

MESP-100-2

Encryption Support Package

**CURTISS-
WRIGHT**

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Key Features

- Data encryption and decryption
- Customized for ARTM transmitters
- 100 kbps to 20 Mbps data rates
- Sealed for environmental capability
- Key management software and key load cabling available

Applications

- Flight test
- Missile test
- Secure recording

Overview

The MESP-100-2 is a three module set securing two channels of streaming telemetry data using commercial grade AES-256. These modules can be used in a stand-alone application or as part of a PCM encoder stack. The MESP provides a PCM clock and data electrical interface, a key fill interface, data isolation and a three ampere power isolation for separation between the encoder and a digital telemetry transmitter or recorder.

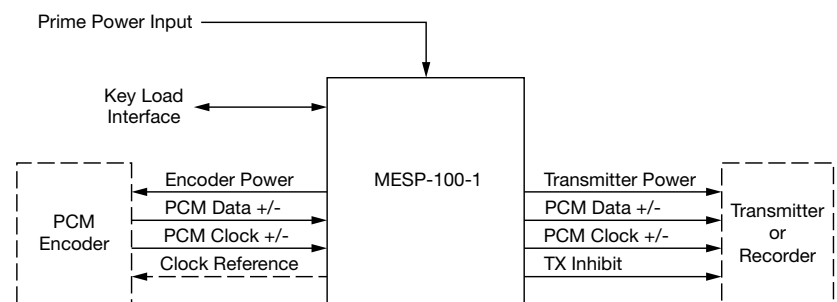


Figure 1: MESP-100-2 block diagram

TABLE 1 Connector Pin Assignments

J1 TRANSMITTER INTERFACE	J2 PRIME POWER INTERFACE	J3 KEY FILL INTERFACE	J4 ENCODER INTERFACE	J5 CT INTERFACE
1_Power +	1_+28V TX	1_RS422 IN+	1_TTL Clock RTN	1 Chassis Return
2_Power Gnd	2_+28V TX	2_RS422 IN-	2_TTL Data RTN	2 CT Clock IN
3_Spare	3_+28V MESP	3_COMMON GND	3_Spare	3 Signal Return
4_422 Clock N OUT	4_+28V MESP	4_ZEROALL IN	4_422 Clock N IN	4 CT Data IN
5_422 Data N OUT	5_CHASSIS	5_Spare	5_422 Data N IN	5 Chassis Return
6_Spare	6_+28V TX RTN	6_RS422 OUT+	6_Spare	6 Chassis Return
7_Spare	7_+28V TX RTN	7_RS422 OUT-	7_Spare	7 Signal Return
8_Spare	8_+28V MESP RTN	8_KEY +5V	8_Spare	8 Signal Return
9_Power +	9_+28V MESP RTN	9_KEY LOADED LED	9_TTL Clock OUT	9 Chassis Return
10_Power Gnd			10_TTL Data OUT	
11_Spare			11_Spare	
12_422 Clock P OUT			12_422 Clock P IN	
13_422 Data P OUT			13_422 Data P IN	
14_COMM Gnd			14_Spare	
15_Power ON/OFF			15_COMM GND	

Specifications

General

- Supply voltage: +28VDC nominal, 22-34VDC range
- Power consumption: 6W max
- Power filter rating: 3 amperes on the transmitter output
- RF/EMI: Per MIL-STD-461G
- Operating temperature: -40 to 85°C (base plate)
- Storage temperature: -54 to 95°C
- Random vibration: 15 Grms, 20 to 2,000 Hz, 10 minutes, any axis
- Acceleration: 25 g, indefinite duration, any axis
- Shock: 15g, half-sine, 11 mS, 6 shocks, any axis
- Humidity: 5% to 95% non-condensing
- Altitude: 0 to 70,000 feet

Dimensions and Mechanical

- Dimensions: 2.4 x 2.4 x 6.1" (61 x 61 x 155 mm)
- Weight: 16 ounces (0.45 kg) max
- Finish: Per MIL-STD-5541E

Clock and Data Input-Output Impedance

- RS-422, 120 Ohms, nominal
- Auto detect Clock rates
- Built in Test at power up

Ordering Information

[Contact Curtiss-Wright](#) for ordering information.

