

# Power Conversion & Control Products



Advanced Power Converters

GE Aviation understands your need for high quality, reliable electrical systems. We are a proven Center of Excellence with design and production expertise committed to developing, manufacturing, and supporting electronic products to fulfill the requirements crucial to the success of your program.

Our reputation, depth of knowledge and experience in meeting today's increasingly stringent performance and reliability criteria has allowed GE Aviation to successfully participate in many air, land, sea and space programs in commercial and military markets. Responsiveness to the needs of the marketplace is proven by our 50-year history of successfully providing critical, complex equipment.

GE Aviation is a world class organization that provides the latest technology to the Power Conversion and Control Products we produce. Research and development is focused on technical creativity, continuous improvement and advanced technologies to meet the engineering and manufacturing challenges of the future.

## New Technology

### Silicon Carbide Technology

- ✓ 2X Power Density
- ✓ Higher Efficiency
- ✓ Higher Temperature



Lighting Controllers

## Power Conversion Products

- Power Supplies – Single / multiple output regulated power supplies with 28VDC, 270VDC, three/single phase 115VAC, 400Hz / 60Hz inputs
- Uninterruptible Power Systems
- Regulated and unregulated transformer Rectifier Units
- Inverters - Single and three phase 115 volt, 400 cycle, 60 cycle
- Battery Chargers – Multiple chemistries
- Frequency Converters – AC to AC
- High Voltage Custom Power supplies for Advanced Power Conversion applications and Directed Energy Systems

## Control Products

- Complete Cockpits, Consoles, and Work Stations
- Integrated Systems (power, controls, lighting)
- Fuel management panels, fire warning and extinguishing panels
- Caution, warning, advisory, master caution and master warning panels
- Extensive built-in-test
- Discrete or Data Bus communication (MIL-STD-1553, ARINC429, others)
- Sunlight readable, NVIS compatible displays
- Multiple lighting technologies
- HMI design interface

## Features

- Built In Test
- Light Weight
- In-Rush Limiting
- High Efficiency
- Data Bus Interface
- Overload Protection
- Short Circuit Protection
- High Density

## Standards for Design

- RTCA DO-160 MIL-STD-130
- RTCA DO-178 MIL-STD-461
- MIL-HDBK-217 MIL-STD-704
- MIL-HDBK-454 MIL-STD-810
- MIL-HDBK-5400



Transformer/Rectifier Units



Panels and Integrated Consoles



# Power Conversion & Control Products



Battery Chargers

## Battery Systems

- Temperature compensated charge control
- Uninterruptible power and bus voltage management for critical busses
- Built-in-test for charger and battery fault detection
- State of charge indication
- All battery chemistries supported; Li-Ion, Ni-Cad, Pb Acid, Ni-MH

## Lighting Controllers

- NVIS capable
- Single and multichannel outputs
- LED, Incandescent, and electroluminescent
- In-rush current limiting, short circuit and overload protection
- Data bus control. Step or continuous dimming
- Built-in-Test
- Trimmable outputs for balanced lighting

## TRU/RTRU

- Regulated and unregulated outputs
- Parallel operation with load sharing
- Precise regulation of output power
- Double power density technology

## Deicing

- Electrical deicing for blades and windshields
- Precise output control for optimal heating
- High power capabilities

## Frequency Converters

- Single or three phase AC any usable output (i.e. 115VAC 50/60Hz)

## Digital Control Products

- Provides the machine-machine interface for the platform system
- Ideal for control and activation of doors, flight surfaces, landing gear, and thrust reversers

## Control Panels

- Provide the human-machine interface with platform systems
- Uniform appearance with balanced luminescence
- Data Bus or discrete signal interface
- Sun light readable displays / Night Vision Imaging System (NVIS) compatible
- Integrated consoles or individual panels

## Inverters

- Provides several power output options from the main DC Bus
- Very high power conversion efficiencies

## Power Supplies

- Selectable voltage outputs
- Provide in flight performance monitoring
- Overvoltage, over-current and short circuit protection on all outputs

## Advanced Power Conversion

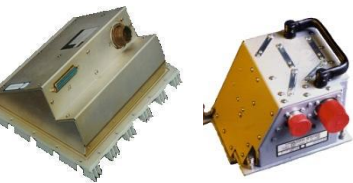
- Very high efficiency and density product applications
- Modular designs allow for maximum flexibility based on unique requirements
- Silicon Carbide (SiC) Product Technology for High Voltage, High Temperature, High Power and High Frequency applications

## Interference Blanking Units (IBU)

- Standardized Packages
- Programmable
- Power Conditioning
- Built-in-test, Circuit Protection



Sensor Systems



Power Supplies



Control Panels

