Flexible and lightweight SATEL-TR300

Quality radio modules for wireless data communications

SATEL-TR300

SATEL-TR300 is a UHF data transceiver module in a lightweight single board structure. It is designed to be integrated into a host device or into the customer's own housing .

The frequency band 320 ... 380 MHz makes SATEL-TR300 to be an excellent choice for GNSS industry in Asia and utility business in the Middle East.

• 60 MHz tuning range (320...380 MHz)
  and selectable channel width (6.25, 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-TR300 is compatible with widely used SATEL radios, such as SATEL-EASy+ and SATELLINE-EASy.

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.
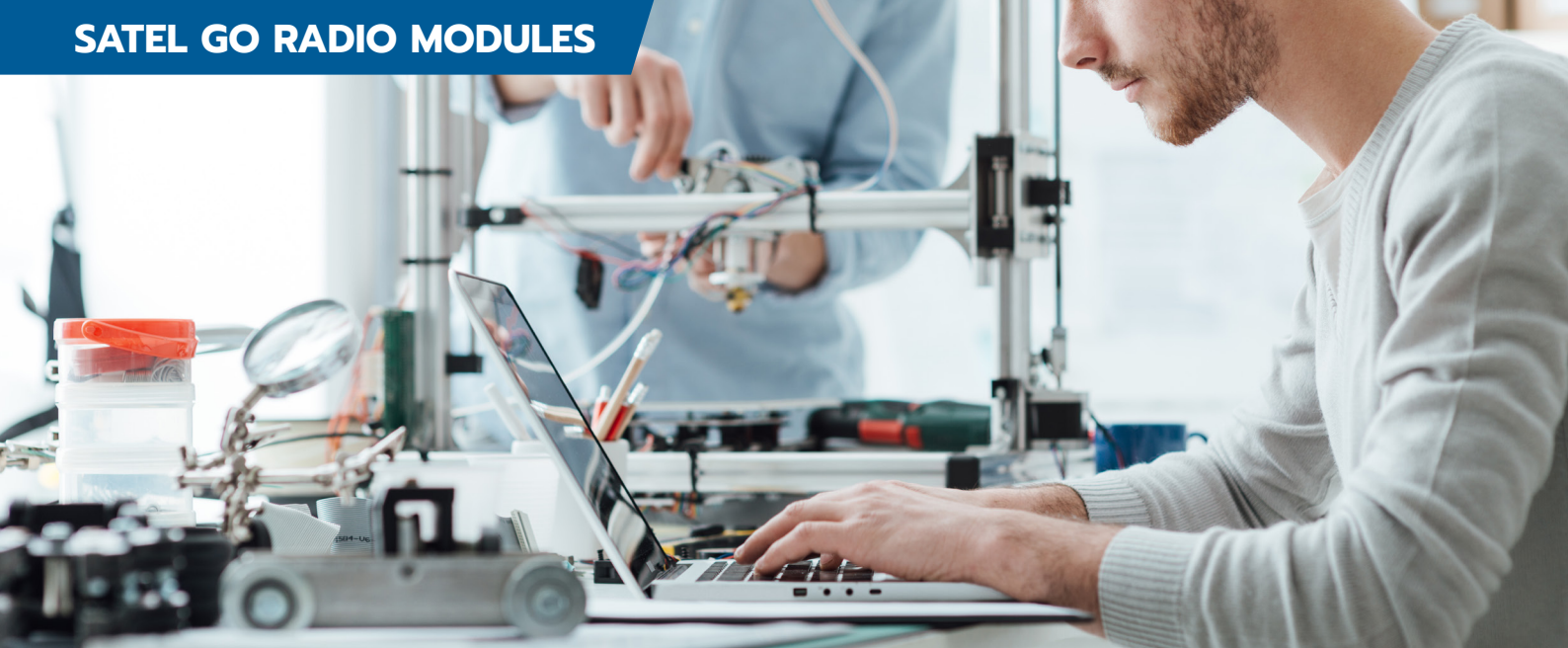
SATEL GO

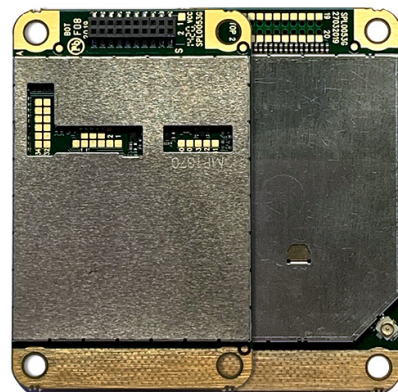### Mission-Critical Connectivity

Read more: www.satel.com

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-TR300 is supplied without a housing in PCB format with RF-shielding,
- facilitating installation into the customer's own housing or into a host device, for example to transfer GNSS correction data in a land surveying rover or RTK base station.
  The radio module configuration can be done with the SATEL SL-commands or SATEL Configuration Manager software.

SATEL-TR300

Frequency / Tuning range	320 ... 380 MHz / 60 MHz
Channel width	6.25 / 12.5 / 20 / 25 kHz (software selectable)
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

Error correction	Channel width	Data speed of radio interface		
		Radio compatibility SATEL-4FSK	Radio compatibility SATEL-8FSK	Radio compatibility SATEL-16FSK
FEC OFF	6.25 kHz	4800 bps	7200 bps	**)
	12.5 kHz	9600 bps	14400 bps	**)
	25 kHz	19200 bps	28800 bps	**)
FEC ON	6.25 kHz	3600 bps	4800 bps	7200 bps
	12.5 kHz	7200 bps	9600 bps	14400 bps
	25 kHz	14400 bps	19200 bps	28800 bps
Sensitivity (typically) BER < 10 E-2	-113 dBm			

GENERAL SPECIFICATIONS

Input voltage	+3.8 Vdc ... +5.5 Vdc
Power consumption, typical	0.9 W (RX) 6.4 W (TX 1 W) 0.5 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 Weight	57 x 36 x 6.9 mm (w. screw fasteners) 20 g

DATA MODEM

Electrical interface	CMOS-UART
Interface connector	1.27 mm pitch socket
Data speed of serial interface	9600 ... 115200 bps
Air linterface encryption	AES128 default, AES256 as an order option

Values are subject to change without a notice.

*) Ask availability

**) FEC always ON

SATEL-TR300 complies with the following international standards:
EN 300 113, EN 301 166, EN 301 489-1, -5, IEC 62368-1 and FCC Part 90

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