



# Flexible and lightweight SATEL-TR4+

Quality radio modules for wireless data communications

## SATEL-TR4+

SATEL-TR4+ is a UHF data transceiver module in a lightweight single board structure. It is designed to be integrated into a host device, e.g. to transfer GNSS correction data in a land surveying rover or RTK base station.

- 70 MHz tuning range (403...473 MHz) and selectable channel width (12.5, 20 and 25 kHz)
- Extended operating voltage range
- Moderate power consumption
- AES128 support as default, AES256 as an order option
- Polling Protocol as an order option

## Compatible and customizable

SATEL-TR4+ is compatible with widely used SATEL radios, such as SATELLINE-M3-TR4, -EASy, -EASy Pro and SATEL-EASy+ and also with other manufacturers' radio protocols.

SATEL GO radio modules match all the needs of OEM customers. Please contact us or our nearest distributor for various possibilities to create a customized solution for you.

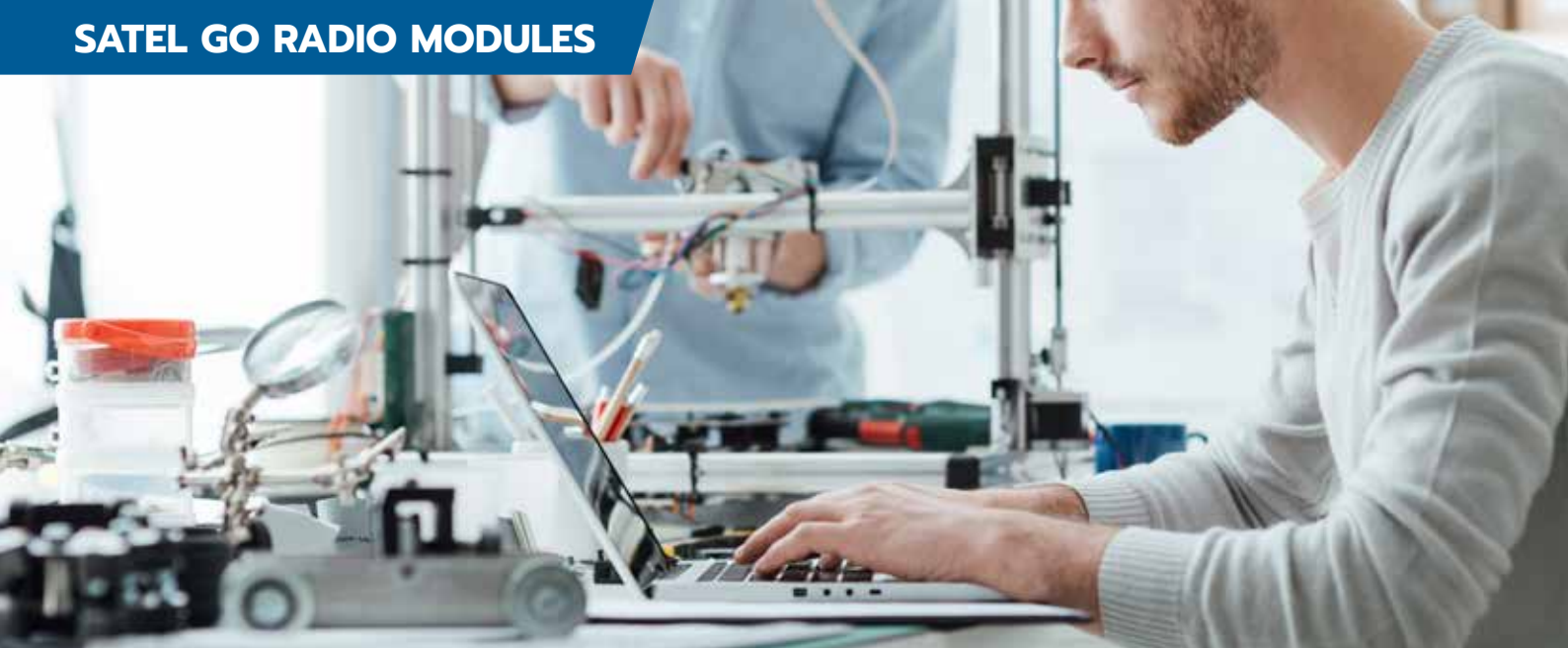
Read more: [www.satel.com](http://www.satel.com)

