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## Trimble SNR2400 Rugged Machine Radio

### License-Free\*, High-Speed Data Link for On-Machine ATS Applications

#### General Description

The Trimble® SNR2400 machine radio modem lets you establish a robust, wireless data link developed for real-time, high-precision ATS applications in the construction industry.

The 2400MHz (2.4GHz) frequency offers many advantages for use with Trimble ATS total stations on the construction site:

- Virtually immune to interference
- No licensing is required
- Low-latency, high-speed link provides the lowest latency of measurement information to the machine.
- Ideal operating characteristics for Trimble ATS Construction Total Station operation

#### Designed for Machine Operation

The Trimble SNR2400 radio is based on the Trimble SNR900 and Trimble SiteNet 450 family of radios. The SNR series of radios and the SiteNet 450 radio are custom-designed for use on heavy machinery. They are connected directly to the machine harness power with no intermediate power conditioning required, allowing simpler installation and a more robust solution. The integrated low-profile antenna eliminates the need for additional radio antenna cables.

The standard form factor used by all of Trimble's on-machine radios provides interchangeable solutions designed to work with the existing infrastructure on site.

#### License-Free

The Trimble SNR2400 radio is certified for license-free operation in Europe, U.S.A., Canada, Australia and New Zealand. This makes the Trimble SNR2400 radio extremely portable—you can move it from project to project without licensing hassles and restrictions.

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## 2400MHz for Total Productivity

The Trimble SNR2400 radio is designed to work optimally with the Trimble ATS Construction Total Station. The high speed and low latency characteristics of the Trimble SNR2400 offer the most accurate solution possible.

The Trimble SNR2400 uses frequency-hopping technology and multiple transmissions to provide a reliable network in virtually any radio environment. The Trimble SNR2400 radio is a plug-in replacement for the Trimble SNR900 radio and is fully compatible with Trimble ATS Construction Total Stations using 2.4GHz radios.

Fully sealed against dust, rain, splash, and spray, the Trimble SNR2400 radio remains reliable even in harsh conditions. The radio's rugged design and reliability minimizes downtime and lowers ownership costs.

## Standard Features

- License-free in the EU, U.S.A., Canada, Australia and New Zealand\*
- Direct operation on 12- or 24-volt machine power
- Low-profile integral 2.5 dBi antenna (no need for antenna cables)
- CAN interface
- LED status indicators
- Heavy-duty 8-pin Bendix connector
- Power and data via a single cable
- Designed for machine mounting
- Rugged and waterproof (fully sealed)
- Frequency-hopping, spread-spectrum technology
- Compatible with Trimble ATS Total Stations
- High data rate
- Low power consumption
- Typical >1000m, line-of-sight range

*The Trimble SNR2400/TC2400C operates in the 2400 to 2483.5 MHz frequency band (2400 to 2454 MHz in France). It contains a transmitter module that is certified for unlicensed use in this band as a transmitter pursuant to 47 C.F.R. §§ 15.247 Subpart C of Part 15 of FCC Rules regarding Spread Spectrum Systems for the United States. License-free operation in Canada is covered by RSS-210 of Industry Canada; in the European Union is covered by harmonized standard EN 300 328; in Australia and New Zealand by gazetted standard AS/NZS 4771:2000.*

*For more information about use in other countries, please contact Trimble.*

## Ordering information

The SNR2400 is available in a single feature level that supports the Trimble ATS Construction Total Station operation.

Part Numbers	Description
55170-XX	On Machine Install Kit
55146-XX	Field Replacement Unit

### Part number suffix matrix:

Country	Standard
Global	-10
France	-24

## Specifications

Physical Characteristics	
Size	285 mm (height) x 85 mm (width) (11.2 in x 3.4 in)
Weight	1.1 kg (2.4lb)

Environmental Characteristics	
Operating temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Storage temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Humidity	Exceeds MIL-STD-810E (aggravated cyclic humidity),
Sealing	Environmentally sealed to ±34.5 kPa (±5 psi), immersible to 1m
Vibration	8 gRMS, 20–2000 Hz random vibration
Shock	
Operational	±40 g 10 msec
Survival	±75 g 6 msec

Electrical Specifications	
Input voltage range	10.5 VDC to 32 VDC
Power consumption	
Nominal	250 mA (3 W)
Transmit	1250 mA (15 W)
Connector	8 Pin Bendix
Ports	2x RS232, 1x CAN
Input protection	Reverse voltage protection, up to 36 VDC Load dump protected, compliant to ISO 7637 specifications Short circuit protected

Radio-Modem Performance	
Modes	Rover
Range	
Optimal	>1.6km (1 mile), line-of-sight
Typical	>1000m (0.6 miles), varies with terrain and operating conditions
Frequency range	
Global	2400 – 2472 MHz
France	2400 – 2425 MHz
Networks	12 user selectable networks
Transmit power	Meets FCC requirements of 20dBm maximum power output
Wireless data rate	400 Kbps

### 8 Pin Bendix - Mil-spec high cycle count connector:

Pin	Signal	Description
A	PWR+	Power
B	PWR-	Power ground & RS-232 ground
C	RS-232 2 TXD	RS-232
D	RS-232 2 RXD	RS-232
E	CAN0 Hi	System bus
F	RS-232 3 TXD	RS-232
G	RS-232 3 TXD	RS-232
H	CAN0 Lo	System bus

*Specifications and description are subject to change without notice*