



**NATIONAL  
COMMUNICATIONS  
AUTHORITY**

# **SATELLITE LICENSING FRAMEWORK IN GHANA**



### Version of the Document

Date	Version	Comments
May, 2024	1.0	First official publication
October, 2024	1.1	First revision to clarify the different categories of non-FSS Landing Rights

## Table of Contents

<b>Version of the Document</b>	<b>1</b>
<b>1.0 Introduction</b>	<b>5</b>
<b>1.1 Legal Framework</b>	<b>5</b>
<b>1.2 Scope of Application</b>	<b>5</b>
<b>2.0 General Requirements for all Applicants</b>	<b>6</b>
<b>3.0 Space Segment Satellite Services</b>	<b>6</b>
<b>3.1 Satellite Filings</b>	<b>6</b>
3.1.1 Overview	6
3.1.2 Application Requirements	7
3.1.3 Fees payable	7
<b>3.2 Satellite Landing Rights (FSS)</b>	<b>8</b>
3.2.1 Overview	8
3.2.2 Direct Connectivity between Space Stations and International Mobile Telecommunications (IMT) user equipment	8
3.2.3 Application Requirements	9
3.2.4 Licence Validity Period	9
3.2.5 Fees Payable	9
3.2.6 Special Conditions of licence	9
<b>3.3 Satellite Landing Rights(MSS)</b>	<b>10</b>
3.3.1 Overview	10
3.3.2 Application Requirements	10
3.3.3 Licence Validity Period	10
3.3.4 Fees Payable	11
3.3.5 Special Conditions of Licence	11
<b>3.4 Satellite Landing Rights (Others)</b>	<b>11</b>
3.4.1 Overview	11
3.4.2 Application Requirements	11
3.4.3 Licence Validity Period	12
3.4.4 Fees Payable	12
3.4.5 Special Conditions of Licence	12
<b>4.0 Earth Segment Satellite Services</b>	<b>12</b>
<b>4.1 Special Conditions</b>	<b>12</b>
<b>4.2 Portable Satellite Terminals (PST)</b>	<b>13</b>
4.2.1 Overview	13
4.2.2 Application Requirements	13
4.2.3 Licence validity Period	13
4.2.4 Fees Payable	13

<b>4.3</b>	<b>Satellite Gateway Earth Station</b>	<b>14</b>
4.3.1	Overview	14
4.3.2	Application Requirements	14
4.3.3	Licence Validity Period	14
4.3.4	Fees Payable	14
<b>4.4</b>	<b>Earth Stations in Motion</b>	<b>14</b>
4.4.1	Overview	14
4.4.2	Application Requirements	15
4.4.3	Licence Validity Period	15
4.4.4	Fees Payable	15
<b>4.5</b>	<b>Satellite Earth Station Terminal</b>	<b>15</b>
4.5.1	Overview	15
4.5.2	Application Requirement	16
4.5.3	Licence Validity Period	16
4.5.4	Fees Payable	16
<b>4.6</b>	<b>Satellite Earth Station Network</b>	<b>16</b>
4.6.1	Overview	16
4.6.2	Application Requirement	17
4.6.3	Licence Validity Period	17
4.6.4	Fees Payable	17
4.6.5	Procedure for Upgrade/Downgrade of SESN and PST	18
<b>5.0</b>	<b>Frequency Ranges</b>	<b>18</b>
<b>6.0</b>	<b>Licensing Procedure for all Applications</b>	<b>18</b>
<b>7.0</b>	<b>Electronic Communications Equipment Authorisation (Type Approval) Requirements</b>	<b>19</b>
<b>8.0</b>	<b>Effective Date</b>	<b>19</b>
<b>9.0</b>	<b>Attachments</b>	<b>19</b>
9.1	NCA Customer Registration Form – AP01B	19
9.2	NCA Satellite Technical Form (Landing Rights) – AP15A	19
9.3	NCA Satellite Technical Form– AP15	19
9.4	NCA Type Approval Form – AP16	19

