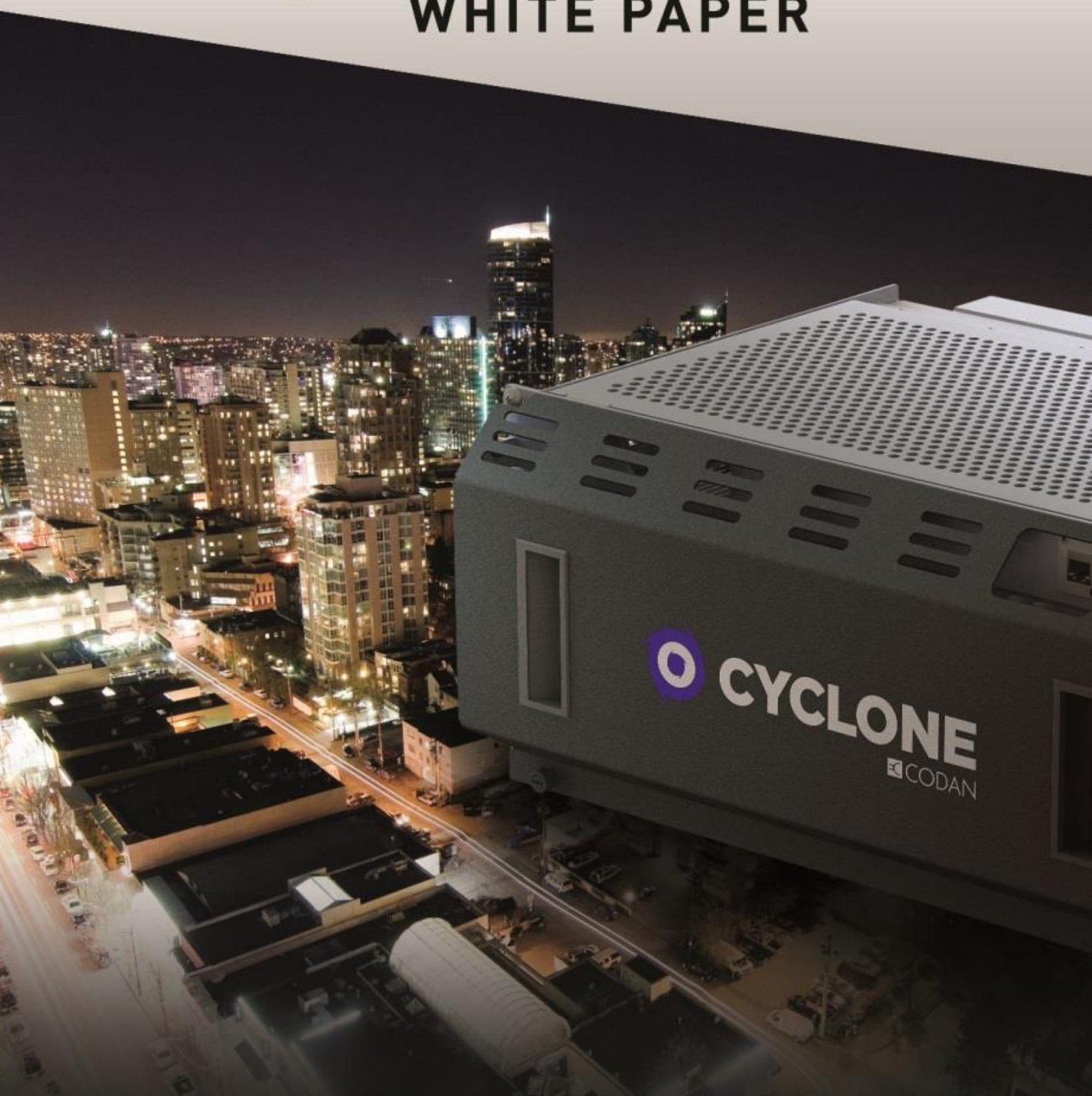




CYCLONE

WHITE PAPER



DISCOVER THE CYCLONE

The Codan Cyclone

The Cyclone repeater/base station provides a replacement for the Motorola Quantar® and other legacy equipment frequently installed in land mobile radio communications systems. By integrating the RIC-M technology from Avtec, the Cyclone can be used to leverage the existing v.24 interface that is widely used within the industry.