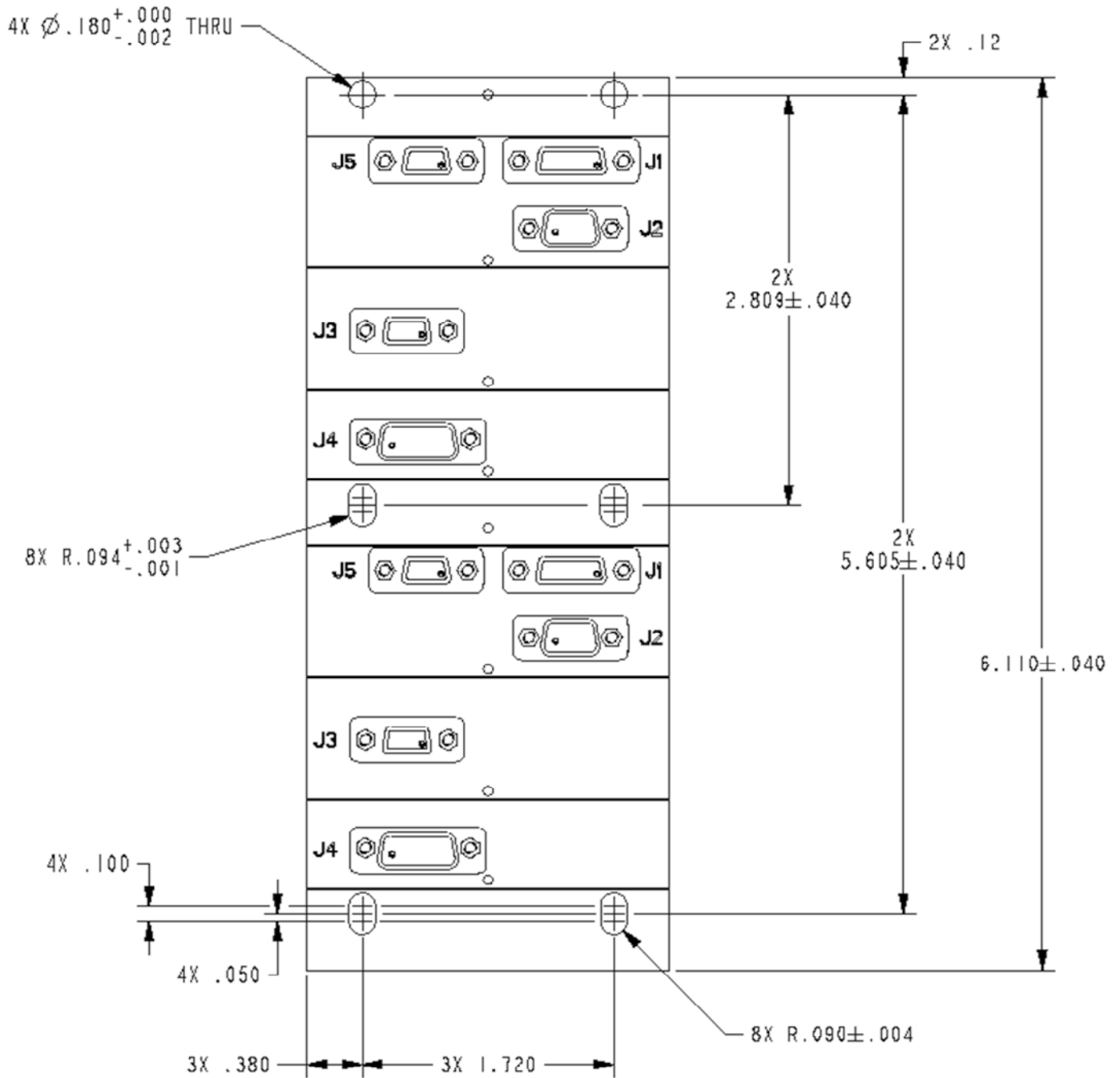


Figure 2: MESP-100-2 outline drawing