TAIT DMR
CONVENTIONAL DMR
SOLUTIONS

BUSINESS-CRITICAL COMMUNICATIONS

tait
communications

BE SELECTIVE.
PERFORMANCE MATTERS.

FUTURE PROOF YOUR BUSINESS-CRITICAL COMMUNICATIONS

At Tait, we place our LMR knowledge at the center of our Unifying Critical Communications strategy, and partner with experts in their fields to deliver the best outcomes for our clients.
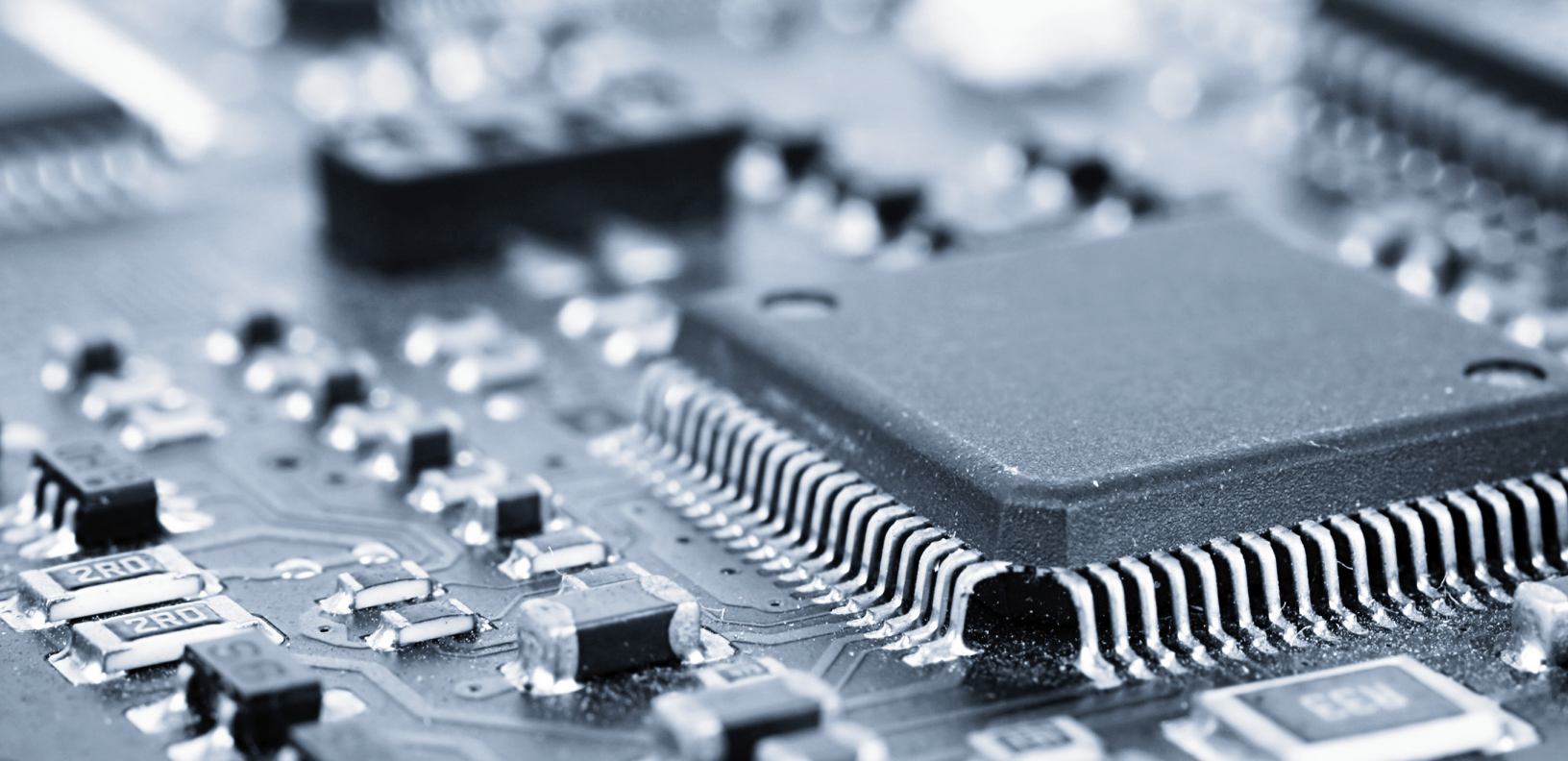
Utilities, Oil and Gas, Mining, Transportation and other organizations with communication needs are committed to supporting their employees with the best communications technologies. At Tait, we deliver business-critical communications solutions and ensure that our clients get optimal performance from their investments. From a single DMR site to a wide-area network, Tait will integrate all your technologies, including cellular and smart devices, into a core DMR solution to give you seamless communication, location awareness, and workforce management.

