

# Much more than a radio. A mobile applications platform.

Supercharge the performance of your existing or new Tait mobile radio with the Tait Unified Vehicle platform.

Tait Unified Vehicle loads your mobile with more computing power, WiFi, wireless broadband, and more. Increase productivity and safety with more connectivity, and powerful new applications.

It's time to re-imagine the mobile radio.



## KEY FEATURES

- Powerful applications platform
- P25 and DMR mobiles supported
- LTE/Cellular connectivity
- Create a network of networks
- Applicable to new and existing mobiles
- Improved voice and data support
- Broadband connectivity options
- Embedded Applications include:
  - AppBuilder
  - OTAP over WiFi
  - Voice Recorder
- Roadmapped items:
  - PTTToC Client
  - Dual SIM Capability
  - Band 14 LTE



### FEATURES AND BENEFITS

#### Unifying critical communications

As technology convergence increases complexity and puts added demands on your communication system, consider the Tait Unified Vehicle platform to keep you connected. Ensure your people can continue to communicate simply, regardless of the bearer, when they need it most.

#### For both new and existing mobiles

Improve the performance of both new and existing Tait radios. Simply add the Tait Unified Vehicle platform option to the TM9300 or TM9400 to increase their capability.

#### Improved voice and data support

Gain increased business efficiency by connecting your voice network with your data network. Get the right information to the right people and equipment by using the fastest and most reliable methods available.

#### Broadband connectivity options

Today there are many wireless options that deliver increased bandwidth. The Tait Unified Vehicle platform is designed to support short range high bandwidth technologies like WiFi, as well as longer range services such as 3G and LTE.

#### Increased coverage

External WiFi and cellular antenna options deliver a coverage boost to devices around the vehicle.

#### VoIP ready

The architecture of the Tait Unified Vehicle platform allows a number of audio paths to be accessed and converted into VoIP. These streams will be used in the future to deliver services over broadband or the ethernet port.

#### AppBuilder

This application provides a more user-friendly way of creating customized communications solutions. Behavior-based and graphical programming formats can be used. AppBuilder has access to a number of APIs that can control the LMR radio, external interfaces or functionality on the Tait Unified Vehicle.

#### Integration capable

The mobile already supports a number of integration ready features which include the following:

- CCDI/RAP radio control protocols
- Space for integration boards
- Access to digital IO lines
- Access to analog signals
- Software defined interfaces
- Status SDM, Packet and IP data

#### Voice recording

With voice recording and playback, you gain increased security and safety for your people and vehicles.

#### Ready for OTAP and Fleet Management

The Tait Unified Vehicle WiFi connection can be used to program your Tait mobile radio with configuration updates and new firmware when used with Tait EnableFleet, an industry leading configuration management tool.

### SUPPORTED NETWORKS AND FEATURES

	DMR Trunked Tier 3	DMR Conventional Tier 2	MPT	P25 Trunked	P25 Conventional	Analog Conventional
Remote Application	✓	✓	✗	✓	✓	✗
WiFi OTAP	✓	✓	✓	✓	✓	✓
Voice Recording	✓	✓	✓	✓	✓	Future
AppBuilder	✓	✓	✓	✓	✓	✓

# Tait Unified Vehicle

## SPECIFICATIONS



### GENERAL

Supported Devices	TM9300, TM9400 (in hand-held control head or remote head configuration only)
LAN (Ethernet)	mDNS, DNS Proxy DHCP Server DHCP Client 10/100Mbps
WLAN	2.4 GHz IEEE 802.11 b/g/n SISO 20 MHz 5 GHz IEEE 802.11 a/n SISO 20/40 MHz Access point/station/direct (simultaneous or independent use), supports up to 5 clients
Client security modes	Open WEP-40/128 PSK 802.11i Draft/RSN/Mixed PSK with CCMP/TKIP/CCMP+TKIP cipher 802.11i Enterprise TTLS/PEAP with CCMP/TKIP/CCMP+TKIP cipher 802.11i Mixed PSK with CCMP cipher
AP security mode	802.11i Mixed PSK with CCMP cipher
Host interfaces	10/100 Base-T RJ45 Ethernet port Serial Port on DB-15 Connector (on radio unit) RS-232 optional (on radio unit) 3 SMA antenna connectors (Primary, Secondary/Diversity(cellular), WiFi)
Serial port	Optional TTL level with up to 115200 baud (serial input will support RS-232 levels)
Input/output (GPIOs)	Up to 3 configurable GPIOs and 4 GPIOs on DB15 connector (on radio unit) Up to 7 additional configurable GPIOs on optional interface board (on radio unit) Ref to the 3DK Hardware Developer's Kit Application Manual MMA-000110-03 for more details
Power	Ignition Sense and Power Management Low-power mode triggered on timer delay (ignition sense), or periodic timer Supply voltage (via LMR terminal) 10.7 – 16.0 VDC additional power consumption compared to LMR radio 300mA. Note: the LMR radio can consume 100mA on standby to receive, 1 amp on receive at full volume and 6.5A transmit (25W 470MHz)
Input voltage	10.7 to 16.0 VDC (via LMR terminal)
Audio Codec Support	
Input	Radio microphone and LMR radio (mono)
Output	Radio speaker and LMR radio (mono)
Support and warranty	1-year standard warranty, optional 1-year warranty extensions
Dimensions and environmental ratings	Refer to TM9300 and TM9400 specifications.

