PUBLIC NOTICE 2026-1

Consultation on the Allocation, Allotment and Assignment of 5G New Radio Spectrum in Anguilla

23 JANUARY 2026

1. Introduction

The Commission is hereby launching a public consultation on spectrum for fifth generation (5G) mobile and fixed wireless access (FWA) telecommunications services.

5G will play a pivotal role in enabling the Gigabit Society vision by delivering ultra-high-speed broadband, ultra-low latency[1], and enabling massive device connectivity that could transform economic and social interactions. 5G supports advanced applications such as autonomous vehicles, remote surgery, smart cities, massive Internet of Things (IoT) deployments, and immersive augmented/virtual reality experiences.

5G networks will enhance visitor experiences for Anguilla's tourist industry as well as enabling seamless remote working and making it possible to improve IoT-enabled smart monitoring of disaster-prone infrastructure.

2. Background

To put this consultation into context, the Commission wishes to advise the public and operators of the regulatory plans for the telecommunications sector over the next several years.

It is the Government's intent to consult on and update the legislation for the telecommunications sector to make it more suitable for current market conditions. In conjunction, the licensing framework and licences will also be updated.

Ideally those changes would have been undertaken already. However, the Commission does not wish to delay market evolution pending those changes because of the potential impact on social and economic welfare.

Accordingly, the Commission is moving forward under the existing legislative and licensing framework and will be publishing several related consultations over the coming months commencing, firstly, with this 5G consultation. Respondents to it should bear in mind that the Commission will be inviting bids from a potential third mobile and or FWA operator. Secondly, a consultation inviting bids to become a new mobile and/or FWA operator will follow. Thirdly, a consultation on enabling the provision of internet services by Low Earth Orbit (LEO) satellite providers. That might be separate from or combined with a wider consultation on satellite service provision. Finally, all the relevant spectrum changes will be consolidated and added to as a part of a consultation on an update to Anguilla's Frequency Allocation Table.

3. Consultation Process

The consultation seeks views on the 5G spectrum bands that should be made available, the amount of spectrum within each band that may be obtained, the way it

[1] This indicates an extremely short time between a "click" by a user and a service response.

should be licensed and the fees that should be charged. The Commission seeks to provide a 5G spectrum plan and a process for assignment that will ensure the effective and efficient use of the spectrum, thereby maximising the total benefits to Anguilla. It will also be necessary to ensure that Anguilla's licensing approach avoids cross-border interference with neighbouring islands.

Stakeholders, including operators, members of the public, equipment vendors, businesses, public institutions and other relevant organisations are invited to comment on the proposals and supporting questions. The consultation will help to shape a roadmap for island wide 5G deployment that meets the above objectives and that is aligned with national laws, regional agreements and the ITU Radio Regulations. Respondents should note that all references to making 5G spectrum available for mobile also apply to its use for FWA and that the Commission intends to invite bids from a third operator to deliver mobile and/or FWA in a subsequent licencing consultation.

Respondents who wish to provide comments on this Consultation Document are invited to do so in written form.

Responses should be submitted to the Commission in electronic form to facilitate further distribution and posting on the Commission's website.

Submissions will be accepted through the following addresses:

Email to: **consultations@puc.ai**

Delivery (paper and electronic copy) by hand or by courier to:

Mr. Damien Harrigan
Executive Director
Anguilla Public Utilities Commission
Hansa Building II – Unit 1,
Cosley Drive,
The Valley, Anguilla

Responses must be received by the Commission no later than 3:30 p.m. local time on Friday, March 6, 2026.

Respondents are requested to provide evidence and reasoning when answering questions.

4. What is 5G?

5G represents the next generation of and FWA networks.

5G capabilities include:

- Higher speeds – enabling faster downloads of large files and smooth viewing of video.
- Massive Machine-Type Communications (mMTC) - enabling large-scale Internet of Things (IoT) applications by supporting large numbers of connected devices such as those used in smart cities, which could for example facilitate the tourist industry in Anguilla.
- Network Slicing – a 5G network can be divided into multiple virtual networks, each optimised for different services e.g. such as one slice for IoT, another for video streaming, and another for critical communications, helping to guarantee quality of service.

The maximum 5G speeds achieved in practice regionally are demonstrated by the Ookla speed measurements shown in Figure 1. The speeds achievable in Anguilla, especially at peak times, would depend on the capacity built into the networks by local operators as well as the availability of suitable spectrum and the density of cell sites.

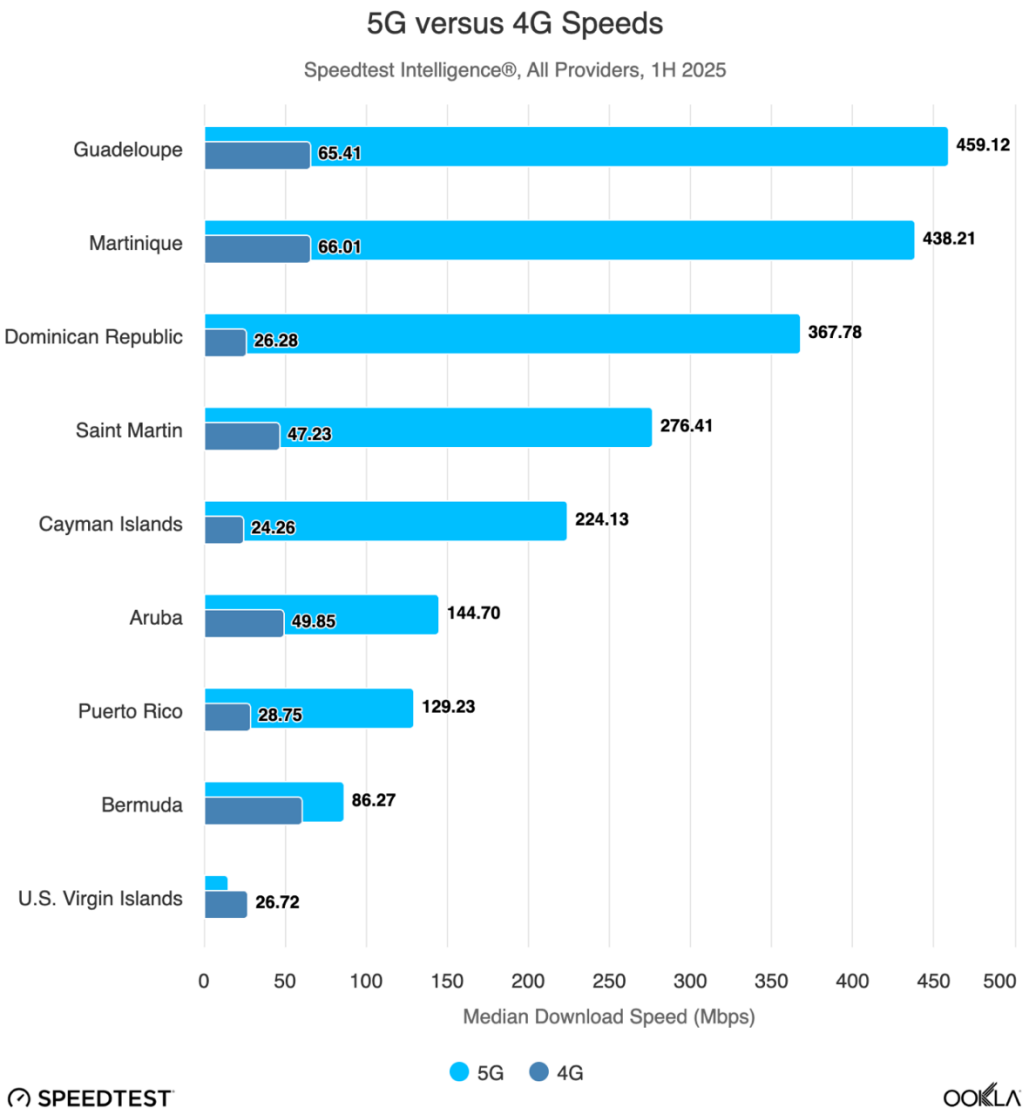

Figure 1: Baker, K. (2025, July 22). The Caribbean states of 5G. Ookla. https://www.ookla.com/articles/the-caribbean-states-of-5g

As can be seen, Martinique has achieved over 400 megabits per second (Mbps). That is over 7 times the speed that was achieved by 4G. Over 200 Mbps was achieved in the Cayman Islands, roughly 10 times 4G speeds.

Worldwide, the top normal operational speed so far, based on Ookla measurements, has been achieved by an operator called “e&” in the United Arab Emirates at over 800 Mbps.

5. Benefits to Anguilla from 5G

The potential sector specific benefits resulting from the arrival of 5G could include:

- Government and finance: Improved e-Government portals and secure payments due to better protocols, broadening financial inclusion for small merchants and vendors.
- Medicine: Ultra-fast speeds and low latency that enables high-quality telemedicine, remote diagnostics, and real-time consultations.
- Tourism: Seamless streaming, contactless services, and augmented-reality guides that improve the visitor experience, while hotels and villas could offer enterprise-grade Wi-Fi over 5G fixed wireless.
- Business: Supporting remote work and global business services, attracting location-independent professionals and enabling local firms to serve clients abroad with cloud apps and video collaboration that does not stutter.
- Utilities: Deployment of smart meters for monitoring distributed solar and batteries.
- Transport and Ports: Tracking vehicles and cargo.

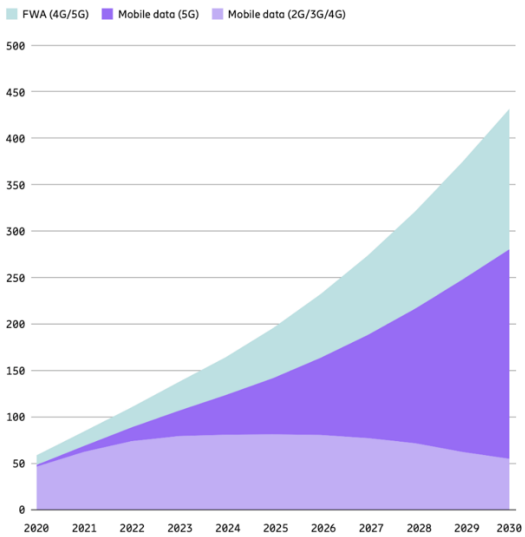

Figure 2: Global mobile network data traffic (EB per month); source: Ericsson Mobility Report June 2025

The growth in total 5G mobile data traffic worldwide can be seen in Figure 2. 5G has already nearly matched 2G,3G and 4G combined in terms of the total volume of data traffic transported. 5G is forecast to overtake the total of all other forms of mobile data traffic during 2026.

6. Legal Framework for Licensing 5G Spectrum

Under Section 3 of the Telecommunications Act, the Commission is required to ensure the systematic development of telecommunications throughout Anguilla and to determine applications for licences and frequency authorisations. The Commission advises the Minister on policies relating to telecommunications. The Minister, in consultation with the Commission, may propose changes to Anguilla's Spectrum Plan.

Under Section 25 the Minister is responsible for allocating spectrum uses to promote the economic and orderly operation of telecommunications networks and services while recovering associated costs. The procedures for doing so can encompass methods such as auctions, tenders, fixed pricing, or criteria-based selections.

Under Section 26, subject to prioritising government needs for national security and adhering to the spectrum plan, the Minister has the authority to allocate or reallocate any frequency bands.

The Minister has determined that changes to the Spectrum Plan are required to enable appropriate 5G spectrum to be assigned in the very near future. The Telecommunications Frequency Management Regulations make it clear that when the Minister amends the Spectrum Plan under Section 3(6) the Ministry and the Commission are required under Section 2 of the Regulations to take account of the public interest.

Maximising the public interest involves, inter alia, taking account of the potential impacts of changes on both current and future spectrum availability and usage; promoting the efficient utilisation of spectrum resources; adhering to relevant regional agreements, standards, and arrangements specific to Anguilla; complying with applicable international standards, ITU treaties, and other agreements; so as to optimise the use of spectrum for diverse public and private telecommunications purposes.

7. Terminology

The methodology for spectrum allocation and assignment is necessarily technical. Therefore, for the purposes of common understanding when interpreting and responding to this consultation, please take note of the following definitions and technical details:

- **Allocation** refers to the entry of frequency bands into the Frequency Allocation Table for Anguilla. More broadly according to the ITU, allocation is the act of getting a SERVICE allocated to a band on a PRIMARY or Secondary basis.

- **Allotment** refers to the entry of a designated frequency channel in an agreed plan. More broadly according to the ITU, allotment is the act of allotting a broad-spectrum resource to an APPLICATION or LICENSEE along with defined rights and obligations.

- **Assignment** refers to the authorisation process for the use of specific frequency by a licensee in Anguilla. More broadly according to the ITU, assignment is the act of assigning a finite spectrum resource to a STATION at a location and for a time.

- **EPC** refers to Evolved Packet Core. This is a Long-Term Evolution (LTE) core network. LTE advanced, that is provided in Anguilla currently, is a 4G mobile technology.

- **5G** is a third-generation partnership project (3GPP) system standard consisting of a 5G Access Network (AN), 5G Core (5GC) Network and User Equipment (UE). The name 3GPP has been retained even though mobile is now evolving to 5G and in the 2030s will move to 6G.