The Tait DMR TB9300 and TB7300 base stations support DMR Tier 2 and meet the DMR standard for full interoperability. Tait offers a unique DMR ecosystem with industry leading software solutions, a large choice of partners for dispatch consoles, media recorders, and other tailored services.

Tait has a reputation for building tough products and resilient networks. We design, manufacture, deploy and support each client solution from end-to-end. To ensure each system succeeds, our global services team works with your organization to deliver an upgrade that is seamless, on time, and within budget.

Whatever your goals, your solution should be defined by your objectives. Insisting on open standards will ensure choice and protect your investment over the life of your communications assets.

Talk to us about creating a safer, simpler, smarter, DMR business-critical communications future.

DMR
DIGITAL MOBILE RADIO ASSOCIATION

■ Performance Matters.

RF Performance - Base Stations

The TB9300 and TB7300 offer exceptional receiver performance and exceed or match all other DMR Tier 2 base stations on the market for sensitivity, selectivity, and intermodulation performance. This means that the user gets extended talk-in (uplink) range as well as significantly increased resistance to interference. This is vital on busy radio sites and provides a better user experience.

Tait Quality and Value

The Tait DMR Tier 2 product line benefits from high quality design and offers exceptional value when compared to alternatives. We design, manufacture, and quality-control all our products so we can confidently deliver the highest quality of materials and workmanship in the industry. Tait portables are Tough, Tait mobiles are adaptable and Tait base stations have exceptional performance.

Tait conventional DMR enables you to capitalize on the investment and knowledge we have gained through the development of our DMR trunking solutions. The Tait DMR conventional offering utilizes the same high quality portables, mobiles and base station radio product lines that Tait is renowned for. Tait are radio people and have been in the industry for over 47 years.

Quad-mode terminals

The Tait 9300 terminals are capable of four operating modes—analog conventional, MPT 1327 trunking, DMR Tier 2 conventional, and DMR Tier 3 supported by a single firmware version. This quad-mode capability allows migrations between analog and digital.

Flexible dual-mode base stations/repeaters

The Tait terminal fleet is now also supported by dual mode bases stations/repeaters – DMR Tier 2 conventional and DMR Tier 3 trunking. Tait base stations also support analog mode in a repeater format.

Partnering for extended functionality

All of our DMR standard product lines are integrated with the most appropriate competitive market partnering solutions to deliver the best results for your critical communications network. Partner offerings help deliver solutions that protect, secure and assist mobile-based organizations.

BE SELECTIVE.
PERFORMANCE MATTERS.

Resilient and Reliable

Built to Last

The TB9300 and TB7300 base stations have been built to cope with a wide range of environmental and physical duress. Our base stations and repeaters are often put in remote locations where the enclosure does not provide a high degree of protection. They may endure through some punishing treatment when they are delivered to the site. Tait has allowed for these situations in their design.

Reliable Terminals

Tait Tough terminals are built for reliability. Being able to trust in these units is essential in business-critical environments. Tait design for extended life in the field without the need for regular refurbishment due to mechanical failures.

Fault Tolerant Network

The Tait conventional DMR multi-site network is designed to deliver the maximum system availability. Its architecture gives it a high degree of tolerance to failure. If a network element fails, an alarm can be raised on Tait EnableMonitor. As always, it is wise to consider any failure scenario in advance of an event. This is especially important where health and safety issues may arise from partial or total loss of the radio communications network.

For example, if the site node communications fails, the site that has been isolated from the node can continue to function on a stand alone basis. Consideration needs to be given to how to set up the radio terminals to cope with this in advance.

Tait Tough

Tait customers have tough jobs. Utility, Oil, Gas, Mining and Transport industries all place challenges on the users and the equipment that they use. A critical safety tool is a reliable communications solution. The most exposed part of this solution is the portable radio.

That is why Tait engineered the TP9300 radio to survive in some of the most hostile conditions. The TP9300 is one of the toughest radios ever made.

