

# **Power Supply Solutions**

Reliable, Custom, High-performance Power



Today's technology-driven world requires a robust and dependable power supply. Finding reliable power solutions that meet unique, customer-specific requirements can be challenging, particularly when they must consistently perform in harsh or rugged environments. As a leading-edge aerospace and defense company, TTM has the ability to solve complex power supply needs by leveraging extensive electrical and mechanical engineering design expertise.

# **Trusted Technology Partner**

Backed by over 80 years of technology innovation and OEM experience as well as a breadth of knowledge garnered as a power supply consumer and systems integrator, we have a deep, first-hand understanding of the challenging environments that power supplies must withstand, with the need for quality products on-time. Our team of highly skilled design engineers have a proven track record of developing and manufacturing extremely reliable, high-performance power solutions specifically designed to meet the rigorous and diverse requirements of military customers.

# **Solving Tough Power Supply Challenges**

TTM's power solutions are globally deployed on rotary-wing, fixed-wing, ground and maritime platforms where providing a clean and stable power supply are critical to the performance of the aircraft's onboard electronics.

Our custom supplies are specifically designed and tested to your requirements and enable other sensitive electronics onboard to operate reliably and consistently, even in the extreme environmental conditions often found on military platforms.

## Smart. Experienced. Compliant.

Each power supply system is designed to meet and/or exceed each individual customers Size, Weight and Power (SWaP), Electromagnetic Interference (EMI), Electromagnetic Compatibility (EMC), thermal and structural requirements. We are extremely well versed in all military design specifications, ensuring fully compliant designs. We work diligently to provide solutions that will seamlessly integrate with your platform and also understand that protecting your assets and decreasing product down time is of critical importance.



# **Custom Power Supply Options**

# Designed to meet your needs:

### **Unique Functions**

- Voltage and current data monitoring and logging
- Vibration and temperature monitoring and logging
- Custom control and status reporting

## **Customer Defined Power Requirements**

- Input requirements
- Output requirements
- Power characteristics
- Isolation, creepage & clearance

## **Customer Defined Environmental Requirement**

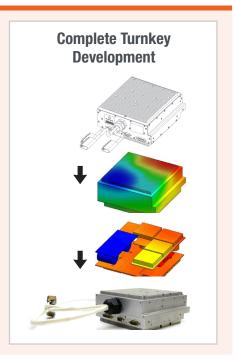
- Temperature
- Vibration
- EMI

### **Standard Functions**

- Power On and Off sequencing
- Over Voltage Protection (OVP)
- Over Current Protection (OCP)
- Built-in-test & diagnostics
- Inrush control
- Soft start

## **Custom Application Packaging**

- Form factor
- Thermal
- Structural



# **Turnkey Partner Providing Custom Solutions**

TTM offers full-service, turnkey engineering support and can leverage our extensive systems, electrical and mechanical engineering design, test expertise and integration services to meet the most exacting customer requirements and specifications. Our engineering teams understand the importance of forming a solid partnership to help ensure successful project outcome. We look forward to a productive engagement as we collaborate with you through the entire power supply development process.

# **Key System Features**

### **Specification Compliance**

- MIL-STD -704 or D0160 input voltage
- MIL-STD-461 EMI compliance
- MIL-STD-810 (environmental)
- IEC 60950-1
- MIL-STD-1399
- MIL-STD-1275
- STANAG-1008

### **Custom Packaging**

- Conduction, convection cooled
- Application specific packaging design

### **Input Power**

- Single and multi-isolated inputs; 85 VAC-264 VAC
- DC and AC inputs
- Power factor correction
- Single phase 50-400 Hz
- Three phase 50-400 Hz
- Active power factor correction

#### **Output Power**

- Requirement driven output power rating
- Recoverable over current protection
- Multiple output
- Latching over voltage protection

#### **Advanced Functions**

- Output monitoring, data logging
- Variable speed fan drive

## **Analysis Capabilities**

- MTBF
- Stress analysis
- Worst Case Circuit Analysis (WCCA)
- Vibration and Thermal analysis (FEA)
- **SPICE Simulations**
- Mathematical Modeling

# Visit www.ttm.com for more information.

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