



# INFORMATION AND COMMUNICATION TECHNOLOGIES AUTHORITY (ICTA)

Level 12, The Celicourt 6, Sir Celicourt Antelme Street Port Louis Mauritius  
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## APPLICATION FORM FOR AN EARTH STATION (IN A FIXED SATELLITE SERVICE) LICENCE (RA 16)/ VSAT/USAT (C, Ku, Ka band operation) LICENCE (RA 44)

**Please complete in BLOCK letters.**

**Application made on behalf of a body corporate should be signed by a person duly authorised by the body corporate.**

**Payment by cheque should be made to the order of the Information and Communication Technologies Authority.**

INFORMATION
You are kindly informed that the determination of this application by the ICT Authority is subject to successful coordination as per the provisions of Article 9 of the ITU Radio Regulations. Kindly note that the maximum duration for the coordination procedure is four months.

SECTION 1: PARTICULARS OF APPLICANT	
1.1 Company Name:-  (or partnership, sole trader, individual)	1.2. Trading Name:-
1.3. (a) Registered address  ----- ----- ----- -----	(b) Business address (for correspondence)  ----- ----- ----- -----
1.4 Details of contact person for official communication	
(a) Name:-	(d) Mobile No.:-
(b) Designation:-	(e) Fax No.:-
(c) Day time Tel. No.:-	(f) Email:-

SECTION 2: LICENCE AND SERVICE DETAILS
<b>Please fill in and tick the boxes as appropriate</b>
<p><b>2.1</b> Please specify the purpose for which you are setting up an Earth Station/VSAT/USAT</p> <p>_____</p> <p>_____</p>
<p><b>2.2</b> Please specify whether you are setting an Earth Station/VSAT/USAT under any particular licence.</p> <p><input type="checkbox"/> NO    <input type="checkbox"/> YES (If in the affirmative, please quote the type and licence number)</p> <p>_____</p>
<p><b>2.3</b> Type of licence under this present application</p> <p><input type="checkbox"/> New licence, Operation start date _____</p> <p><input type="checkbox"/> Amendment to existing licence</p> <p><input type="checkbox"/> Temporary licence, from _____ to _____</p>

**2.4 Type of Satellite Service**

- |                                                                                                |                                                       |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> VSAT 1-way services                                                   | <input type="checkbox"/> Point-to-point services      |
| <input type="checkbox"/> VSAT 2-way services                                                   | <input type="checkbox"/> Point to multipoint services |
| <input type="checkbox"/> Satellite News Gathering (SNG) Services                               |                                                       |
| <input type="checkbox"/> Other (please specify and supplement with appropriate documentations) |                                                       |
- \_\_\_\_\_

**2.5 Description of transmission**

- |                                                       |                                |
|-------------------------------------------------------|--------------------------------|
| <input type="checkbox"/> Data                         | <input type="checkbox"/> Audio |
| <input type="checkbox"/> Video                        | <input type="checkbox"/> Voice |
| <input type="checkbox"/> Other (please specify) _____ |                                |

**2.6 Type of use**

- Own use
- 3<sup>rd</sup> party use (please provide the details about the services and attach a copy of (1) company registration, (2) shareholding structure & (3) business plan)
- Connection to another telecommunications network
- NO     YES (please provide details) \_\_\_\_\_

**SECTION 3: TYPE APPROVAL**

Please indicate whether any radiocommunication and telecommunication equipment which is intended to be used for the proposed Earth Station/VSAT/USAT have been type approved by this Authority:

- Yes (Please attach copy of type approval certificate issued by ICT Authority)
- No

In case the answer is No, please submit the following information together with your request for type approval:

1. A copy of the equipment brochure detailing all technical specifications
2. The type approval certificates obtained in the country of origin, if available.
3. Test reports or Certificates of compliance with international standards issued by accredited independent test houses and laboratories having tested or type approved the equipment.
4. Certificates of compliance with international standards issued by the manufacturer (optional)

## SECTION 4: EARTH STATION /VSAT/USAT DETAILS

Name of Earth Station/VSAT/USAT \_\_\_\_\_

Address of Earth Station/VSAT/USAT \_\_\_\_\_

Geographical coordinates:

Longitude			
Degrees	E/W	Min	Sec

Latitude			
Degrees	N/S	Min	Sec

Operating Angles:

Azimuth			
From (Degrees)		To (Degrees)	

Elevation	
(Degrees)	

EIRP \_\_\_\_\_ dBW

Horizontal Elevation diagram attached, see Figure No: \_\_\_\_\_

Height of ground above mean sea level: \_\_\_\_\_ m

Height at the base of the aerial system above mean sea level: \_\_\_\_\_ m

Height of centre of antenna above mean sea level: \_\_\_\_\_ m

Height at highest point of aerial system above mean sea level: \_\_\_\_\_ m

Associated Space Station \_\_\_\_\_

Nominal orbital longitude (if geostationary)

