

**S1. GENERAL INFORMATION** Complete for all satellite applications.

a. Space Station or Satellite Network Name: AMAZONAS-3		e. Estimated Date of Placement into Service: 3/31/2013		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date: 5/31/2010		f. Estimated Lifetime of Satellite(s): 15 Years		j. Number of transponders offered on a common carrier basis:	
c. Construction Completion Date:		g. Total Number of Transponders: 8		k. Total Common Carrier Transponder Bandwidth: MHz	
d1. Est Launch Date Begin: 12/1/2012	d2. Est Launch Date End: 5/31/2013	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 3600 MHz		i. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO	

**S2. OPERATING FREQUENCY BANDS** Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper  
Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (.Hz)		Upper Frequency (.Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
18300	M	18800	M	T	Fixed Satellite Service
19700	M	20200	M	T	Fixed Satellite Service
28100	M	28600	M	R	Fixed Satellite Service
29500	M	30000	M	R	Fixed Satellite Service

**S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:**

a. Nominal Orbital Longitude (Degrees E/W): 61 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:  The satellite network AMAZONAS-3 will be a replacement of the AMAZONAS-1 (located in the orbital location 61° West) in the C and Ku bands and will add new Ka band capacity. Under this application, we are only seeking authority to provide service with AMAZONAS-3 to the U.S. territories in the standard bands. Considering the size of the database, the Schedule S information for this application has been divided in two. This database contains only the Ka
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		
d. Toward West: 0.05 Degrees	e. Toward East: 0.05 Degrees	Range of orbital are in which adequate service can be provided (Optional): g. Westernmost: _____ Degrees E/W h. Easternmost: _____		
i. Reason for service are selection (Optional):				

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S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System:

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):

S4b. Total Number of Orbital Planes in Network or System:

S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)

**NO NGSO DATA FILED**

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S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-ltr codes), satellites or Figure No. of Service Area Diagram.
1	S	AMA-3_1.gxt	01

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S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna Gain		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross- Polar Isolation (dB)	(h) Polar- ization Switch- able? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit			Receive				
										(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (k)	(o) G/T Max. Gain Pt. (db/K)	(p) Min. Saturation Flux Density (dBW/m2)	Input Attenuator (dB)	
		(q) Max. Value	(r) Step Size														
FW3	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW5	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
RT3D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT5D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
FW1	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW6	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
RT1D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT6D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
FW3	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
FW5	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT3U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
RT5U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW7	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT7U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW6	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT6U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW1	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT1U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW9	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT9U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW8	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT8U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW2	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT2U	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW2	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
FW9	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
RT2D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT9D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
FW7	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5

FW8	R	52	47	0.1	0.1	26	N		1				2570	18	-95	20	0.5
RT7D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					
RT8D	T	48	43	0.1	0.1	26	N		1	2.5	17	65					

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S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:  
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or" X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)				
						At Angle of Arrival above horizontal (for emission with highest PFD)				
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg
FW3	R	C	-61		FW3U_C.gxt					
FW3	R	X	-61		FW3U_X.gxt					
RT3D	T	C	-61		RT3D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
RT3D	T	X	-61		RT3D_X.gxt					
FW5	R	C	-61		FW5U_C.gxt					
FW5	R	X	-61		FW5U_X.gxt					
RT5D	T	C	-61		RT5D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
RT5D	T	X	-61		RT5D_X.gxt					
RT1U	R	C	-61		RT1U_C.gxt					
RT1U	R	X	-61		RT1U_X.gxt					
FW1	T	C	-61		FW1D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW1	T	X	-61		FW1D_X.gxt					
RT2U	R	C	-61		RT2U_C.gxt					
RT2U	R	X	-61		RT2U_X.gxt					
FW2	T	C	-61		FW2D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW2	T	X	-61		FW2D_X.gxt					
RT3U	R	C	-61		RT3U_C.gxt					
RT3U	R	X	-61		RT3U_X.gxt					
FW3	T	C	-61		FW3D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW3	T	X	-61		FW3D_X.gxt					
RT5U	R	C	-61		RT5U_C.gxt					
RT5U	R	X	-61		RT5U_X.gxt					
FW5	T	C	-61		FW5D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW5	T	X	-61		FW5D_X.gxt					
RT6U	R	C	-61		RT6U_C.gxt					
RT6U	R	X	-61		RT6U_X.gxt					
FW6	T	C	-61		FW6D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW6	T	X	-61		FW6D_X.gxt					