- A **5G Access Network** comprises a next generation radio access network (NG-RAN) and/or a non-3GPP AN connecting to a 5G Core Network.

- **E-UTRA** refers to Evolved Universal Terrestrial Radio Access. It is the air interface and radio access technology for 4G LTE (Long-Term Evolution) networks. It is the radio access component of the Evolved Packet System (EPS), which includes the LTE air interface and the Evolved Packet Core (EPC). It specifies how user equipment (UE) such as smartphones communicate with the network via base stations (eNodeBs).

- An **NG-RAN** is a radio access network that supports one or more of the following options and that connects to a 5GC:
    - Standalone 5G New Radio.
    - New Radio as the anchor with E-UTRA extensions.
    - Standalone E-UTRA.
    - E-UTRA as the anchor with 5G New Radio extensions.

- The main entity of the NG-RAN is the **gNB**, where "g" stands for "5G" and "NB" for "Node B". 5G is indicated by "NR" (for "New Radio"). “B” refers to “Base Station”.

- The **LTE-RAN** main component is the eNodeB where “e” stands for “evolved”.

- A **5G Core Network** is defined in 3GPP Technical Specification 23.501.

- **International Mobile Telecommunications (IMT)** is the general term used by the ITU for broadband mobile systems.

- **IMT Standards** - all mobile broadband systems - 3G, 4G and 5G - depend on these.

- **IMT** includes IMT-2000, IMT- Advanced and IMT-2020.

- **IMT-2000** is commonly referred to as 3G.

- **LTE-Advanced** is an IMT-Advanced service. LTE-Advanced is referred to as a 4G technology.

- **5G** is an IMT-2020 service.

- **4G** is also used by some operators to refer to evolved 3G technologies including HSPA+ and WiMax.

- The ITU Radio Regulations identify spectrum for IMT in general and not specifically for 3G, 4G, 5G, IMT-2000, IMT-Advanced, or IMT-2020.

- **PRIMARY** services are indicated in capitals in the ITU Radio Regulations spectrum tables. Coordination is required if two primary services operate in the same band and would otherwise cause harmful interference to each other.

- **Secondary services** are indicated in lower case in the ITU Radio Regulations spectrum tables. These cannot cause harmful interference to, or claim protection, from primary services.

- A full 5G network is called a **Standalone (SA) network**. A network using both LTE and 5G is called a **Non-Standalone (NSA) network**.

8. IMT Bands

The following bands are identified for IMT (which includes 5G usage) in ITU Region 2 where Anguilla lies, in the ITU Radio Regulations:

Frequency Band	IMT Specific Footnotes	ITU Regions covered.
450-470 MHz	5.286AA	All
470-608	5.295	Some parts Region 2 for IMT, not Anguilla
470-698 MHz	5.308A	Some parts Region 2 for IMT, not Anguilla
698-960 MHz	5.317A	2
1 427-1 518 MHz	5.341B	2
1 710-1 885 MHz	5.384A	All
1 885-2 025 MHz	5.388	All
2 110-2 200 MHz	5.388	All
2 300-2 400 MHz	5.384A	All
2 500-2 690 MHz	5.384A	All
3 300-3 400 MHz	5.429D	2
3 300-3 400 MHz	5.430A, 5.431B	All
3 400-3 600 MHz	5.431B	2
3 600-3 700 MHz	5.434	2
3700 - 3800 MHz	5.435B	Bahamas, French overseas depts and T&T from Caribbean
3800-4200 MHz		Not identified for IMT but 3.7 to 4 GHz used for 5G in USA
24.25-27.5 GHz	5.532AB	All
37-43.5 GHz	5.550B	All
47.2-48.2 GHz	5.553B	2
66-71 GHz	5.559AA	All

Table 1: Bands identified for IMT; Source ITU Radio Regulations

Respondents are invited to make proposals for appropriate 5G spectrum within IMT identified bands in particular. The Commission is open to considering bands identified for mobile in the ITU Radio Regulations that are of interest even if not specifically designated for IMT, although we do not imagine that is likely.

9. Band Usage Worldwide for 5G New Radio

In May 2025 the GSMA identified the following harmonised bands widely used for 5G:

Low bands	600 MHz, 700 MHz, 800 MHz, 900 MHz
Mid-bands	1500 MHz, 1700 MHz, 1800 MHz, 2.1 GHz, 2.3 GHz, 2.6 GHz, 3.5 GHz (3.3–4.2 GHz), 4.8 GHz and 6 GHz
High-bands	26 GHz, 28 GHz

Table 2: 5G Spectrum; GSMA Public Policy Paper, May 2025

The Global mobile Suppliers Association (GSA) reported on the number of operators that had deployed or been licensed to operate in specific 5G New Radio bands by Oct

2025 as illustrated in Figure 3. Broadly speaking the most used are 3.5GHz (bands n77 and n78); 26 to 28 GHz (n257, n258 and n261); and 700 MHz (n28, n12 and n14), in that order.

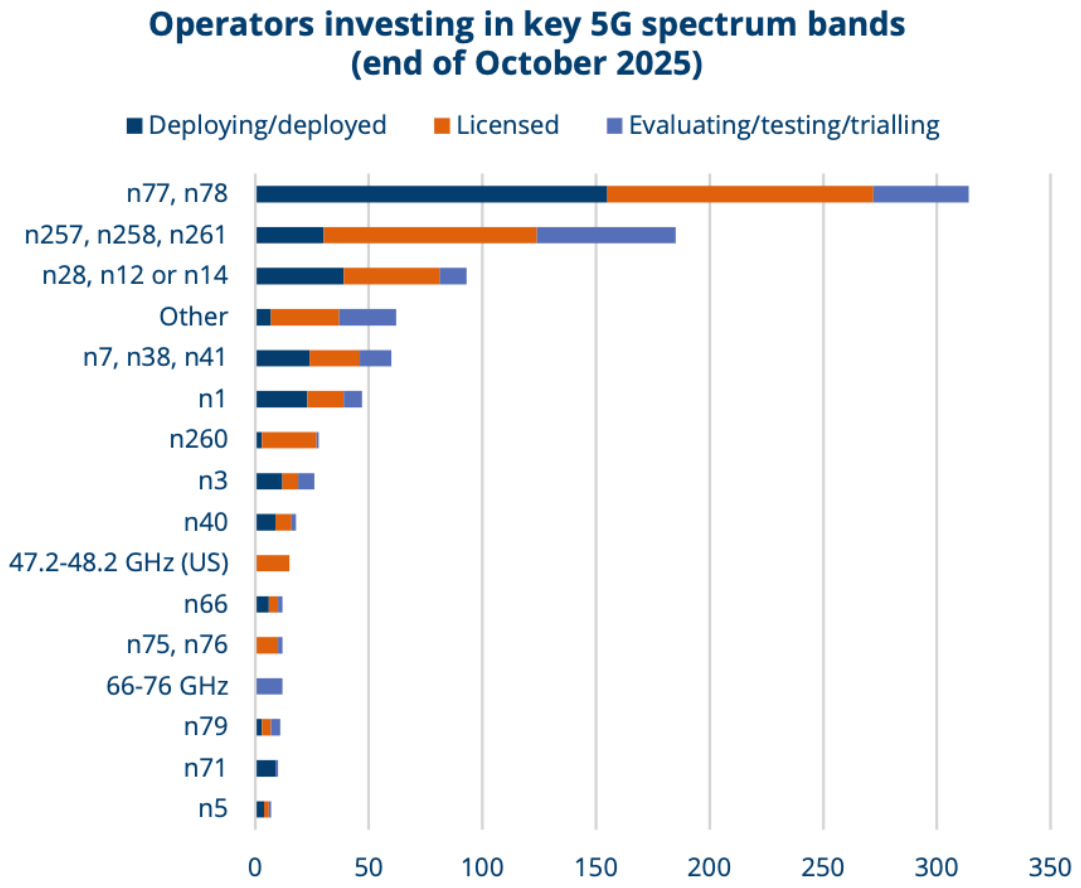

Figure 3: 5G Band Usage by Operators; GSA 5G Market Snapshot; Nov 2025; Source: Global mobile Suppliers Association (GSA)

The Commission is not consulting specifically on bands identified for the use of High Altitude IMT Base Stations (HIBS). We are not aware of any current demand in Anguilla. However, respondents can make proposals in this respect should they wish to do so.

10. Mobile Spectrum Frequency Characteristics

When considering which 5G frequencies will be most appropriate, the appropriate mix of bands is important. Mobile frequencies are typically differentiated according to whether they fall into one of 3 ranges:

- ***Low-Band Spectrum (Below 1 GHz***): This enables wide-area coverage, better penetration through buildings, and suitability for rural/underserved areas and the Internet of Things (IoT).

- ***Mid-Band Spectrum*** (often referred to as covering 1-6 GHz although the GSMA now refers to 1 to 8.4 GHz): This band balances coverage and capacity. It is useful for urban/suburban mobile 5G broadband.

- ***High-Band, mmWave Spectrum*** (Above 24 GHz): This is most useful for providing services that require high capacity (i.e. the highest throughput speeds) and the lowest latency (i.e. the fastest response times). It has a shorter range and is most suitable for dense urban areas and small cells.

A combination of bands is used by operators to provide the optimum balance in terms of reach and data capabilities.

11. 5G Core Connectivity and Radio Combination Options

To rollout 5G more rapidly, instead of transitioning directly to a full 5G network with both a 5G core and a 5G radio network, operators frequently adopt a phased approach, relying on existing 4G LTE infrastructure in some respects. That requires the use of suitable intra-band or inter-band approaches as identified by 3GPP where both LTE and 5G radio networks are being operated concurrently. In these circumstances workable combinations of frequencies have been identified by 3GPP. *Respondents should refer to the 3GPP website for further details*.[2]

A full 5G network is called a Standalone (SA) network. A network using both LTE and 5G is called Non-Standalone (NSA). NSA options rely on dual connectivity. In other words, the core network connects with both the existing LTE radio network and in addition a new 5G Radio Access Network (RAN). The core network can be an EPC or 5GC.

The 3rd Generation Partnership Project (3GPP) has defined several configurations, or "Options", for connecting RANs to the core network in the context of 5G. The features that distinguish each option are:

- Use of Dual Connectivity – LTE and 5G RAN
- Choice of RAN acting as master node – LTE or 5G
- Core Network used - EPC or 5GC

The Commission anticipates that the most likely first step towards a full 5G network for the existing operators is initially to deploy 5G using Option 3 above which allows the re-use of existing EPC Core functionality. In this case the LTE eNodeB acts as the master node, and the 5G NR gNodeB is a secondary node, connected to the EPC. The control plane (data management) is handled by LTE, while 5G NR is used for additional user plane data carriage. This is termed EN-DC or E-UTRAN New Radio Dual Connectivity. Thus, existing 4G infrastructure is leveraged to provide enhanced mobile broadband (eMBB) with 5G NR for higher data rates.

The number of operators worldwide using 5G NSA and 5G SA can be seen in Figure 4. Over 3 times as many have opted for NSA initially.

[2] See the latest release of 3GPP TS 38.101-3

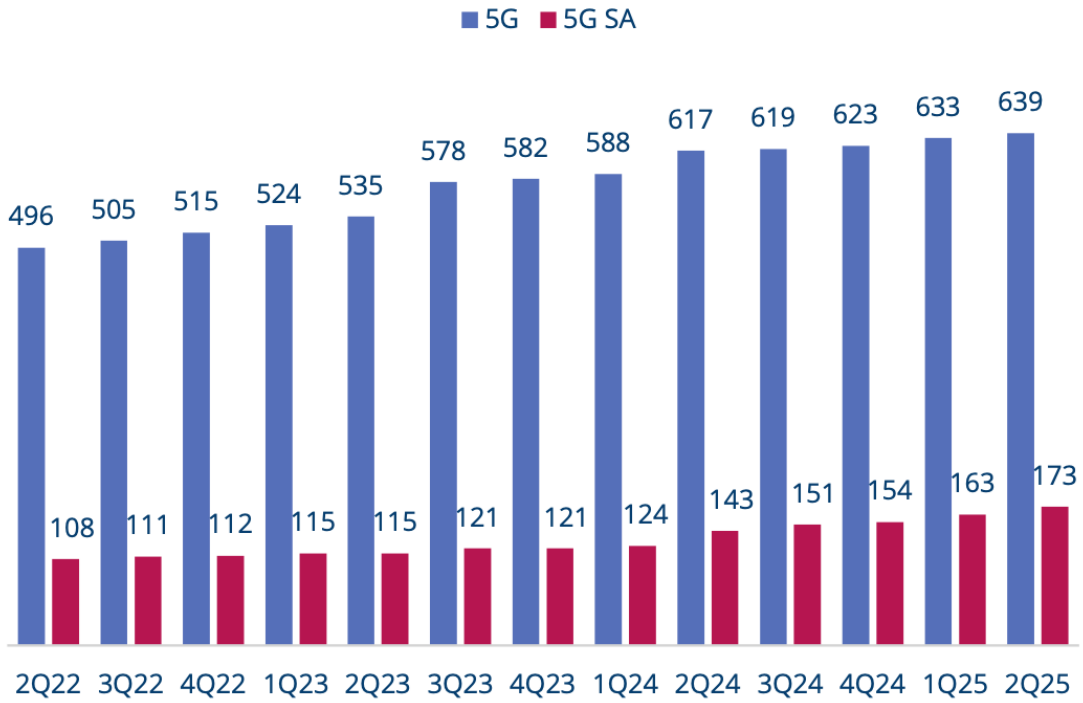

Figure 4: Number of operators investing in 5G SA for public networks and the number investing in any 3GPP 5G network; 5G Standalone; Aug 2025; Source: Global mobile Suppliers Association (GSA)

For further reference we have included the full range of core network and radio combination options in Annex: 5G Standalone (SA) and Non-Standalone (NSA) Options

12. Inter-Island Agreements

The presence of nearby neighbouring island jurisdictions such as St Martin (approximately 7km distance away) may require coordination between administrations and operators to avoid harmful radio interference. The existing inter-island agreements are on the Commission's website,[3] however we summarise elements of the main ones here.

a. Land Mobile

The land mobile agreement concerns the spectrum coordination of mobile radiocommunication networks in the frequency range 698 MHz to 3800 MHz. This agreement was reached in February 2023 between the administrations of Anguilla (AIA), France, Sint Maarten (SXM) and the State of the Netherlands for Saba and St. Eustatius.

