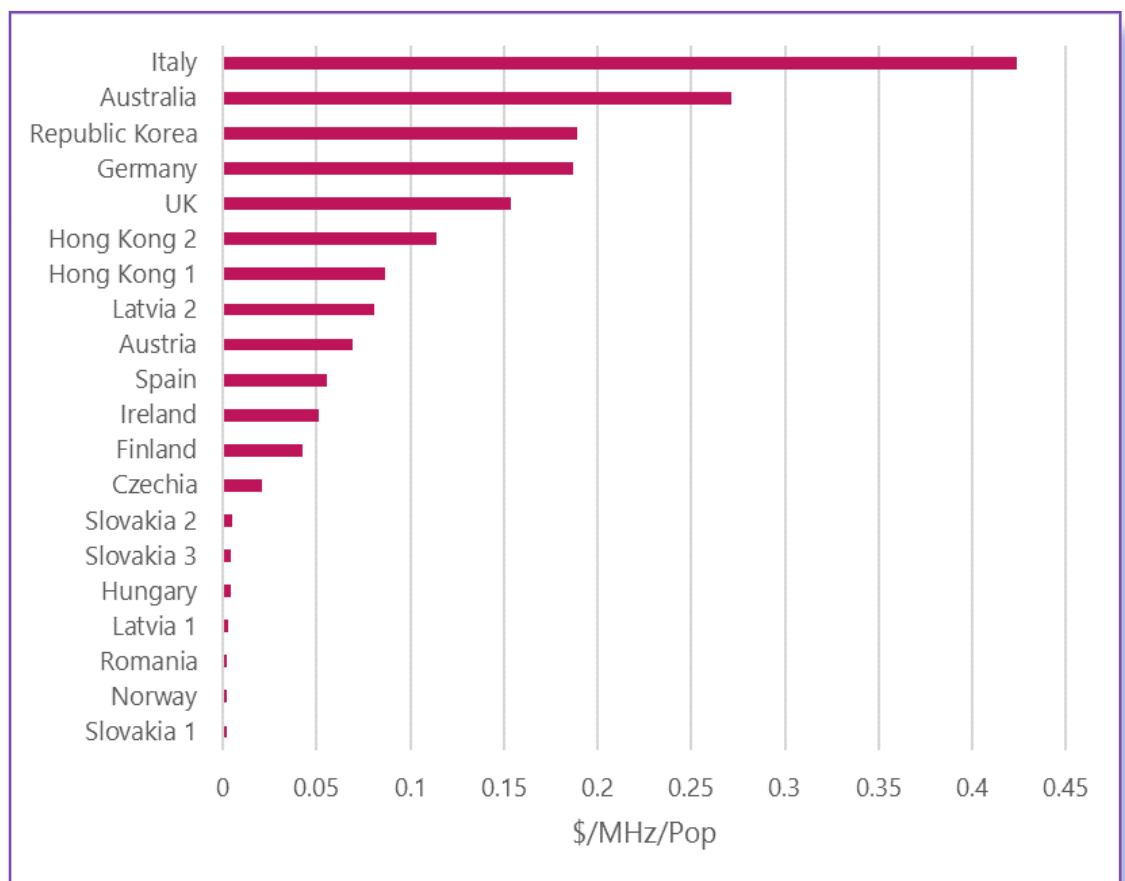
Figure 1: Countries that have auctioned/allocated C-Band spectrum since 2015



Since 2015 GSA has identified 23 countries that have auctioned or allocated C-Band spectrum for mobile broadband

The prices paid for the C-Band spectrum have varied widely. The amount operators are prepared to spend will depend on the degree of competition, the amount of suitable spectrum they already hold, on the length of time the licence is valid, on the extent of the coverage/performance requirements that are attached to the licence, and on the economic value (the amount of money spent by) each mobile customer in the country concerned. Figure 2 shows (where data is available) the prices paid for C-Band spectrum in 5G-relevant auctions since 2015.

Figure 2: Final payment value of C-Band spectrum in recent auctions, \$/MHz/Pop



Italian operators have paid the most per MHz per head of population for C-Band spectrum in recent auctions

The fees paid range from USD\$0.002 per MHz per Pop (per person) (Slovakia, Norway and Romania) to USD\$0.424 per MHz per Pop in Italy. The upcoming French allocation of C-Band spectrum will sit right in the middle of this range. France has approved an unusual procedure for allocation of C-Band licences to use spectrum in the 3410–3800 MHz range. In an initial allocation procedure, four 50 MHz blocks will be available at a fixed price of €350 million per block (\$0.117/MHz/Pop). This will put it between UK and Hong Kong in terms of spectrum licensing costs. Subsequently additional 10 MHz blocks will then be made available by auction at a reserve price of €70 million for 10 MHz blocks.

GSA 5G Spectrum Auction Tracker

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GSA has developed a new database, the GSA 5G Spectrum Auction Tracker (available for subscribers) which collates data about the prices of spectrum sold at auction or allocated to operators through administrative proceedings.

The number of countries allocating or auctioning C-Band spectrum will grow rapidly in the coming months. Other ongoing or upcoming C-Band auctions (some releasing an additional block of C-Band spectrum) include Belgium, Brazil, Channel Islands, Cyprus, Czechia, Ecuador, Estonia, France, Greece, Hungary, India, Israel, Luxembourg, Mexico, Myanmar, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Sweden, Taiwan, Thailand, UK, Ukraine, and USA (for CBRS, and possibly other C-Band spectrum). In addition to these scheduled auctions/allocations, in December 2019 the Arab Spectrum Management Group decided to release spectrum in the 3300-3800 MHz range (except for four countries that agreed to release 3400-3800 MHz) for mobile broadband services, so further C-Band spectrum auctions/allocations can be expected in that region soon.

GSA will continue to track this important, and reporting on the cost of 5G spectrum (including C-Band spectrum and other important bands).

About GSA

GSA (the Global mobile Suppliers Association) is a not-for-profit industry organisation representing companies across the worldwide mobile ecosystem engaged in the supply of infrastructure, semiconductors, test equipment, devices, applications and mobile support services.

GSA actively promotes the 3GPP technology road-map – 3G, 4G, 5G – and is a single source of information resource for industry reports and market intelligence. GSA Members drive the GSA agenda and define the communications and development strategy for the Association.

Membership of GSA is open to any supplier of products; systems or services related to the mobile industry and brings many benefits including access to the GAMBoD and NTS database. The range of benefits includes enhanced discussion, networking and influencing opportunities on the key industry topics, and unique promotional/visibility opportunities for your company name, capabilities, positioning and messages. More details can be found at <https://gsacom.com/gsa-membership/>

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Contact

GSA Secretariat Email: research@gsacom.com

Tel: +44 330 113 1572 | <https://gsacom.com>