RT7U	R	C	-61		RT7U_C.gxt					
RT7U	R	X	-61		RT7U_X.gxt					
FW7	T	C	-61		FW7D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW7	T	X	-61		FW7D_X.gxt					
RT8U	R	C	-61		RT8U_C.gxt					
RT8U	R	X	-61		RT8U_X.gxt					
FW8	T	C	-61		FW8D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW8	T	X	-61		FW8D_X.gxt					
RT9U	R	C	-61		RT9U_C.gxt					
RT9U	R	X	-61		RT9U_X.gxt					
FW9	T	C	-61		FW9D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
FW9	T	X	-61		FW9D_X.gxt					
FW1	R	C	-61		FW1U_C.gxt					
FW1	R	X	-61		FW1U_X.gxt					
RT1D	T	C	-61		RT1D_C.gxt	-138.5	-133.5	-128.5	-123.5	-123.5
RT1D	T	X	-61		RT1D_X.gxt					
FW6	R	C	-61		FW6U_C.gxt					
FW6	R	X	-61		FW6U_X.gxt					
RT6D	T	C	-61		RT6D_C.gxt	-138.5	-133.5	-128.5	-123.5	-123.5
RT6D	T	X	-61		RT6D_X.gxt					
FW2	R	C	-61		FW2U_C.gxt					
FW2	R	X	-61		FW2U_X.gxt					
RT2D	T	C	-61		RT2D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
RT2D	T	X	-61		RT2D_X.gxt					
FW9	R	C	-61		FW9U_C.gxt					
FW9	R	X	-61		FW9U_X.gxt					
RT9D	T	C	-61		RT9D_C.gxt	-143.5	-143.5	-143.5	-143.5	-143.5
RT9D	T	X	-61		RT9D_X.gxt					
FW7	R	C	-61		FW7U_C.gxt					
FW7	R	X	-61		FW7U_X.gxt					
RT7D	T	C	-61		RT7D_C.gxt	-138.5	-133.5	-128.5	-123.5	-123.5
RT7D	T	X	-61		RT7D_X.gxt					
FW8	R	C	-61		FW8U_C.gxt					
FW8	R	X	-61		FW8U_X.gxt					
RT8D	T	C	-61		RT8D_C.gxt	-138.5	-133.5	-128.5	-123.5	-123.5
RT8D	T	X	-61		RT8D_X.gxt					

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S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Channel No.	(B) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
FWR3U	450000	R	28350	R	C
FWR5U	450000	R	28350	L	C
FWR1U	450000	R	28350	R	C
FWR6U	450000	R	28350	L	C
FWR2U	450000	R	29750	R	C
FWR9U	450000	R	29750	L	C
FWR7U	450000	R	29750	R	C
FWR8U	450000	R	29750	L	C
RTN3D	450000	T	18550	L	C
RTN5D	450000	T	18550	R	C
RTN1D	450000	T	18550	L	C
RTN6D	450000	T	18550	R	C
RTN2D	450000	T	19950	L	C
RTN9D	450000	T	19950	R	C
RTN7D	450000	T	19950	L	C
RTN8D	450000	T	19950	R	C
FWR3D	450000	T	19950	R	C
FWR5D	450000	T	19950	L	C
FWR1D	450000	T	19950	R	C
FWR6D	450000	T	19950	L	C
FWR2D	450000	T	19950	R	C
FWR9D	450000	T	19950	L	C
FWR7D	450000	T	19950	R	C
FWR8D	450000	T	19950	R	C
RTN3U	450000	R	29750	L	C
RTN5U	450000	R	29750	R	C
RTN1U	450000	R	29750	L	C
RTN6U	450000	R	29750	R	C
RTN2U	450000	R	29750	L	C
RTN9U	450000	R	29750	R	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
FWR3	113.4	FWR3U	FW3U	FWR3D	FW3D
FWR5	113.4	FWR5U	FW5U	FWR5D	FW5D
FWR1	113.4	FWR1U	FW1U	FWR1D	FW1D
FWR6	113.4	FWR6U	FW6U	FWR6D	FW6D
FWR2	113.4	FWR2U	FW2U	FWR2D	FW2D
FWR9	113.4	FWR9U	FW9U	FWR9D	FW9D
FWR7	113.4	FWR7U	FW7U	FWR7D	FW7D
FWR8	113.4	FWR8U	FW8U	FWR8D	FW8D
RTN3	113.4	RTN3U	RT3U	RTN3D	RT3D
RTN5	113.4	RTN5U	RT5U	RTN5D	RT5D
RTN1	113.4	RTN1U	RT1U	RTN1D	RT1D
RTN6	113.4	RTN6U	RT6U	RTN6D	RT6D
RTN2	113.4	RTN2U	RT2U	RTN2D	RT2D
RTN9	113.4	RTN9U	RT9U	RTN9D	RT9D
RTN8	113.4	RTN8U	RT8U	RTN8D	RT8D
RTN7	113.4	RTN7U	RT7U	RTN7D	RT7D