The main tables in the agreement have been extracted for reference and are shown in Table 3 and Table 4.

Frequency Usage and Preferential Frequency Plans

[3] https://pucanguilla.com/agreements

Frequency Band	Further Information on Band	Country	Base Receive (MHz)	Base Transmit (MHz)
B85	PPDR 700	AIA	698-703	728-733
B17	us 700	AIA	704-716	734-746
B67	SDL 700	F	NA	738-753
B68	PPDR 700	F	698-703	753-758
B13	us 700	AIA	777-787	746-756
B28	CEPT 700	F, SXM	703-733	758-788
B28	APT_700	BES	703-748	758-803
B28	PPDR 700 (1)	F, SXM, BES	733-736	788-791
B20	800	F	832-862	791-821
B5	850	AIA	824-844	869-889
B8	900	F, SXM, BES, AIA	890-915	935-960
B3	1800	F, SXM, BES, AIA	1710-1785	1805-1880
B2	1900	AIA	1900-1910	1980-1990
B1 FDD	2100	F, SXM, BES, AIA	1920-1980	2110-2170
B33 TDD	2100	SXM, BES, AIA	1900-1920	1900-1920
B34 TDD	2100	SXM, BES, AIA	2010-2025	2010-2025
B40 TDD	2300	SXM, BES, AIA	2300-2400	2300-2400
B7 LTE FDD	2600	F	2500-2570	2620-2690
B38 LTE TDD	2600	F	2570-2620	2570-2620
B42 TDD	3800	F, SXM	3400-3600	3400-3600
B43 TDD	3800	F, SXM	3600-3800	3600-3800

Table 3: Technical and Operational Requirements. Key: Anguilla (AIA), France (F), St. Maarten (SXM) and the Netherlands (HOL) for Saba and St. Eustatius (BES); The geographical area concerned includes the territories of St Maarten (SXM)/Saint-Martin (F), Anguilla (AIA), Saint-Barthélemy (F), Saba and St Eustatius (BES), Bonaire excluded

Technical Requirements Applicable for UMTS, LTE and NR systems				
Base stations may be operated without coordination if the predicted mean field strength of each carrier produced by the base station does not exceed the values given in this table at a height of 1.5 m above ground.				
Compatible band / plan	**For information**	**Base transmit (MHz)**	**Systems**	**Max field strength at border/coastline (dBµV/m/5MHz)**
Band 85	B85_PPDR_700	728–733	LTE	59
Band 17		736–746	LTE	59
Band 67	B67_SDL_700	738–753	LTE	59
Band 13	B13_US_700	746–756	LTE	59
Band 68	B68_PPDR 700	753–758	LTE	59
Band 28		758–778	LTE/NR	59
Band 28	PPDR 788–791	787–803	LTE	59
Band 20	B20_800	791–821	LTE	59
Band 05	850	869–885	LTE / UMTS (1)	59
Band 08	900	950–960	LTE / UMTS (2)	59
Band 03	1800	1810–1820; 1830–1840; 1845–1855; 1865–1875	LTE (2)	65
Band 02	B2_1900	1980–1990	LTE	65
Band 01	B1_FDD_2100	2110–2170	LTE / UMTS	65
Band 33	B33_TDD 2100	1900–1920	LTE / UMTS	21
Band 34	B34_TDD 2100	2010–2025	LTE / UMTS	21
Band 07	B7_LTE FDD 2600	2620–2690	LTE	65
Band 38	B38_LTE TDD 2600	2570–2620	LTE	32
Band 40	B40_TDD 2300	2300–2400	LTE (3)	32
Band 42	B42_TDD 3800	3400–3600	NR (3)	79 (sync) / 15 (unsync) (5)
Band 43	B43_TDD 3800	3600–3800	NR (3)	79 (sync) / 15 (unsync)

Table 4: Frequency Usage for Each Territory. Key: Anguilla (AIA), France (F), St. Maarten (SXM) and the Netherlands (HOL) for Saba and St. Eustatius (BES); The geographical area concerned includes the territories of St Maarten (SXM)/Saint-Martin (F), Anguilla (AIA), Saint-Barthélemy (F), Saba and St Eustatius (BES), Bonaire excluded

b. Broadcasting Agreement

A further agreement between the administrations of Anguilla, France and St. Maarten and The State of the Netherlands for Saba, St. Eustatius governs the spectrum coordination of Broadcasting Networks in the Frequency Range 470-694 MHz.

The agreement requires that emissions in these bands aiming at Dutch St Maarten (SXM) from other territories, emissions aiming at French St Martin & St Barthélemy (F) from other territories and emissions aiming at Anguilla (AIA) from other territories must be reproved. In other words, emissions must be adjusted to avoid harmful interference.

There is no general primary allocation for mobile services in this band for mobile in ITU Region 2 where Anguilla is located.[4] The bands 546 to 570 MHz and 658 to 690 MHz have been allocated – on a PRIMARY basis - for possible broadcasting use in Anguilla

[4] The Bahamas is an exception.

under the agreement. Consequently, we do not anticipate any demand for use by mobile telecoms in this frequency range.

13. Benchmarking

The Commission has investigated 5G band allocations and 5G bands of interest in other Caribbean islands and has considered comments made by a range of stakeholders in response to a recent 5G consultation in the Bahamas.

Overall, the band that appears to be attracting the most interest is n78 (3300-3800 MHz TDD) followed by band n28 (703 MHz – 748 MHz and 758 MHz – 803 MHz FDD). This is consistent with the information provided by the GSA in Figure 3.

a. Bahamas

At the conclusion of a consultation process in the Bahamas[5], URCA - subject to further confirmation - stated that its initial focus was on Bands n41 (2496 - 2690 MHz TDD), n66 1710 - 1780 MHz and 2110 MHz - 2200 MHz FDD), n2 (1850 - 1910 MHz and 1930 - 1990 MHz FDD). Band n78 was also of interest. However, based on the availability of sufficient spectrum URCA stated that it would refrain from making band 78 available currently. URCA was also interested in FDD band n71 (600MHz) however that is not available in Anguilla.[6]

Network equipment vendor Ericsson made several substantive inputs to the consultation. Ericsson said that the following bands should be considered: 700 MHz (3GPP n12, n14, n28); 3300-3800 MHz (3GPP n77/n78); 26/28 GHz (3GPP n257, n258,n261); 2.5 GHz (3GPP n7/n38); and 600 MHz (3GPP n71).

For **low bands in** the Bahamas, Ericsson suggested the 600 MHz and 700 MHz bands (n71, n28) for cost-effective 4G and 5G coverage, particularly in suburban and rural areas. They also recommend considering the 700 MHz band (3GPP n14) for 5G deployment, following the US band plan.

In Anguilla, 600 MHz is included in the broadcasting agreement mentioned. 700 MHz bands are however available and currently being used for LTE.

For **mid-bands,** Ericsson proposed 3300-3700 MHz (n78), AWS (n66), and 2300-2400 MHz (n40) bands. However, it said that the focus should be on the 3300-3700 MHz band, which is widely used for 5G globally. Ericsson also proposed considering the 6 GHz band (6425-7125 MHz) for 5G in the medium to long term, as it could meet future spectrum capacity needs.

[5] Roadmap to enable 5G deployment in The Bahamas; Statement of Results and Next Steps; ECS 01/2025; Issue Date: 31 January 2025

[6] https://urcabahamas.bs/consultations/ecs-73-2024-public-consultation-on-roadmap-to-enable-5g-deployment-in-the-bahamas

For **high-bands**, Ericsson recommended the 26 GHz band (n258) to support high-speed connectivity, particularly for fixed wireless access (FWA) services which could help extend gigabit connectivity to rural communities.

b. Cayman Islands

We understand that operators in the Cayman Islands have permission to use spectrum already available to them in the 2300, 2500 and 3500 MHz frequency bands for 5G. The exact frequencies that have been used do not appear to have been published. However, FLOW has 200 MHz in band n78 (3400-3600 MHz TDD) and Digicel has 90MHz in band n40 (2300 to 2390 MHz TDD). FLOW also has some spectrum in the 2500MHz band for fixed wireless services.

c. Worldwide Benchmark of 5G Use for C Band in ITU Region 2

Figure 5: Worldwide Benchmark of 5G Use for C Band in ITU Region 2, GSA Snapshot; August 2025; Source: Global mobile Suppliers Association (GSA)

d. Worldwide Benchmark of 5G Use for in the 26 GHz to 28 GHz Range in ITU Region 2

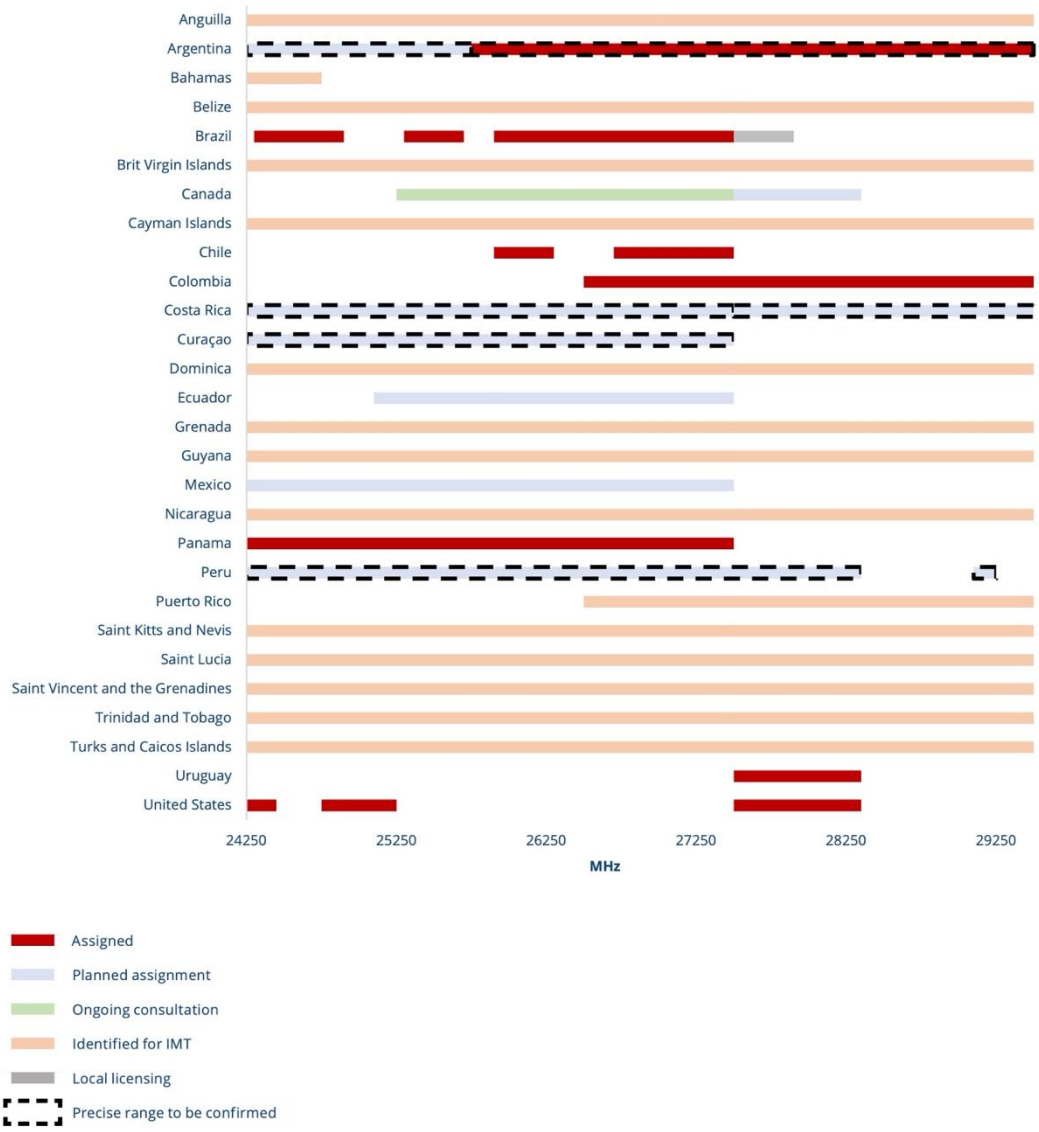

Figure 6: Worldwide Benchmark of 5G Use for 26 to 28 GHz in ITU Region 2, GSA Snapshot; August 2025

e. Spectrum Block Sizes

Spectrum must be assigned in appropriately sized blocks. Larger contiguous spectrum block sizes using a single carrier are best in terms of data throughput and technical simplicity. New Radio caps a single carrier at 100 MHz in Frequency Range 1 (FR1) and 400 MHz in FR2.[7] Greater bandwidths would require operators to stack carriers via carrier aggregation.