## List of Abbreviations

API:	Advance Publication Information
BGAN	Broadband Global Area Network
BR:	Radiocommunication Bureau
BR IFIC:	BR International Frequency Information Circular
CR/C	Coordination Request
EPFD:	Equivalent Power Flux Density
ESIM:	Earth Stations in Motion
FSS:	Fixed Satellite Service
GIFEC	Ghana Investment Fund for Electronic Communications
GIPC:	Ghana Investment Promotion Centre
GSO:	Geostationary-Satellite Orbit
IGW	International Gateway
ITU:	International Telecommunication Union
ITU-BR	International Telecommunication Union - Radiocommunication Bureau
IMT:	International Mobile Telecommunications
ITU-R:	International Telecommunication Union - Radiocommunication Sector
IWCL:	International Wholesale Carrier
MIFR:	Master International Frequency Register
MNO:	Mobile Network Operator:
NCA or the Authority:	National Communications Authority
NFAT:	Ghana National Frequency Allocation Table
NGSO:	Non-Geostationary Satellite Orbit
PLMN:	Public Land Mobile Networks
PSTN:	Public Switched Telephone Networks
PST:	Portable Satellite Terminal
RR:	Radio Regulations (RR)
RURACOM	Rural Telephony Network
SESN:	Satellite Earth Station Networks
SEST:	Satellite Earth Station Terminal
VSAT:	Very Small aperture Terminal
WRC:	World Radiocommunication Conferences

## 1.0 Introduction

### Whereas

- a) Section 64 of the Electronic Communications Act, 2008 (Act 775) authorises the National Communications Authority (“NCA” or “the Authority”) *“to ensure that access to the space segment is made available on a non-discriminatory and equitable basis in allocating frequency bands for electronic communications services that use satellite systems”*;
- b) Section 58 (2) of Act 775 requires the Authority to comply with applicable standards and requirements of the International Telecommunication Union (ITU) and its Radio Regulations (RR), as agreed to or adopted by the Republic of Ghana in controlling, planning, administering, managing and licensing the use of the radio frequency spectrum;
- c) No. **0.3** of the Preamble to the Radio Regulations provides that, *“in using frequency bands for radio services, Members shall bear in mind that radio frequencies and any associated orbits, including the geostationary-satellite orbit are limited natural resources and that they must be used rationally, efficiently and economically, in conformity with the provisions of these Regulations”*;
- d) The Radio Regulations further provide in article 18.1 that, *“No transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject”*;
- e) ITU-R Resolution 22 (WRC-19) requires that the operation of transmitting earth stations within the territory of an administration is carried out only with due authorisation by that administration;
- f) Under Sections 9(1, 2 & 3) of Act 775 the use of a spectrum for designated services is pursuant to a frequency authorisation granted by the Authority upon an application in the manner specified by law and in accordance with policies and rules published by the Authority;

### 1.1 Legal Framework

In exercise of the power of the Authority to issue guidelines and standards from time to time further to Section 3 (r) of the National Communications Authority Act, 2008 (Act 769), this document, **Satellite Licensing Framework in Ghana**, has been developed to provide the framework of the policies and rules relating to the application for frequency authorisations for satellite services in Ghana. It outlines the various categories of satellite services, the licensing requirements and their associated fees.

### 1.2 Scope of Application

The provisions in this document shall be read and applied together with all applicable laws currently in force and with such modifications as subsequent legislations and directives issued by the Authority may prescribe.

## 2.0 General Requirements for all Applicants

2.1. An Application for satellite licences shall be in writing and addressed to:

The Director General  
National Communications Authority  
No. 6 Airport City, KIA, Accra  
P. O. Box CT1568, Cantonments, Accra  
Ghana

And a copy sent to:  
Email: spaceservices@nca.org.gh

2.2 An applicant shall complete the relevant sections of the NCA Customer Registration Form AP01B (available at the Authority's offices or downloadable from <https://nca.org.gh/wp-content/uploads/2021/12/NCA-FORM-AP01B.pdf>) and provide the required technical information specified in this document for submission together with the requisite non-refundable application fee payable by Banker's Draft to the National Communications Authority or by Bank transfer.

## 3.0 Space Segment Satellite Services

This section details the requirement for licensing of Space Segments Satellite services, including Satellite Filings and Satellite Landing Rights.

### 3.1 Satellite Filings

#### 3.1.1 Overview

The NCA recognises the United Nations Outer Space Treaty (1967) on the freedom of state actors to explore outer space in conformity with international regulations. The Authority further recognizes Article 8 of the ITU Radio Regulations which provides that frequency spectrum or orbits used by stations in space derive their right to international recognition from the recording of the frequency assignments and/or orbital positions in the Master International Frequency Register (MIFR).

As the notifying administration for the Republic of Ghana, with responsibility for submission and management of all satellite filings to the ITU on behalf of organisations registered in Ghana, the NCA is committed to supporting the activities of new and established satellite operators in their projects within the Geostationary-Satellite Orbit (GSO) and the Non-Geostationary Satellite Orbit (NGSO). This support includes guidance on meeting the requirements of ITU outlined in the applicable articles of the Radio Regulations as well as the relevant Appendices and Resolutions.