RTN7U	450000	R	29750	L	C
RTN8U	450000	R	29750	L	C

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S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e) Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
1	450MG7W	450000	16	1035750	0.75		10.7	22.9
2	450MG7W	450000	8	779250	0.75		8.3	20.5
3	45M0G7W	45000	16	103575	0.75		10.7	22.9
4	45M0G7W	45000	8	77925	0.75		8.3	20.5
5	5M60G7W	5600	4	8000	0.857		7.5	19.7
6	4M00G7W	4000	8	8000	0.857		11.6	23.8
7	1M00G7W	1000	8	2000	0.857		11.6	23.8
8	1M40G7W	1400	4	2000	0.857		7.5	19.7
9	45M0G7W	45000	8	70687	0.666		7	19.2



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S13. TYPICAL EMISSIONS For each planned type of emission provide:

Associated Transponder ID Range (a) Start (b) End		Modulation ID		(e) Carriers per Transponder	(f) Carrier Spacing (kHz)	(g) Noise Budget Reference (Table No.)	(h) Energy Dispersal Bandwidth (kHz)	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			
		(c) Digital (Table S11)	(d) Analog (Table S12)					(i) Assoc. Stn. Max. Antenna Gain (dBi)	Assoc. Station Transmit Power (dBW) (j) Min. (k) Max.		EIRP (dBW) (l) Min. (m) Max.		(n) Max. Power Flux Density (dBW/m <sup>2</sup> /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
FWR1	FWR9	1		1		Forward Ka-ban		63	14.6	19.6	64	64	-124.5	23.3
FWR1	FWR9	2		1		Forward Ka-ban		63	15.4	20.4	62.5	64.5	-124	19.5
FWR1	FWR9	3		10		Forward Ka-ban		63	9.6	14.6	52.5	52.5	-126	23.3
FWR1	FWR9	4		10		Forward Ka-ban		63	4.6	9.6	52.5	52.5	-126	19.5
RTN1	RTN9	5		80		return ka 5.pdf		44.9	0.6	5.6	32.2	32.2	-137.3	36.3
RTN1	RTN9	6		112		return ka 6.pdf		46.6	3.6	8	37	37	-131	36.3
RTN1	RTN9	7		450		return ka 7.pdf		44.9	-0.6	2	31	31	-131	36.3
RTN1	RTN9	8		321		return ka 8.pdf		44.9	-5.4	-0.4	26.2	26.2	-137.3	36.3
FWR1	FWR9	9		10		Ka-band 9.pdf		63	4.6	9.6	50.5	52.5	-126	19.5

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S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): #Error

**Remote Control (TT C) Location(s):**

S14a: Street Address: PRAIA DO FLAMENGO 200			
S14b. City: RIO DE JANEIRO	S14c. County: BRAZIL	S14d. State/Country	S14e. Zip Code: 22210-030
S14f. Telephone Number: +552198582255		S14g. Call Sign of Control Station (if appropriate):	

**Remote Control (TT C) Location(s):**

S14a: Street Address: CARRETERA M 220, KM 1,800			
S14b. City: ARGANDA DEL REY	S14c. County: SPAIN	S14d. State/Country	S14e. Zip Code: 28500
S14f. Telephone Number: +34918700160		S14g. Call Sign of Control Station (if appropriate):	

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Characteristics and  
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 2778	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 3459		
S15c. Mass of spacecraft and fuel at launch (kg): 6254	S15f. Length (m): 26.06	S15i. Payload: 0.846
S15d. Mass of fuel, in orbit, at beginning of life (kg): 1057	S15g. Width (m): 8.82	S15j. Bus: 0.8863
S15e. Deployed Area of Solar Array (square meters): 74.2	S15h. Height (m): 8.11	S15k. Total: 0.75

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a): 11596	(f): 11596	(k): 11596	(p): 11596
Bus (Watts):	(b): 2890	(g): 1559	(l): 2890	(q): 1559
Total (Watts):	(c): 14486	(h): 13155	(m): 14486	(r): 13155
Solar Array (Watts):	(d): 17537	(i): 15678	(n): 15865	(s): 14331
Depth of Battery Discharge (%):	(e) 78.9 %	(j) %	(o) 78.9 %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A

**In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R § 25.114.**