Drawing on industry experience, reasonable block sizes would be:

[7] www.3gpp.org/technologies/adding-channel-bandwidth-to-existing-nr-bands

- Low-band: 2*5 pr 2*10 (FDD) and 10 MHz or 20MHz contiguous (TDD).[8]

- Mid-band: 80–100 MHz (TDD) contiguous per operator.[9, 10]

- mmWave: 200MHz, 400 MHz or 800MHz (TDD) contiguous per operator.[11] Qualcomm has noted that the 26 GHz band is a mature technology adopted in several markets with a mature ecosystem of devices.[12]

By way of comparison Ericsson in its response to the regulator in the Bahamas recommended block sizes 2x5 MHz (FDD) / 1x10 MHz in sub-3GHz (TDD), 100 MHz in the 3.3-3.8 GHz band (TDD) and 200 MHz in the 26 GHz band (TDD).[13]

14. Private Networks

In addition to public 5G services, likely use cases for private 5G networks exist where sites are spread out but operations need reliable, secure coverage. That could include holiday resorts, the airport, seaport and marinas, utilities, schools and clinics, construction yards and festivals. Private networks could also enable more resilient communications during storms.

Key 5G characteristics that enhance resiliency include superior beam forming (i.e. more directional signals), carrier aggregation across different bands (in case one becomes too noisy) and network slicing for quality of service.

A mid-band layer such as n78 (around 3.5 GHz) can provide the main private network for indoor/outdoor mobility, with optional low-band (leased 700/850/900 MHz) for deep indoor reach or wide-area utility crews. mmWave would be added only where ultra-high capacity is needed.

Data-intensive cases include live production video at events, Augmented Reality and Virtual Reality training and guest experiences and short-haul wireless backhaul/FWA to resort villas. 80-100 MHz contiguous mid-band carriers would be used in the mid bands and 400-800 MHz of mmWave in dense hotspots such as beaches, event zones and quays.

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[8] www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/129955-award-of-the-700-mhz-and-3.6-3.8-ghz-spectrum/associated-documents/secondary-documents/award-of-the-700-mhz-and-3.6-3.8-ghz-spectrum-bands.pdf?v=323623; paragraph 5.293

[9] www.gsma.com/connectivity-for-good/spectrum/5g-spectrum-planning-for-the-future-of-mobile-connectivity

[10] www.nokia.com/standardization/spectrum-policy

[11] www.ericsson.com/en/reports-and-papers/further-insights/leveraging-the-potential-of-5g-millimeter-wave

[12] Ofcom Public consultation on enabling mmWave spectrum for new uses, response by Qualcomm; 29 Jan 2024; www.ofcom.org.uk

[13] Roadmap to enable 5G deployment in The Bahamas; Statement of Results and Next Steps; ECS 01/2025; Issue Date: 31 January 2025

Private networks are a consideration when determining how much spectrum to award to public operators that also provide private network services, as well as when making awards to private networks run by individual organisations that are not primarily telecommunications operators.

15. Existing 5G User Equipment Ecosystem

User equipment (UE) availability worldwide based on 5G New Radio band compatibility is illustrated in Figure 7. The greatest availability exists in 3.5GHz (n77, n78), 2.5 GHz (n41), 1.9 and 2.1 GHz (n1), 1800 MHz (n3, n5 and n8) and 700 MHz (n28).

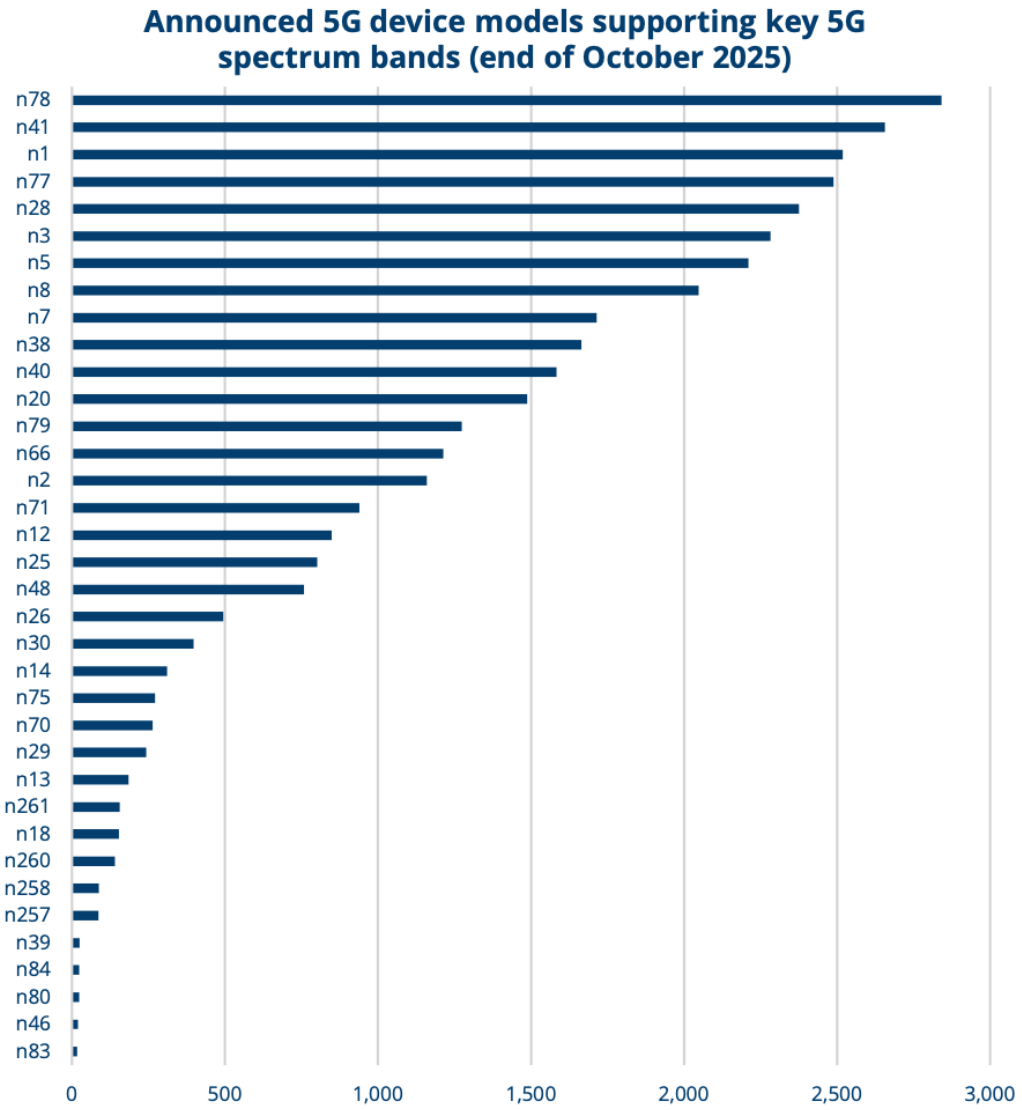


Figure 7: 5G End-user device availability; 5G Market Snapshot; GSA; Source: Global mobile Suppliers Association (GSA)

UE availability is obviously an important factor when an operator is considering which 5G bands to use. We have combined the most used spectrum bands with the UE availability ranking when making proposals below with respect to band availability.

16. Synchronisation

TDD spectrum is often assigned to several operators on a contiguous fashion without guard bands. That requires synchronisation or semi-synchronisation between neighbouring spectrum users/licensees. Synchronisation maximises the use of the spectrum but reduces the flexibility for operators to adjust their uplink to downlink data throughput ratios.

Agreement has already been reached in the Land Mobile agreement for the parameters where 3400-3800MHz are used in synchronised or unsynchronised fashion (see Table 4). Transmission power at the coastline of the neighbouring island has to fall below the levels identified for synchronised usage (not more than 79 dBµV/m/5 MHz at the receiving coastline) and unsynchronised usage (not more than 15 dBµV/m/5 MHz at the receiving coastline) to avoid harmful interference. That means that operators in Anguilla would have to synchronise with operators in St Maarten and St Martin at least in order to use the higher transmit powers specified.

The Commission therefore proposes a general rule that 5G New Radio TDD spectrum should be assigned in Anguilla only on a synchronised basis, including synchronisation with operators in neighbouring islands as necessary. That could exclude mmWave spectrum. However, we invite comments on whether any TDD New Radio band assignments within Anguilla should allow for non-synchronised usage. That would probably require significant guard bands to be used between spectrum assignments.

Question 1. Where 5G NR TDD spectrum is made available should it be possible to assign it on an unsynchronised basis or only on a synchronised basis?

17. Existing Mobile Frequencies Assigned

The existing mobile frequencies that have been assigned are illustrated in Table 5.

Operator	Band	Bottom (MHz)	Top (MHz)	Total MHz
Digicel	Low-band	704	716	12
Digicel	Low-band	734	746	12
FLOW	Low-band	746	756	10
FLOW	Low-band	777	787	10
FLOW	Low-band	824	836	12
FLOW	Low-band	836	842	6
FLOW	Low-band	869	881	12
FLOW	Low-band	881	887	6
Digicel	Low-band	898	903	5
Digicel	Low-band	908	913	5
Digicel	Low-band	943	948	5
Digicel	Low-band	953	958	5
Digicel	Mid-band	1895	1905	10
FLOW	Mid-band	1905	1910	5
Digicel	Mid-band	1975	1985	10
FLOW	Mid-band	1985	1990	5

Table 5: Existing Mobile Frequency Assignments

The total amount of spectrum assigned in each of the low, mid and high bands is shown in Table 6.

Existing Spectrum Assignments	MHz
Low Band <1 GHz	
Digicel Assigned	44
Flow Assigned	56
Mid-Band 1 to 6 GHz	
Digicel Assigned	20
Flow Assigned	10
High-Band (Millimeter Wave) > 24 GHz	
Digicel Assigned	0
Flow Assigned	0
Totals	
Digicel	64
Flow	66
Grand Total	130

Table 6: Existing Low, Mid and High Band Spectrum Assignments by Operator

As can be seen, no mmWave spectrum has been assigned. Flow has more low-band mobile spectrum whereas Digicel has more mid-band spectrum. The Commission aims for broadly similar assignments in the low mid and high-bands dependent on operator demand but does not necessarily expect exactly equal assignments.

18. Satellite Compatibility

Spectrum is identified for IMT in Region 2 in the range 3,400MHz to 3,800 MHz. The Radio Regulations contain footnotes specifying either that there is limited protection for mobile services from space stations[14] in the case of 3,400 MHz to 3,600 MHz spectrum, or that coordination with neighbouring countries is required where there is coexistence between mobile and space services.

In Anguilla, the Commission has not licensed any spectrum for satellite use in these bands and is not aware of anybody using them. However, the Commission invites any comments about possible interference with satellite receivers in Anguilla or neighbouring islands.

Question 2. Do you believe that there is any potential harmful interference that could result from the use of mobile services in the 3,400MHz to 3,800 MHz band, or other bands in which operators or potential operators may be interested, because of satellite activities?

19. Proposed Band Allocations and Allotments

The most appropriate 5G band allocations and allotments depend on a range of factors including availability, suitability, demand, the strength of the network equipment and end user device ecosystem and compatibility with existing band assignments and operator preferences.

Table 7 demonstrates band usage and user equipment availability based on information from the GSA. NR bands in the far-left column are ranked according to the number of operators using them worldwide (most used at the top, least at the bottom):

[14] ITU Radio Regulation definition: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere.

