

File Number: **DRAFT-SAT-LOA-20260626-00261**

Call Sign:

S1. Satellite Information

a. Space Station or Satellite Network Name	b. Orbit Type	c. Estimated Operational Lifetime of Space Station(s) From Date of Launch (yrs)	d. Will the space station(s) operate on a Common Carrier basis?	e. Application Description
X83	Non-Geostationary (NGSO)		N/A	ICEYE seeks authority for its X83 (Tranche 4) synthetic aperture radar satellite.

S2. Operating Frequency Bands

a. Type of Service	b. If a. is Other, provide a service description	c. Satellite Frequency Band (MHz)	d. Satellite Frequency (Lower Band Edge) (MHz)	e. Satellite Frequency (Upper Band Edge) (MHz)	f. Direction of Transmission	g. Non Conforming Indicator
EESS		2200 - 2290	2200	2290	Space-to-Earth (Transmit)	No
OTHER: Other Satellite Service	EESS (active)	Other	9200	10400	Space-to-Earth (Transmit)	Yes
OTHER: Other Satellite Service	EESS (active)	Other	9200	10400	Earth-to-Space (Receive)	Yes
EESS		8025 - 8400	8025	8400	Space-to-Earth (Transmit)	No
EESS		2025 - 2110	2025	2110	Earth-to-Space (Receive)	No

S3. NGSO Orbital Information

a. Total Number of Simultaneously Operating Satellites in Constellation	b. Total Number of Satellites Deployed During the License Term	c. Orbit Epoch Date	d. Celestial Reference Body	e. If d. is "Other", provide the name of celestial body being referenced	f. Total Number of Orbital Planes
1	1	2026-10-01	Earth		1

g. Orbital Plane Information

(i) Orbital Plane No.	(ii) Number of Satellites in Plane	(iii) Inclination Angle (°)	(iv) Inclination Angle Tolerance (+/- °)	(v) Orbital Period (seconds)	(vi) Apogee (km)	(vii) Apogee Tolerance (+/- km)	(viii) Perigee (km)	(ix) Perigee Tolerance (+/- km)	(x) Argument of Perigee (°)	(xi) Right Ascension of Ascending Node (°)	(xii) Right Ascension of Ascending Node Tolerance (+/- °)	(xiii) Active Service Arc Begin Angle with Respect to Ascending Node (°)	(xiv) Active Service Arc End Angle with Respect to Ascending Node (°)	(xv) Is additional info on the active service arc provided in the application?	(xvi) Satellite Spacing	(xvii) Phase Angle Spacing (°)	(xviii) First Satellite Initial Phase Angle (°)	(xix) Maximum Orbital Eccentricity
1	1	97.7	2	5,780	425	175	425	175	0	0	1	98	98	No	Evenly-Spaced	1	0	0.1

h. Initial Phase Angle Information

(i) Orbital Plane No.	(i) Satellite No.	(ii) Initial Phase Angle (°)
1	1	0

S4. Earth-to-Space (Receive) Beams

a. Beam ID:	SR1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	2025	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	2110	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	RHCP	q. Antenna Pointing Error (°):
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:
j. Maximum G/T (dB/K):	0	w. What information will be provided with the predicted antenna gain contours?:
k. Minimum G/T (dB/K):		
l. Maximum Saturation Flux Density (dBW/m²):		
m. Minimum Saturation Flux Density (dBW/m²):		

x. Receive Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
SR1D2	1.2	2086.9	2086.3	2087.5	Service Link	
SR1B2	0.9	2086.9	2086.45	2087.35	Service Link	
SR1C1	1.2	2050	2049.4	2050.6	TT&C	
SR1B1	0.9	2086.9	2086.45	2087.35	TT&C	
SR1C2	1.2	2050	2049.4	2050.6	Service Link	
SR1D1	1.2	2086.9	2086.3	2087.5	TT&C	
SR1A1	0.9	2050	2049.55	2050.45	TT&C	
SR1A2	0.9	2050	2049.55	2050.45	Service Link	

a. Beam ID:	XR1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):
b. Beam Frequency (Lower Band Edge) (MHz):	9200	o. Peak Isotropic Antenna Gain (dBi):
c. Beam Frequency (Upper Band Edge) (MHz):	10400	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):
d. Polarization:	H	q. Antenna Pointing Error (°):
e. Can the space station vary the channel bandwidth with on-board processing?:	No	r. Antenna Rotational Error (°):
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:

j. Maximum G/T (dB/K):	19	w. What information will be provided with the predicted antenna gain contours?:
k. Minimum G/T (dB/K):		
l. Maximum Saturation Flux Density (dBW/m ²):		
m. Minimum Saturation Flux Density (dBW/m ²):		