Consequently, the NCA shall ensure compliance with the relevant provisions of the Radio Regulations, in particular, Article 5 (on Table of Frequency Allocations), Article 9 (on Procedures for effecting coordination with or obtaining agreement of other administrations) and Article 11 (on Notification and recording of frequency assignments), as well as obligations under Article 44 of the ITU Constitution and ITU-R Resolution 49 (Administrative due diligence applicable to some satellite services).

### 3.1.2 Application Requirements

- a. Applications and all correspondence relating to satellite networks in planned and non-planned bands shall be submitted by the applicant to the NCA in electronic format, in accordance with the format required by the ITU Space Services software (<http://www.itu.int/ITU-R/software/space/index.html>) to:  
Email: [spaceservices@nca.org.gh](mailto:spaceservices@nca.org.gh)
- b. The NCA shall only file a satellite network application to the ITU on behalf of an applicant whose satellite network(s) meets the criteria contained in this document and which is consistent with the ITU Radio Regulations.
- c. An applicant must establish satisfactorily that their satellite project can be realised within the relevant regulatory time limits and the relevant technical and operational parameters consistent with Resolution 35 (WRC 19).

### 3.1.3 Fees payable

An Applicant for a Satellite Filing is required to comply with the Fees Schedule fixed by the ITU and the NCA.

#### 3.1.3.1 ITU Fees

- a) In accordance with the provisions of ITU Council Decision 482, as amended, the ITU charges fees for processing satellite network filings on a cost recovery basis. Detailed arrangements for the implementation of these cost recovery charges are available from the ITU.
- b) The ITU Finance Department issues invoices for fees related to processing a satellite network filing directly to the concerned satellite network operator. These invoices will be sent to the NCA, which will then forward to the operator. Upon receipt, the operator is responsible for making the payment directly to the ITU by the specified deadline and must inform the NCA once the payment is completed.
- c) Non-compliance with the provisions of Council Decision 482, as amended, shall result in cancellation by ITU-BR of any filing(s) done by the NCA on behalf of an applicant.

#### 3.1.3.2 NCA Fees

Fees payable by an Applicant to the NCA shall be in accordance with the schedule below: -

Filing activity/type	Payment Due Date	Charges (US\$)
<b>Submissions (and relevant modifications)</b>		
New requests (except for NGSO EPFD filings)	On date of request/application	1,000.00
New NGSO EPFD filing requests		3,000.00
<b>Annual management</b>		
API filings	Q1 annually (on receipt of invoice)	1,200.00
CR/C GSO and NGSO filings (<100 ITU units)		2,500.00
CR/C GSO and NGSO filings (≥100 ITU units)		4,000.00
<b>Notifications</b>		
API requests		1,000.00

Filing activity/type	Payment Due Date	Charges (US\$)
CR/C GSO and NGSO requests	On date of request/application	

## 3.2 Satellite Landing Rights (FSS)

### 3.2.1 Overview

This Licence grants a space segment satellite operator the rights to use spectrum in Ghana, contingent on the ITU Radio Bureau publishing a notice for the system in the BR International Frequency Information Circular (Space Services) (BR IFIC) to facilitate successful registration in the MIFR. The operations must adhere to the registration in the MIFR of the ITU.

Additionally, this Licence authorises the Licensee to provide services to NGSO terminals aboard foreign-registered Aircrafts and Vessels while traversing Ghana’s airspace and territorial waters within the licensed frequency bands. However, it does not permit space segment operators to retail their services in Ghana without the requisite licence.

Entities applying for Satellite Landing Rights Licence with proof of registration as a body corporate other than in Ghana, shall be required to comply with the requirements for external companies under the laws of Ghana.

However, a licensee may provide services only through Authorised or Licenced telecom service operators in Ghana, including direct connectivity between space stations and International Mobile Telecommunications (IMT) user equipment. Such service operators must hold any of the following Authorisations or Licences applicable to their registered business activity:

- a. Internet/Public Data Service and Satellite Earth Station Network
- b. Mobile Network Operators
- c. Broadband Wireless Access Operators
- d. Satellite Earth Station Terminal

### 3.2.2 Direct Connectivity between Space Stations and International Mobile Telecommunications (IMT) user equipment

A Satellite Landing Right licence **does not** authorise a satellite operator to establish direct connections between space stations and International Mobile Telecommunications (IMT) devices, such as mobile phones or tablets within the territory of Ghana.