NR band	Frequency range	Duplex mode	UE availability ranking & band
n77	3300–4200 MHz	TDD	4 – n77
n78	3300–3800 MHz	TDD	1 – n78
n257	26.5–29.5 GHz	TDD	31 – n257
n258	24.25–27.5 GHz	TDD	30 – n258
n261	27.5–28.35 GHz	TDD	27 – n261
n28	UL 703–748 / DL 758–803 MHz	FDD	5 – n28
n12	UL 699–716 / DL 729–746 MHz	FDD	17 – n12
n14	UL 788–798 / DL 758–768 MHz	FDD	22 – n14
n7	UL 2500–2570 / DL 2620–2690 MHz	FDD	9 – n7
n38	2570–2620 MHz	TDD	10 – n38
n41	2496–2690 MHz	TDD	2 – n41
n1	UL 1920–1980 / DL 2110–2170 MHz	FDD	3 – n1
n260	37–40 GHz	TDD	29 – n260
n3	UL 1710–1785 / DL 1805–1880 MHz	FDD	6 – n3
n40	2300–2400 MHz	TDD	11 – n40
n262	47.2–48.2 GHz	TDD	not listed
n66	UL 1710–1780 / DL 2110–2200 MHz	FDD	14 – n66
n75	DL 1432–1517 MHz	SDL (DL-only)	23 – n75
n76	DL 1427–1432 MHz	SDL (DL-only)	not listed
n263	57–71 GHz	TDD	not listed
n79	4400–5000 MHz	TDD	13 – n79
n71	UL 663–698 / DL 617–652 MHz	FDD	16 – n71
n5	UL 824–849 / DL 869–894 MHz	FDD	7 – n5

Table 7: Operator band usage and end user equipment availability ranked worldwide

As indicated previously, worldwide, the GSMA has reported that the following bands are widely used for 5G:

- *Low-band*: 600 MHz, 700 MHz, 800 MHz, 900 MHz
- *Mid-band:*1500 MHz, 1700 MHz, 1800 MHz, 2.1 GHz, 2.3 GHz, 2.6 GHz, 3.5 GHz (3.3–4.2 GHz), 4.8 GHz and 6 GHz
- *High-band*: 26 GHz, 28 GHz

However, based on the GSA information only n28 touches on 800MHz and there is less apparent evidence for 2.3 GHz, 4.8 GHz and 6 GHz currently.

a. Commission Identified Bands of Interest

On this basis, and considering all the factors and taking all the information described previously into account, the Commission has identified the following bands of interest:

i. n78 (3300–3800 MHz, TDD)

This has a deep overall device/RAN ecosystem. It is one of the most-supported 5G bands globally and is widely used across LatAm/Caribbean – see Figure 8. It is ideal as the primary capacity layer.

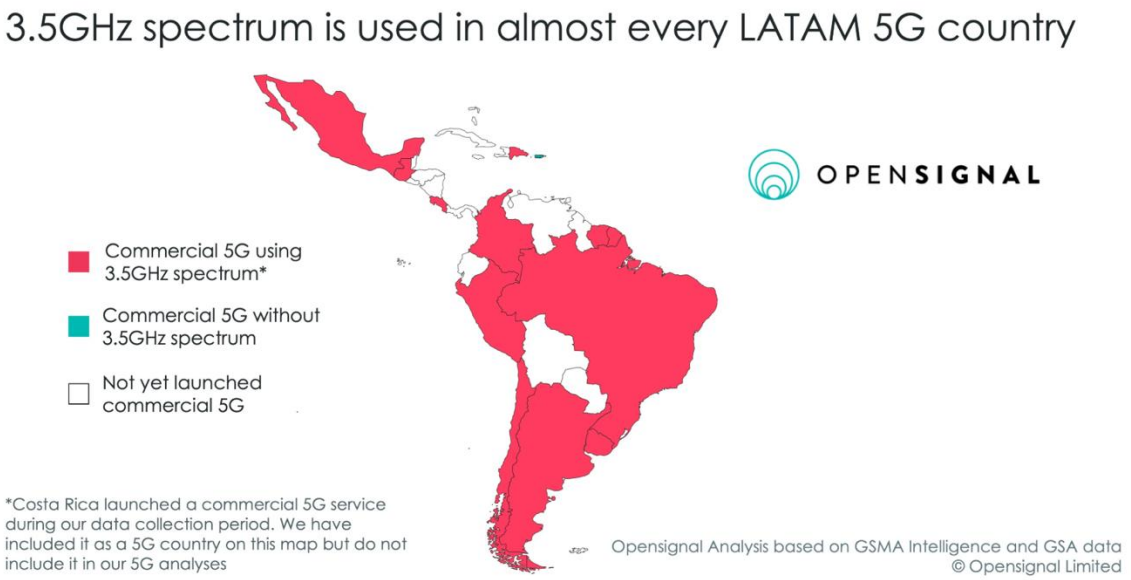


Figure 8: Opensignal. (2024, September 19). 3.5GHz spectrum: The driving force behind 5G experience in LATAM. https://www.opensignal.com/2024/09/19/35ghz-spectrum-the-driving-force-behind-5g-experience-in-latam

ii. n28 (UL 703–748 / DL 758–803 MHz, FDD)

Strong low-band coverage with large device base; widely adopted across the Americas for reach/indoors.

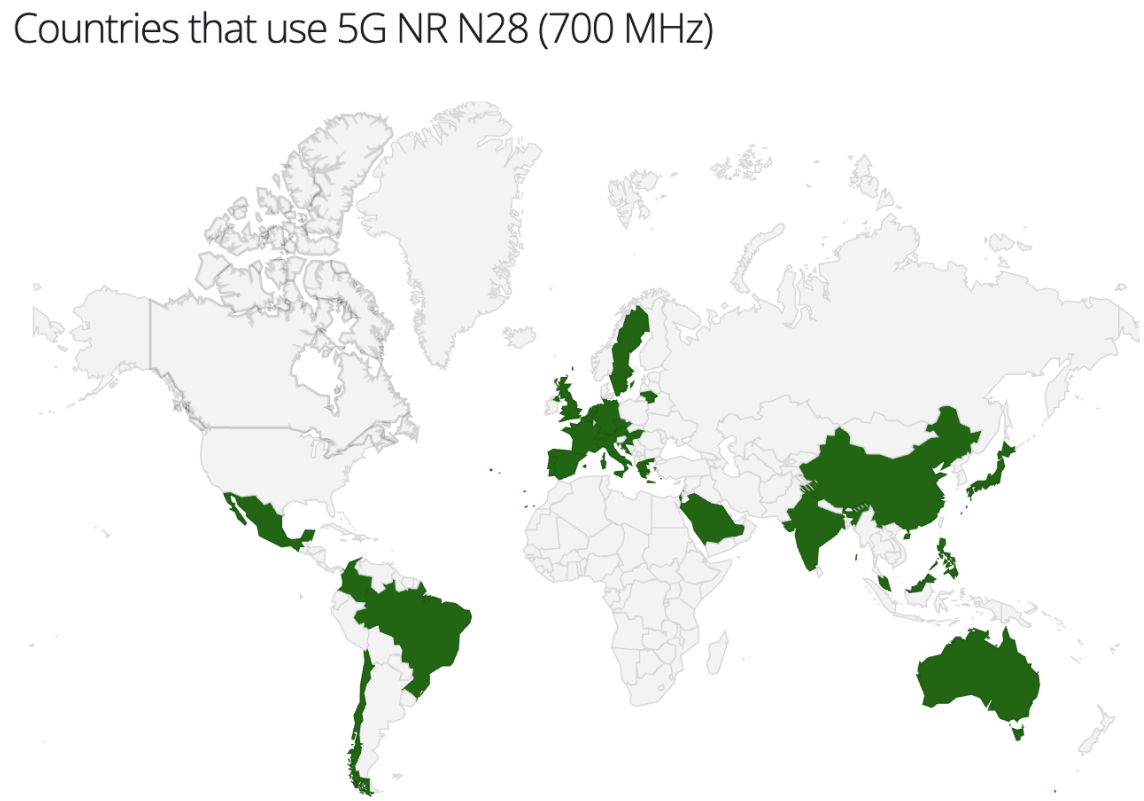


Figure 9: www.frequencycheck.com/bands/5g-nr-band-28-700; 12 Nov 2025

iii. n41 (2496–2690 MHz, TDD)

This band has a very mature network and handset ecosystem.

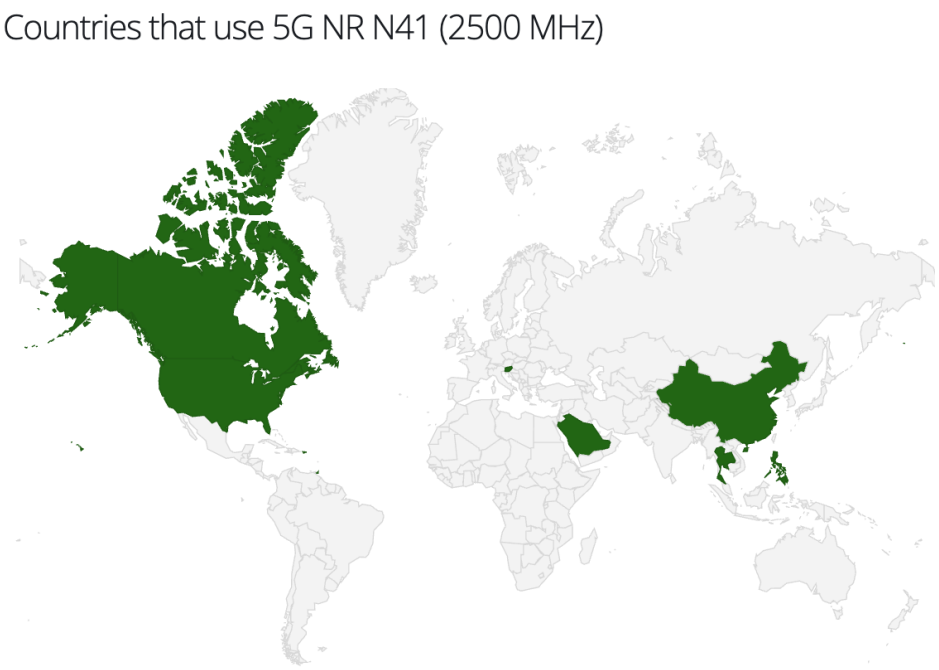


Figure 10: https://www.frequencycheck.com/bands/5g-nr-band-41-2500; 12 Nov 2025

iv. n66 (UL 1710–1780 / DL 2110–2200 MHz, FDD)

The Commission is also exploring interest in this band. Band n66 (AWS-3, 1710–1780 MHz uplink / 2110–2200 MHz downlink, FDD) is somewhat widely used in Region 2 (the Americas) for 5G NR. For example, it is deployed by major operators in the United States, Canada, Puerto Rico, and Chile, primarily as a supplementary capacity band alongside mid-band (n77/n78) and low-band (n71/n5) holdings.

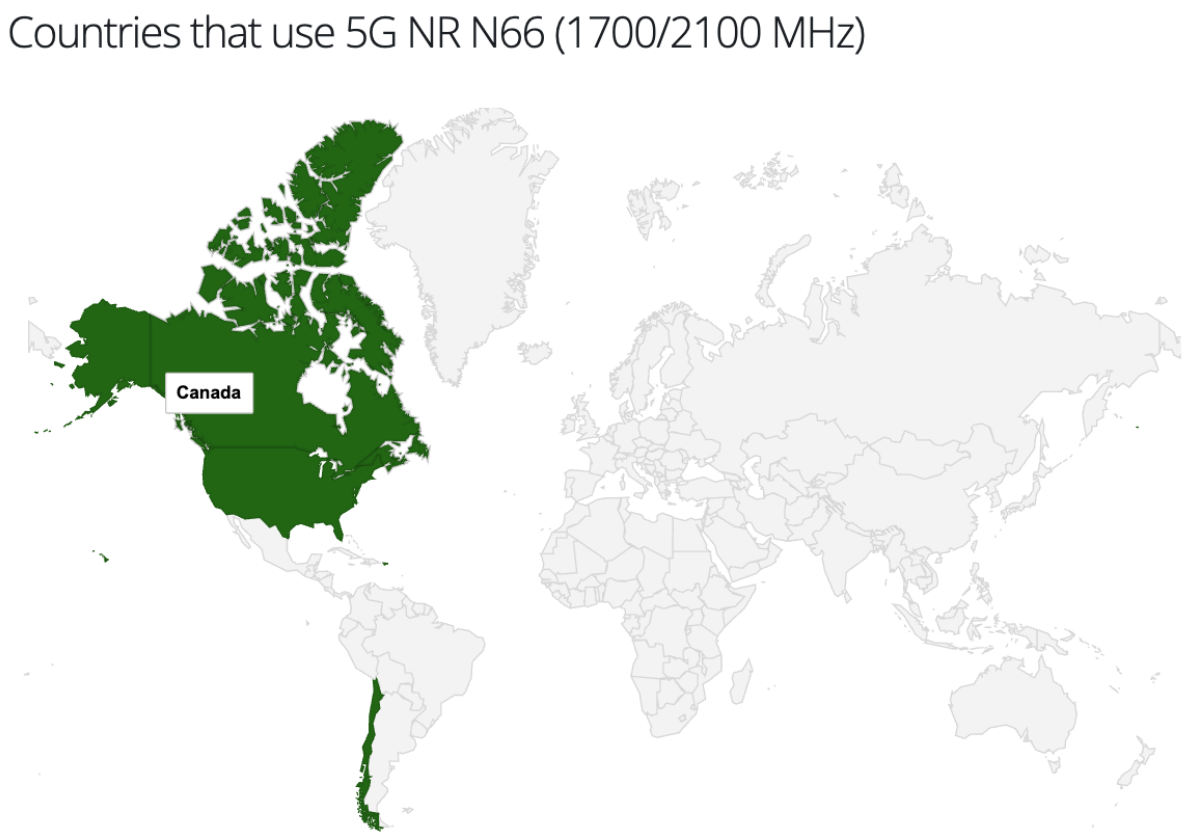


Figure 11: https://www.frequencycheck.com/bands/5g-nr-band-66-1700-2100

v. n257 (26500 - 29500 MHz, TDD)

Band n257, often referred to as the 28 GHz band, is a key mmWave spectrum for 5G, offering high capacity and multi-gigabit speeds but limited range, making it ideal for dense urban hotspots, fixed wireless access (FWA), and enterprise applications rather than wide-area mobile coverage. Known assignments in this frequency range can be seen in Figure 6 and include, Brazil, Panama and the United States.

vi. Other bands that the Commission is seeking interest in Anguilla:

- *n12 (699–716 MHz uplink / 729–746 MHz downlink, FDD*): low-band spectrum, excellent for wide-area coverage and building penetration. Already used in the US (AT&T) and supported by most global device manufacturers.

