

UBOTICA
CogniSAT[™]
CAM-LC

AI-Enabled Camera for Launch Vehicles



The Ubotica CogniSAT-CAM-LC is a light-weight, high resolution intelligent camera system specifically designed to be mounted within a satellite launch vehicle. It has been designed to provide high resolution compressed video streaming during launch and stage separation. It can also be used to provide real-time video streams during payload deployment.

The CogniSAT-CAM-LC integrates a 2.3 Megapixel RGB sensor which can operate in full High Definition at 60 frames per second. Additionally, the camera integrates H.265 compression in hardware, thereby maximising the efficiency of the data channel, and provides for text overlay insertion in line with transmission. The use of Gbit Ethernet as the control and data interface minimises the complexity of integrating multiple cameras within the system architecture and also allows easy modification of runtime parameters.

While the CogniSAT-CAM-LC comes pre-configured to provide on-demand video streaming over Ethernet, the integration of the power efficient Intel[™] Movidius[™] Myriad-X VPU allows for the easy integration of additional AI operations. Additional capabilities can be easily developed and deployed within the overall CogniSAT design environment.

	Min	Typ	Max	Units	Notes
Physical Characteristics					
Length		136.0		mm	
Width		66		mm	
Height		53		mm	
Mass		350		g	
Electrical Characteristics					
Supply Voltage		5		V	
		28		V	
Power		7	10	W	Dependant on application
Environmental					
Operating Temperature	-40		+85	°C	
Storage Temperature	-55		+85	°C	
Shock			1,269	g	3-axes, SRS, 5g @ 30Hz / 1,269g @ 1kHz to 10kHz
Vibration (Sine)			15.0	g	3-axes, 3g @ 5Hz - 125Hz, max g @ 20Hz - 40Hz, 2 Oct/min
Vibration (Random)			14.2	grms	3-axes, 20Hz - 2,000Hz, max g 50Hz - 800Hz 2min/axis
Thermal-Vacuum	Operation from -40°C to +65°C at 1x10 ⁻⁵ mbar				

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