



CORVUS PLATFORM

DATASHEET

		1U	2U 3U	6U 8U	12U 16U
Available Power per PSU Channel		Up to 9.8 W @ 5 V	Up to 48 W @ 12 V		
Available Payload Mass	No AOCs	Up to 1 kg	Up to 2.5 kg 4 kg	Up to 7.5 kg 11.5 kg	-
	AOCs	Up to 0.5 kg	Up to 2 kg 3.5 kg	Up to 6.5 kg 10.5 kg	Up to 16 kg 22 kg
Available Payload Volume	No AOCs	0.5U	1.5U 2U	4U 6U	-
	AOCs	0.25U	1.25U 1.75U	-	-
	AOCs & S Band	-	1U 1.5U	2.5U 4.5U	Up to 8.5U 12.5U
Power Interface		1x reg. 3.3 V 1x reg. 5 V 4x configurable reg. channels 3.3/5 V Max. 1.8 A per channel 1x unreg. VBat. (6.8 – 8.4 V)	6x configurable reg. channels 3.3/5/12 V 3x configurable reg. channels 3.3/5/12 V with backup 4 A per channel 1x unreg. VBat. (13.6 – 16.8 V)		
Battery Stored Energy		Up to 23 Wh 2 cells	<i>Baseline</i> 46 Wh 4 cells – possible increase based on available volume	<i>Baseline</i> 92 Wh 8 cells – possible increase based on available volume	
Data Interfaces		<i>Platform communication bus</i> 1x RS485 CSP v1 1x CAN CSP v1 1x I2C CSP v1 1x RS422 CSP v1 (<i>optional</i>) Possible extension of data and signal interfaces through CDHS (UART, I2C, SPI, ADC, PWM, GPIO)			
CDHS		<i>Baseline Deep Thought</i>			
Data Storage		Payload expected to have own storage – support available Deep Thought 4x32 MiB data Typ. HK and log			

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Data Rates and Frequencies	<p>UHF Amateur 430 – 440 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p>UHF Commercial 400 – 402 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p>VHF Amateur 144 – 146 MHz Up/down <i>baseline</i> 9600/19200 bps</p>	<p>UHF Amateur 430 – 440 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p>UHF Commercial 400 – 402 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p>VHF Amateur 144 – 146 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p><i>Optional:</i> S Band Down <i>baseline</i> 2200 – 2290 MHz 250 – 512 kbps</p> <p>Up <i>baseline</i> 2025 – 2110 MHz 9.6 – 128 kbps</p>	<p>UHF Commercial 400 – 402 MHz Up/down <i>baseline</i> 9600/19200 bps</p> <p>S Band Down <i>baseline</i> 2200 – 2290 MHz 250 – 512 kbps</p> <p>Up <i>baseline</i> 2025 – 2110 MHz 9.6 – 128 kbps</p> <p><i>Optional:</i> X Band</p> <p>UHF Amateur</p> <p>VHF Amateur</p>	
AOCS	<p><i>Optional</i> 3x MTQ 1x magnetometer 3x gyroscope</p>	<p><i>Baseline</i> 3x RW 3x MTQ 6x FSS 1x magnetometer 3x gyroscope</p> <p><i>Optional</i> 1x Star Tracker</p>	<p><i>Baseline</i> 4x RW in pyramid 3x MTQ 6x FSS 1x magnetometer 1x gyroscope</p> <p><i>Optional</i> 1x Star Tracker</p> <p><i>Baseline for 6U with STR</i> AKE 0.5° @ 1σ APE 1.0° @ 1σ Slew ~ 1.5°/s</p>	
GNSS Accuracy	<p>Celeste GNSS Position 2.0 m CEP Velocity 0.1 m/s Time 5 ns</p>			
Design Lifetime	Up to 5 years			

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- **ISR** – 16U with multispectral camera (spacemanic.com/missionready/isr)