- *n14 (788–798 MHz uplink / 758–768 MHz downlink, FDD):* also, low-band, but narrower (10 MHz). Has been used by US FirstNet, public safety LTE/5G. Device ecosystem is reasonably good because of FirstNet's influence in the US.

- *n40 (2300–2400 MHz, TDD)*: mid-band spectrum with a good balance of coverage and capacity. This band is widely used in India and parts of Asia for LTE/5G, with a very strong device ecosystem. In Anguilla, it is available but coordination with St Maarten and St Martin would be needed to avoid cross-border interference. Caribbean adoption would require harmonisation.

b. Commission's Views on Appropriate Spectrum Block Sizes

The Commission is proposing, wherever possible, to make available the following blocks of spectrum for assignment:

- **n28 FDD**: 2*5 MHz or 2*10MHz
- **n78 TDD**: 500 MHz mid-band spectrum TDD. This would be split into blocks of 100MHz of contiguous spectrum for subsequent possible assignment. In China, n78 is the backbone of nationwide 5G, with operators using 100 MHz contiguous blocks each, fully synchronised.
- **n41 TDD**: 10MHz contiguous blocks. Four to five such blocks could be assigned to an operator.
- **n257 TDD (26.5-29.5GHz mmWave TDD)**: 3 GHz of high-band band mmWave n257 TDD spectrum. That would be allotted in 200MHz, 400MHz or 800 MHz blocks of contiguous spectrum for subsequent assignment. For example, in the USA, the FCC allocated 28 GHz mmWave band, often in 400–425 MHz blocks[15]. In Europe, the CEPT harmonised 26 GHz (24.25–27.5 GHz) into 200–400 MHz blocks[16].

Question 3. Which 5G New Radio spectrum bands should be allocated for 5G in Anguilla and Why?

Question 4. Should all available bands be made available for assignment at the same time or should introduction of them be staged? If staged, please indicate reasonable timelines.

[15] https://www.selectspectrum.com/assets/documents/pdf/millimeter-wave/28%20GHz_Spectrum%20Summary_200330.pdf
[16] https://cept.org/files/2167/ITU-APT%20CEPT%2026%20GHz%20-%20Steve%20Green%20ECC%20PT1.pdf

Question 5. What minimum spectrum block sizes should be available for assignment?

20. Future Spectrum Availability

The Commission wishes to create as much certainty as reasonably possible with respect to future mobile spectrum availability including for the purposes of 5G and later 6G. In this light we should be grateful if respondents could provide, albeit we recognise, very speculative, comments about possible spectrum demands for up to the next 10 years. Comments can of course be restricted to the next two or three years if that is all that is considered feasible.

Question 6. What views do respondents have about future spectrum demand?

21. Awarding and Pricing 5G Spectrum

Spectrum can be awarded by means of a "beauty contest". That involves a comparative evaluation process where frequencies are awarded to the applicant judged most likely to deliver the greatest overall public benefit, rather than to the highest monetary bidder. Operators submit detailed plans explaining how the spectrum would be used to improve coverage, capacity, and quality of service. Submissions are scored against transparent criteria such as their contribution to policy goals including the maximisation of competition. Arguably, this approach can steer market outcomes toward universal access and better service quality. However, critics might point to risks of subjectivity and lobbying.

Spectrum auctions are widely used to assign mobile frequencies in larger jurisdictions on the basis that they are transparent, can help to reveal operators' true valuations, and generate government revenue. The GSMA advocates that most regulators have made spectrum available for 5G by auctioning it for use on a nationwide basis and allowing transmission at full operating power.[17, 18] However, the suitability of auctions for a very small market like Anguilla is debatable. With only a handful of potential bidders, an auction risks being uncompetitive or even failing altogether. Excessive reserve prices or aggressive bidding due to any uncertainty about future assignments could divert scarce capital away from network rollout and service quality into licence fees. In addition, designing and running an auction process can be a complex and expensive administrative task, arguably disproportionate for the purposes of Anguilla.

Current spectrum pricing is contained in the Telecommunications Spectrum Fees Regulations 2015. Annual spectrum fees must be paid not more than 30 days after the anniversary date of the grant of the frequency authorisation. The fees payable with respect to mobile spectrum are specified in Schedules 2 and 3 of the regulations. Those are payable over 10 years with 20% payable in each of years one and two. The

[17] 5G Spectrum; GSMA Public Policy Paper, May 2025

[18] Full power licenses are those that allow operators to transmit at the maximum Effective Isotropic Radiated Power (EIRP) or power limits defined by the regulator

remainder is divided by 8 and paid in equal amounts over the following 8 years. They are illustrated in Table 8 and Table 9.

Fees Regulations Schedule 2			
Network Type	**Description**	**MHz**	**Spectrum Fees (10 years, EC$)**
GSM	800 MHz Band (GSM 2.5 or lower) – 850A Band 869 to 881 MHz (Downlink), paired with 824 to 836 MHz (Uplink) (6 MHz – paired)	12	345,500
GSM	900 MHz Band (GSM 2.5 or lower) – 935 to 957.5 MHz (Downlink), paired with 890 to 912.5 MHz (Uplink) (5 MHz – paired)	10	287,500
GSM	1800 MHz Band (GSM) – 1827.5 to 1850 MHz and 1865 to 1880 MHz (Downlink); 1732.5 to 1755 MHz and 1770 to 1785 MHz (Uplink) (10 MHz – paired)	20	370,972
GSM	1900 MHz Band (GSM) – 1950 to 1990 MHz (Downlink), paired with 1870 to 1910 MHz (Uplink) (5 MHz – paired)	10	958,343

Table 8: Telecommunications Spectrum Fees Regulations 2015, Schedule 2

Fees Regulations Schedule 3			
Network Type	**Description**	**MHz**	**Spectrum Fees (10 years, EC$)**
Mobile/IMT	700 MHz Band – (MOBILE & IMT – 3G/4G and LTE) (6 MHz – paired)	12	1,200,000
IMT-2000 applications for 3G, 4G and LTE) – (IMT-2000 – cdma2000/WCDMA – 3G/4G, LTE)	800 MHz Band (850 MHz for IMT-2000 applications for 3G, 4G and LTE) – (IMT-2000 – cdma2000/WCDMA – 3G/4G, LTE) (6 MHz – paired)	12	1,200,000
Mobile/IMT	1900 MHz Band – (MOBILE & IMT – 3G, 4G and LTE) (5 MHz – paired)	10	1,000,000
MOBILE & IMT – 3G/4G, LTE	1700/2100 MHz Band (AWS) – (MOBILE & IMT – 3G/4G, LTE) (5 MHz – paired)	10	1,000,000

Table 9: Telecommunications Spectrum Fees Regulations 2015, Schedule 3

The policy objective for Anguilla is less about maximising upfront revenue and more about securing reliable, affordable, and modern mobile services, including good coverage across the island and resilience during emergencies. In the light of this the Commission wishes to strike a balance between affordability, encouraging use of the spectrum and making a reasonable contribution towards public finances. Therefore, we propose that 100MHz of spectrum in the 3.5 GHz band would be priced at

approximately 10% of the total cost of the spectrum assigned to each of the existing mobile operators. That is EC$ 490,000 for a 10 year licence.

Question 7. Do respondents agree that the Commission should seek to assign 5G spectrum based on a beauty contest/comparative selection process where demand > supply?

Question 8. Should there be spectrum caps where demand > supply?

Question 9. What should be the pricing of the 3.5 GHz band? What is the justification for your proposals?

22. Non-Price Terms

a. Scope

5G spectrum will be awarded on a national basis and could be used for mobile or FWA.

b. Duration

The Commission intends to grant spectrum authorisations for 10 year terms. That is consistent with existing authorisations and provides a balance between certainty for operators, a reasonable opportunity to make a return on investment and the ability to allocate spectrum bands efficiently over time.

23. Next Steps

After receiving the views of respondents, the Commission will:

- Determine 5G band allocations and allotments.
- Determine the assignment process.
- Advise the Minister on how to update the frequency plan accordingly.
- Invite applications for 5G spectrum which may include re-allocation of existing bands.
- Assign 5G spectrum accordingly.
- Decide on and confirm future consultations and their sequencing

24. Annex: Full List of Questions

Question 1. Where 5G NR TDD spectrum is made available should it be possible to assign it on an unsynchronised basis or only on a synchronised basis?
Question 2. Do you believe that there is any potential harmful interference that could result from the use of mobile services in the 3,400MHz to 3,800 MHz band, or other bands in which operators or potential operators may be interested, because of satellite activities?
Question 3. Which 5G New Radio spectrum bands should be allocated for 5G in Anguilla and Why?
Question 4. Should all available bands be made available for assignment at the same time or should introduction of them be staged? If staged, please indicate reasonable timelines.
Question 5. What minimum spectrum block sizes should be available for assignment?
Question 6. What views do respondents have about future spectrum demand?
Question 7. Do respondents agree that the Commission should seek to assign 5G spectrum based on a beauty contest/comparative selection process where demand > supply?
Question 8. Should there be spectrum caps where demand > supply?
Question 9. What should be the pricing of the 3.5 GHz band? What is the justification for your proposals?

25. Annex: New Radio FR1

NR operating band	Uplink (UL) *operating band* BS receive / UE transmit F_{UL_low} – F_{UL_high}	Downlink (DL) *operating band* BS transmit / UE receive F_{DL_low} – F_{DL_high}	Duplex Mode
n1	1920 MHz – 1980 MHz	2110 MHz – 2170 MHz	FDD
n2	1850 MHz – 1910 MHz	1930 MHz – 1990 MHz	FDD
n3	1710 MHz – 1785 MHz	1805 MHz – 1880 MHz	FDD
n5	824 MHz – 849 MHz	869 MHz – 894 MHz	FDD
n7	2500 MHz – 2570 MHz	2620 MHz – 2690 MHz	FDD
n8	880 MHz – 915 MHz	925 MHz – 960 MHz	FDD
n12	699 MHz – 716 MHz	729 MHz – 746 MHz	FDD
n13	777 MHz – 787 MHz	746 MHz – 756 MHz	FDD
n14	788 MHz – 798 MHz	758 MHz – 768 MHz	FDD
n18	815 MHz – 830 MHz	860 MHz – 875 MHz	FDD
n20	832 MHz – 862 MHz	791 MHz – 821 MHz	FDD
n24[16]	1626.5 MHz – 1660.5 MHz	1525 MHz – 1559 MHz	FDD
n25	1850 MHz – 1915 MHz	1930 MHz – 1995 MHz	FDD
n26	814 MHz – 849 MHz	859 MHz – 894 MHz	FDD
n28	703 MHz – 748 MHz	758 MHz – 803 MHz	FDD
n29[19]	N/A	717 MHz – 728 MHz	SDL
n30[3]	2305 MHz – 2315 MHz	2350 MHz – 2360 MHz	FDD
n31	452.5 MHz – 457.5 MHz	462.5 MHz – 467.5 MHz	FDD
n34	2010 MHz – 2025 MHz	2010 MHz – 2025 MHz	TDD
n38[10]	2570 MHz – 2620 MHz	2570 MHz – 2620 MHz	TDD
n39	1880 MHz – 1920 MHz	1880 MHz – 1920 MHz	TDD
n40	2300 MHz – 2400 MHz	2300 MHz – 2400 MHz	TDD
n41	2496 MHz – 2690 MHz	2496 MHz – 2690 MHz	TDD
n46[13]	5150 MHz – 5925 MHz	5150 MHz – 5925 MHz	TDD
n47[11]	5855 MHz – 5925 MHz	5855 MHz – 5925 MHz	TDD
n48	3550 MHz – 3700 MHz	3550 MHz – 3700 MHz	TDD
n50[1]	1432 MHz – 1517 MHz	1432 MHz – 1517 MHz	TDD
n51	1427 MHz – 1432 MHz	1427 MHz – 1432 MHz	TDD
n53	2483.5 MHz – 2495 MHz	2483.5 MHz – 2495 MHz	TDD
n54	1670 MHz – 1675 MHz	1670 MHz – 1675 MHz	TDD
n65[4]	1920 MHz – 2010 MHz	2110 MHz – 2200 MHz	FDD
n66[6,7]	1710 MHz – 1780 MHz	2110 MHz – 2200 MHz	FDD
n67[19]	N/A	738 MHz – 758 MHz	SDL

