

# MINIATURE LOW COST CONTROL ELECTRONICS (mLCCE)

- 25W of output power at your fingertips
- Cooler agnostic, applicable to other devices

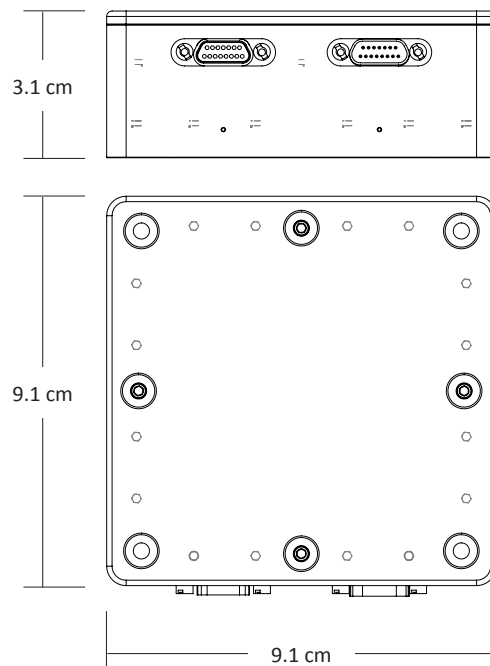
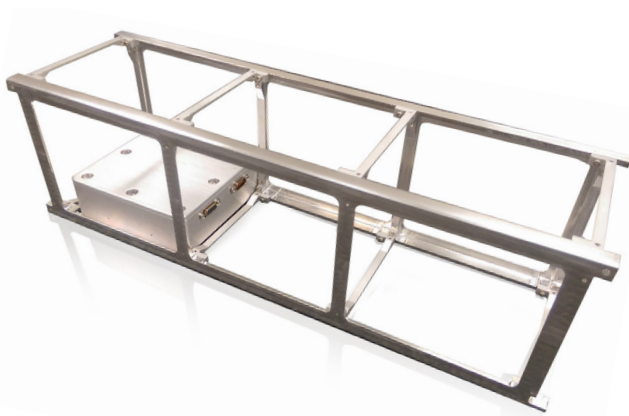


## COMPACT, PLUG AND PLAY, RADHARD TECHNOLOGY FOR MULTI-PURPOSE CONTROL.

The mini Low Cost Control Electronics (mLCCE) is a radiation-hard, space qualified set of control electronics developed under AFRL SBIR, initially designed to drive CubeSat space-based cryocooler systems supporting thermal imaging systems. The mLCCE has a single motor drive and temperature sensor, and is cooler agnostic, allowing it to be integrated with cryocoolers from multiple manufacturers.

The mLCCE was specifically designed to support a wide range of linear cryocoolers, from various manufacturers, with at the nominal input power point of 25W. It was designed to tolerate radiation levels up to 100 krad. The mLCCE accepts a DC input voltage from 7V to 35V and provides power conversion at 94% efficiency at rated power.

The Iris Technology mLCCE represents an FPGA based general purpose, radiation hardened, compact platform for the control of a variety of devices types such as motors, actuators, solar power / battery charging systems, and optical bench thermal stabilization.

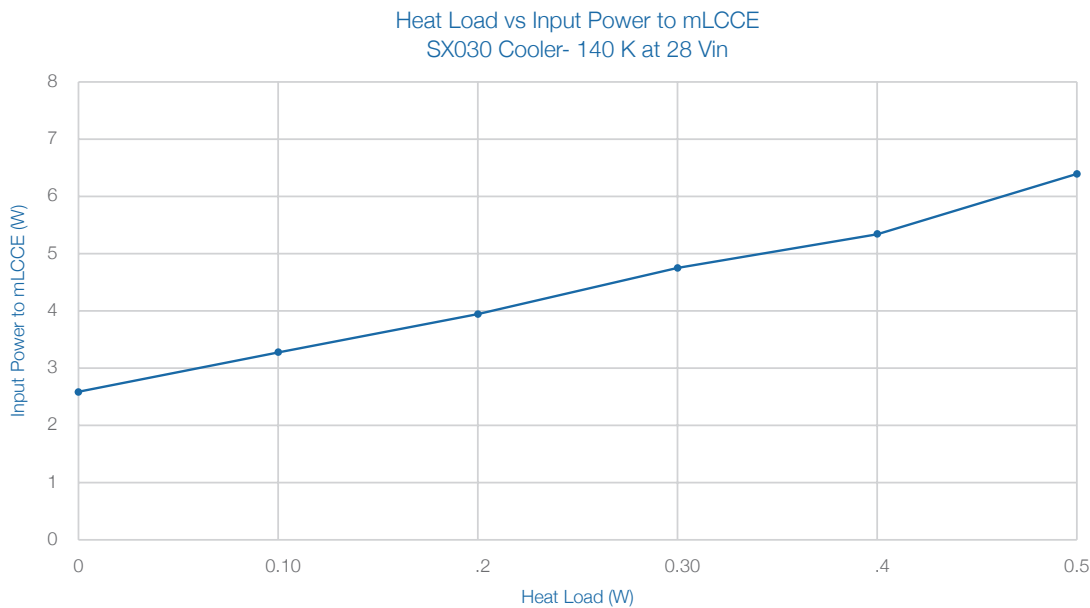


## MINIATURE LOW COST CONTROL ELECTRONICS (MLCCE)

Mini Low Cost Control Electronics (mLCCE)

25W	
<b>GENERAL</b>	
Application	Tactical, Low Cost Space, Microsat
# of Motors	1
<b>PHYSICAL</b>	
Mass	< 400 grams
Volume (cm)	9.1 x 9.1 x 3.1
<b>POWER</b>	
Input Voltage ( $V_{DC}$ )	9 to 35
Total Output Power ( $W_{AC}$ )	25
<b>TEMPERATURE TELEMETRY</b>	
# of Temp. Sensors	1
<b>ADVANCED FEATURES</b>	
Vibration Control	No
Input Ripple Filter	No
TRL Level	6

### Heat Load vs Input Power



#### IRIS TECHNOLOGY

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