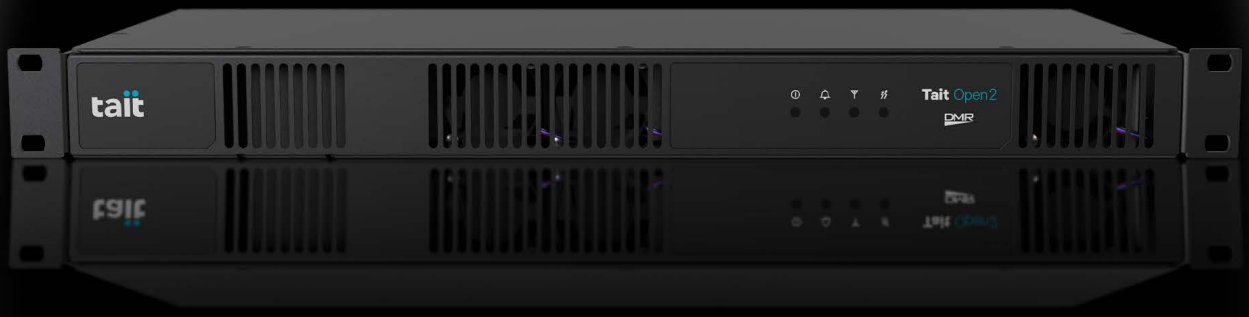
MORE COVERAGE.
WORKS WITH YOU.

TAIT OPEN2
BASE STATION

DMR



Tait Open2

ESSENTIAL
TEAM COMMS

tait
communications

TAIT OPEN2 BASE STATION

MORE COVERAGE & CAPACITY

WHAT IS A BASE STATION?

A base station, often called a repeater, is a fixed radio unit that receives signals from portable or mobile radios and re-transmits them at higher power from a strategically chosen location, allowing radios to communicate more reliably across a wider area.

The Tait Open2 base station (TO2-B50) is ideal for teams needing essential functionality in a high-quality DMR Tier 2 device.

EXPANDED COVERAGE

Coverage gaps leave teams disconnected, affecting coordination and access to timely support. Tait Open2 base stations offer a cost-effective way to expand radio coverage, keeping teams connected and safe across your operation.

MORE CAPACITY

For busy work sites with multiple teams that need separate simultaneous conversations, you can increase capacity and channel availability by adding multiple Tait Open2 base stations at each site.

COMPACT AND COST-EFFECTIVE

With a compact 1U form factor, Tait Open2 base stations are designed to fit standard 19-inch equipment racks for simple and cost-effective installation.

RESILIENT OPERATIONS

Tait Open2 base stations support redundant control functionality, including High Availability, to help reduce disruption during unexpected issues.

FLEXIBLE POWER OPTIONS

Multiple power supply options provide greater flexibility in deployment, helping accommodate a range of site and infrastructure requirements.

CHANNEL SECURITY

Tait Open2 base stations support subscriber access restriction to prevent the unauthorized use of the channel. This level of security is not offered in direct mode operation.

FREEDOM OF CHOICE

Tait proudly supports and contributes to the DMR open standard ecosystem. Open standards enable multivendor compatibility to give you more freedom of choice and value for money throughout the life of your investment.

SYSTEM CONTROL OPTIONS

The Tait Open2 base station supports two options for the deployment of a channel controller:

- Base station channel controller
- Server channel controller

For Tait Open2 systems with 1–9 sites, essential network control functionality can be hosted directly on Tait base stations with a base station channel controller. This eliminates the need for an external server, making the solution simpler and more affordable.

For DMR Tier 2 systems with 10+ sites or requiring integration with external applications (such as dispatch consoles and voice recording systems), a server channel controller is an effective solution.

> For advanced capabilities including DMR Tier 3 trunking, simulcast or other frequency bands, please explore the **TB7300**.



