

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: EHOSTAR-4		e. Estimated Date of Placement into Service: 7/8/2005		i. Will the space station(s) operate on a Common Carrier Basis: N	
b. Construction Commencement Date:		f. Estimated Lifetime of Satellite(s): 5 Years		j. Number of transponders offered on a common carrier basis: 0	
c. Construction Completion Date:		g. Total Number of Transponders: 32		k. Total Common Carrier Transponder Bandwidth: 0 MHz	
d1. Est Launch Date Begin:	d2. Est Launch Date End:	h. Total Transponder Bandwidth (no. transponders x Bandwidth) 768 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)		
17.3	G	17.8	G	R	Feeder Link for Broadcasting Satellite Service in FSS
12.2	G	12.7	G	T	Broadcasting Satellite Service - Video

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 77 W		b. Alternate Orbital Longitude (Degrees E/W):		c. Reason for orbital location selection: Mexican DBS orbital location.	
Longitudinal Tolerance or E/W Station-Keeping:		f. Inclination Excursion or N/S Station-Keeping Tolerance:		Range of orbital are in which adequate service can be provided (Optional): <u> </u> Degrees <u> </u> E/W	
d. Toward West:	0.05 Degrees	e. Toward East:		g. Westernmost:	h. Easternmost:
		0.05 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.
SARX	S		-6 dB contour
SATX	S		-8 dB contour
GLOBAL	S		Visible Earth.

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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			Input Attenuator (dB)	
										(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)	(q) Max. Value	(r) Step Size
		(c) Peak (dBi)	(d) Edge (dBi)														
RXLC	R	34.3	28.3	0.1	0.1	30	N		SARX				716	5.7	-99	20	1
RXR	R	34.3	28.3	0.1	0.1	30	N		SARX				716	5.7	-99	20	1
TXLC	T	36.4	28.4	0.1	0.1	30	N		SATX	2.3	70.7	54.9					
TXR	T	36.4	28.4	0.1	0.1	30	N		SATX	2.3	70.7	54.9					
OMN	R	2.5	-0.5	0.1	0.1	30	N	90	GLOBAL				1000	-27.5			
OMN	T	2.5	-0.5	0.1	0.1	30	N	90	GLOBAL	6.4	0.72	1.1					
RXV	R	34.3	28.3	0.1	0.1	30	N	90	SARX				812	5.2			
TXV	T	36.4	28.4	0.1	0.1	30	N	90	SATX	10	0.0072	15					

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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
RXLC	R	C	-77		RXLC.GXT					
RXR	R	C	-77		RXRC.GXT					
TXLC	T	C	-77		TXLC.GXT					
TXR	T	C	-77		TXRC.GXT					
RXV	R	C	-77		RXV.GXT					
TXV	T	C	-77		TXV.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)
U0001	24000	R	17324	R	C
U0003	24000	R	17353.16	R	C
U0005	24000	R	17382.32	R	C
U0007	24000	R	17411.48	R	C
U0009	24000	R	17440.64	R	C
U0011	24000	R	17469.8	R	C
U0013	24000	R	17498.96	R	C
U0015	24000	R	17528.12	R	C
U0017	24000	R	17557.28	R	C
U0019	24000	R	17586.44	R	C
U0021	24000	R	17615.6	R	C
U0023	24000	R	17644.76	R	C
U0025	24000	R	17673.92	R	C
U0027	24000	R	17703.08	R	C
U0029	24000	R	17732.24	R	C
U0031	24000	R	17761.4	R	C
U0002	24000	R	17338.58	L	C
U0004	24000	R	17367.74	L	C
U0006	24000	R	17396.9	L	C
U0008	24000	R	17426.06	L	C
U0010	24000	R	17455.22	L	C
U0012	24000	R	17484.38	L	C
U0014	24000	R	17513.54	L	C
U0016	24000	R	17542.7	L	C
U0018	24000	R	17571.86	L	C
U0020	24000	R	17601.02	L	C
U0022	24000	R	17630.18	L	C
U0024	24000	R	17659.34	L	C
U0026	24000	R	17688.5	L	C
U0028	24000	R	17717.66	L	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
T0001	129.5	U0001	RXRC	D0001	TXLC
T0003	129.5	U0003	RXRC	D0003	TXLC
T0005	129.5	U0005	RXRC	D0005	TXLC
T0007	129.5	U0007	RXRC	D0007	TXLC
T0009	129.5	U0009	RXRC	D0009	TXLC
T0011	129.5	U0011	RXRC	D0011	TXLC
T0013	129.5	U0013	RXRC	D0013	TXLC
T0015	129.5	U0015	RXRC	D0015	TXLC
T0017	129.5	U0017	RXRC	D0017	TXLC
T0019	129.5	U0019	RXRC	D0019	TXLC
T0021	129.5	U0021	RXRC	D0021	TXLC
T0023	129.5	U0023	RXRC	D0023	TXLC
T0025	129.5	U0025	RXRC	D0025	TXLC
T0027	129.5	U0027	RXRC	D0027	TXLC
T0029	129.5	U0029	RXRC	D0029	TXLC
T0031	129.5	U0031	RXRC	D0031	TXLC
T0002	129.5	U0002	RXLC	D0002	TXRC
T0004	129.5	U0004	RXLC	D0004	TXRC
T0006	129.5	U0006	RXLC	D0006	TXRC
T0008	129.5	U0008	RXLC	D0008	TXRC
T0010	129.5	U0010	RXLC	D0010	TXRC
T0012	129.5	U0012	RXLC	D0012	TXRC
T0014	129.5	U0014	RXLC	D0014	TXRC
T0016	129.5	U0016	RXLC	D0016	TXRC
T0018	129.5	U0018	RXLC	D0018	TXRC
T0020	129.5	U0020	RXLC	D0020	TXRC
T0022	129.5	U0022	RXLC	D0022	TXRC
T0024	129.5	U0024	RXLC	D0024	TXRC
T0026	129.5	U0026	RXLC	D0026	TXRC
T0028	129.5	U0028	RXLC	D0028	TXRC

