# CR-128 COMMAND RECEIVER

An efficient isolated power supply is used to provide the RF/IF and decoder assemblies greater than 1 MΩ of isolation between primary power and chassis. A simple mechanical packaging design that consists of a single chassis and one external cover results in an overall volume of 3.7 cubic inches. Additionally, the aluminum-alloy chassis provides superior strength-to-weight ratio with excellent thermal and electrical conductivity. The mechanical package is designed and environmentally sealed to survive defined missile and unmanned aerial vehicle environments without degradation in electrical performance. Each receiver is field tunable from 420 MHz to 450 MHz. Frequency control is performed through the digital control of phase-locked synthesizers which are programmable in 100 kHz steps.

| RECEIVER | |
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| **Physical** | |
| Volume | 3.3” L x 2.2” W x 0.515” H (3.7 $in^3$ total) |
| Weight | 4.0 oz max (113 grams) |
| **Power Requirements** | |
| Input Voltage | +22 VDC to +36 VDC |
| Input Power | 1.8 W typical |
| **Connectors** | |
| Data I/O | M83513/04 (25-pin micro-miniature D) |
| RF Input | SMA female (MIL-C-39012/60) |
| Fill I/O | 6-pin micro-strip plug (DS-102 format) |

## FEATURES

The unit is addressable for simultaneous missions. An embedded triple DES decryption-controlled cryptographic item prevents inadvertent terminations and has both serial and discrete telemetry outputs. Reconfigurability makes for easy sparing; spare receivers are not required for each configuration. Reed-Solomon decoding provides error correction and protection against burst errors, including an enhanced position location reporting system. As a drop-in replacement for legacy receivers, the user output allows for vehicle-control functions simultaneous with command functions.

## EXPERT SUPPORT

The CR-128 is designed, built, assembled and tested all within one facility and is serviced and supported by engineering professionals with decades of spaceflight design experience. Every CR-128 delivered is accompanied by domain expertise in parts, materials, radiation anaylsis, mechanical engineering, power supply design, digital signal processing, radio frequency design and manufacturing engineering. For most applications existing data items can be provided for review, reducing the analysis and testing required.





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