S5. Space-to-Earth (Transmit) Beams

a. Beam ID:	ST1	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	2200	o. Peak Isotropic Antenna Gain (dBi):	1.5
c. Beam Frequency (Upper Band Edge) (MHz):	2290	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	RHCP	q. Antenna Pointing Error (°):	
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-23.3	w. What information will be provided with the predicted antenna gain contours?:	
k. Maximum Transmit EIRP (dBW):	5.5		

x. Transmit Channels						
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication
ST1A2	3	2263	2261.5	2264.5	Service Link	
ST1A1	3	2263	2261.5	2264.5	TT&C	
ST1B1	3	2273.5	2272	2275	TT&C	
ST1B2	3	2273.5	2272	2275	Service Link	

y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m ² /BW)	(v) 2-5° (dBW/m ² /BW)	(vi) 5-15° (dBW/m ² /BW)	(vii) 15-20° (dBW/m ² /BW)	(viii) 20-25° (dBW/m ² /BW)	(ix) 25-90° (dBW/m ² /BW)	(x) Southeastern Region (dBW/m ² /BW)	(xi) Northeastern Region (dBW/m ² /BW)	(xii) Western Region (dBW/m ² /BW)	(xiii) Other Region (dBW/m ² /BW)	(xiv) Energy Dispersal Bandwidth (kHz)
		4 kHz	-160.6	-159.4	-155.7	-154.1	-152.8	-146.3					

a. Beam ID:	XA1	n. Beam Peak Flux Density at Command Threshold (dBW/m ²):	
b. Beam Frequency (Lower Band Edge) (MHz):	9200	o. Peak Isotropic Antenna Gain (dBi):	45.2
c. Beam Frequency (Upper Band Edge) (MHz):	10400	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):	
d. Polarization:	H	q. Antenna Pointing Error (°):	
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):	
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:	
g. Is the beam shapeable? (Check box if Yes):	Yes	t. Under what rules will the associated antenna contours be submitted?:	
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:	
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:	

j. Maximum Transmit EIRP Density (dBW/Ref BW):	53.4	w. What information will be provided with the predicted antenna gain contours?:											
k. Maximum Transmit EIRP (dBW):	84.2												
x. Transmit Channels													
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication							
XA1	150	9650	9575	9725	Service Link								
XA2	200	9650	9550	9750	Service Link								
XA3	300	9650	9500	9800	Service Link								
XA4	600	9600	9300	9900	Service Link								
XA5	1200	9800	9200	10400	Service Link								
y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
		1 MHz						-69.6					

a. Beam ID:	XT1	n. Beam Peak Flux Density at Command Threshold (dBW/m²):											
b. Beam Frequency (Lower Band Edge) (MHz):	8025	o. Peak Isotropic Antenna Gain (dBi): 17											
c. Beam Frequency (Upper Band Edge) (MHz):	8400	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):											
d. Polarization:	RHCP	q. Antenna Pointing Error (°):											
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):											
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?: No											
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:											
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:											
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:											
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-28.7	w. What information will be provided with the predicted antenna gain contours?:											
k. Maximum Transmit EIRP (dBW):	21												
x. Transmit Channels													
(i) Channel ID	(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)	(iv) Channel Frequency (Lower Band Edge) (MHz)	(v) Channel Frequency (Upper Band Edge) (MHz)	(vi) Channel Type	(vii) Point of Communication							
XT1A	375	8212.5	8025	8400	Service Link								
y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
		4 kHz	-166.1	-164.8	-161.1	-159.6	-158.2	-151.8					