Degrees		E/W

## SECTION 5: ANTENNA DETAILS

5.1 Type of antenna (e.g. Cassegrain/Gregorian etc) \_\_\_\_\_

5.2 Diameter of dish \_\_\_\_\_ m

### 5.3 Characteristics Of Transmitting Antenna

Maximum Isotropic gain

dBi	

Beamwidth

Degrees			

Polarisation \_\_\_\_\_

Antenna radiation pattern (give reference pattern or provide diagram as attachment) \_\_\_\_\_

### 5.4 Characteristics Of Receiving Antenna

Maximum Isotropic gain 

dBi			
		*	

 Beamwidth 

Degrees					

Polarisation \_\_\_\_\_

Antenna radiation pattern (give reference pattern or provide diagram as attachment) \_\_\_\_\_

Maximum aggregated bandwidth \_\_\_\_\_

Maximum aggregated data rate/Bit rate \_\_\_\_\_

## SECTION 6: TRANSMITTING

6.1 Satellite Receiving Beam Designation \_\_\_\_\_

6.2 Characteristics common to the following list of assigned frequencies

C4a. Class of Station <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>						C6. Polarisation Type <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table> If linear, provide angle in degrees <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>									C3a. Assigned Frequency Band (kHz) <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>							C8g. Maximum Aggregate Power +/- dBW <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>				
C4b. Nature of Service <table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>																										

6.3 Emissions common to the Assigned Frequencies listed below

C7a. Designation of emission	C8a1/C8b1.* Max. Peak Power		C8a2/C8b2.* Max. Power Density		C8c1. Minimum Peak Power		C8c1. Minimum Power Density	
	+/-	dBW	+/-	dBW/Hz	+/-	dBW	+/-	dBW/Hz
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If maximum peak power and maximum power density values are of type C8b, check this box .

Provide reason for minimum peak power and minimum power density (C8c) values being absent as attachment No. \_\_\_\_\_.

More emissions on attachment No \_\_\_\_\_.







**Guidance Notes regarding application for an Earth Station (in a fixed satellite service) Licence (RA16)/ VSAT/USAT(C, Ku, Ka band of operation) Licence RA44**

Notes:

1. There may be insufficient space on the application form to answer particular questions, in such cases the appropriate section should be photocopied and added to the form.
2. The processing of the application may be delayed if any of the details given on the form are not complete or correct.
3. The determination of this application by the ICT Authority is subject to successful coordination as per the provisions of Article 9 of the ITU Radio Regulations. Kindly note that the maximum duration for the coordination procedure is four months.

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**SECTION 4: EARTH STATION DETAILS**

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Name of the Earth Station/VSAT/USAT	Indicate the name by which the Earth Station/VSAT/USAT will be known.
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Horizon Elevation Diagram	Enter a Figure number of the diagram indicating the horizon elevation angle for each azimuth around the earth station; the horizon elevation angle is the angle viewed from the centre of the earth station antenna between the horizontal plane and a ray that grazes the visible physical horizon in the direction concerned.
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Operating Angles	Enter the planned range of operating azimuthal angles. These angles are to be calculated for the nominal orbital longitude, taking into account the tolerances.
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Associated Space Station	Indicate the name of the associated space station with which communication is to be established as registered with the IFRB.
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Nominal Orbital Longitude	Enter the nominal longitude of the orbital position of that of the satellite expressed in decimal degrees E (the value should not exceed 180 Degrees).
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**SECTION 5: ANTENNA DETAILS**

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Type of Antenna	ie Cassegrain/Gregorian etc.
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Maximum Isotropic Gain	Enter the gain ( $G_i$ : see RRS1.160a) of the antenna in the direction of maximum radiation, expressed in dBi.
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Beamwidth	Enter the total beamwidth at the mean half-power points of the main lobe, expressed in decimal degrees. Describe in detail in attachment if not symmetrical.
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Radiation Pattern	If a reference radiation pattern cannot be indicated by one of the symbols below, or the measured radiation diagram of the antenna is available, give the relevant information in an attachment. If an attachment is provided, enter a figure number identifying its presence.
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Indicate the reference radiation pattern, preferably by means of the



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following symbols or similar symbols not exceeding 12 characters.

<b>Symbol</b>	<b>Description of the Radiation Pattern</b>
REC-465	Current version of ITU-R Recommendation 465: "Reference earth station radiation pattern for use in coordination and interference assessment in frequency range from 2 to about 30 GHz."
REC-580	Current version of ITU-R Recommendation 580: "Radiation diagrams for use as design objectives for antennas of earth stations operating with geostationary satellites."
AP28	Point 4, Annex II of Appendix S7. Note: This radiation diagram is identical to that in Annex III to Appendix S8.
29-25LOG(FI)	Represents a reference radiation pattern similar to that in ITU-R Rec.465 with side lobe radiation reduced by 3dB.
27-25LOG(FI)	As above with side lobe radiation reduced by 5dB.

