

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

a. Space Station or Satellite Network Name: DIRECTV 15		e. Estimated Date of Placement into Service:		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		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: 38		k. Total Common Carrier Transponder Bandwidth: MHz	
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 1520 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	18590	M	T	Direct to Home in the Fixed Fixed Satellite Service
19700	M	20200	M	T	Direct to Home in the Fixed Fixed Satellite Service
28350	M	28600	M	R	Fixed Satellite Service
29250	M	29290	M	R	Fixed Satellite Service
17300	M	17800	M	R	Fixed Satellite Service
12200	M	12700	M	T	Broadcasting Satellite Service - Video

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

a. Nominal Orbital Longitude (Degrees E/W): 102.75 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection:	
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance: 0.05 Degrees	Range of orbital are in which adequate service can be provided (Optional): Degrees      E/W		
d. Toward West:      0.025 Degrees	g. Westernmost:		h. Easternmost:		
e. Toward East:      0.025 Degrees		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.
CONUS+	S		Contiguous US plus AK
HI	S		Hawaii
PR	S		Puerto Rico
LABC	S		Area around DIRECTV LA Broadcast center
CRBC	S		Area around DIRECTV CO Broadcast Center

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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 Iso- lation (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															
KAU	T			0.1		27	Y		CONUS+			59.5						
KAHI	T			0.1		27	Y		HI			59.5						
KAP	T			0.1		27	Y		PR			59.5						
KUU	T			0.1		27	Y		CONUS+			59						
KUHI	T			0.1		27	Y		HI			60.8						
KUP	T			0.1		27	Y		PR			61						
KALA	R			0.1		27	Y		LABC					21	-107.2		1	1
KAC	R			0.1		27	Y		CRBC					21	-107.2		1	1
KULA	R			0.1		27	Y		LABC					18.4	-99.4		1	1
KUC	R			0.1		27	Y		CRBC					18.4	-99.5		1	1
KBU	T			0.1		27	Y		CONUS+			59.5						

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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
KBU	T	C	-102.75		5_103W_CONUS_B.g	-126	-124	-124	-124	-124
KAU	T	C	-102.75		5_103W_CONUS_A.g					
KAHI	T	C	-102.75		15_103W_HAWAII.g	-118	-118	-118	-118	-120
KAP	T	C	-102.75		D15_103W_P.R..gxt	-118	-118	-118	-118	-118
KALA	R	C	-102.75		15_103W_LABC_Rx.g					
KAC	R	C	-102.75		5_103W_CRBC_Rx.g					
KUU	T	C	-101		15_101W_CONUS.g					
KUHI	T	C	-101		15_101W_HAWAII.g					
KUP	T	C	-101		D15_101W_P.R..gxt					
KULA	R	C	-101		5_101W_LABC_RX.g					
KUC	R	C	-101		5_101W_CRBC_RX.g					

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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)
AR002	36000	R	29530	L	C
AR004	36000	R	29570	L	C
AR006	36000	R	29610	L	C
AR008	36000	R	29650	L	C
AR010	36000	R	29690	L	C
AR012	36000	R	29730	L	C
AR014	36000	R	29770	L	C
AR016	36000	R	29810	L	C
AR018	36000	R	29850	L	C
AR020	36000	R	29890	L	C
AR022	36000	R	29930	L	C
AR024	36000	R	29970	L	C
BR001	36000	R	28375	R	C
BR003	36000	R	28415	R	C
BR005	36000	R	28455	R	C
BR007	36000	R	28495	R	C
BR009	36000	R	28535	R	C
BR011	36000	R	28575	R	C
BR002	36000	R	28375	L	C
BR004	36000	R	28415	L	C
BR006	36000	R	28455	L	C
BR008	36000	R	28495	L	C
BR010	36000	R	28535	L	C
BR012	36000	R	28575	L	C
BR013	36000	R	29269	R	C
BR014	36000	R	29269	L	C
AR001	36000	R	29530	R	C
AR003	36000	R	29570	R	C
AR005	36000	R	29610	R	C
AR007	36000	R	29650	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

