# D.T.MUX
# COD-R™

Reference# **DTMUX-COD-R**

## Miniature Data Acquisition/Recorder & Real Time transmitting system

The D.T.MUX COD-R is a miniature data acquisition system (until 128 channels) with very low latency real time transmitting.

Especially design for high stress environment and destructive test, like impact test system or UAV, when integration space constraints are to maximum.

The unit is composed from 1 to 6 user selectable acquisition module following chassis dimension. Modules can be chosen following needs to acquire analog or digital data.

### Applications

- Real time Transmission
- Very low latency data acquisition
- Harsh environment/ High velocity / Impact Test
- Low volume integration

This is an all-in-one solution, the base system includes a transmitter (Band S, 1 or 5 Watt(s)) and permit transmit data in real time to a ground station or another system (IRIG 106 Chapter 4 standard). In option an internal solid-state memory until 128GB and replaceable Internal one-shot battery power energy until 20 minutes can be available.

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# D.T.MUX™
### RECORDER SYSTEM
## TECHNOLOGY

## MECHANICAL

| | Specification | Remark |
|---|---|---|
| **Size (mm)** | 101 x 68 x 76.5 | 6 Modules **(7U)** |
| | 79.8 x 68 x 76.5 | 4 Modules **(5U)** |
| | 48 x 68 x 76.5 | 1 Module **(2U)** |
| **Weight** | ≈ 650g | 6 Modules |
| | ≈ 540g | 4 Modules |
| | ≈ 380g | 1 Module |
| **Connectors** | MIL-DTL-32139 | Nano-D Serie |
| | SMA | Antenna |
| **Mounting** | 12x M3 | Customizable |

**7U**  **5U**  **2U**
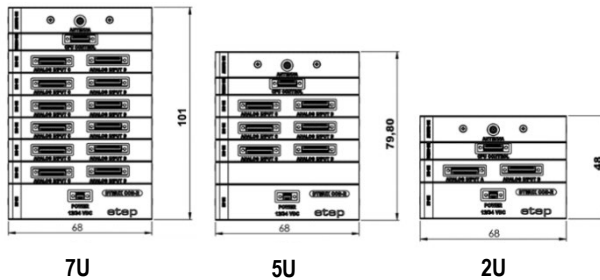
## ELECTRICAL

| | |
|---|---|
| **Input Voltage** | 28Vdc (12 to 34Vdc) |
| **Power consumption** | ≈ 12 to 25 watts (28Vdc) |
| **Power Interruption** | ≈ 60 to 200ms |
| **Standard** | MIL-STD-704F |

## ENVIRONMENTAL

| | Specification | Remark |
|---|---|---|
| **Temperature** | -40°C to 65°C | Operating |
| | -55°C to 90°C | Storage |
| **Cooling** | Passive | Convection |
| **Humidity** | 95% | Non-Cond |
| **Vibration** | 5Hz to 2KHz | 6.29 g RMS |
| **Shocks** | 100g 11ms | Operating |
| **Acceleration** | > 100g linear 3 axis | Operating |
| **Altitude** | + 60,000 ft | Operating |
| **MTBF** | > 90,000 hours | Computed |
| **EMI** | MIL-STD-461 | Rev F |

## STANDARD FUNCTIONALITY

| | Specification |
|---|---|
| **Transmitter** | S-Band PCM/FM Until 14Mbps (Customizable) |
| **Power** | 1W or 5W* (Only with 5U & 7U) |
| **Telemetry** | PCM Irig 106 Chapter 4 standard |
| **Time synch** | Irig B |
| **Recording** | IRIG 106 Chapter 10 / DTMUX format |
| **COM port** | RS-232 Configuration/Maintenance |
| **Status** | Trough PCM or RS-232 |

## COD-R PART NUMBER COMPOSITION

**Transmitter power**
1 Watt = **1W**
5 Watts = **5W**

**Internal Battery [OPTION**]**
**B** = Internal Battery
**0** = None

**COD-R-5U-1W-2G-B**

**Chassis dimension**
1 user Module = **2U**
4 user Modules = **5U**
6 user Modules = **7U**

**Internal Memory [OPTION**]**
**16G** = 16 GBytes
**32G** = 32 GBytes
**64G** = 64 GBytes
**128G** = 128 GBytes
**0** = None
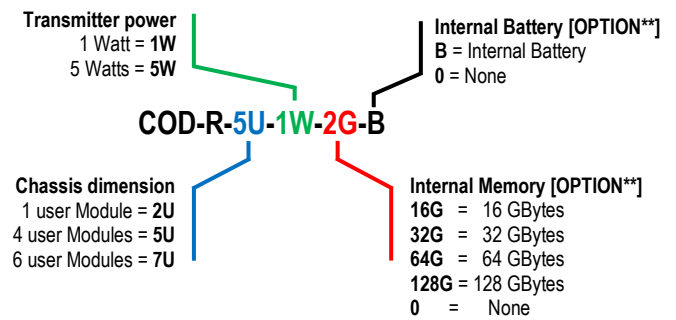
*  *5W Transmitter takes 2 slots on available slots*

**OPTION - Internal Memory**
Rugged Wide temperature SSD from 16GB to 128GB internal memory

**OPTION - Crash Protected Memory**
ED-155 Standard Crash Protected memory

**OPTION - Internal One-shot Battery**
Replaceable Internal Independent Power Supply option (battery) is available to sustain 10 to 25 minutes of power. Possibility to switch from external internal power source by discrete command.

## LIST OF AVAILABLES MODULES

*Following Analog/Digital module are available on the shelf.*

| ANALOG TYPE | CODE | Channels | Device |
|---|---|---|---|
| **Analog Voltage** | VOLT | **8 / 16** | |
| **Current** | AMPR | **8 / 16** | |
| **ICP** | ICP | **6 / 9** | **COD** |
| **Thermocouple** | THER | **4 / 8** | |
| **Strain Gauge** | GAGE | **4 / 8** | |
| **Piezo** | PIEZ | **4 / 8** | |

*Example PN: **ICP-4-COD***
*Customized modules available*

| DIGITAL TYPE | CODE | Channels | Device |
|---|---|---|---|
| **PCM** | PCM | **2 / 4** | |
| **RS 232/422** | RS | **2 / 4 / 8** | |
| **Freq counter** | FREQ | **2 / 4** | |
| **DISCRETE** | DS | **4 / 8 / 16** | |
| **CAN bus** | CAN | **2 / 4** | **COD** |
| **ARINC 429** | A429 | **2 / 4 / 8** | |
| **MIL-BUS 1553** | 1553 | **1R** | |
| **VIDEO SD** | VSD | **1** | |
| **VIDEO HD** (1080i) | VHD | **1** | |

*Example PN: **RS-4-COD***
*Customized modules available*