a. Beam ID:	XT2	n. Beam Peak Flux Density at Command Threshold (dBW/m²):											
b. Beam Frequency (Lower Band Edge) (MHz):	8025	o. Peak Isotropic Antenna Gain (dBi): 17											
c. Beam Frequency (Upper Band Edge) (MHz):	8400	p. Isotropic Antenna Gain at 3 dB Beamwidth (dBi):											

d. Polarization:	RHCP	q. Antenna Pointing Error (°):
e. Can the space station vary the channel bandwidth with on-board processing?:	Yes	r. Antenna Rotational Error (°):
f. Is this a command beam? (Check box if Yes):	No	s. Will a GIMS container file containing all antenna contour data be provided?:
g. Is the beam shapeable? (Check box if Yes):	No	t. Under what rules will the associated antenna contours be submitted?:
h. Is the beam steerable? (Check box if Yes):	No	u. Provide a list of each orbital plane in which this antenna beam is used.:
i. Is the beam fed into transponders? (Check box if Yes):	No	v. Are all space stations in the NGSO constellation identical?:
j. Maximum Transmit EIRP Density (dBW/Ref BW):	-26.8	w. What information will be provided with the predicted antenna gain contours?:
k. Maximum Transmit EIRP (dBW):	19	

x. Transmit Channels													
(i) Channel ID		(ii) Channel Bandwidth (MHz)	(iii) Center Frequency (MHz)		(iv) Channel Frequency (Lower Band Edge) (MHz)		(v) Channel Frequency (Upper Band Edge) (MHz)		(vi) Channel Type		(vii) Point of Communication		
XT2B		150	8300		8225		8375		Service Link				
XT2A		150	8180		8105		8255		Service Link				
y. Max. Power-Flux Densities													
			Angles of Arrival PFD						Geographic Region PFD				
(i) Beam Sub-Frequency (Lower Band Edge) (MHz)	(ii) Beam Sub-Frequency (Upper Band Edge) (MHz)	(iii) Reference Bandwidth (BW)	(iv) 0-2° (dBW/m²/BW)	(v) 2-5° (dBW/m²/BW)	(vi) 5-15° (dBW/m²/BW)	(vii) 15-20° (dBW/m²/BW)	(viii) 20-25° (dBW/m²/BW)	(ix) 25-90° (dBW/m²/BW)	(x) Southeastern Region (dBW/m²/BW)	(xi) Northeastern Region (dBW/m²/BW)	(xii) Western Region (dBW/m²/BW)	(xiii) Other Region (dBW/m²/BW)	(xiv) Energy Dispersal Bandwidth (kHz)
		4 kHz	-164.1	-162.9	-159.2	-157.6	-156.3	-149.8					

S6. Space-to-Space (Receive) Beams

S7. Space-to-Space (Transmit) Beams

S8. Attachments

Beam ID	Direction of Transmission	(i) Document Type	(ii) If Document Type is "Other", provide short description	(iii) File Name
SR1	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		SR1 (SRX) over Georgia, USA.png
SR1	Earth-to-Space (Receive)	Receive Antenna Gain Contour Diagram		SR1 (SRX) Antenna Beam Projection over Western Australia.png
ST1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		ST1 Over Western Australia (No S-band Down Over USA).png
XA1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XA1 (XSAR) Antenna Beam Projection over Western Australia (Increased Zoom).png
XA1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XA1 (XSAR) Antenna Beam Projection over Georgia, USA.png
XA1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XA1 (XSAR) Antenna Beam Projection over Georgia, USA (Increased Zoom).png
XA1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XA1 (XSAR) Antenna Beam Projection over Western Australia.png
XT1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XT1 (XTX) Antenna Beam Projection over Georgia, USA.png

XT1	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XT1 (XTX) Antenna Beam Projection over Western Australia.png
XT2	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XT2 (XTX) Antenna Beam Projection over Western Australia.png
XT2	Space-to-Earth (Transmit)	Transmit Antenna Gain Contour Diagram		XT2 (XTX) Antenna Beam Projection over Georgia, USA.png