AR009	36000	R	29690	R	C
AR011	36000	R	29730	R	C
AR013	36000	R	29770	R	C
AR015	36000	R	29810	R	C
AR017	36000	R	29850	R	C
AR019	36000	R	29890	R	C
AR021	36000	R	29930	R	C
AR023	36000	R	29970	R	C
AT001	36000	T	19730	R	C
AT003	36000	T	19770	R	C
AT005	36000	T	19810	R	C
AT007	36000	T	19850	R	C
AT009	36000	T	19890	R	C
AT011	36000	T	19930	R	C
AT013	36000	T	19970	R	C
AT015	36000	T	20010	R	C
AT017	36000	T	20050	R	C
AT019	36000	T	20090	R	C
AT021	36000	T	20130	R	C
AT023	36000	T	20170	R	C
AT002	36000	T	19730	L	C
AT004	36000	T	19770	L	C
AT006	36000	T	19810	L	C
AT008	36000	T	19850	L	C
AT010	36000	T	19890	L	C
AT012	36000	T	19930	L	C
AT014	36000	T	19970	L	C
AT016	36000	T	20010	L	C
AT018	36000	T	20050	L	C
AT020	36000	T	20090	L	C
AT022	36000	T	20130	L	C
AT024	36000	T	20170	L	C
BT001	36000	T	18324	R	C
BT003	36000	T	18364	R	C
BT005	36000	T	18404	R	C
BT007	36000	T	18444	R	C
BT009	36000	T	18484	R	C
BT011	36000	T	18524	R	C
BT002	36000	T	18324	L	C

BT004	36000	T	18364	L	C
BT006	36000	T	18404	L	C
BT008	36000	T	18444	L	C
BT010	36000	T	18484	L	C
BT012	36000	T	18524	L	C
BT013	36000	T	18564	R	C
BT014	36000	T	18564	L	C
KR001	24000	R	17324	R	C
KR003	24000	R	17353.16	R	C
KR005	24000	R	17382.32	R	C
KR007	24000	R	17411.48	R	C
KR009	24000	R	17440.64	R	C
KR011	24000	R	17469.8	R	C
KR013	24000	R	17498.96	R	C
KR015	24000	R	17528.12	R	C
KR017	24000	R	17557.28	R	C
KR019	24000	R	17586.44	R	C
KR021	24000	R	17615.6	R	C
KR023	24000	R	17644.76	R	C
KR025	24000	R	17673.92	R	C
KR027	24000	R	17703.08	R	C
KR029	24000	R	17732.24	R	C
KR031	24000	R	17761.4	R	C
KR002	24000	R	17338.58	L	C
KR004	24000	R	17367.74	L	C
KR006	24000	R	17396.9	L	C
KR008	24000	R	17426.06	L	C
KR010	24000	R	17455.22	L	C
KR012	24000	R	17484.38	L	C
KR014	24000	R	17513.54	L	C
KR016	24000	R	17542.7	L	C
KR018	24000	R	17571.86	L	C
KR020	24000	R	17601.02	L	C
KR022	24000	R	17630.18	L	C
KR024	24000	R	17659.34	L	C
KR026	24000	R	17688.5	L	C
KR028	24000	R	17717.66	L	C
KR030	24000	R	17746.82	L	C
KR032	24000	R	17775.98	L	C

KT001	24000	T	12224	R	C
KT003	24000	T	12253.16	R	C
KT005	24000	T	12282.32	R	C
KT007	24000	T	12311.48	R	C
KT009	24000	T	12340.64	R	C
KT011	24000	T	12369.8	R	C
KT013	24000	T	12398.96	R	C
KT015	24000	T	12428.12	R	C
KT017	24000	T	12457.28	R	C
KT019	24000	T	12486.44	R	C
KT021	24000	T	12515.6	R	C
KT023	24000	T	12544.76	R	C
KT025	24000	T	12573.92	R	C
KT027	24000	T	12603.08	R	C
KT029	24000	T	12632.24	R	C
KT031	24000	T	12661.4	R	C
KT002	24000	T	12238.58	L	C
KT004	24000	T	12267.74	L	C
KT006	24000	T	12296.9	L	C
KT008	24000	T	12326.06	L	C
KT010	24000	T	12355.22	L	C
KT012	24000	T	12384.38	L	C
KT014	24000	T	12413.54	L	C
KT016	24000	T	12442.7	L	C
KT018	24000	T	12471.86	L	C
KT020	24000	T	12501.02	L	C
KT022	24000	T	12530.18	L	C
KT024	24000	T	12559.34	L	C
KT026	24000	T	12588.5	L	C
KT028	24000	T	12617.66	L	C
KT030	24000	T	12646.82	L	C
KT032	24000	T	12675.98	L	C
CMD01	800	R	29502.5	L	T
CMD02	800	R	29505.9	R	T
TLM01	800	T	20198.5	L	T
TLM02	800	T	20199.5	R	T

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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)
MKA	36M0G7W	36000						
MKU	24M0G7W	24000						





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**Page 10: TT and C**

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

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Characteristics and  
Certifications**

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

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 type="checkbox"/>	YES	<input type="checkbox"/>	NO	<input checked="" 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
<b>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.</b>						