U0030	24000	R	17746.82	L	C
U0032	24000	R	17775.98	L	C
D0001	24000	T	12224	L	C
D0003	24000	T	12253.16	L	C
D0005	24000	T	12282.32	L	C
D0007	24000	T	12311.48	L	C
D0009	24000	T	12340.64	L	C
D0011	24000	T	12369.8	L	C
D0013	24000	T	12398.96	L	C
D0015	24000	T	12428.12	L	C
D0017	24000	T	12457.28	L	C
D0019	24000	T	12486.44	L	C
D0021	24000	T	12515.6	L	C
D0023	24000	T	12544.76	L	C
D0025	24000	T	12573.92	L	C
D0027	24000	T	12603.08	L	C
D0029	24000	T	12632.24	L	C
D0031	24000	T	12661.4	L	C
D0002	24000	T	12238.58	R	C
D0004	24000	T	12267.74	R	C
D0006	24000	T	12296.9	R	C
D0008	24000	T	12326.06	R	C
D0010	24000	T	12355.22	R	C
D0012	24000	T	12384.38	R	C
D0014	24000	T	12413.54	R	C
D0016	24000	T	12442.7	R	C
D0018	24000	T	12471.86	R	C
D0020	24000	T	12501.02	R	C
D0022	24000	T	12530.18	R	C
D0024	24000	T	12559.34	R	C
D0026	24000	T	12588.5	R	C
D0028	24000	T	12617.66	R	C
D0030	24000	T	12646.82	R	C
D0032	24000	T	12675.98	R	C
CMD1	1500	R	17308	V	T
TLM1	1000	T	12200.5	V	T
TLM2	1000	T	12202.5	V	T
TLM3	1000	T	12698.5	V	T

T0030	129.5	U0030	RXLC	D0030	TXRC
T0032	129.5	U0032	RXLC	D0032	TXRC
CM01		CMD1	RXV		
CM02		CMD1	OMNRV		
TM01				TLM1	TXV
TM02				TLM2	TXV
TM03				TLM3	TXV
TM04				TLM1	OMNTV
TM05				TLM2	OMNTV
TM06				TLM3	OMNTV

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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)
D1	24M0G7W	24000	4	27647	0.691		6.1	18.3

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S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Signal Type	(e) Channels per Carrier	Multi-channel Telephony				(j) Video Standard NTSC, PAL, etc.	(k) Video Noise- Weighting (dB)	(l) Video and SCPC/FM Modulation Index	(m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB)	(n) Total C/N Performance Objective (dB)	(o) Single Entry C/I Objective (dB)
					(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)	(i) RMS Modulation Index						
CMD1	1M50F2D	1500		1								9	21.2	
TLM1	1M00G2D	1000		1								9	21.2	
CMD2	1M50F2D	1500		1								9	21.2	
TLM2	1M00G2D	1000		1								9	21.2	

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

Associated Transponder ID Range		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)		EIRP (dBW)		(n) Max. Power Flux Density (dBW/m ² /Hz)	(o) Assoc. Stn Rec. G/T (dB/K)
(a) Start	(b) End							(j) Min.	(k) Max.	(l) Min.	(m) Max.			
T0001	T0032	D1		1		LB1.doc		65.5	12.8	18.8	46.9	54.9		12.7
CM01	CM01		CMD1	1		CMD1 LB.doc		65.5	3.1	9.1				
CM02	CM02		CMD2	1		CMD2 LB.doc		65.5	17.9	20.9				
TM01	TM03		TLM1	1		TLM1 LB.doc					1.1	4.1		33
TM04	TM06		TLM2	1		TLM2 LB.doc					7	15		37.5

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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): Yes

Remote Control (TT C) Location(s):

S14a: Street Address: 801 North American Sky Boulevard			
S14b. City: Gilbert	S14c. County: Maricopa	S14d. State/Country AZ	S14e. Zip Code:
S14f. Telephone Number:		S14g. Call Sign of Control Station (if appropriate):	

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S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

S15a. Mass of spacecraft without fuel (kg): 1626	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel and disposables at launch (kg): 1694		
S15c. Mass of spacecraft and fuel at launch (kg): 3320	S15f. Length (m): 3.16	S15i. Payload: 0.85
S15d. Mass of fuel, in orbit, at beginning of life (kg): 710	S15g. Width (m): 1.82	S15j. Bus: 0.89
S15e. Deployed Area of Solar Array (square meters): 70.5	S15h. Height (m): 5.8	S15k. Total: 0.76

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): 6811.5	(f): 6811.9	(k): 6811.5	(p): 6811.9
Bus (Watts):	(b): 617.3	(g): 508.6	(l): 617.3	(q): 508.6
Total (Watts):	(c): 7428.8	(h): 7320.5	(m): 7428.8	(r): 7320.5
Solar Array (Watts):	(d): 8809.8	(i): 8082.4	(n): 8746	(s): 8020
Depth of Battery Discharge (%):	(e) 75 %	(j) 75 %	(o) 79.8 %	(t) 79.8 %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" 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

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.