

RSDO CATALOG ADVISORY NOTICE

THE RSDO CATALOG SERVES AS A **STARTING POINT** FOR MEETING YOUR SPACECRAFT REQUIREMENTS. THE RSDO CATALOG SPREADSHEET IDENTIFIES THE HERITAGE (**PROVEN DESIGN**) MISSION CONFIGURATION ONLY OF EACH SPACECRAFT LISTED. THE HERITAGE MISSION CONFIGURATION IS ONLY **ONE OF MANY** CONFIGURATIONS THAT EACH SPACECRAFT IS CAPABLE OF ACHIEVING.

TO LEARN MORE ABOUT THE FULL CAPABILITY OF EACH RSDO SPACECRAFT, PLEASE CONTACT THE RSDO AT RSDO@GSFC.NASA.GOV OR 301-286-1289.

PLEASE ADVANCE TO PAGES 2 AND 3 TO REVIEW THE RSDO CATALOG SPREADSHEET.

RSDO	Rapid II Summary		Surrey	Surrey	Surrey
	Units		MicroSat-70	Minisat-400	SNAP
Compatibility	Payload Power (OAV) (EOL)	W (EOL)	1.5 - 18	100	2.5
	Payload Mass Limit of Bus	kg	23.8	200	3
	Bus Dry mass (w/o Payload)	kg	44.7	206.7	6.5
	Science Data Downlink capacity	kbps	2048	2048	38.4 + 76.8
	Science Data Storage capability	Mbit	2048	3072	24
	Pointing Knowledge	arcsec	1800	72	3600
	Pointing Control	arcsec	1800	360	< 18,000
	Pointing Stability (Jitter)	arcsec/sec	20	20	18
	Slewwrate	deg/min	300	300	12
	Mission Design Life	yrs	3 @ .85	1	1 @ .8
	Compatible LVs	(names)	Cosmos-3M, Ariane-4, Delta, Athena, OSP Minataur, Taurus, Zenit, Dnepr, Tsyklon	Dnepr, SS-18, Taurus, Athena, Delta II, EELV, Eurokot, Ariane-5, Cyclone, Zenit	Cosmos-3M, Ariane-4, Athena, Cyclone, Delta II, Delta III, EELV, Zenit, Dnepr
	Nominal Orbit		700 km, sun synch	650km, 65deg	700 km, 98 deg
	Types of Orbits available		400-1400km, all inclinations	400-1400km, all inclinations	400-1400km, all inclinations
External Volume available for Payload		.3 x .3 x .2	250mm x 1000mm diameter	Mission Dependent	
Internal Volume Available for Payload		.11 x .28 x .28 m Earth observation compartment and .078 x .35 x .35 for 3 payload module trays	8bays, 0.18m ² , 0.03m ² , 6x 0.01m ²	3 module boxes, central bay	
Description	ACS	type	3 axis zero bias, 3 wheels, mag tq's	3-axis /ZM	3-axis momentum bias, 1 wheel, mag tq's
	GPS	# receivers	1	12 channel, 2 antennas	1
	Batteries	type/Ah	NiCd / 7 Ah	NiCd/20 Ah	NiCd / 1.4 Ah
	Arrays	cell type/Area	Ga As, 0.7 m ²	Single Junction GaAs, .5m ²	Ga As, 0.16 m ²
	Nominal Voltage	V	5V regulated and 14V unregulated	28	8
	C&DH Bus Architecture	description	RS232, RS422, RS485	RS422/485 and CAN	CAN, RS232, RS422
	Downlink Formats		CCSDS	CCSDS	Custom
	Downlink Band		S-Band	S-band	S-Band
	Structure	description	Rectangular. Al honeycomb stacked trays.	Al Honeycomb Nine sided prism	3 side prism. Al + Al/Al honeycomb
	Propulsion	type	None	N2, 10 thrusters @ 0.1N	Liq. Butane, self press.
	Propellant Capacity	kg	None	5.3	0.033
Max delta V	m/s	None	15	3	
Programmatic	heritage mission(s)	name(s)	Tsinghua-1	UoSAT-12	SNAP-1
	nominal schedule	mths	19	18	12
	Contract Options	1	None	Enhanced Power	Cameras & Machine Vision System
		2		Resistojet propulsion sub-system	UHF receiver
		3			
		4			
		5			
		6			
	7				
	8				