This is consistent with Government policy requirement for the conduct of trial or commercial deployment of direct connectivity between space stations and IMT devices through the provider of the Rural Telephony Network (RuraCom), established by the Ghana Investment Fund for Electronic Communications (GIFEC). All Mobile Network Operators (MNOs) have a roaming agreement with GIFEC to allow their customers use the RuraCom, which provides coverage to unserved and underserved rural communities in Ghana. Accordingly, any trial or commercial deployment of direct connectivity between space stations and IMT devices is subject to approval by the NCA.

Further to policy direction and technological advancement and studies conducted by ITU-R, the NCA may respond pursuant to Section 27 of Act 775 to establish modalities for direct connectivity between space stations and IMT user equipment in Ghana.

### 3.2.3 *Application Requirements*

An Applicant for Satellite Landing Rights (FSS) shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A copy of the licence from the applicant's home country in which the satellite is registered as well as ITU Coordination procedure status, as in the CRC special section number and BR IFIC number in which the satellite network was published.
- b. Technical information on the satellite system including frequencies used, orbiting parameters, and coverage footprint as provided to the ITU or the country of satellite registration.
- c. An overview of the scope of services the applicant intends to provide in Ghana.
- d. A Completed Technical Satellite Application Form, NCA Form AP15A (downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15A-Satellite-Landing-Right-Services-2.pdf>)

### 3.2.4 *Licence Validity Period*

The licence shall be valid for an initial period of ten (10) years, with the option to renew subject to continued satisfactory compliance with the licence conditions or obligations.

### 3.2.5 *Fees Payable*

The fees payable shall consist of:

- a. an Application Fee of One Thousand US Dollars (US\$1,000.00); and
- b. Licence Fees of Ten Thousand US Dollars (US\$10,000.00) per satellite system; where a "satellite system" refers to the number of sets of satellite(s) working together in unison in the same constellation within the same frequency band and with footprint over the territory of Ghana.

### 3.2.6 *Special Conditions of licence*

- a. A Licensee shall furnish the NCA with subscriptions of its Distribution Partners or Wholesale Customers, and their activities in Ghana, where applicable.
- b. A Licensee shall not terminate international voice traffic on the Public Land Mobile Networks (PLMN) and Public Switched Telephone Networks (PSTN) without an arrangement with a licensed International Wholesale Carrier (IWC) or an International Gateway (IGW) licence holder.
- c. The operations must be conducted in a manner that does not cause financial or technical harm or compromise national security.

### 3.3 Satellite Landing Rights(MSS)

#### 3.3.1 Overview

This authorisation grants a space segment satellite operator the rights to operate a Mobile Satellite Service (MSS).

A successful applicant is granted rights for the related satellite services and to use spectrum in Ghana, contingent upon the ITU Radio Bureau publishing a notice for the system in the BR IFIC towards the successful registration into the MIFR. The operations must comply with its registration in the MIFR of the ITU.

A licensee may provide services only through Authorised or Licenced telecom service operators in Ghana, including direct connectivity between space stations and International Mobile Telecommunications (IMT) user equipment. These service operators must hold any of the following Authorisations or Licences applicable to their registered business:

- a. Internet/Public Data Service and Satellite Earth Station Network
- b. Mobile Network Operators
- c. Broadband Wireless Access Operators
- d. Satellite Earth Station Terminal

#### 3.3.2 Application Requirements

A satellite operator applying for Satellite Landing Rights (MSS) shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A copy of the licence from the applicant's home country where the satellite is registered, along with the ITU Coordination procedure status that is the CRC special section number and BR IFIC number in which the satellite network was published.
- b. Technical information on the satellite system including frequencies used, orbiting parameters and coverage footprint as provided to the ITU or the country of satellite registration.
- c. An overview of the scope of services the applicant intends to provide in Ghana.
- d. A Completed Technical Satellite application form, NCA Form AP15A (downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15A-Satellite-Landing-Right-Services-2.pdf>)

#### 3.3.3 Licence Validity Period

The licence shall be valid for an initial period of ten (10) years, with the option to renew subject to continued satisfactory compliance with the licence conditions or obligations.

### 3.3.4 Fees Payable

The fees payable shall consist of:

- a. An Application Fee of One Thousand US Dollars (US\$1,000.00); and
- b. Licence Fees of Ten Thousand US Dollars (US\$10,000.00).

### 3.3.5 Special Conditions of Licence

- a. A licensee shall furnish the NCA with subscription of its Distribution Partners or Wholesale Customers and or their activities in Ghana, where applicable.
- b. A licensee shall not terminate international voice traffic on the Public Land Mobile Networks (PLMN) and Public Switched Telephone Networks (PSTN) without an arrangement with a licensed International Wholesale Carrier (IWC) or an International Gateway (IGW) licence holder.
- c. The operations must be conducted in a manner that does not cause financial or technical harm or compromise national security.