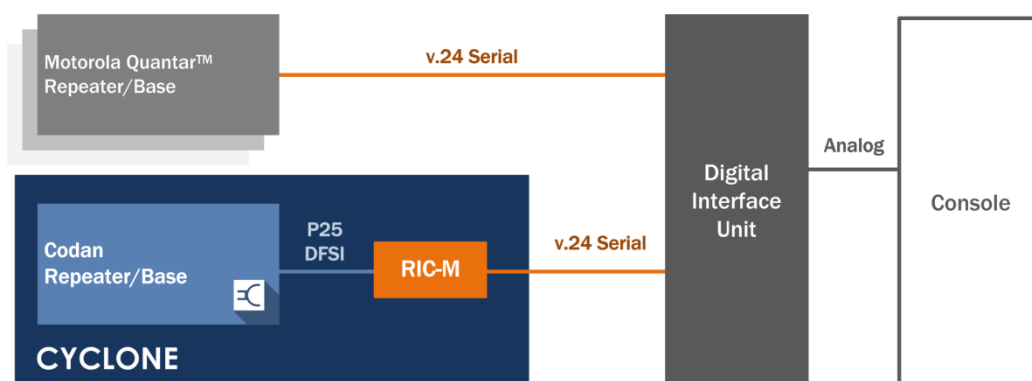
A Much Needed Alternative

Many radio sites are equipped with aging and obsoleted legacy repeaters, including the Motorola Quantar®, which use non-P25 Standard interfaces. Production of these legacy repeaters ceased several years ago, meaning that parts for critical components became a challenge to obtain. The combination of non-P25 Standard interfaces and lack of spare parts available to fix existing equipment has limited the options of existing Motorola Quantar users. Ultimately, users are faced with the need to replace the existing station and until now the only option was to use a next-generation repeater from the same vendor at a significantly higher price.

Fortunately, Codan Radio now provides a much needed alternative for those who face the difficult situation of an aging repeater system: **replace your obsolete legacy equipment with the elegant and cost effective Codan Cyclone.**

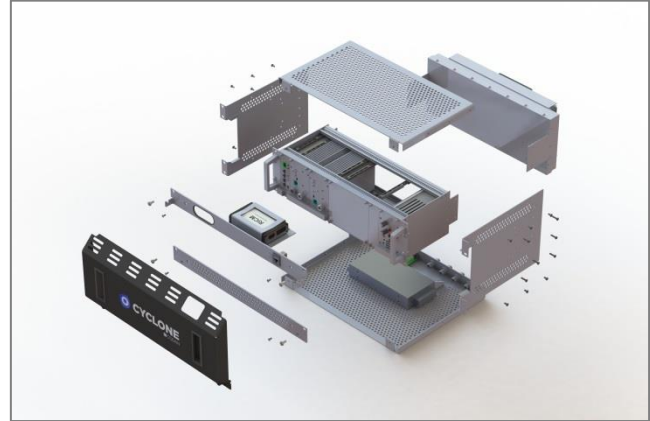
How the Codan Cyclone Works

The Codan Cyclone is a repeater/base station that can replace the Motorola Quantar® and operate with a v.24 interface. An integrated Avtec RIC-M module provides the v.24 interface into the Cyclone by converting an existing v.24 connection to the APCO™ P25 DFSI connection used by the Codan transceiver equipment. If a v.24 interface is not used, the Cyclone has an analog E&M circuit interface that can be used for a simple audio and control interface. Once installed and operational, the Codan Cyclone works seamlessly with the existing consoles, interface units, and other legacy base/repeater units.



A Legend at Heart

The core of Codan Cyclone consists of the robust MT-4E Series modular RF repeater that has made Codan/Daniels Electronics synonymous with reliability in the LMR industry. The MT-4E repeater is equipped with the Universal Interface Card (UIC) that makes all repeater/base station functions available via a non-proprietary APCO™ P25 DFSI Ethernet interface; this is converted to/from v.24 (or E&M) via the integrated Avtec RIC-M module.

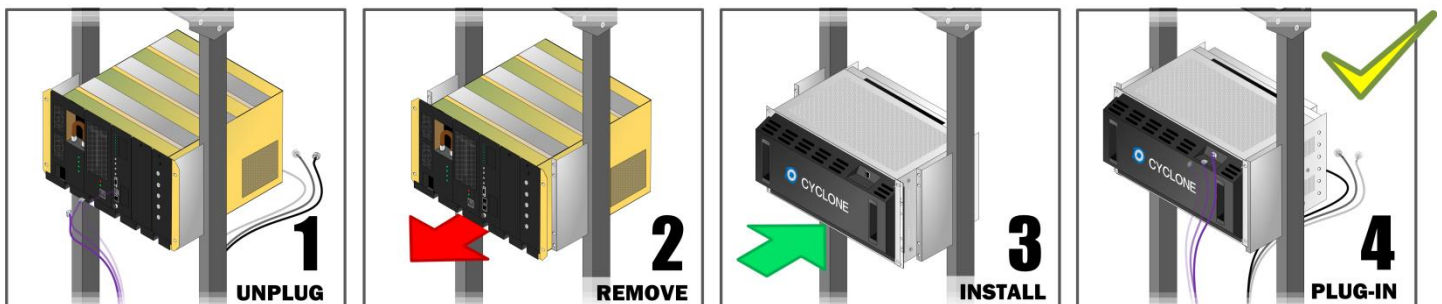


Built to Make Replacement Easy

The Codan Cyclone has been carefully designed to make the replacement of legacy equipment, including the Motorola Quantar®, as easy as possible:

- The Cyclone unit combines the MT-4E equipment, RIC-M module, AC/DC (or DC/DC) power supply and RF power amplifier in a single 19 inch rack-mountable enclosure to become an all-in-one replacement unit.
- The rack unit footprint of the Cyclone is approximately the same as the Motorola Quantar®, and all of the RF and interface connections are in the same general location on the unit.
- Each Cyclone ships pre-configured to the customer's frequency, configuration and networking specifications. Further configuration and customization is easily achieved through the RIC-M's simple web-based interface.

