



KPSU

KU/KA Power Supply Unit

ALL WE DO

To Serve Those Who Serve



OAE power supply and Ethernet switching for commercial aircraft

The KPSU (Ku/Ka Power Supply Unit) designed and manufactured by SCI Technology is the only commercially available power supply compliant to the new ARINC-792 SATCOM standard. The KPSU provides two outputs, nominally 52-VDC, of up to 2,000W of power to the Outside Antenna Equipment (OAE), as well as providing Ethernet connectivity between the OAE and MODMAN. The KPSU also includes automated BIT functionality providing LRU health and status updates.



Ku/Ka-band Power Supply Unit (KPSU)

- KPSU is ARINC-792 Compliant
- Mounts in aircraft "overhead"
 - Mounting compliant with ARINC-836
- KPSU supported functions provide:
 - Power to Outside Antenna Equipment (OAE)
 - Ethernet connectivity between OAE/MODMAN
 - Automated BIT health and status information for the LRU
 - Configurable and actionable aircraft discrete inputs/outputs

Electrical Specifications

- Input Power per RTCA/DO-160G 3-Phase 115 VAC @ 2200 Watts
- 2 Outputs of Nominal 52 VDC Conditioned Power to the OAE
 - Output 1 (Labeled as J2-RX):
 - 52VDC @ 20A minimum, Power: 1040W
 - Output 2 (Labeled as J3-TX): Build Selectable (-001 or -002)
 - (-001) 52 VDC @ 10A minimum, Power: 520W
 - (-002) 52 VDC @ 20A minimum, Power: 1040W
- Output Rise Time: 100ms nominal
- Combined Output Voltage Ripple/Noise: 0.4V Maximum p-p
- Line & Load Regulation: 0.4V Maximum, Efficiency: >85%
- Output Current Limit: Short Circuit protected at > 50A
- Output over Voltage Protection: > 60VDC

- Remote Sense: optional if required
- Start up time: less than 1 second
- Over temperature Protection: +90C with automatic recovery
- Integrated 4 port 10/100 Base-T Ethernet switch
 - 1 port to Micro Controller, 1 port to J2, 1 port to J3
- Discrete inputs are "Open/Gnd" receivers referenced from "DC28V"
- Discrete outputs are "Open/Gnd" drivers referenced to "Signal Gnd"
- Power Good Output Status Discrete"
- RS-232 Maintenance port provided on J1
- RS-422 TX available on J1 and J2 (TBD baud rate & data bits)

Mechanical Specifications

- ARINC-836 Form-Factor
- Weight to be verified
- Electrical Interfaces over MIL-DTL-38999 Series 3 Connectors
- Input Isolation: 2150V DC
- Output Isolation: 1000V DC to chassis
- External Fan Output (Fused Phase-A input thru 5A power switch)
- Internal Fan (12V_DC or Fused Phase-B)

Environmental Specifications

- RTCA/DO-160G Environmental Testing for ARINC-792 Compliance
- RTCA/DO-160G EMI Testing for ARINC 792 Compliance