## 3.4 Satellite Landing Rights (Others)

### 3.4.1 Overview

This authorisation grants a space segment satellite operator the rights to operate in all satellite services with the exception of Fixed and Mobile Satellite Services such as satellite systems in the Navigational, Earth Observation, Remote Sensing and Broadcasting Services.

A successful applicant is granted rights to provide related satellite services and to use spectrum in Ghana, contingent upon the ITU Radio Bureau publishing a notice for the system in the BR IFIC, facilitating successful registration in the MIFR. The operations must comply with its registration in the Master International Frequency Register (MIFR) of the International Telecommunications Union (ITU).

### 3.4.2 Application Requirements

A satellite operator applying for Landing Rights shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A copy of the licence from the applicant's home country in which the satellite is registered as well as ITU Coordination procedure status i.e. the CRC special section number and BR IFIC number in which the satellite network was published framework.
- b. Technical information on the satellite system including frequencies used, orbiting parameters, and coverage footprint as provided to the ITU or the country of satellite registration.
- c. An overview of the scope of services the applicant intends to provide in Ghana.
- d. A Completed Technical Satellite Application Form, NCA Form AP15A, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15A-Satellite-Landing-Right-Services-2.pdf>

### 3.4.3 Licence Validity Period

The licence shall be valid for an initial period of ten (10) years, with the option to renew subject to continued satisfactory compliance with the licence conditions or obligations.

### 3.4.4 Fees Payable

An application fee of One Thousand US Dollars (US\$1,000.00) is required.

### 3.4.5 Special Conditions of Licence

- a. A licensee shall provide the NCA with a list of its Distribution Partners or Wholesale Customers and details of their activities in Ghana.
- b. A licensee shall not terminate international voice traffic on the Public Land Mobile Networks (PLMN) and Public Switched Telephone Networks (PSTN) without an arrangement with a licensed International Wholesale Carrier (IWC) or an International Gateway (IGW) licence holder.
- c. The operations must be conducted in a manner that does not cause financial or technical harm or compromise national security.

## 4.0 Earth Segment Satellite Services

Licensing of satellite services that require the installation of earth infrastructure and the provision of services directly to the end users such as Portable Satellite Terminal (PST), Satellite Gateways, Satellite Earth Station Terminal (SEST) including Very Small Aperture Terminals (VSATs), Earth Stations in Motion (ESIMs) and Satellite Earth Station Networks (SESN), shall be in accordance with the following conditions:

### 4.1 Special Conditions

- a. An applicant must be legally registered and duly certified to operate in Ghana. Applicants shall be required to show proof of their Certificate of Incorporation issued by the Registrar of Companies in Ghana, the Register of members, indicating the shareholding structure, and a Copy of the Company's Regulations.
- b. An applicant with foreign ownership shall comply with all relevant applicable laws, including requirements under the Ghana Investment Promotion Centre (GIPC) Act in force at the time.
- c. A Licensee shall provide the NCA with a list of its Distribution Partners or Wholesale Customers and details of their activities in Ghana, including subscriptions and traffic volumes submitted bi-annually (in June and December each year).
- d. The Authority reserves the right to monitor the network operated under this licence, upon notification and in coordination with the network operator, as may be necessary for national security or public interest.
- e. A licensee shall not terminate international voice traffic on the Public Land Mobile

Networks (PLMN) and Public Switched Telephone Networks (PSTN) without an arrangement with a licenced International Wholesale Carrier (IWC) or an International Gateway (IGW) licence holder.

- f. The operations must be conducted in a manner that does not cause financial or technical harm or compromise national security.

## 4.2 Portable Satellite Terminals (PST)

### 4.2.1 Overview

Portable Satellite Terminals (PST) is a communication system where user terminals communicate directly with a constellation of satellites accessible with small and easily transportable terminals including Satellite phones, Broadband Global Area Networks (BGANs), Amateur Radios, Satellite IoT devices among others to provide voice or data services.

### 4.2.2 Application Requirements

A satellite earth segment operator applying for PST licence shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A Completed Technical Application Form, NCA Form AP15, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>
- b. Copies of technical specifications of all equipment planned for deployment as provided by the equipment manufacturer.
- c. A brief description of the network architecture and underlying technologies.

### 4.2.3 Licence validity Period

The licence shall be valid for an initial period of five (5) years, with the option to renew subject to continued satisfactory compliance with the licence conditions or obligations.