# SATELGO

Mission-Critical Connectivity

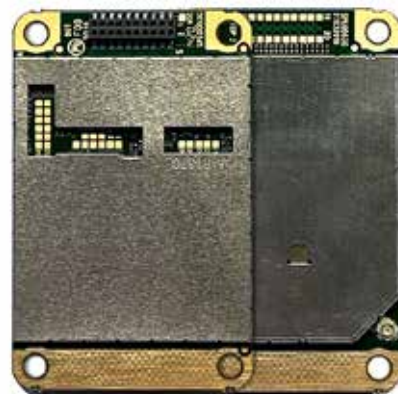
SATEL – the world's leading expert and innovator in independent radio networking technology. Our solutions are used in wide range of industrial applications. We are known for our high quality, expertise, service and support.

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



## Easy installation and configuration

SATEL-TR4+ is supplied without a housing in PCB format with RF-shielding, facilitating installation into the customer's own housing or into a host device. The radio module configuration can be done with the SATEL SL-commands or SATEL Configuration Manager software.



### SATEL-TR4+

Frequency	403...473 MHz
Channel width	12.5 kHz / 20 kHz/ 25 kHz (software selectable)
Tuning range	70 MHz
Frequency control	Synthesized 6.25 kHz tuning resolution (10 kHz @ 20 kHz spacing)
Modulation	4FSK, 8FSK, 16FSK, GMSK*)
Carrier power	0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1 W programmable

### RADIO INTERFACE CHARACTERISTICS

Radio compatibility	Error Correction	Channel Width	Data speed of radio interface	Sensitivity (appr.) BER < 10 E-2
SATEL-4FSK	FEC OFF	12.5 kHz	9600 bps	-112 dBm
		25 kHz	19200 bps	-109 dBm
	FEC ON (3/4 coding)	12.5 kHz	7200 bps	-115 dBm
		25 kHz	14400 bps	-113 dBm
SATEL-8FSK	FEC OFF	12.5 kHz	14400 bps	-105 dBm
		25 kHz	28800 bps	-103 dBm
	FEC ON (2/3 coding)	12.5 kHz	9600 bps	-112 dBm
		25 kHz	19200 bps	-111 dBm
SATEL-16FSK	FEC ON (3/4 coding)	12.5 kHz	14400 bps	-104 dBm
		25 kHz	28800 bps	-102 dBm

Values are subject to change without a notice.

\*) Ask availability

SATEL Oy  
Meriniitynkatu 17, P.O.Box 142  
FI-24101 Salo, FINLAND  
Tel. +358 2 777 7800  
info@satel.com



AdriNet d.o.o.  
Jarušica 9a, 10 000 Zagreb  
Hrvatska / Croatia  
t.+385 1 888 68 84

### GENERAL SPECIFICATIONS

Input voltage	+3.8 Vdc ... +5.5 Vdc
Power consumption, typical	0.89 W (RX) 4.8 W (TX 1 W) 0.3 W (Sleep)
Temperature range	-20 °C ... +55 °C (complies with the standards) -30 °C ... +70 °C functional -40 °C ... +85 °C storage
Antenna connector	HIROSE U.FL compatible type (Adapter cables available for TNC, SMA, MCX, MMCX etc.)
Construction	PCB with RF-shielding
Size H x W x D mm	57 x 36 x 6.9 mm (w. screw fasteners)
Weight	20 g

### DATA MODEM

Electrical interface	CMOS-UART
Interface connector	1.27 mm pitch socket
Data speed of serial interface	1200 ... 115200 bps
Air linterface encryption	AES128 default, AES256 order option

SATEL-TR4+ complies with the following international standards: EN 300 113, EN 301 489-1, -5, IEC 62368-1 and FCC Part 90

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