

# TECHNICAL SPECIFICATIONS

FREQUENCY RANGES	136-174, 380-520, 768-869, 896-960 MHz
CHANNEL CAPACITY	32
CHANNEL SPACING	12.5/15/25/30 kHz
PRIMARY INPUT POWER	13.8 VDC
DIMENSIONS	21" H x 19" W x 20" D
WEIGHT	18 lbs
SIGNALLING OPTIONS	CTCSS, NAC, TGID
INTERFACES	4-Wire, P25 Digital FSI, ISSI, CSSI options available
<b>TRANSMITTER</b>	
RF OUTPUT POWER	0.5W-8W EXCITER. 30W, 60-110W
MAX DUTY CYCLE	100%
TRANSMITTER CURRENT DRAIN	< 2.5A
FREQUENCY STABILITY -30°C TO 60°C (PPM)	VHF: 1ppm UHF: 0.5ppm 700/800/900: 0.1ppm
MODULATION	ANALOG FM, C4FM
SPURIOUS/HARMONICS	-70 dBc
FM HUM AND NOISE	> 38 dB
AUDIO DISTORTION	VHF/UHF: <2% 700/800/900: <3%
<b>RECEIVER</b>	
RX CLASS A CURRENT DRAIN	≤ 250 mA
RX CLASS B CURRENT DRAIN	≤ 115 mA
RX FREQUENCY STABILITY @ -30° TO 60° C (PPM)	VHF: ± 1ppm UHF: ± 0.5ppm 700/800/900: ± 0.1ppm
SENSITIVITY	< -118 dBm
SELECTIVITY	>75 dB
SPURIOUS/IMAGE REJECTION	> 90 dB
INTERMODULATION	> 80 dB
SQUELCH SENSITIVITY	-121 to -115 dBm
AUDIO RESPONSE	+1, -3 dB
AUDIO DISTORTION	2%

# THE CODAN COMMUNICATIONS

## PROCESS

Solving challenging requirements is what we do best



### ASSESS

Our technical consultants will conduct a detailed on-the-ground assessment of:

- Human needs
- Operational environment
- Opportunities and challenges
- Cultural context
- Scenario planning



### DESIGN

Our field service team will then design a custom solution for those challenges, using the right hardware and software from Codan or one of our technology partners.



### DEPLOY

Our specialist logistics team gets the hardware and the resources to wherever you are, getting your system up and running fast.



### TRAIN

We'll train operators and communications staff on how to use the system – which will be a short process, thanks to our easy-to-use interfaces and interoperability.



### SUPPORT

We're available to be deployed within 24 hours for any support required. And we're always on hand for any advice you require.

# MT-4E SERIES



**CODAN** | BE HEARD  
COMMUNICATIONS

CODANCOMMS.COM

12-30075-EN Issue 1

## CONTACT US

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# CHALLENGING REQUIREMENTS? NO PROBLEM

Codan's MT-4E Series analog and P25 infrastructure platform continues to offer industry-leading reliability, flexibility and performance.

Features:

- Environmentally and Mechanically Robust
- Low-Current Operation
- Modular and Customizable
- Flexible configuration and interface paths
- Standards based, vendor-neutral operation

Since the launch of the Daniels Electronics Ltd. MT-4E Series platform over a decade ago to address the needs of a growing P25 Digital market, the application of the MT-4E product has grown to creatively solve radio communications infrastructure challenges from the most simple to the most complex.