### 4.2.4 Fees Payable

- a. Application Fees of Two Hundred US Dollars (US\$200.00), and
- b. Licence and Annual Regulatory Fees in the schedule below:

PST Categories	Licence Fee (US)	Annual Regulatory Fees (US)
Class 1 (10,001+ unlimited terminals)	\$2,000.00	\$20,000.00
Class 2 (1,001-10,000 terminals)	\$1,500.00	\$10,000.00
Class 3 (501-1000 terminals)	\$1,000.00	\$2,000.00
Class 4 (51-500 terminals)	\$500.00	\$1,000.00
Class 5 (1-50 terminals)	\$500.00	\$500.00

## 4.3 Satellite Gateway Earth Station

### 4.3.1 Overview

Satellite Gateway Earth Stations serve as large hubs that connect the satellite network to the internet and/or private networks and cloud services. These gateways may be used for telephony and data backhaul, broadcast feeder links, private networks as well as telemetry, tracking, commanding and monitoring of satellite networks.

### 4.3.2 Application Requirements

A satellite earth segment operator applying for Satellite Gateway Earth Station Licence shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. Technical information on the satellite system including frequencies used, orbiting parameters, and coverage footprint as provided to the ITU or the country of satellite registration.
- b. Technical plans showing the architecture of the Station and overview of the applicant's intended operations in Ghana.
  - c. A Completed Technical Application Form, NCA Form AP15, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>

### 4.3.3 Licence Validity Period

The licence shall be valid for an initial period of ten (10) years, with the option to renew subject to continued satisfactory compliance with the licence terms and conditions or obligations.

### 4.3.4 Fees Payable

- i. An Application Fee of Two Thousand US Dollars (US\$2,000.00),
- ii. A Licence Fee of Twenty Thousand US Dollars (US\$20,000.00), and
- iii. An Annual Regulatory fee of One Thousand US Dollars (US\$1,500.00) per terminal

## 4.4 Earth Stations in Motion

### 4.4.1 Overview

**Earth stations in motion (ESIM)** shall refer to earth stations that communicate with GSO and NGSO orbit system(s) operating in the Fixed Satellite Service (FSS) and on platforms in motion in all frequency ranges allocated to ESIMs per the National Frequency Allocation Table (NFAT).

For the purpose of this framework, ESIMs shall be limited to Aeronautical (on-board aircraft), Maritime (on-board water-vessels), and Land (on-board land vehicles) earth stations. The operations of ESIMs are also permissible with SESN Licence under section 4.5 below with the exception of Foreign-flagged vessels and aircrafts that are in the territory of Ghana for a period not exceeding one (1) week.

#### 4.4.2 Application Requirements

A satellite earth segment operator applying for Licence to operate ESIM within the territory of Ghana, (other than operators providing ESIM services to non-Ghanaian registered Aircraft and Vessels) shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A Completed Technical Application form, NCA Form AP15, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>
- b. A brief description of the network architecture and underlying technologies.
- c. Copies of technical specifications of all equipment planned for deployment as provided for by the equipment manufacturer.
- d. A copy of the certificate of aircraft registration and air-worthiness (applicable to aeronautical ESIM).
- e. A copy of the certificate of vessel registration issued by Ghana Maritime Authority (applicable to local water-vessel ESIMs) or by the relevant competent authority in the country of origin.

#### 4.4.3 Licence Validity Period

The Licence tenure for an ESIM shall be renewable every five (5) years, subject to the payment of yearly regulatory fee and the continued satisfactory compliance with the licence terms and conditions.

#### 4.4.4 Fees Payable

- a. An Application fee of One Thousand US Dollars (US\$1,000.00),
- b. A Licence fee of One Thousand US Dollars (US\$1,500.00), and
- c. An Annual Regulatory fee of One Thousand Five Hundred US Dollars (US\$1,500.00)

### 4.5 Satellite Earth Station Terminal

#### 4.5.1 Overview

Satellite Earth Station Terminal (SEST) refers to any fixed earth station terminal (including VSATs) linked to a satellite system for the provision of Internet access or connectivity solutions via satellite frequency bands. SEST may route traffic via satellite to and from a hub or gateway earth station in country or outside Ghana. A SEST Licence is granted for single terminal(s).

A SEST Licence is categorised into the following based on the intended use:

- a. Private corporate networks;
- b. Internet Connectivity for the Public; and
- c. Research purposes.

#### 4.5.2 Application Requirement

A satellite earth segment operator applying for Licence to operate a SEST within the territory of Ghana shall be required to provide the following in addition to the requirements under section 2.0 above:

- a. A Completed Technical Application Form, NCA Form AP15, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>
- b. Copies of technical specifications of all equipment planned for deployment as provided by the equipment manufacturer.
- c. A brief description of the network architecture and underlying technologies (where applicable or as shall be required).