Replacing a Motorola Quantar® with a Codan Cyclone is simply a matter of disconnecting and removing the old unit, and then connecting the Cyclone in its place. This means that an obsolete station can be replaced with an operation that takes just a few minutes to complete.



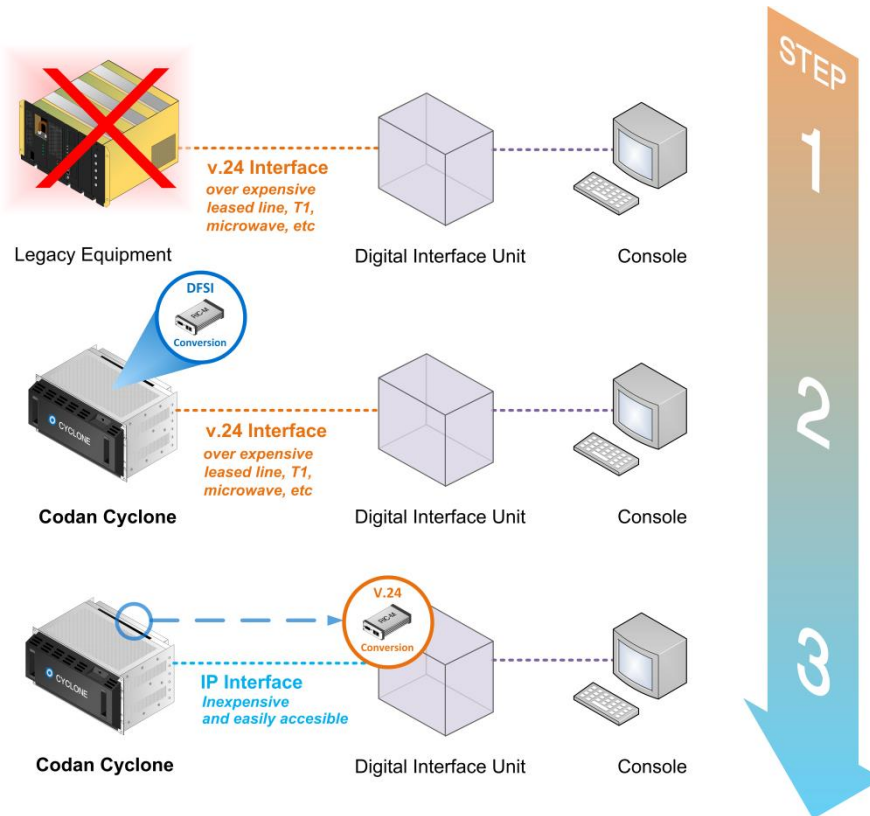
A Smart Transition Plan

Legacy repeaters/base stations, including the Motorola Quantar® can be replaced one by one, making for an easy, gradual transition that keeps your existing communications system intact and operational while older equipment is phased-out. Replacing legacy equipment with Codan Cyclone units is a cost-effective and non-disruptive alternative to complete system replacement.

Once all stations have transitioned, you have the option of maintaining your existing Non-P25 Standard v.24 or E&M backhaul network, or switching to an open-standard, non-proprietary APCO™ P25 Digital Fixed Station Interface (DFSI) backhaul network; each Cyclone has the built-in ability to operate using either interface.

PLAN

- ✓ Gradually replace aging, unsupported equipment with reliable new equipment.
- ✓ Transition to an open standard network and free yourself from the restrictions of proprietary equipment.



Transitioning to a P25 DFSI compliant IP backhaul eliminates the need for expensive T1 circuits or leased lines, since these are the only viable backhaul technologies for v.24 and wireline interfaces. IP is inexpensive and increasingly available. The backhaul itself can transition gradually as well; leased lines can continue to be used initially, but when the majority of the stations in the network are replaced by P25 DFSI compliant Cyclone repeaters, the integrated RIC-M units can be physically moved to the central hub, and an IP network connection can be established in place of the leased lines.

The Codan Difference

Replacing your Motorola Quantar® with the Codan Cyclone is not only simple and cost-effective, but has the same numerous benefits that make Codan/Daniels Electronics MT-4E Series a favorite among radio experts in the land mobile communications industry:

- Modularity and customizability allows for convenient upgrade and expansion paths to a wide range of analog and P25 Digital system configurations
- Extremely low power consumption
- Robust temperature performance
- Ease of interoperability and full utilization of open standard
- Industry leading customer service and support
- Dependability from a designer and manufacturer with over 60 years experience in the LMR industry

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