

Spaceborne Telemetry

Miniature COMSEC Unit

MCU-110



- Standalone unit
- 5 Megabit uplink
- 10 Megabit downlink
- Up to 64 downlink keys
- Space qualified
- NSA Certified
- Type 1 design

Telemetry-West has a long and rich heritage of securing space vehicle communications links. High-reliability space communications has been one of Telemetry-West's primary business thrusts since 1968 beginning with the Apollo space program.

The miniature COMSEC unit (MCU-110) is an integrated encryptor/decryptor unit providing security capabilities for satellite communications links. Telemetry-West has drawn on its vast experience developing space qualified products and embedding NSA endorsed cryptographic devices to design and manufacture the MCU-110.

The MCU-110 is a Type 1 secure, USB and SGLS-compatible unit providing both uplink and downlink functions in a single, small, lightweight housing. The unit uses the Cardholder algorithm for uplink decryption up to 5 Mbps, with 16 selectable keys. The unit uses the Pegasus Algorithm (KG-227) for the downlink encryption up to 10 Mbps with up to 64 selectable keys. The MCU-110 has 80 bits of telemetry data that reports on health and status. The MCU-110 also has a convolutional encoder that is enabled by the user if required. The unit is radiation hardened and designed for missions up to 15 years.

MCU-110 Specifications

Encryptor/Decryptor	
Encrypt	Pegasus Algorithm
	Selectable up to 64 keys
	Additional keys optional
Decrypt	Cardholder Algorithm
National Security Agency	Type 1
Data Rates	
Encrypt	.500 bps to 10 Mbps
Decrypt	.125 bps to 5 Mbps
Encoding	Selectable convolutional R=7, Rate 1/2
Size	.5.7" x 5.7" x 1.04"
Weight	1.5 lb. aluminum housing
	1.2 lb. magnesium housing (optional)
Power	4.2 Watts (max.)
Input Voltage	22 to 36 Volts
Surge	< 2 Amps for <300 msec
Operating Temperature	-24°C - +61°C
Vibration	.19g rms
Radiation Hardening	100 Krads (outside chassis)
Tempest	NACSIM 5100A Compliant
EMI	Mil-STD-461C/D (Tailored)

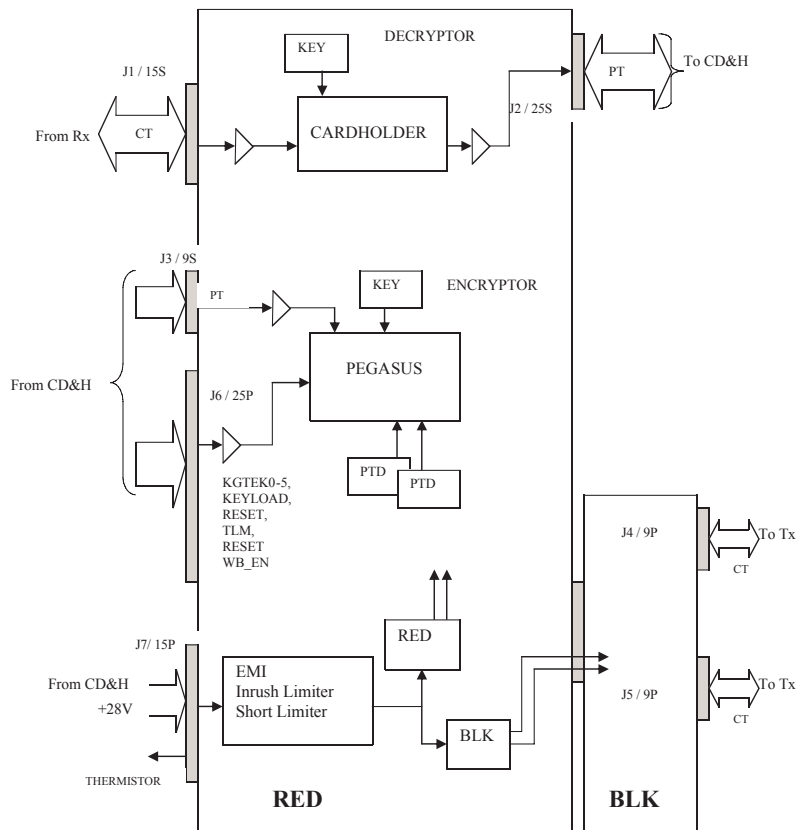


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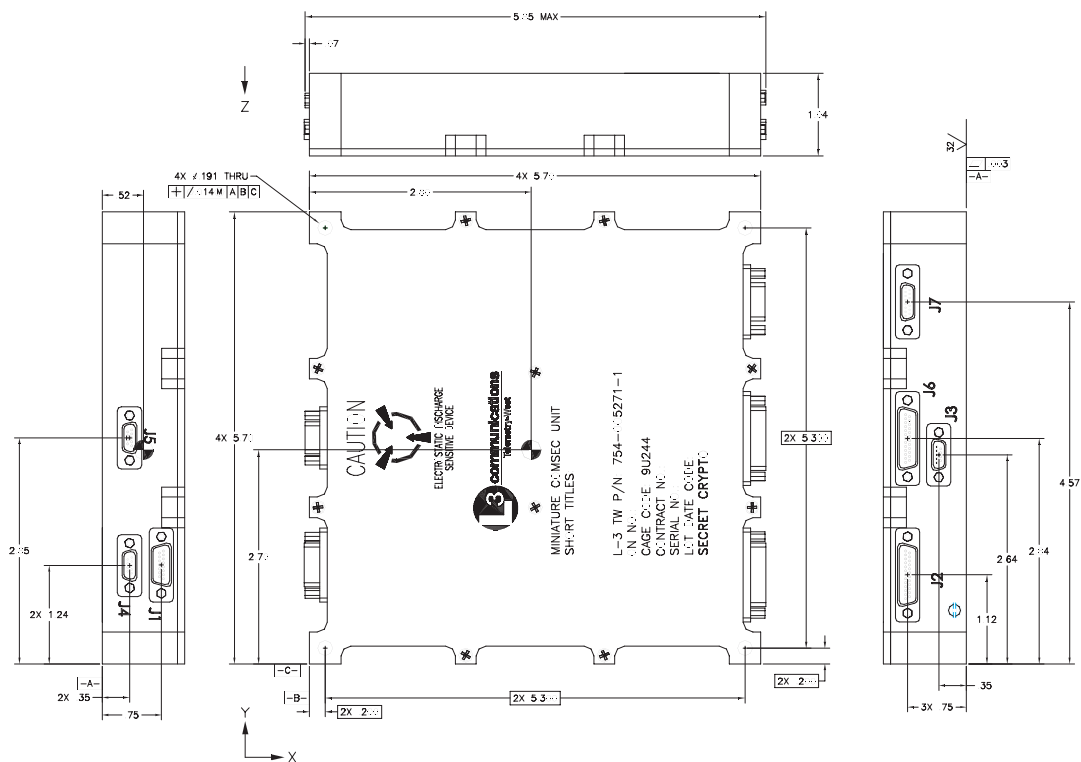
Telemetry-West

Excellence You Can Measure

MCU-110 Miniature COMSEC Unit



MCU-110 External Interfaces



MCU-110 Mechanical Outline Drawing

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