IRIS TECHNOLOGY

IRIS CONTROL ELECTRONICS

SPACE QUALIFIED CONTROL ELECTRONICS

SECOND GENERATION SERIES OF RAD-HARD AND CRYOCOOLER AGNOSTIC CONTROLLERS

The ICE-G2 family is a series of radiation-hard, space qualified sets of control electronics initially designed to drive satellite space-based cryocooler systems supporting thermal imaging systems. The ICE-G2 family is cooler agnostic, allowing it to be integrated with cryocoolers from multiple manufacturers.

In addition to basic cryocooler control functionality, the ICE-G2 family adds multiple options for mission customization and flexibility, including; launch locks, input ripple filter (IRF), and vibration control. The IRF reduces noise perturbation to the input power bus, reducing conducted emissions. The vibration control provides 5-harmonic vibration analysis between the accelerometer or force transducer and the compressor, adjusting the voltage and providing image stabilization.

ICE-G2 ARCHITECTURE HIGHLIGHTS

- GaN FET power driver
- Microcontroller/FPGA logic controller
- Iris patented active vibration control algorithm expanded to multiple CCEs
- Reprogrammable software allows customization to unique mission needs

Multiple output power ranges
- 30–200 W (TRL 9)
- >200–1000 W (TRL 3)

Options for mission customization
- Input Ripple Filter (IRF)
- Vibration Control
- Launch Locks

Radiation hardened up to 100 Krad

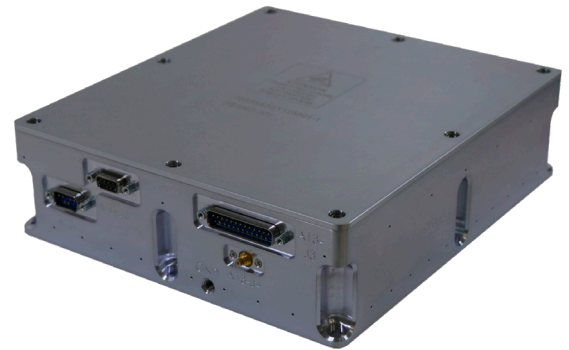# SPACE QUALIFIED CONTROL ELECTRONICS | ICE-G2 FAMILY

	ICE-G1-30IL	ICE-G2-60	ICE-G2-200I / IL	SPLCCE	HPLCCE
SPECIFICATIONS					
# of Motors	1	2	2	1 + Balancer	2
Total Output Power (WAC)	30	60	200	160	200
Input Ripple Filter	Yes	No	Yes	Yes	Yes
Launch Locks	Yes	No	Optional	Optional	No
Vibration Control	No	Yes	Yes	Yes	Yes
Radiation Tolerance (TID)	> 30 kRad	> 30 kRad	> 100 kRad	> 100 kRad	> 100 kRad
TRL	8	9	8	9	9

ICE-G1-30IL

ICE-G2-60

ICE-G2-200

Iris Technology provides unmatched reliability and flexibity in Cryocooler Control Electronics and Integrated Systems with the cryocooler of your choice.

For more information about our Cryocooler Control Electronics and other Aerospace Solutions, **email us at: aerospace@iristechnology.com**