TP**9361**
SPECIFICATIONS

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Designed for maximum safety in the field and enhanced usability

Intrinsically Safe Tait DMR portables are engineered to operate safely in hazardous environments, ensuring your people have communications they can depend on while they get the job done.

The Tait TP9361 portable provides reliable clear audio when it matters most while providing the benefits of a DMR digital platform.

This intrinsically safe portable offers inbuilt GPS, as well as DMR conventional, DMR trunked, full MPT 1327 and conventional FM operation.

KEY FEATURES

▶ Intrinsically Safe portable designed to meet stringent International safety standards

▶ Future proof multi-mode portable (DMR Tier 2 and Tier 3, MPT 1327 and conventional analog FM)

▶ Provides choice and interoperability using open standard DMR protocol

▶ Supporting worker safety with man down alerts and built in GPS positioning

▶ Internationally recognized color for intrinsic safety

▶ Built to last Tait Tough portables engineered for demanding environments with IP67 rating and exceeding MIL standard specification

▶ Complete package with accessories portfolio

▶ Data Services improve organizational efficiencies

DMR
DIGITAL MOBILE RADIO ASSOCIATION

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FEATURES AND BENEFITS*

Future proof multi-mode portable

The Tait TP9361 IS portable operates in 4 modes—DMR Tier 3 and Tier 2, MPT 1327 and conventional analog FM—delivering exceptional functionality and value in one device.

The TP9361 provides:

▸ Roaming between MPT 1327 and DMR Tier 3 trunked networks.
▸ Roaming between Conventional FM and DMR Tier 2 Conventional networks.
▸ Individual calls provide privacy between individuals.
▸ Group calls allow separate teams to communicate amongst themselves without having to listen to irrelevant traffic.
▸ Increased channel capacity with support of up to 2,000 channels.
▸ Analog capability includes Priority and Dual Priority, Editable, Zone and Background Scan.
▸ PSTN dialling allows a user to make phone calls on DMR systems that support telephone interconnect.
▸ Shared menu structure between 9300 terminals.
▸ Trunked operation allows for individual and private calls within designated groups.

Worker safety is ensured with globally recognized Intrinsically Safe ratings systems

The TP9361 portable is designed and tested to meet global IS standards, ensuring safe operation in hazardous environments.

▸ The battery circuitry is fully encapsulated.
▸ The radio circuit has a stored energy limitation, which prevents internal sparking or overheating in the unlikely event of a circuit failure.
▸ Component and conductor spacing and protective coatings prevent short circuits caused by dust or atmospheric contamination.

Internationally recognized IS colour

The TP9300 IS model is made in the internationally recognised blue colour for Intrinsically Safe portables, ensuring instant recognition in the field.

Engineered for demanding environments with IP67 rating

▸ MIL standard specifications for the most rugged applications
▸ IP67 rating for water and dust protection.
▸ 16 key keypad.

▸ 4 programmable function keys including emergency key.
▸ Programmable orange emergency key at base of antenna for ease of location in dark or restrictive environments.
▸ Recessed lens provides screen protection.
▸ Impact protected corners provide shock absorbing protection.
▸ Water shedding grille assists voice clarity and high audio volume is maintained in wet environments.

Complete package with accessories portfolio

▸ Intrinsically Safe audio accessories including speaker-microphones, headsets and earpieces.
▸ Intrinsically Safe Li-Ion battery
▸ Intrinsically Safe compatible battery charger
▸ Data Services improve organizational efficiencies
▸ Integrated GPS ensures that you always know where your workforce is.
▸ Short data messages for location, status and text.
▸ Packet data over traffic channels for work force management, Telemetry, SCADA and customer specific applications.

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GENERAL

Frequency stability	±0.5ppm (-22°F to 140°F / -30°C to 60°C)
Channels/zones	1,000 – 2,000 channels/50 – 100 zones
Talk groups	26 talk group lists comprised of up to 1,000 – 2,000 members each
Scan groups	300 with up to 50 members each, maximum of 2,000 members total
Dimensions (DxWxH) - With Li-Ion 2300 mAh battery	1.77 x 2.56 x 5.35in (45 x 65 x 136mm) excluding knobs
Weight - With Li-Ion 2300 mAh battery	13.93oz (395g) – no antenna, 15.17oz (430g) with IS battery and antenna
Radio Operating temperature range	-20°C to 60°C (-4°F to 140°F) [T]
Water and dust protection	IP67
ESD rating	+/- 4kV contact discharge and +/-8kV air discharge
Frequency increment/channel step	2.5/3.125/5/6.25kHz
Digital protocol	DMR: ETSI TS 102 361
Signalling options (Analog)	MDC1200, encode and decode, Two tone decode, PL (CTCSS), DPL (DCS). Selcall (5 - tone)
Vocoder type	AMBE +2™
Packet Data	½ Rate, ¾ Rate, Full rate, Single Slot

[T] Subject to Compliance, Ambient Temperature: T4 -20°C < Ta < +50°C, T3 -20°C < Ta < +60°C

TRANSMITTER

Frequency band	VHF	UHF	700/800MHz
Transmit Frequency Range	136-174 MHz	380-470 MHz	762-870 MHz
Output power (IIA) Output power (IIC)	5W, 3W, 2W, 1W 1W	4W, 2.5W, 2W, 1W 1W	2.5W, 2W, 1W 1W
FM Transmit Deviation (12.5kHz / 25kHz channels) *	2.5 / 5kHz	2.5 / 5kHz	2.5 / 5kHz