TO2-B50

TAIT OPEN2 BASE STATION

TECHNICAL SPECIFICATIONS

GENERAL INFORMATION

Frequency stability	+/-0.5 ppm
Channels	4000
Channel spacing	12.5 kHz
	12.5 kHz provides 2 TDMA channels (6.25 kHz equivalent) in DMR mode
Frequency increment/channel step	VHF 2.5 / 3.125 kHz (or multiples of), UHF 5 / 6.25 kHz
External frequency reference	10 MHz / 12.8 MHz (auto detect)
DMR packet data	1/2 Rate, 3/4 Rate, Full rate, Single Slot
Physical specifications	
Dimensions (HxWxD)	1.7 x 19 x 15.8 in (44 x 483 x 400 mm)
	1U Rack Space
Weight	AC: 17.2 lb (7.8 kg), DC: 14.8 lb (6.7 kg)
Operating temperature	-22°F to 140°F (-30°C to +60°C)
Power specifications	
Power supply AC	120 to 230 VAC 50 / 60 Hz
Power supply DC	13.8 V (nominal 12 V) Typical (12-16 VDC range)
Output power	
VHF	Programmable 1-50 W
UHF	Programmable 1-40 W
Connectors	
Transmitter	N-type female
Receiver	BNC female
External reference frequency input	BNC female
Network ethernet port	RJ45
Analog line and I/O connector	25-way D-range
AC input	IEC connector
DC input	Screw terminal

MILITARY STANDARDS 810G

Applicable MIL-STD	Method	Procedure
Shock	516.6	1

TRANSMITTER

Frequency range	VHF: 136-174 MHz UHF: 400-470 MHz 470-520 MHz[1]
Output power	VHF: 1-50 W UHF: 1-40 W
Modulation types	4FSK (DMR), FM (analog)
Adjacent channel power 12.5 kHz static	60 dB, complies with EN 300 113 v2.2.1 (DMR)
Conducted spurious emissions	
VHF	< -36 dBm 9 kHz to 1 GHz and < -30 dBm 1 GHz to 4 GHz
UHF	< -36 dBm 30 MHz to 1 GHz and < -30 dBm 1 GHz to 4 GHz / 12.75 GHz
Duty Cycle	100%
Power consumption	
Standby	DC: 0.54 A, 7.5 W @ 12 V (Tx Sleep) DC: 0.77 A, 10.6 W @ 13.8 V AC: 0.2 A 20 W @ 120/230 V
Tx @ 50 W (VHF)	DC: 9.6 A, 133 W @ 13.8 V AC: 0.87 A / 1.67 A, 200 W @ 120/230 V

RECEIVER

Frequency range	VHF: 136-174 MHz UHF: 400-470 MHz UHF: 470-520 MHz[1]
Modulation types	4FSK (DMR), FM (analog)
Conducted spurious emissions	< -90 dBm from 9 kHz to 2 GHz
DMR	
Sensitivity (unfaded sensitivity ETS 300 113)	
Typical	-122 dBm (0.18 µV) @ 5% BER
Guaranteed	-120 dBm (0.22 µV) @ 5% BER
Selectivity ETS 300 113	
@ 1% BER	≥ 82 dB (VHF), ≥ 79 dB (UHF)
Intermodulation response attenuation	≥ 78 dB @ 1% BER unfaded
Blocking rejection	
> 1 MHz	100 dB @ 1% BER
Analog	
Sensitivity	< -119 dBm (0.25 µV) (12 dB SINAD, centre of switching range) at 25°C
Selectivity (EIA-603)	85 dB (VHF & UHF)
Intermodulation	79 dB (ETSI)
Spurious response attenuation	≥ 100 dB (ANSI / TIA) and ≥ 90 dB (ETSI)
FM hum and noise	
VHF / UHF	45 dB (ANSI / TIA), 50 dB (ETSI)

1. Above 480 MHz, an alternative to the Tait Open2 portables will be required

WE GO BEYOND FOR A SAFER WORLD.

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Tait_B_Open2 Base Station_v4 October 2026

Quality Management ISO 9001

Environment Management ISO 14001:2015

Occupational Health & Safety Management ISO 45001:2018

Tait Communications