Our compact radios have been tested and proven to survive. With Tait, you can trust that your people can communicate whenever they need to.

The Drop Test

Tait dropped a portable radio from the height of 6 feet onto concrete – that's 50% higher than the military requirement. The portable was dropped from 26 different angles, over and over again to ensure the durability of everything from the battery and antenna fittings to the internal componentry and the LCD screen. The portable survived each time.

Water Immersion Test

Tait TP9300 portables are IP67 water and dust protection-certified to survive with no leaks under 1 metre of water for 30 minutes. At Tait, we go even further and trust our radios at twice the depth for longer time intervals.

Build Quality

Every component is selected and tested so the radio can endure harder knocks and more extreme temperatures. The radios are assembled and tested in our own factory, delivering maximum quality where it matters most.

Tough Family

Tait stands behind the quality and ruggedness of all our products, not just our portables. Our mobiles and base stations have also been designed and proven to withstand extreme temperatures, hard knocks and the wear and tear of everyday use in the demanding environments that our clients work in.

TAIT CONVENTIONAL DMR
PRODUCTS

Tait Tough DMR Portables

TP9300 DMR Portable: Rugged, feature-rich and business-critical communications grade

The TP9300 is one of the smallest and lightest critical-communications-grade portable radios on the market. TP9300s are designed tough, for rugged environments and uncompromised worker safety.

Key features:

- VHF, UHF, 800MHz, and 900MHz frequency bands.
- Quad-mode operation (Analog Conventional, MPT1327, DMR Conventional/Tier 2, DMR Trunking/Tier 3).
- Lithium-ion battery for longer performance.
- Surpassed MIL-Standards for durability and is IP67 compliant.
- Programmable emergency key for easy access in an emergency.
- Intrinsically Safe as an option.
- Audible channel annunciation, and other functions, keep first first responder eyes on the mission.

Models:

The TP9300 comes in a range of models that deliver different user interface experiences or meet specific challenges such as Intrinsically safe radios. Three models are described as follows:

TP9360

This portable supports a wide range of features and has both a user display and a 16 key keypad.

It is designed for use in an environment where there will be regular interaction between a user and the radio. The keypad also allows the support or dialling or texting. A robust 4 line display allows access to a wide range of services and operational parameters. The key features of this portable are:

- Integrated GPS for location awareness applications
- Encryption capable for voice security
- Pre-defined status messages
- Text message capability
- Channel capacity up to 2000

TP9310

The TP9310 is a conventional portable designed to offer a more straightforward user interface. This unit has no display or keypad and is often preferred in applications where only a small number of channel or groups are used and where dirt and grime make the use of a display or keypad impractical. The key features of this portable are:

- 16 way selector for channel or talk-group
- Internal GPS option for location awareness

TP9361

The TP9361 is a multi-mode intrinsically safe portable. This includes analog, MPT1327, conventional DMR Tier 2 and Trunked DMR Tier 3. This radio is available in blue casing to allow its easy identification as an IS radio. A number of regional compliance options are available.

Tait Tough DMR Mobiles

TM9300 DMR Mobile: Flexible, reliable and business-critical communications grade

A high performing critical-communications-grade mobile, designed to deliver quality audio and intuitive operation for the many challenges that first responders face.

With multiple configuration options, programmable function keys, and software licenses available for additional features, the TM9300 is a future-proof communications choice.

Key features:

- VHF, UHF, 800MHz, and 900MHz frequency bands.
- Quad-mode operation (Analog Conventional, MPT1327, DMR Conventional/Tier 2, DMR Trunking/Tier 3).
- Interoperability in accordance with DMR standards.
- Encryption, voice and data, simulcast support and pre-set status messages.
- Options slot for flexible expansion capacity.
- IP54 rating and water-resistant control head that exceeds MIL-STD-810G.

Models

The TM9300 comes in a range of models that deliver different user interface experiences or meet specific challenges such as custom interfaces or connectivity. Three models are described in more detail below:

TM9355

This mobile is the top of the range and supports either a local or remote control head. When used with the standard control-head and keypad microphone it benefits from a large 4 line display. Alternatively a smaller hand held controller microphone can be deployed which simplifies installation in the current vehicle environment.

