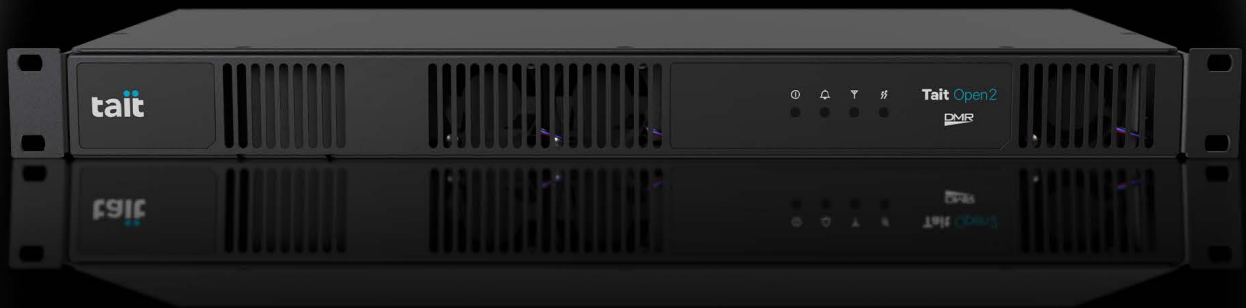


# MORE COVERAGE. WORKS WITH YOU.

TAIT OPEN2  
BASE STATION



## Tait Open2

**ESSENTIAL  
TEAM COMMS**



# 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 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 more complex DMR Tier 2 systems, or those with 10+ sites, a server channel controller is an effective solution. It enables more channels per site, integration with external applications (such as dispatch consoles and voice recording systems), and more concurrent conversations to easily handle higher traffic levels across many sites.

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

<b>Frequency stability</b>	+/-0.5 ppm
<b>Channels</b>	4000
<b>Channel spacing</b>	12.5 kHz and 25 kHz in analog 12.5 kHz provides 2 TDMA channels (6.25 kHz equivalent) in DMR mode
<b>Frequency increment/channel step</b>	VHF 2.5 / 3.125 kHz (or multiples of), UHF 5 / 6.25 kHz
<b>External frequency reference</b>	10 MHz / 12.8 MHz (auto detect)
<b>DMR Packet data</b>	1/2 Rate, 3/4 Rate, Full rate, Single Slot

### Physical specifications

<b>Dimensions (HxWxD)</b>	1.7 x 19 x 15.8 in (44 x 483 x 400 mm) 1U Rack Space
<b>Weight</b>	AC: 17.2 lb (7.8 kg), DC: 14.8 lb (6.7 kg)
<b>Operating temperature</b>	-22°F to 140°F (-30°C to +60°C)

### Power specifications

<b>Power Supply AC</b>	120 to 230 VAC 50 / 60 Hz
<b>Power Supply DC</b>	13.8 V (nominal 12 V) Typical (12-16 VDC range)

### Output power

<b>VHF</b>	Programmable 1-50 W
<b>UHF</b>	Programmable 1-40 W

### Connectors

<b>Transmitter</b>	N-type female
<b>Receiver</b>	BNC female
<b>External reference frequency input</b>	BNC female
<b>Network ethernet port</b>	RJ45
<b>Analog line and I/O connector</b>	25-way D-range
<b>AC input</b>	IEC connector
<b>DC input</b>	Screw terminal

### MILITARY STANDARDS 810G

Applicable MIL-STD	Method	Procedure
<b>Shock</b>	516.6	1

### TRANSMITTER

<b>Frequency range</b>	VHF: 136-174 MHz UHF: 400-470 MHz 470-520 MHz <sup>1</sup>
<b>Output power</b>	VHF: 1-50 W UHF: 1-40 W
<b>Modulation types</b>	4FSK, FM, C4FM
<b>Adjacent channel power 12.5 kHz static</b>	60 dB, complies with EN 300 113 v2.2.1 (DMR)
<b>Conducted spurious emissions</b>	
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
<b>Duty Cycle</b>	100%
<b>Power consumption</b>	
<b>Standby</b>	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
<b>Tx @ 50 W (VHF)</b>	DC: 9.6 A, 133 W @ 13.8 V AC: 0.87 A / 1.67 A, 200 W @ 120/230 V

### RECEIVER

<b>Frequency range</b>	VHF: 136-174 MHz UHF: 400-470 MHz UHF: 470-520 MHz <sup>1</sup>
<b>Modulation types</b>	FM, C4FM
<b>Conducted spurious emissions</b>	< -90 dBm from 9 kHz to 2 GHz
<b>DMR</b>	
<b>Sensitivity (Unfaded sensitivity ETS 300 113)</b>	
Typical	-122 dBm (0.18 µV) @ 5% BER
Guaranteed	-120 dBm (0.22 µV) @ 5% BER
<b>Selectivity ETS 300 113</b>	
@ 1% BER	≥ 82 dB (VHF), ≥ 79 dB (UHF)
<b>Intermodulation response attenuation</b>	≥ 78 dB @ 1% BER unfaded
<b>Blocking rejection</b>	
> 1 MHz	100 dB @ 1% BER
<b>Analog</b>	
<b>Sensitivity</b>	< -119 dBm (0.25 µV) (12 dB SINAD, centre of switching range) at 25°C
<b>Selectivity (EIA-603)</b>	85 dB (VHF & UHF)
<b>Intermodulation</b>	79 dB (ETSI)
<b>Spurious response attenuation</b>	≥ 100 dB (ANSI / TIA) and ≥ 90 dB (ETSI)
<b>FM hum and noise</b>	
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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Quality Management  
ISO 9001



Environment Management  
ISO 14001:2015



Occupational Health & Safety Management  
ISO 45001:2018

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