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#### **SECTION 6: TRANSMITTING DETAILS**

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Satellite Receiving Beam Designation      Enter the receiving beam designation by a symbol consisting of up to four characters. For practical reasons, there are different approaches for the designation of the beam, it may consist of:

- (a) number such as 1, 2, 3, etc., which refer to the number of the figure representing the corresponding antenna gain contour published in the relevant Special Section; or
- (b) number such as 195, which identify a beam having a maximum gain of 19.5dB; or
- (c) a symbol of up to three letters (or a letter and a figure), which is used to represent the abbreviated beam name, such as G for global, NWQ for North West Quadrant, WH for West Hemisphere, Z1 for Zone 1, O for Omnidirectional.

For steerable beams, the last character shall always be the letter "R".

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Class of station / Nature of service      Indicate the appropriate class of station and the nature of service using the symbols given in Tables Nos. 6A1 and 6B1 respectively of the Preface to the IFL, the SRS and the WIC. Up to four pairs of values can be provided.

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Polarisation      Enter the symbol for the type of polarisation in the first box (see symbols for the type of polarisation in Table No. 9D1 of the Preface to the IFL, the SRS and the WIC). In the case of linear polarisation (symbol "L"), indicate in the second box the angle (in degrees) measured counter-clockwise in a plane normal to the beam axis from the equatorial plane to the electric vector of the waves as seen from the satellite.

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Assigned frequency band      Enter the bandwidth of the assigned frequency band as defined in RR.S1. 147 expressed in kHz. The assigned frequency band should in no case exceed the bandwidth of a single satellite transponder.

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Maximum aggregate power	Enter the maximum aggregate power (dBW) of all carriers supplied to the input of the antenna. This information applies only to the case of a receiving satellite antenna beam operating with a transmitting associated earth station.
Designation of emission	Indicate the necessary bandwidth (RR.S1.152) and class of emission (RR.S1.139) in accordance with Article 4 and Appendix 6; see also IFRB Circular-letters No. 457 of 2 June 1980 and No. 511 of 8 July 1982.
Maximum peak power	<p>Enter the appropriate sign (+ or -) and the maximum value of the total peak envelope power (RR.S1.157), expressed in dBW, supplied to the input of the antenna for each corresponding emission.</p> <p>Note: If the maximum values of peak envelope power are being provided for individual carriers, they should be of type C8a1. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and total peak power values of type C8b1.</p>
Maximum power density	<p>Enter the appropriate sign (+ or -) followed by the value of the maximum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR.S1.152) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of maximum power density.</p> <p>Note: If the values of maximum power density are being provided for individual carriers, they should be of type C8a2. If the notification does not concern individual carriers (e.g. as in spread spectrum applications) provide a general designation of emission (item C7a) and maximum power density values of type 8b2.</p>
Minimum peak power	Enter the appropriate sign (+ or -) and the minimum value of the peak envelope power (RR.S1.157), expressed in dBW, supplied to the input of the antenna for each corresponding emission (carrier type).
Minimum power density	Enter the appropriate sign (+ or -) followed by the value of the minimum power density per Hertz (expressed in dBW/Hz) supplied to the input of the antenna for each corresponding emission (carrier type) averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz. For narrow band carriers with a necessary bandwidth (RR.S1.152) less than the reference bandwidth, the peak power should be averaged over the reference bandwidth (4 kHz or 1 MHz) to obtain this value of minimum power density.
Assigned frequency	Enter the assigned frequency as defined in RR.S1.148 expressed in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500

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MHz inclusive, and in GHz above 10 500 MHz, and enter the letter k, M or G, as appropriate.

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### **SECTION 7: RECEIVING DETAILS**

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Satellite Transmitting Beam Designation Enter the transmitting beam designation by a symbol consisting of up to ten characters (as for Satellite Receiving Beam Designation in Sec 6).

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Class of station / Nature of service Same as for 'Class of station / Nature of service' in Sec 6.

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Polarisation Same as for 'Polarisation' in Sec 6.

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Assigned frequency band Same as for 'Assigned frequency band' in Sec 6.

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Receiving system noise temperature Enter the total receiving system noise temperature expressed in kelvins, referred to the output of the space station receiving antenna.

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Designation of Emission Is made up of three parts, Bandwidth (four characters), Emission (three characters) & Description of Emission (two characters). This makes a nine character emission code. See Guide to Class of Emissions RA97. e.g. 30M0F8FHN is 30M0 = 30MHz, F = Frequency modulated, 8 = Composite system with one or more channels containing analogue information, F = Television (video), H = Sound of broadcasting quality (stereophonic or quadrophonic), N = No multiplexing employed. Indicate the necessary bandwidth (RR.S1.152) and class of emission (RR.S1.139) in accordance with Article 4 and Appendix 6; see also IFRB Circular-letters No. 457 of 2 June 1980 and No. 511 of 8 July 1982.

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C/N objective (total-clear sky) Enter the required carrier to noise ratio, in decibels, for the overall link for each carrier when clear sky propagation conditions apply.

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Assigned frequency Enter the assigned frequency as defined in RR.S1.148 expressed in kHz up to 28 000 kHz inclusive, in MHz above 28 000 kHz to 10 500 MHz inclusive, and in GHz above 10 500 MHz, and enter the letter k, M or G, as appropriate.

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