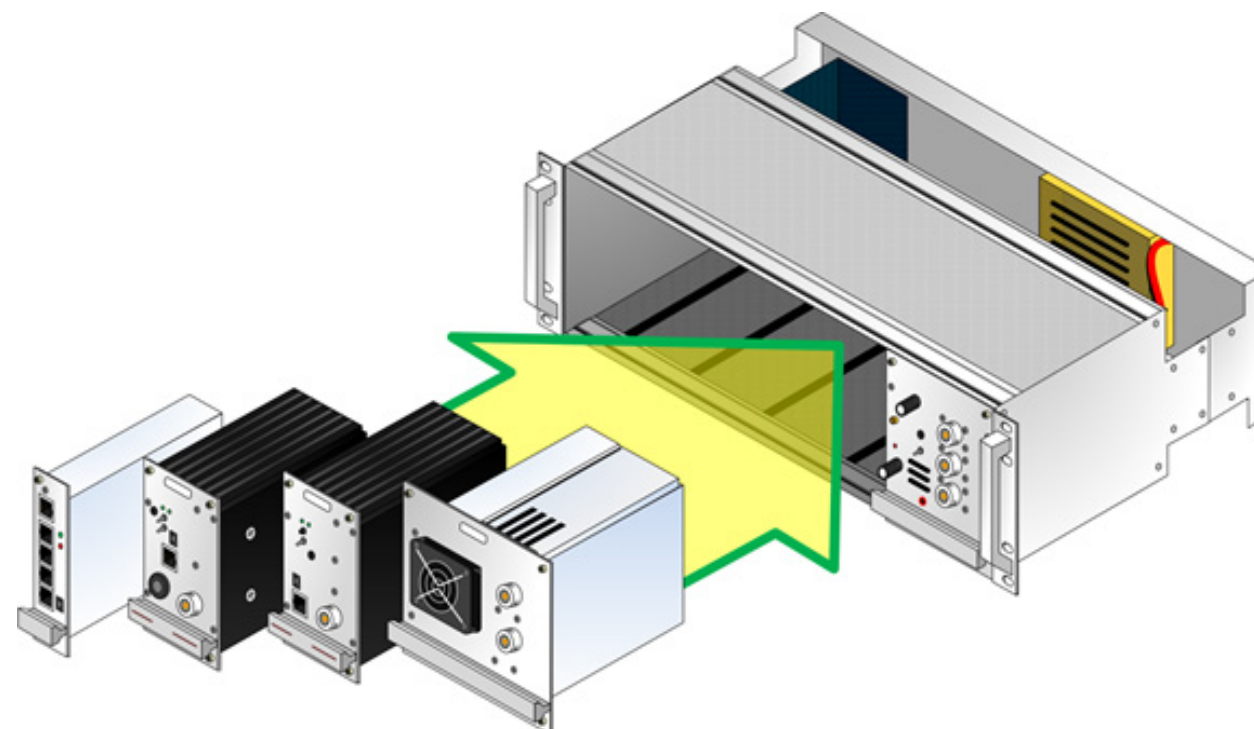
The MT-4E Series is the foundation for thousands of radio sites, either as standalone repeaters/base stations, or providing coverage into the most challenging environments. From remote mountaintop base stations and repeaters, to voting and simulcast solutions, to trunked radio systems, thousands of users across the globe trust their business and their safety to the MT-4E's seamless and problem-free operation.

## HOW THE MT-4E PLATFORM WORKS

The MT-4E Series is a modular system based on a 19 inch subrack platform consisting of a signal routing motherboard and 3RU rack mounting chassis. Hot-swap capable RF and control modules are arranged in the subrack housing to create a multitude of different repeater and base station system configurations to suit any communications need.

- RF modules are available in UHF, VHF, 700/800/9000 MHz bands. Available in analog or P25 operation.
- Control modules are added to an MT-4E system to provide various additional functionality, including:
  - Flexible external interfaces into an MT-4E system including RoIP via the APCO P25 DFSI open standard, paging controller, and 2/4-Wire E&M.
  - Signal routing and steering to create any combination of drop-link, multilink or crossband system.
  - External discipline of the transmitter for increased stability or for modulation of digital paging signals.
- A selection of amplifier products can be added to increase the built in 8W exciter power from 30W up to 100W, depending on application power and rack spacing requirements.
- The subrack chassis has an optional wrap-around panel with a built-in AC/DC power supply, and provides a terminal block that gives access to pertinent audio and control signaling for interface into external controllers.
- An optional 1U remote site monitoring option provides live site data and logging capabilities for predictive trending and alarm/trigger notification.

The MT-4E Receiver and Transmitter modules, as well as select control interfaces, are supported by easy-to-use software applications that allow for easy setup, configuration and testing. All MT-4E firmware and software updates are available on the Codan website at no additional cost.



## FIXED APPLICATIONS

Codan's (Daniels Electronics Ltd.) MT-4E Series have been the industry benchmark for low power environments, making it the gold standard for solar powered repeater applications. Codan continues to be the top choice for critical systems operating in hard-to-access locations. Listed below are some of the typical fixed applications for MT-4E infrastructure:

- Remote Solar Repeaters and Base Stations
- Commercially Powered Repeaters and Base Stations
- RoIP enabled Base Stations and Networks of Repeaters
- Crossband Repeaters, Drop-Link Repeaters and custom Multi-link solutions

The flexible nature of the MT-4E platform allows for simple integration with external controllers, which has allowed the applications of this dependable product to expand for beyond simple remote, solar installations. Codan is proud to offer the following advanced-feature solutions using the MT-4E product as a foundation:

- P25 Digital and Analog Conventional networking of LMR infrastructure
- P25 Digital and Analog Conventional Voting and Simulcast.
- Multi-Site P25 Digital Trunking

Both Conventional and Trunked solutions offer the following advantages:

- APCO P25 Compliant, vendor-neutral solution
- Distributed network control and fallback modes for maximum redundancy
- Scalability without Tiered Pricing
- Fully IP Based Core

## TRANSPORTABLE APPLICATIONS

The durable, low-current benefits of the MT-4E Series provide the foundation for our line of transportable products that address a variety of applications, from harsh environments, to tactical deployments. Unlike many products available in the LMR industry, the Codan MT-4E based transportable solutions are among the only offerings that use infrastructure-grade equipment; this means greater reliability, and broader functionality, particularly in P25 Digital applications.