n68	698 MHz – 728 MHz	753 MHz – 783 MHz	FDD
n70	1695 MHz – 1710 MHz	1995 MHz – 2020 MHz	FDD
n71	663 MHz – 698 MHz	617 MHz – 652 MHz	FDD
n72	451 MHz – 456 MHz	461 MHz – 466 MHz	FDD
n74	1427 MHz – 1470 MHz	1475 MHz – 1518 MHz	FDD
n75[2,19]	N/A	1432 MHz – 1517 MHz	SDL
n76[19]	N/A	1427 MHz – 1432 MHz	SDL
n77[12]	3300 MHz – 4200 MHz	3300 MHz – 4200 MHz	TDD
n78	3300 MHz – 3800 MHz	3300 MHz – 3800 MHz	TDD
n79[17]	4400 MHz – 5000 MHz	4400 MHz – 5000 MHz	TDD
n80	1710 MHz – 1785 MHz	N/A	SUL
n81	880 MHz – 915 MHz	N/A	SUL
n82	832 MHz – 862 MHz	N/A	SUL
n83	703 MHz – 748 MHz	N/A	SUL
n84	1920 MHz – 1980 MHz	N/A	SUL
n85	698 MHz – 716 MHz	728 MHz – 746 MHz	FDD
n86	1710 MHz – 1780 MHz	N/A	SUL
n87	410 MHz – 415 MHz	420 MHz – 425 MHz	FDD
n88	412 MHz – 417 MHz	422 MHz – 427 MHz	FDD
n89	824 MHz – 849 MHz	N/A	SUL
n90[5]	2496 MHz – 2690 MHz	2496 MHz – 2690 MHz	TDD
n91[9]	832 MHz – 862 MHz	1427 MHz – 1432 MHz	FDD
n92[9]	832 MHz – 862 MHz	1432 MHz – 1517 MHz	FDD
n93[9]	880 MHz – 915 MHz	1427 MHz – 1432 MHz	FDD
n94[9]	880 MHz – 915 MHz	1432 MHz – 1517 MHz	FDD
n95[8]	2010 MHz – 2025 MHz	N/A	SUL
n96[13,14]	5925 MHz – 7125 MHz	5925 MHz – 7125 MHz	TDD
n97[15]	2300 MHz – 2400 MHz	N/A	SUL
n98[15]	1880 MHz – 1920 MHz	N/A	SUL
n99[22]	1626.5 MHz – 1660.5 MHz	N/A	SUL
n100[21]	874.4 MHz – 880 MHz	919.4 MHz – 925 MHz	FDD
n101[21]	1900 MHz – 1910 MHz	1900 MHz – 1910 MHz	TDD
n102[13,14]	5925 MHz – 6425 MHz	5925 MHz – 6425 MHz	TDD
n104[17]	6425 MHz – 7125 MHz	6425 MHz – 7125 MHz	TDD
n105	663 MHz – 703 MHz	612 MHz – 652 MHz	FDD
n106	896 MHz – 901 MHz	935 MHz – 940 MHz	FDD
n109[9]	703 MHz – 733 MHz	1432 MHz – 1517 MHz	FDD
n110	1390 MHz – 1395 MHz	1432 MHz – 1435 MHz	FDD

NOTE 1: UE that complies with the NR Band n50 minimum requirements in this specification shall also comply with the NR Band n51 minimum requirements.

NOTE 2: UE that complies with the NR Band n75 minimum requirements in this specification shall also comply with the NR Band n76 minimum requirements.

NOTE 3: Uplink transmission is not allowed at this band for UE with external vehicle-mounted antennas.

NOTE 4: A UE that complies with the NR Band n65 minimum requirements in this specification shall also comply with the NR Band n1 minimum requirements.

NOTE 5: Unless otherwise stated, the applicability of requirements for Band n90 is in accordance with that for Band n41; a UE supporting Band n90 shall meet the requirements for Band n41. A UE supporting Band n90 shall also support band n41.

NOTE 6: A UE that supports NR Band n66 shall receive in the entire DL operating band.

NOTE 7: A UE that supports NR Band n66 and CA operation in any CA band shall also comply with the minimum requirements specified for the DL CA configurations CA_n66B and CA_n66(2A) in the current version of the specification.

NOTE 8: This band is applicable in China only.

NOTE 9: Variable duplex operation does not enable dynamic variable duplex configuration by the network, and is used such that DL and UL frequency ranges are supported independently in any valid frequency range for the band.

NOTE 10: When this band is used for V2X SL service, the band is exclusively used for NR V2X in particular regions.

NOTE 11: This band is unlicensed band used for V2X service. There is no expected network deployment in this band.

NOTE 12: In the USA this band is restricted to 3450 – 3550 MHz and 3700 – 3980 MHz. In Canada this band is restricted to 3450 – 3650 MHz and 3650 – 3980 MHz.

NOTE 13: This band is restricted to operation with shared spectrum channel access as defined in TS 37.213 [14].

NOTE 14: This band is applicable only in countries/regions designating this band for shared-spectrum access use subject to country-specific conditions.

NOTE 15: The requirements for this band are applicable only where no other NR or E-UTRA TDD operating band(s) are used within the frequency range of this band in the same geographical area. For scenarios where other NR or E-UTRA TDD operating band(s) are used within the frequency range of this band in the same geographical area, special co-existence requirements may apply that are not covered by the 3GPP specifications.

NOTE 16: DL operation in this band is restricted to 1526 – 1536 MHz and UL operation is restricted to 1627.5 – 1637.5 MHz and 1646.5 – 1656.5 MHz.

NOTE 17: For this band, CORESET#0 values from Table 13-5 or Table 13-6 in [8, TS 38.213] are applied regardless of the minimum channel bandwidth.

NOTE 18: Void

NOTE 19: For SDL bands, downlink configuration for RRM performance testing is same as FDD.

NOTE 20: Operating band n200 is a reserved value.

NOTE 21: This band is applicable only in countries subject to ECC Decision (20)02 [19], for the FRMCS application.

NOTE 22: UL operation in this band is restricted to 1627.5 – 1637.5 MHz and 1646.5 – 1656.5 MHz.

26. Annex: New Radio FR2

Operating Band	Uplink (UL) operating band BS receive UE transmit	Downlink (DL) operating band BS transmit UE receive	Duplex Mode
	F_{UL_low} – F_{UL_high}	F_{DL_low} – F_{DL_high}	
n257	26500 MHz – 29500 MHz	26500 MHz – 29500 MHz	TDD
n258	24250 MHz – 27500 MHz	24250 MHz – 27500 MHz	TDD
n259	39500 MHz – 43500 MHz	39500 MHz – 43500 MHz	TDD
n260	37000 MHz – 40000 MHz	37000 MHz – 40000 MHz	TDD
n261	27500 MHz – 28350 MHz	27500 MHz – 28350 MHz	TDD
n262	47200 MHz – 48200 MHz	47200 MHz – 48200 MHz	TDD
n263	57000 MHz – 71000 MHz	57000 MHz – 71000 MHz	TDD[1]

NOTE 1: This band is for unlicensed operation and subject to regional and/or country specific regulatory requirements.

27. Annex: EUTRA/LTE Bands

E-UTRA Operating Band	Uplink (UL) operating band BS receive UE transmit			Downlink (DL) operating band BS transmit UE receive			Duplex Mode
	F_{UL_low} – F_{UL_high}			F_{DL_low} – F_{DL_high}			
1	1920 MHz	–	1980 MHz	2110 MHz	–	2170 MHz	FDD
2	1850 MHz	–	1910 MHz	1930 MHz	–	1990 MHz	FDD
3	1710 MHz	–	1785 MHz	1805 MHz	–	1880 MHz	FDD
4	1710 MHz	–	1755 MHz	2110 MHz	–	2155 MHz	FDD
5	824 MHz	–	849 MHz	869 MHz	–	894MHz	FDD
61	830 MHz	–	840 MHz	875 MHz	–	885 MHz	FDD
7	2500 MHz	–	2570 MHz	2620 MHz	–	2690 MHz	FDD
8	880 MHz	–	915 MHz	925 MHz	–	960 MHz	FDD
9	1749.9 MHz	–	1784.9 MHz	1844.9 MHz	–	1879.9 MHz	FDD
10	1710 MHz	–	1770 MHz	2110 MHz	–	2170 MHz	FDD
11	1427.9 MHz	–	1447.9 MHz	1475.9 MHz	–	1495.9 MHz	FDD
12	699 MHz	–	716 MHz	729 MHz	–	746 MHz	FDD
13	777 MHz	–	787 MHz	746 MHz	–	756 MHz	FDD
14	788 MHz	–	798 MHz	758 MHz	–	768 MHz	FDD
15	Reserved			Reserved			FDD
16	Reserved			Reserved			FDD
17	704 MHz	–	716 MHz	734 MHz	–	746 MHz	FDD
18	815 MHz	–	830 MHz	860 MHz	–	875 MHz	FDD
19	830 MHz	–	845 MHz	875 MHz	–	890 MHz	FDD
20	832 MHz	–	862 MHz	791 MHz	–	821 MHz	FDD
21	1447.9 MHz	–	1462.9 MHz	1495.9 MHz	–	1510.9 MHz	FDD
22	3410 MHz	–	3490 MHz	3510 MHz	–	3590 MHz	FDD
231	2000 MHz	–	2020 MHz	2180 MHz	–	2200 MHz	FDD
2417	1626.5 MHz	–	1660.5 MHz	1525 MHz	–	1559 MHz	FDD
25	1850 MHz	–	1915 MHz	1930 MHz	–	1995 MHz	FDD
26	814 MHz	–	849 MHz	859 MHz	–	894 MHz	FDD
27	807 MHz	–	824 MHz	852 MHz	–	869 MHz	FDD
28	703 MHz	–	748 MHz	758 MHz	–	803 MHz	FDD
29	N/A			717 MHz	–	728 MHz	FDD[2]
3015	2305 MHz	–	2315 MHz	2350 MHz	–	2360 MHz	FDD
31	452.5 MHz	–	457.5 MHz	462.5 MHz	–	467.5 MHz	FDD
32	N/A			1452 MHz	–	1496 MHz	FDD[2]

33	1900 MHz	–	1920 MHz	1900 MHz	–	1920 MHz	TDD
34	2010 MHz	–	2025 MHz	2010 MHz	–	2025 MHz	TDD
35	1850 MHz	–	1910 MHz	1850 MHz	–	1910 MHz	TDD
36	1930 MHz	–	1990 MHz	1930 MHz	–	1990 MHz	TDD
37	1910 MHz	–	1930 MHz	1910 MHz	–	1930 MHz	TDD
38	2570 MHz	–	2620 MHz	2570 MHz	–	2620 MHz	TDD
39	1880 MHz	–	1920 MHz	1880 MHz	–	1920 MHz	TDD
40	2300 MHz	–	2400 MHz	2300 MHz	–	2400 MHz	TDD
41	2496 MHz		2690 MHz	2496 MHz		2690 MHz	TDD
42	3400 MHz	–	3600 MHz	3400 MHz	–	3600 MHz	TDD
43	3600 MHz	–	3800 MHz	3600 MHz	–	3800 MHz	TDD
44	703 MHz	–	803 MHz	703 MHz	–	803 MHz	TDD
45	1447 MHz	–	1467 MHz	1447 MHz	–	1467 MHz	TDD
46	5150 MHz	–	5925 MHz	5150 MHz	–	5925 MHz	TDD[8]
47	5855 MHz	–	5925 MHz	5855 MHz	–	5925 MHz	TDD[11]
48	3550 MHz	–	3700 MHz	3550 MHz	–	3700 MHz	TDD
49	3550 MHz	–	3700 MHz	3550 MHz	–	3700 MHz	TDD[16]
50	1432 MHz	-	1517 MHz	1432 MHz	-	1517 MHz	TDD[13]
51	1427 MHz	-	1432 MHz	1427 MHz	-	1432 MHz	TDD[13]
52	3300 MHz	-	3400 MHz	3300 MHz	-	3400 MHz	TDD
53	2483.5 MHz	-	2495 MHz	2483.5 MHz	-	2495 MHz	TDD
…							
64	Reserved						
65	1920 MHz	–	2010 MHz	2110 MHz	–	2200 MHz	FDD
66	1710 MHz	–	1780 MHz	2110 MHz	–	2200 MHz	FDD[4]
67	N/A			738 MHz	–	758 MHz	FDD[2]
68	698 MHz	–	728 MHz	753 MHz	–	783 MHz	FDD
69	N/A			2570 MHz	–	2620 MHz	FDD[2]
70	1695 MHz	–	1710 MHz	1995 MHz	–	2020 MHz	FDD[10]
71	663 MHz	–	698 MHz	617 MHz	–	652 MHz	FDD
72	451 MHz	–	456 MHz	461 MHz	–	466 MHz	FDD
73	450 MHz	–	455 MHz	460 MHz	–	465 MHz	FDD
74	1427 MHz	–	1470 MHz	1475 MHz	–	1518 MHz	FDD
75	N/A			1432 MHz	–	1517 MHz	FDD[2]
76	N/A			1427 MHz	–	1432 MHz	FDD[2]
85	698 MHz	–	716 MHz	728 MHz	–	746 MHz	FDD
87	410 MHz	–	415 MHz	420 MHz	–	425 MHz	FDD
88	412 MHz	–	417 MHz	422 MHz	–	427 MHz	FDD

NOTE 1: Band 6, 23 is not applicable

NOTE 2: Restricted to E-UTRA operation when carrier aggregation is configured. The downlink operating band is paired with the uplink operating band (external) of the carrier aggregation configuration that is supporting the configured Pcell.