FM hum and noise (analog)
    12.5kHz channel
    25kHz channel
	-40dB
	-45dB
		-40dB
		-45dB
			-40dB
			-45dB

Conducted/radiated emissions	-36dBm <1GHz, -30dBm >1GHz	-36dBm <1GHz, -30dBm >1GHz	-20dBm
Audio response	+1/-3dB	+1/-3dB	+1/-3dB
Audio distortion (Analog)	2.5%	2.5%	2.5%

* Wideband operation subject to FCC regulations

RECEIVER

	VHF	UHF	700/800 MHz
Receive Frequency Range	136-174 MHz	380-470 MHz	762-776 & 850-870 MHz
Channel Spacing *	6.25/12.5/25kHz	6.25/12.5/25kHz	6.25/12.5/25kHz
Analog Sensitivity 12dB SINAD	-120dBm (0.22 μV)	-120dBm (0.22 μV)	-120dBm (0.22 μV)
Digital Sensitivity (PDMR) 5% BER	-119dBm (0.25 μV)	-119dBm (0.25 μV)	-119dBm (0.25 μV)
Intermodulation rejection (TIA603D)	75dB	75dB	75dB
Intermodulation rejection (ETS 300)	65dB	65dB	65dB
Selectivity (Analog) TIA603D (2 Tone)	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 50dB 25kHz: 70dB
Selectivity (Analog) ETS 3000-086 & TIA603C 1 Tone	12.5kHz: 52dB 25kHz: 73dB	12.5kHz: 50dB 25kHz: 70dB	12.5kHz: 60dB 25kHz: 70dB
FM hum and noise (Narrowband / Wideband)	-40dB / -45dB	-40dB / -45dB	-40dB / -45dB
Spurious Rejection (TIA603D)	70dB	70dB	70dB
Conducted Emissions (TIA603D)	70dB	70dB	70dB
Rated Audio (Internal)	0.5W	0.5W	0.5W
Audio Response (TIA603D)	+1/-3dB	+1/-3dB	+1/-3dB
Audio Distortion (Rated audio)	2%	2%	2%

* Wideband operation subject to FCC regulations

CHARGER AND BATTERY

Charger options (Li-Ion)	IS compatible desktop single charger.
Battery shift life (DMR mode, standard config)	Li-Ion 2300 mAh 15 hours (5/5/90)
Battery shift life (Analog Mode, standard config)	Li-Ion 2300 mAh 11.5 hours (5/5/90)

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MILITARY STANDARDS 810C, D, E, F AND G

Applicable MIL-STD Method	Method	Procedure
Low pressure	500.5	2
High temperature	501.5	1,2
Low temperature	502.5	1,2
Temperature shock	503.5	1
Solar radiation	505.5	1
Rain	506.5	1,3
Humidity	507.5	2
Salt fog	509.5	1
Dust	510.5	1
Immersion	512.5	1
Vibration	514.6	1
Shock	516.6	1,4,5,6

INTENDED REGULATORY DATA

	USA	Canada	Europe	Australia/New Zealand
VHF (136-174MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN300-489, EN60950.	AS/NZ4295
UHF (380-470MHz)	CFR 47	RSS-119	EN300-086, EN300-113, EN300-219, EN300-489, EN60950	AS/NZ4295
800 MHz	CFR 47	RSS-119	NA	NA

INTENDED IS COMPLIANCE *

	Output Power	USA	Brazil	Canada	Europe	Australia/NZ
VHF (136-174MHz)	1-5 W	Class I Zone 1 AEx ib llA T4...T3 Gb Class I Div 2 Group D		Class I Zone 1 Ex ib llA T4...T3 Gb	ll 2 G Ex ib llA T4...T3 Gb	Ex ib llA T4...T3 Gb
	1 W	Class I Zone 1 AEx ib llC T4...T3 Gb		Class I Zone 1 Ex ib llC T4...T3 Gb	ll 2 G Ex ib llC T4...T3 Gb	Ex ib llC T4...T3 Gb
UHF (380-470MHz)	1-4 W	Class I Zone 1 AEx ib llA T4...T3 Gb Class I Div 2 Group D		Class I Zone 1 Ex ib llA T4...T3 Gb	ll 2 G Ex ib llA T4...T3 Gb	Ex ib llA T4...T3 Gb
	1 W	Class I Zone 1 AEx ib llC T4...T3 Gb		Class I Zone 1 Ex ib llC T4...T3 Gb	ll 2 G Ex ib llC T4...T3 Gb	Ex ib llC T4...T3 Gb
800MHz	1-2.5 W	Class I Zone 1 AEx ib llA T4...T3 Gb Class I Div 2 Group D	Ex ib llA T4...T3 Gb	Class I Zone 1 Ex ib llA T4...T3 Gb		Ex ib llA T4...T3 Gb
	1W	Class I Zone 1 AEx ib llC T4...T3 Gb	Ex ib llC T4...T3 Gb	Class I Zone 1 Ex ib llC T4...T3 Gb		Ex ib llC T4...T3 Gb

* Ambient Temperature: T4 -20°C < Ta < +50°C, T3 -20°C < Ta < +60°C

Level of compliance subject to approval

TAIT DMR SOLUTION

Backed up by our proven radio network expertise, the TP9300 is part of our larger DMR offering. The Tait DMR solution consists of terminals, infrastructure, applications, services and integration with third party interfaces to ensure that your organization can reap all the benefits of the spectrally-efficient DMR standard in a mission critical environment.

Tait Limited facilities are certified for ISO 9001:2008 (Quality Management System), ISO 14001:2004 (Environmental Management System) and ISO 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 9001:2008

Authorized Partners

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