The keypads also allow the support for dialling or texting. A display on either of the control head types allow access to a wide range of services and operational parameters. As with the other TM9300 mobiles a large integration area

and multiple connectivity options make this radio highly adaptable. The key features of this mobile are:

- Encryption capable for voice security
- Pre-defined status messages
- Text message capability
- Channel capacity up to 2000
- Optional GPS receiver for location awareness
- Tait UnifyVehicle candidate (increased connectivity and application option)

TM9315

The TM9315 is a conventional mobile (analog and DMR) designed to offer a more limited user interface with no keypad access and a digital channel number display. This unit is often preferred in applications where only a small number of channel or groups are used or where there is no value in having a keypad. The key features of this mobile are:

- 99 channel or talk-group selection
- Encryption capable for voice security
- Optional GPS receiver for location awareness

TM9395

The TM9395 is a multi-mode mobile that is designed to offer a data or integration platform. It has no control head but can be programmed via its front panel port. It also supports voice via the auxiliary interface. The key features of this mobile are:

- Integration or development platform
- Data terminal
- Optional GPS receiver for location updates
- CCDI control protocol
- Basic single channel voice radio (with optional speaker or handset)

PRODUCTS

WE DESIGN, DEPLOY AND SUPPORT END-TO-END DMR NETWORKS

Tait Tough DMR Base Stations

The Cornerstone of a business-critical Tait DMR System.

Designed for critical operations, the Tait second-generation, native IP base station is intelligent and reliable to mitigate network outages.

Genuine, DMR open-standards compliance provides interoperability with other agencies and greater choice for sourving mission-critical communicaitons.

Both the TB9300 and TB7300 have exceptional receiver performance. In four particular and critical areas they excel. This includes Sensitivity, Selectivity, Intermodulation suppression and blocking resistance. This combination delivers great range and one of the highest levels of protection from interference or overloading.

These base stations deliver some powerful diagnostics information as well as online tools to help identify issues. Save yourself maintenance trips by identifying and even solving many issues from your desk.

The TB9300 and TB7300 are two of the toughest base stations in the market, this has been helped by our listening to customer feedback and responding to it.

Key features:

- DMR Tier 2 or Tier 3, software upgradeable
- 6.25kHz DMR TDMA Conventional or Trunked operation.
- VHF, UHF, 800MHz, and 900MHz frequency band on TB9300
- VHF and UHF (400-470MHz) on TB7300
- Multiple transmit power configurations: Single or Dual 50W, Single 100W (50W VHF and 40W UHF TB7300 only*).
- Extensive remote management and monitoring options (software upgradable, WUI, NTP, SNMP).
- In-built diagnostics with detailed alarm monitoring and management via IP.
- In-built spectrum moniter to investigate co-channel interference remotely.

Models:

The TB9300 and the TB7300 base stations offer different features and capabilities. Some of the specific differences are outline below:

TB9300

This base station is designed in a modular format and is based on a 4U rack system. Each 4U rack supports a power management unit, and either one 50W station or two 50W stations or a single 100W station. This modular format is designed to offer maximum flexibility of large system deployments. The key features of this base station are:

- 100W RF output option in most popular bands
- Power management unit supports wide power supply inputs
- 48, 24 and 12V DC power options
- Front panel diagnostic display
- Extended power amplifier diagnostics

TB7300

This base station is a slimline 1U package with a 50W output in the VHF band and 40W output in UHF. The key features of this base station are:

- Lower standby power than the TB9300 (50%)
- 12V DC power supply only
- VHF (148-174MHz) and UHF* (400-470MHz)

* TB7300 UHF future release.

Tait DMR Infrastructure

Standalone repeaters

Either TB9300 or TB7300 base stations can be used as either basic analog or conventional DMR repeaters. This basic configuration can be used to migrate an existing analog customer that operates a high site using radio frequency control with a donor radio. The TB9300 supports colour code to avoid channel use conflicts while the analog capability supports CTCSS.

TN9300 Core Network: Intelligent, reliable and robust

Tait's DMR TN9300 digital trunked networks are IP-based and provide open standards compliant, mission-critical communications over wide geographic areas. Their extreme resilience and multiple levels of redundancy will deliver critical communications you can depend on. Their flexibility will ensure your organization can deploy cost-effective infrastructure to meet changing operational needs now, and into the future.

The Tait conventional DMR multi-site network is based on a central control node. This highly robust solid state platform controls all multi-site activity as well as providing a database for system monitoring as well as an interface to consoles and other external applications. This approach allows for considerable future enhancement and creates a perfect platform from which to migrate in the future to Trunked DMR Tier 3.