#### 4.5.3 Licence Validity Period

The Licence tenure for a SEST shall be renewable every five (5) years, subject to the payment of yearly regulatory fee as well as the continued satisfactory compliance with the licence terms and conditions.

#### 4.5.4 Fees Payable

Satellite Earth Station Terminal			
SEST	APPLICATION FEES (GHS)	LICENCE FEES (GHS)	ANNUAL REGULATORY FEES (GHS)
Private or Corporate use	3,850.00	19,250.00	15,400.00 (per terminal)
Public use	3,850.00	7,700.00	7,700.00 (per terminal)
Public use (Rural Areas in Ghana)	1,155.00	2,310.00	2,310.00 (per terminal)
Educational Use	385.00	1,540.00	1,540.00 (per terminal)

### 4.6 Satellite Earth Station Network

#### 4.6.1 Overview

Satellite Earth Station Network (SESN) refers to any fixed earth station network (including VSATs) comprising of Multiple Terminals linked to a satellite system for the provision of Internet access, connectivity solutions or satellite broadband services via satellite frequency bands. SESN may route traffic via satellite to and from a hub or gateway earth station in country or outside Ghana.

The procedure for licensing under this category may include a public hearing in accordance with Regulation 94 of the Electronic Communications Regulations, 2011 (LI 1991).

An SESN Licence authorises earth segment satellite operators to provide satellite-based communications and broadband services directly to last mile users including Authorised or Licensed telecom operators.

The scope of the Authorisation shall allow the Authorisation Holder to:

- a. Establish and operate a nationwide Satellite Internet or Public Data Service network in the Republic of Ghana;
- b. Provide internet or public data services to the general public using its own satellite constellation or that of a third party;
- c. Use other **approved** transport facilities such as microwaves and fibre optics to provide the services;
- d. Establish Points of Presence to interconnect with the Public and Private networks to provide authorised services to the general public; and
- e. Interconnect with other transport facility operators to carry user traffic.

**Notwithstanding the above, this Authorisation does not permit the Authorisation Holder to use any frequency spectrum or any other transport facilities without obtaining the relevant Authorisations or Licence from the Authority.**

#### 4.6.2 Application Requirement

A satellite earth segment operator applying for Licence to operate an SESN within the territory of Ghana shall be required to provide the following in addition to section 2.0:

- a. A brief description of the network architecture and underlying technologies (where applicable or as shall be required).
- b. Copies of technical specifications of all equipment planned for deployment as provided by the equipment manufacturer.
- c. A Completed Technical Application form, NCA Form AP15, downloadable from <https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>

#### 4.6.3 Licence Validity Period

The Licence tenure for an SESN shall be renewable every five (5) years, subject to the payment of yearly regulatory fee as well as the continued satisfactory compliance with the licence terms and conditions.

#### 4.6.4 Fees Payable

The fees payable for an SESN Licence shall be per the schedule below:

Satellite Earth Station Network			
SESN	APPLICATION FEES (GHS)	LICENCE FEES (GHS)	ANNUAL REGULATORY FEES (GHS)
Class 1 (Unlimited Terminals, 1001+)	96,250.00	385,000.00	1% of Net Revenue or 192,500.00 whichever is greater

Satellite Earth Station Network			
SESN	APPLICATION FEES (GHS)	LICENCE FEES (GHS)	ANNUAL REGULATORY FEES (GHS)
Class 2 (501-1000 Terminals)	19,250.00	96,250.00	77,000.00
Class 3 (101- 500 Terminals)	7,700.00	70,000.00	50,000.00
Class 2 (51-100 Terminals)		50,000.00	38,500.0
Class 5 (Less/=50 Terminals)		38,500.00	

