

TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Symphonie	a	1974/75	4	13	3/6
Anik B	a	1978	4	10	12
Anik B	a	1978	12	20	4
TDRSS	a	1983/84/88	12/14	30	6/40
FEP	a	1986	20	20	2/8
TV-SAT 1	a	1987	12	230	6/9
TDF-1	a, b	1988	12	260	6/9
TELE-X	a	1989	12,5	230	6/7
TDF-2	a, b	1990	12	260	6/6
TV-SAT 2	a	1989	12	230	6
ECS F5 ¹⁾	a	1988	11	20	-
DFS	a	1989	11/12	20	15/17
DFS	a	1989	20	20	2/7

1) Spare, Backup 2) EPC only a TWT from THALES Germany b TWT from THALES France c Boeing ED L = linearized LC = linearized CAMP

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Eutelsat II ¹⁾	a	1989	12	50	6
TDRS 7/8	a	1992	14	30	6/7
Telecom 2 ²⁾	b	1991	12	50	12/27
Intelsat 7	a	1992	12	50	8/44
Intelsat 7	a	1992	12	35	7/35
HISPASAT	b	1992	7	40	3/6
HISPASAT	b	1992	12	55	12/25
HISPASAT	b	1992	12	110	6/13
IRS ²⁾	b	1993	8	40	2/8
COMETS ²⁾	b	1995	23	30	1/2
Columbus PPF	a	1997	8	27	4/6
Columbus PPF	b	1997	27	53	3/5
Eutelsat II/F6	a	1994	12	75	24/24

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
AMOS	a	1995	12	35	8/9
ASIASAT	a	1995	12	115	13/14
Artemis	b	1997	20	30	4/6
Artemis	a	1997	23	35	3/4
Insat ²⁾	b	1997	6	55	7/8
EOS	b	1996	14	30	3/3
Arabsat 2 A/B	b	1996	12	90	34/34
Tempo 2	b	1997	12	2 x 113 (R)	24/49
Tempo 2	b	1997	12	35	2/4
Telecom 2D	b	1996	12	55	15/16
Telecom 2D	b	1996	6	40	2/3
Turksat 1C	b	1996	12	55	24/24
MGS	b	1996	8	25	2/3

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Hotbird 2	a	1996	12	118	28/29
PanAmSat 6	b	1997	12	2 x 107 (R)	24/24
PanAmSat 6	b	1997	12	35	2/2
Nahuel	a	1997	12	55	24/25
Hotbird 3	a	1997	12	124	28/28
MABUHAY 1/2	a	1997	12	2 x 115 (R)	16/32
TELSTAR 5	b	1997	12	2 x 110 (R)	16/16
APSTAR 2R	b	1997	12	2 x 113 (R)	12/12
APSTAR 2R	a	1997	4	60	36/36
Thaicom 3	a	1997	12	103	18/36
Echostar 3	a	1997	12	2 x 120 (R)	23/23
CHINASTAR	a	1998	12	135 (R)	6/6
Hotbird 4/5	a	1998	12	135	28/56
SIRIUS 1/2	b	1997	12	52	13/26

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
SIRIUS 1/2	b	1997	12	88	27/54
Echostar5	b	1999	12	2 x 110 (R)	24/24
Echostar5	b	1999	12	35	2/2
PIONEER 2	b	1998	12	2 x 135 (R)	24/24
Eutelsat III	a	1997/98/99	12	95/98	32/96
PANAMSAT 7	b	1998	12	2 x 107 (R)	20/20
PANAMSAT 8 R	b	1998	12	2 x 107 (R)	16/16
GE1A	a	2000	12	2 x 120(R)	22/44
LMI 1	a	1998	12	135 (R)	6/7
Worldstar 1/2/3/4	a	1998/1999/2000	1.6	150	18/74
Telesat Nimiq	a	1999	12	2 x 120 (R)	22/22
Telstar 6	b	1999	12	2 x 100 (R)	16/16
Sesat	b	1998	12	95	24

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
L-STAR1	b	2000	12	2 x 113 (R)	24/18
L-STAR 1/2	b, LC	2000	12	2 x 113 (R)	24/30
GE2A	a	1999	12	2 x 100	22/22
TELSTAR 7	a	1999	12	2 x 120	16/17
TELSTAR 7	a	1999	4	55	31/32
Echostar 4	a	1998	12	2 x 120 (R)	22/22
Intelsat K-TV	a	1999	12	110	40/40
Arabsat 2 BSS	a	1999	12	140	28/28
ASTRA 2B	a/b	1999	12	110	42/42
Intelsat IX, F1-F7	a	2000	12	100 (R)	16/112
Intelsat IX, F1-F7	a	2000	4	45-65	45/315
Chinasat 8	a	1999	12	2 x 120	12/12
EOS2	b	1999	7	25	2/4
Koreasat	a	1999	20	90	6/6

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Hispasat 1C	a	2000	12	140	33/33
Europestar 1/2	b	1999	12	140	41/82
ASTRA 1K	a	2000	11	105 (R)	60/60
IRS	b	2000	7	40	8/8
Metop	b	2000-2002	8	26	2/7
Insat	a	2000	4	65	15/15
Eurasiasat	c	2000	7	115	3/3
Eurasiasat	a	2000	12	110	28/28
Telstar 12	b	1999	12	2 x 125	24/24
Telstar 12	b	1999	12	35	2/2
AMRC 1/2/3	a	2000-2002	2	215	44/132
ASTRA 1K	b	2000	18	60	5/5

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Hotbird 6	b	2002	12	130 (R)	34/34
New Bird	a	2001	12	118 (R)	30/30
Astrolink 1/2	b	2001	20	100	25/50
Astrolink 1/2	a	2001	20	40	8/16
Telstar 8	b	2001	12	2 x 130	22/22
Telstar 8	b	2001	20	105	6/7
Telstar 8	b	2001	12	130	2/2
Telstar 8	a	2001	4	38	26/27
ISKY	a	2001	20	2 x 93	14/14
ISKY	b	2001	20	2 x 124 (R)	17/17
Optus C1	b, L	2001	20	130 (R)	5/5
Optus C1	a	2001	12	10	2/2
Europestar F2	a	2001	12	70	40/40

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TWTA Projects for Space Application

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Project		Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Intelsat 10	b, L	2002	12	2 x 150	15/15
Intelsat 10	a, L	2002	4	2 x 58	28/28
DFH3	b, LC	2001	12	55	7/9
INSAT	a/2	2001	2.5	70	2/2
INSAT	b/2	2001	12	60	4/4
JPL	a/2	2001	20	27	2/2
Contour	a/2	2001	8	18	2/2
STELLAT	a	2001	12	95	41/41
Echostar 8	b	2001	12	2 x 130	19
MTSAT	a, L	2001	1.5	80	3/4
HISPASAT 1D	a	2001	12	120	34/34

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TWTA Projects for Space Application

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Project	Launch	Frequency / GHz	RF-Output Power / W	Channels per Satellite / Total
Rocsat 2 b	2001	8	30	2/3
Radarsat b	2001	8	80	3/4
Brasil 1 b	2001	12	2 x 130	12/12
ESW b, LC	2003	20	2 x 150	2
Echostar 9 b	2002	12	2 x 110	22/22
Echostar 9 b	2002	20	120	3/4
Hotbird 7 a	2002	12	97	44/44
IP Star				

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