We help you solve challenges

Quality radio modules for wireless data communication

Machines meet radio technology

Accurate and up-to-date data transfer in precise positioning systems is vital. SATEL's radio modems and modules offer a first-class solution e.g. for GNSS RTK, remote measurement, safety systems and control applications. They combine quality, continuity, flexibility and low life cycle costs. Examples of GNSS systems that use SATEL's radio modems and modules include land surveying, precision farming, machine control, harbor logistics and port cranes.

OEM

SATEL have produced a range of OEM radio modules for system manufacturers to integrate into customer solutions. They are secure, customizable and flexible in mounting options. SATEL's solutions are widely compatible and also support other manufacturers' radio protocols.

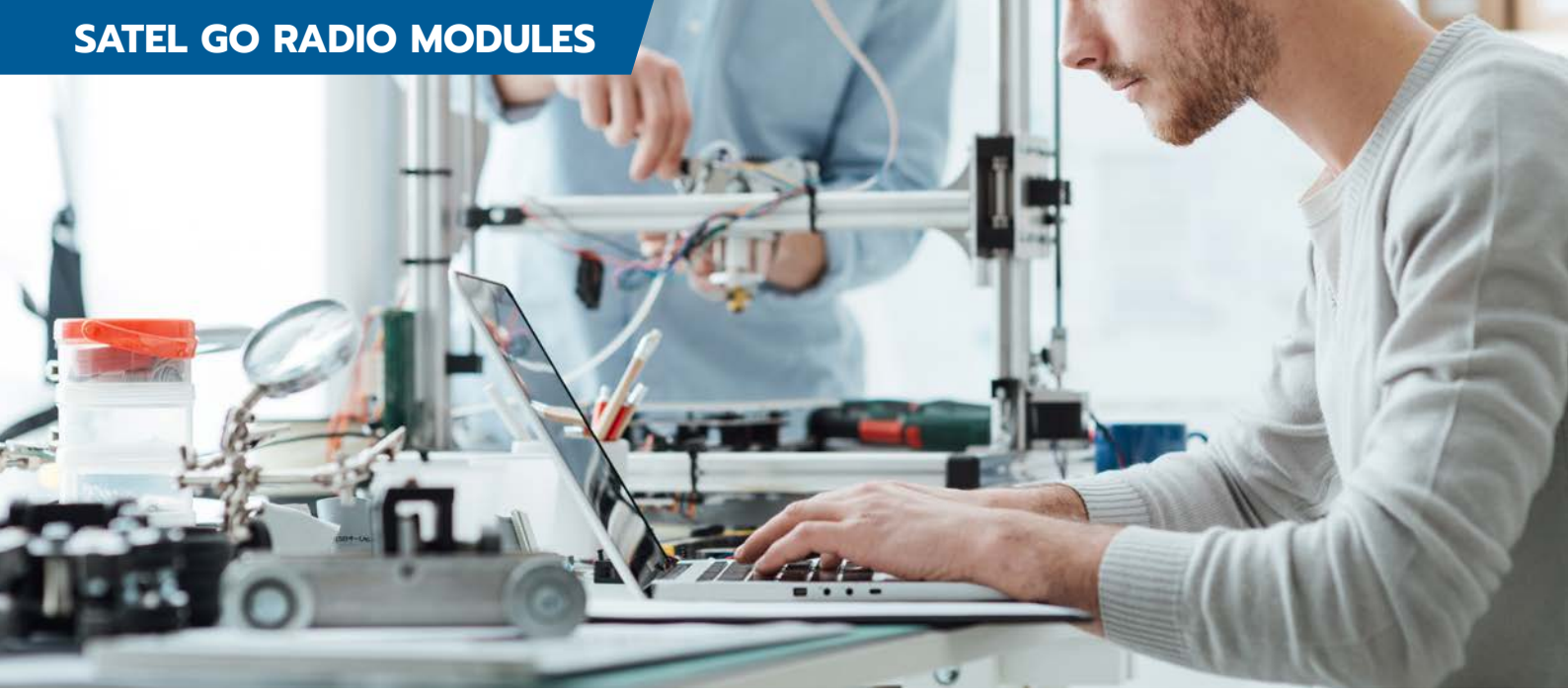
SATELGO

Mission-Critical Connectivity

Read more: www.satel.com

SATEL is the world's leading expert and innovator in independent radio networking technology. We develop and sell high quality private radio technology solutions that enable secure, mission-critical connections. We are known for our high quality, expertise, service and support.

You can contact us directly or get in touch with your local distributor.



Small module on the move

SATEL-TR489 is a multifrequency and multimode transceiver. It has three frequency bands for the client to select and set: licensed 403 … 473 MHz and license-free 902 … 928 MHz and 856 … 876 MHz bands. It is compatible with other widely used SATEL products on corresponding frequencies and also with other manufacturers' radio protocols.

SATEL-TR489

RADIO TRANSCEIVER SPECIFICATIONS

403 … 473 MHz

Frequency range
403 … 473 MHz

Tuning range
70 MHz

Channel spacing
12.5 / 25 / 50*) kHz, selectable

Sensitivity/Carrier power
-113 dBm BER $10E^{-2}$ / 1 W

Data speed
Radio 19200 bps /
Serial 115200 bps

Modulation
4FSK, 8FSK, 16FSK, GMSK

856 … 876 MHz

Frequency range
856 … 876 MHz

Tuning range
20 MHz

Channel spacing
25 / 50 kHz, selectable

Sensitivity/Carrier power
-112 dBm BER $10E^{-2}$ / 0.5 or 1 W

Data speed
Radio 19200 bps /
Serial 115200 bps

Modulation
4FSK, 8FSK, 16FSK, GMSK

902 … 928 MHz

Frequency range
902 … 928 MHz

Spreading method
Frequency hopping

Hopping bands
7, user selectable

Hopping patterns
15 per band, 105 total, user selectable

Hopping channels
50–112, user selectable

Sensitivity/ Carrier power
-108 dBm BER $10E^{-2}$ / 1 W

Data speed
Radio / Serial 115200 bps

Modulation
2-GFSK

GENERAL SPECIFICATIONS

Vibration tolerance
25 G, up to 2 kHz sinusoidal

Operating voltage
+3.8 … 5.5 Vdc

Power consumption (RX / TX)
400 MHz: 890 mW / 4.8 W (1 W)
800 MHz: 875 mW / 4.3 W (0.5W), 7.3 W (1W)
900 MHz: 440 mW / 4.1 W (1 W)

Size / Weight
57 x 36 x 6.9 mm / 20 g

Connectors
1.27 mm pitch socket / U.FL

Interface
CMOS-UART

Temperature range
–30 … +70 °C (operational)
-20 ... +55 °C (complies with the standards)

Values are subject to change without a notice.

SATEL-TR489 complies with the requirements in:
EU, USA, Canada, India, Australia and New Zealand.

*) Meets ETSI EN 302 561

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