#### 4.6.5 Procedure for Upgrade/Downgrade of SESN and PST

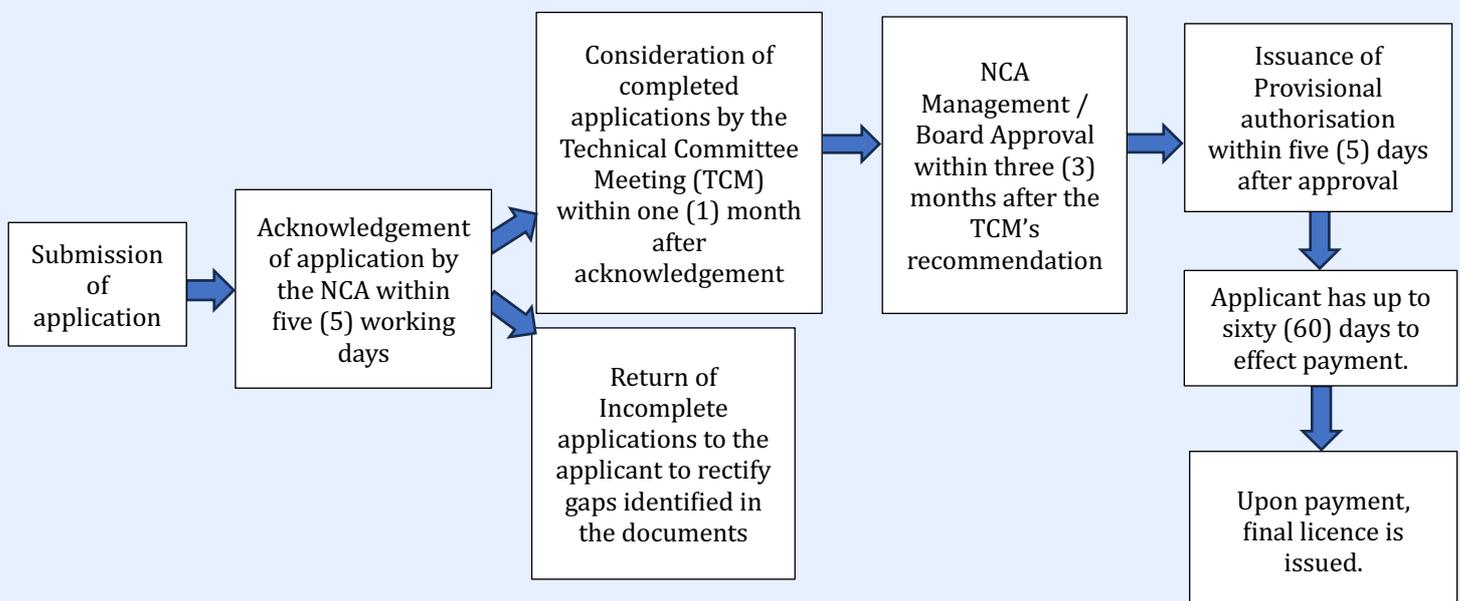
The procedure for the upgrade of the class of SESN or PST shall be based on the analysis made on the biannual reports of the number of active terminals under the licence. The fees for the corresponding upgrade shall be pro-rated. In cases of downgrade the corresponding annual regulatory fee shall apply during the invoicing cycle for the succeeding year.

## 5.0 Frequency Ranges

All frequency bands allocated to satellite services per Ghana's NFAT are available for use and do not incur additional charges. Applicants are therefore required to specify the exact bandwidth within these frequency bands. In the unlikely event that the requested frequencies are not allocated or are dedicated for other services, the applicant may justify the use of such frequencies on a case-by-case basis.

## 6.0 Licensing Procedure for all Applications

In reviewing applications for licensing, the NCA shall have due regard to Regulation 94 of the Electronic Communications Regulations, 2011 (LI 1991) as well as the process outlined in the flow chart below:



## 7.0 Electronic Communications Equipment Authorisation (Type Approval) Requirements

All electronic communications earth segment network infrastructure and user equipment shall be type approved by the NCA in accordance with the Authority's Type Approval Guidelines published on the Authority's website via <https://nca.org.gh/wp-content/uploads/2021/11/Type-Approval-Revised-Guidelines-2015-Final-Revised2.pdf>.

An application for type approval shall be done by the completion of NCA Type Approval Form AP16 available online via <https://nca.org.gh/wp-content/uploads/2020/09/AP16-TYPE-APPROVAL.pdf> and submitted to the NCA through [typeapproval@nca.org.gh](mailto:typeapproval@nca.org.gh).

## 8.0 Effective Date

This document shall become effective from the date of publication in the official gazette.

## 9.0 Attachments

### 9.1 NCA Customer Registration Form – AP01B

<https://nca.org.gh/wp-content/uploads/2021/12/NCA-FORM-AP01B.pdf>

### 9.2 NCA Satellite Technical Form (Landing Rights) – AP15A

<https://nca.org.gh/wp-content/uploads/2024/06/AP15A-Satellite-Landing-Right-Services-2.pdf>

### 9.3 NCA Satellite Technical Form– AP15

<https://nca.org.gh/wp-content/uploads/2024/06/AP15-Licences-for-Satellite-Services.pdf>

### 9.4 NCA Type Approval Form – AP16

<https://nca.org.gh/wp-content/uploads/2020/09/AP16-TYPE-APPROVAL.pdf>