The use of the central node allows improved floor control in very busy systems reducing the number of likely issues. The TN9300 node can support up to 12 sites with 4 base stations on each site. Key features of the infrastructure are as follows:

Key features:

- Multi-network configurations: from a single site, single channel to a wide area network.
- Provides the control and management functions of the Base Stations.
- Open standard DMR interfaces support partner solutions for Dispatch/Consoles, Voice Recorders, Data applications (location services), PSTN gateway for telephone connectivity.
- UCC integration capabilities
- Beacons support multi-site operation on the terminals
- Node interfaces for voice recording, location services and database monitoring
- Channel group control for flexible DMR slot control
- Monitoring of base station connectivity and alarms

Tait Conventional DMR Releases

Ongoing releases

Using the solid base of the established Tait DMR Trunking Tier 3 platform, a first release of a DMR conventional solution was in late 2014. Since then, there have been four cadence releases which have delivered both hardware and feature enhancements. Notable hardware releases have been the TB7300 base station, the TP9310 portable, the TM9315 mobile as well as the intrinsically safe portables. In terms of features, Tait have added a number of both standards-based and beneficial proprietary features. Tait continues its commitment to enhance and deliver innovative conventional offerings. Some key outcomes are as follows:

Key Outcomes:

- Significant hardware developments over the last 12 months
- Site numbers and capacity improvements on multi-site
- Fast site selection capabilities on the terminals
- AIS dispatcher updates that increase capability and features
- Channel groups control offer powerful slot control on multi-site
- Short data traffic supports a range of applications over the network
- Text message support vis terminals and API's

TAIT
ENABLE SUITE

Tait Enable is a suite of extendable management tools and middleware that place the control of your radio network firmly in your hands.

EnableFleet: radio fleet management made easy.

Configure and manage your radio fleet, from a central point.

EnableFleet delivers:

- Centralized radio configuration and firmware management
- Accurate and reliable fleet information - eliminating duplicate IDs
- Consistent installation results
- Cost-effective and easy in-field programming
- Low stress delivery of updates using client application or Over The Air Programming (OTAP)*
- Real-time client-server updates and fleet status display
- File attachment support for installation auditing.
- Secure fleet data
- Flexible server-side hosting options
- Comprehensive reporting

* Future release

EnableMonitor: automated network monitoring and alerting.

Real-time monitoring confirms that your network is operating as expected, to minimize impacts if problems occur.

EnableMonitor delivers:

- Real-time system health status. Diagnose issues early, reduce network downtime
- Proof that your network is operating efficiently
- Reporting on your IT network availability and infrastructure
- Email, SMS and other alerts and alarms if there is an issue
- Automatic discovery and configuration for simplified setup
- Standards-based technology for interoperability
- Secure access to performance data anywhere, anytime
- Redundancy options for guaranteed performance
- Customer support for your peace of mind

Enable Report: giving you a clear picture of your network.

Report on your network over time to ensure optimal performance.

EnableReport delivers:

- Reports on the performance of your radio network
- Provides all the information you need to make analysis easy
- Clearly proves that you are achieving your Service Level Agreements (SLAs) against your Key Performance Indicators (KPIs)
- Supports the specific reporting needs of your business
- Provides various reporting options for the different parts of your network over time
- Allows different user access levels
- Uses standards-based technology

OUR
DMR PARTNERS

Tait delivers unified critical communications solutions with a wide range of technology partners.

Our dedication to deliver value to clients across the globe motivates us to work with best-in-class partners.

In an increasingly complex communications environment, our clients depend on us to work with best-in-class partners to deliver solutions that achieve exceptional operational results. Our clients expect choice and they expect on-going support for each integration between their Tait network and partner products. Tait stands behind all of our partner solutions with a full commitment to support the Tait interface.

We are committed to open standards because they make partnering and collaboration easier and more efficient, drive innovation, and allow us to bring new capabilities to market in an agile fashion.

Tait are proud of our strong partner relationships. Together with our partners we deliver world-class solutions for clients every day.

Our DMR Endorsed Technology Partners:

DMR
DIGITAL MOBILE RADIO ASSOCIATION

TELARC REGISTERED
Environment
ISO 14001

TELARC REGISTERED
Quality
ISO 9001

Telarc REGISTERED
HEALTH+SAFETY
OHSAS 18001