NOTE 3: A UE that complies with the E-UTRA Band 65 minimum requirements in this specification shall also comply with the E-UTRA Band 1 minimum requirements.

NOTE 4: The range 2180-2200 MHz of the DL operating band is restricted to E-UTRA operation when carrier aggregation is configured.

NOTE 5: A UE that supports E-UTRA Band 66 shall receive in the entire DL operating band

NOTE 6: A UE that supports E-UTRA Band 66 and CA operation in any CA band shall also comply with the minimum requirements specified for the DL CA configurations CA_66B, CA_66C and CA_66A-66A.

NOTE 7: A UE that complies with the E-UTRA Band 66 minimum requirements in this specification shall also comply with the E-UTRA Band 4 minimum requirements.

NOTE 8: This band is an unlicensed band restricted to licensed-assisted operation using Frame Structure Type 3

NOTE 9: In this version of the specification, restricted to E-UTRA DL operation when carrier aggregation is configured.

NOTE 10: The range 2010-2020 MHz of the DL operating band is restricted to E-UTRA operation when carrier aggregation is configured and TX-RX separation is 300 MHz The range 2005-2020 MHz of the DL operating band is restricted to E-UTRA operation when carrier aggregation is configured and TX-RX separation is 295 MHz.

NOTE 11: This band is unlicensed band used for V2X communication. There is no expected network deployment in this band so Frame Structure Type 1 is used.

NOTE 12: A UE that complies with the E-UTRA Band 74 minimum requirements in this specification shall also comply with the E-UTRA Band 11 and Band 21 minimum requirements.

NOTE 13: UE that complies with the E-UTRA Band 50 minimum requirements in this specification shall also comply with the E-UTRA Band 51 minimum requirements.

NOTE 14: A UE that complies with the E-UTRA Band 75 minimum requirements in this specification shall also comply with the E-UTRA Band 76 minimum requirements.

NOTE 15: Uplink transmission is not allowed at this band for UE with external vehicle-mounted antennas.

NOTE 16: This band is restricted to licensed-assisted operation using Frame Structure Type 3

NOTE 17: DL operation in this band is restricted to 1526 – 1536 MHz and UL operation is restricted to 1627.5 – 1637.5 MHz and 1646.5 – 1656.5 MHz.

28. Annex: 5G Standalone (SA) and Non-Standalone (NSA) Options

5G Standalone (SA) - Core Connectivity Option 2
A 5G base station (gNodeB) connects directly to the 5G Core (5GC). Uses 5G NR for both control and user plane data. Core network is 5GC. Full 5G deployment, independent of 4G infrastructure. Supports advanced 5G features like ultra-low latency and network slicing. Pure 5G, no reliance on 4G components.

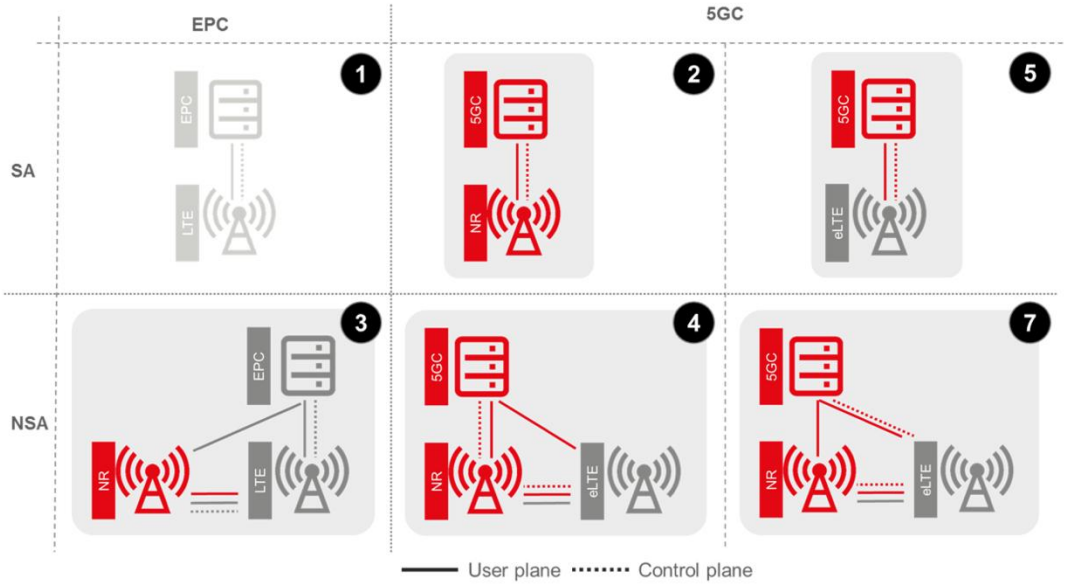
Non-Standalone (NSA) with EPC - Core Connectivity Option 3
A combination of LTE (eNodeB) and 5G NR (gNodeB) where the eNodeB acts as the master node, and the gNodeB is a secondary node, connected to the EPC. The control plane is handled by LTE, while 5G NR is used for additional user plane data (dual connectivity, known as EN-DC or E-UTRAN New Radio Dual Connectivity). Uses an EPC. This approach facilitates early 5G deployments by leveraging existing 4G infrastructure to provide enhanced mobile broadband (eMBB) with 5G NR for higher data rates.

Non-Standalone (NSA) with 5GC - Core Connectivity Option 4
A 5G gNodeB acts as the master node, with an LTE eNodeB as the secondary node, connected to the 5G Core (5GC). Uses 5G NR for the control plane and primary user plane, with LTE as secondary (NE-DC, New Radio E-UTRAN Dual Connectivity). Core network is 5GC. Allows operators to deploy 5G NR as the primary radio while still using LTE, with the benefits of the 5G Core (e.g., network slicing). Enables dual connectivity (data aggregation) with LTE carriers deployed on a cell site.

LTE with 5G Core - Core Connectivity Option 5
An LTE eNodeB connects directly to the 5G Core (5GC). Uses LTE radio for both control and user planes but connects to the 5GC instead of the EPC. Core network is 5GC. Enables operators to upgrade to 5GC without deploying 5G NR. Enables an operator to rapidly rollout wide-area services with 5GC capabilities such as mobile edge computing and network slicing.

Non-Standalone (NSA) with 5GC - Core Connectivity Option 7
An LTE eNodeB acts as the master node, with a 5G gNodeB as the secondary node, connected to the 5G Core (5GC). LTE handles the control plane, with 5G NR for additional user plane data (NGEN-DC, Next Generation E-UTRAN Dual Connectivity). Core network is 5GC. Similar to the NSA with EPC option but uses 5GC, allowing operators to benefit from 5G Core features while maintaining LTE as the anchor. The dual connectivity allows data aggregation with any co-existing 5G new radio carriers to improve throughput. This is the natural evolution from option 3.

Note: Core Connectivity Option 1 is a fully 4G LTE system, where an LTE base station (eNodeB) connects to the EPC. It uses only LTE radio for both control and user plane data, with no 5G components involved. Option 6 was initially planned as a potential configuration for interworking between the 4G EPC and 5GC. However, Option 6 was never formally specified in 3GPP standards. The differences between 3, 3a and 3x and 7 versus 7a are at the user plane level i.e. relating to data carriage.


EPC
5GC
SA
NSA
1
2
5
3
4
7
EPC
LTE
5GC
NR
eLTE
User plane
Control plane

29. Annex: Further Definitions/Terminology Explanations

CA (Carrier Aggregation): Bonds multiple component carriers (CCs) from the *same* RAN node (eNB or gNB) into one wider virtual channel to boost bandwidth and throughput. Works intra-band or inter-band (and across FDD/TDD where supported).

Control Plane: The signalling path that authenticates devices and manages mobility, session setup, and Quality of Service, telling the user plane where and how to carry the actual data.

DC (Dual Connectivity): A general 3GPP feature where UE connects to two different nodes (base stations) at once (one Master, one Secondary) For example: LTE+LTE, LTE+NR, or NR+NR. Traffic can be split across nodes/frequencies/technologies for higher peak rates, better load balancing, and resilience, while control typically stays anchored on the Master node.

Enhanced Mobile Broadband (eMBB): This is one of the three main 5G use cases defined by 3GPP, focusing on delivering significantly higher data rates, greater network capacity, and improved user experience compared to 4G. eMBB is the "high-speed mobile internet" pillar of 5G that enables gigabit-level downloads, seamless 4K/8K streaming, AR/VR applications, and reliable connectivity even in crowded or high-mobility scenarios.

The Evolved Packet Core (EPC): This is the core network architecture used in 4G LTE networks, defined by the 3rd Generation Partnership Project (3GPP). It is a fully IP-based system designed to handle data, voice, and signalling for mobile devices, providing high-speed, low-latency connectivity. The EPC is the core network that manages the communication between LTE base stations (eNodeBs) and external networks like the internet or other operator networks. It handles tasks such as user authentication, mobility management, session establishment, and data routing. Unlike earlier 2G/3G core networks, which separated voice and data (circuit-switched and packet-switched domains), the EPC is entirely packet-switched, optimized for data traffic and supporting voice over IP (VoLTE).

EN-DC (E-UTRA–NR Dual Connectivity): 5G NSA Option 3/3a/3x with a 4G EPC core. LTE eNB is the Master (control-plane anchor) and NR gNB is the Secondary for user-plane boost. Lets operators add 5G capacity quickly while relying on LTE coverage and mobility.

EUTRA - Evolved Universal Terrestrial Radio Access, is the air interface for LTE (Long-Term Evolution) mobile networks, defined by the 3GPP (3rd Generation Partnership Project).

NE-DC (NR–E-UTRA Dual Connectivity): 5G NSA Option 4/4x with a 5G Core (5GC). NR gNB is the Master (anchor to 5GC) and LTE ng-eNB is the Secondary. Useful when NR is the primary layer but LTE supplements capacity/coverage.

NGEN-DC (Next-Generation E-UTRA–NR Dual Connectivity): 5G NSA Option 7/7x with a 5G Core (5GC). LTE ng-eNB is the Master (anchor to 5GC) and NR gNB is the Secondary, enabling both 4G and 5G radios while moving the core to 5GC without making NR the anchor.

SUL (Supplementary Uplink): A band that provides additional uplink (UL) capacity only. It uses lower-frequency unpaired spectrum to supplement the primary uplink carrier, primarily to improve uplink coverage and throughput in challenging environments.

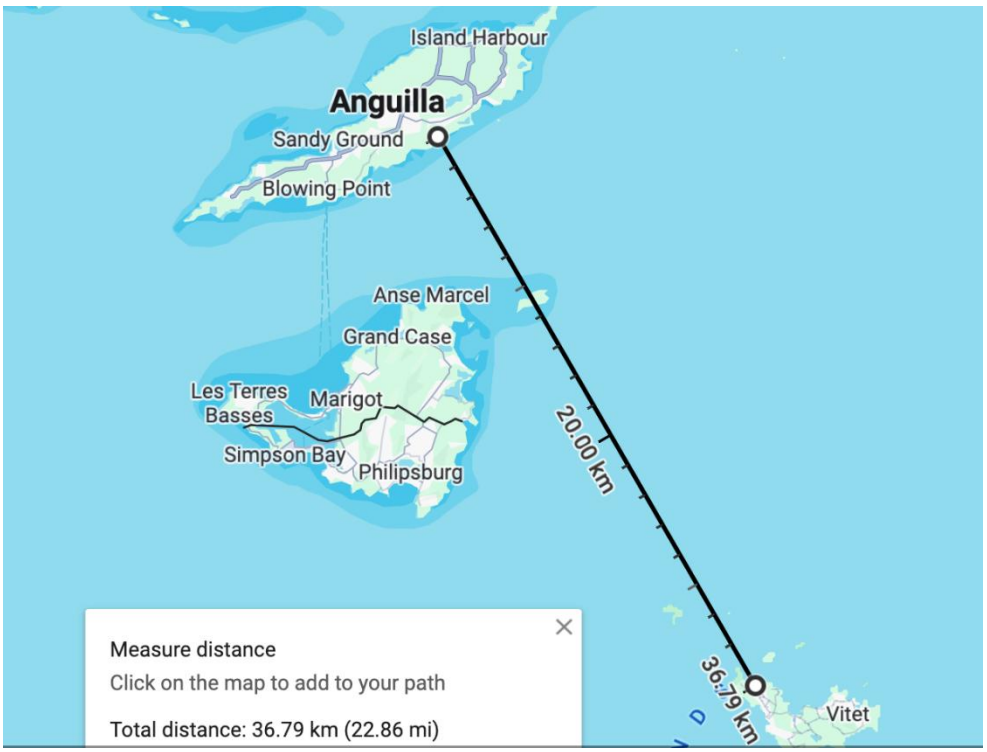
SDL (Supplementary Downlink): A band that provides additional downlink (DL) capacity only. It uses unpaired spectrum to boost downlink speeds and capacity, especially in low-frequency bands where demand for data download is high.

UE/NR-UE: User Equipment/5G User Equipment

User Plane: The path that carries user data packets (your IP traffic) between the device and external data networks (internet, enterprise, IMS).

30. Annex: Anguilla to St Martin Distance

31. Annex: Anguilla to Saint-Barthélemy Distance



32. Annex: List of Figures

33. Annex: List of Tables