### CELLULAR WAN

Uplink	Max 5Mbps
Downlink	Max 10Mbps
Support	MISO

Region	Industry Approvals	Supported Frequency Bands	Carrier Approvals (in progress)
North America & Canada	PTCRB, FCC, IC	- 4G/LTE: 1900(B2), AWS1700(B4), 850(B5), 700(B12/13) - 3G: 1900(B2), 850(B5)	Verizon, AT&T
Europe	ETSI, CE, FCC	- 4G/LTE: B1(2100), B3(1800), B7(2600), B8(900), B20(800) - 3G: B2(2100), B8(900) - 2G: B3(1800), B8(900)	
Australia	RCM, ETSI	- 4G/LTE: B1(2100), B3(1800), B7(2600), B8(900), B20(800) - 3G: B2(2100), B8(900) - 2G: B3(1800), B8(900)	Telstra, Optus
New Zealand	ETSI, RCM	- 4G/LTE: B1(2100), B3(1800), B7(2600), B8(900), B20(800) - 3G: B2(2100), B8(900) - 2G: B3(1800), B8(900)	Vodafone, 2 Degrees

### COMPUTING PLATFORM

Hardware Processor	AM3352 Sitara, ARM Cortex A8 32 bit 600MHz
Memory	RAM 512 MB DDR3 plus SD card slot fitted with 16GB, max capacity of 64GB
Storage	1 GB of SLC NAND Flash
Operating System	Linux (OpenEmbedded LTS)

# Tait Unified Vehicle

## SPECIFICATIONS



### EVENTS ENGINE

General	Custom event triggers and reports Configurable interface, no programming User notifications
Event/Action Types	GPIO, LMR Messages, Timer, Modbus, SMS, Email, TCP/ UDP (Binary, XML, CSV), Serial Port, HTTP/HTTPS, Security Alarms, GPS location, Cloud Integration, MQTT Client, Status Messages

### APPLICATIONS

Remote App	On connected smartphone (Android)
Tait Unified Vehicle AppBuilder	With Visual and Script capability
Customization	Ability to load new applications locally

### MANAGEMENT INTERFACES

Web-Based User Interface	Network configuration User access configuration Firmware updates Application installation Voice recording configuration
Extendible web-based user interface	For applications. SFTP for audit log access and audio files, Device Configuration Templates, Over-the-air software and radio module firmware updates. Optional SSH access

### NETWORK & ROUTING

General	Network Address Translation (NAT) Port Forwarding NTP
IP routing	WiFi-to-Cellular, Ethernet-to-Cellular, Ethernet-to-WiFi

### SECURITY

Firewall	Inbound and Outbound Port Filtering
Client security modes	Open WEP-40/128 PSK 802.11i Draft/RSN/Mixed PSK with CCMP/TKIP/CCMP+TKIP cipher 802.11i Enterprise TTLS/PEAP with CCMP/TKIP/CCMP+TKIP cipher
AP mode	802.11i Mixed PSK with CCMP cipher
Web user interface	HTTPS

### INDUSTRY CERTIFICATIONS

Safety	IECEE Certification Bodies Scheme (CB Scheme) UL 60950
Vehicle Usage	ISO7637-2
Hazardous Environments	Class 1 Div 2
Environmental	RoHS, WEEE, IP54

### TAIT COMMUNICATIONS

Tait has taken every care in compiling this specification sheet, but we're always innovating and therefore changes to our models, designs, technical specification, visuals and other information included in this specification sheet could occur. For the most up-to-date information and for a copy of our terms and conditions please visit our website [www.taitradio.com](http://www.taitradio.com).

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Tait International Limited facilities are certified for ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System) and BS OHSAS 18001:2007 (Occupational Health and Safety Management System) for aspects associated with the design, manufacture and distribution of radio communications and control equipment, systems and services. In addition, all our Regional Head Offices are certified to ISO 9001.

