SATELLINE®-M3-TR3

Wireless World – Local Solution

SATELLINE-M3-TR3 is a UHF data transceiver module in a lightweight single PCB structure. It is designed to be integrated into a host device, for instance for transfer of GNSS correction data in a land surveying rover or RTK base station.

SATELLINE-M3-TR3 is equipped with all necessary features; such as 70 MHz tuning range (403…473 MHz) in one hardware, selectable channel width and low power consumption. The configuration of the radio module can be made by using the SATEL SL-commands or SATEL Configuration Manager -software.

SATELLINE-M3-TR3 is compatible with widely used SATELLINE-3AS and -EASy radio modems and also with other manufacturers' radio protocols.
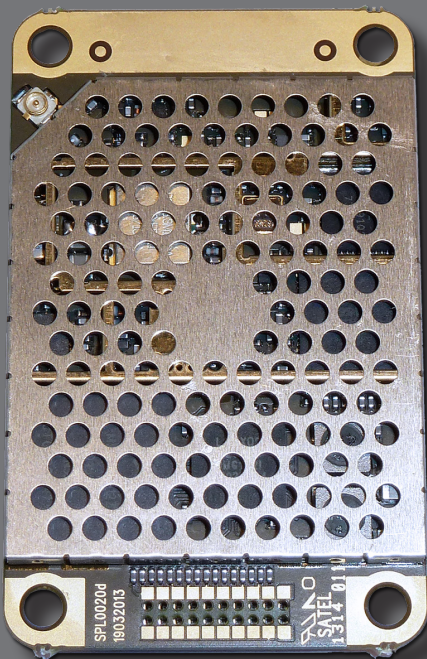
VHF with NMS
UHF with NMS
UHF
Licence Free
IP67
Customer Specific

With SATEL radio modems, setting up a local data transfer network is quick and cost effective. Your wireless network is independent and free of operator services. The cost of operation is either free of charge or fixed, depending on the frequency used. SATELLINE radio modems are type-approved in over 50 countries.

For the latest information, please visit our website www.satel.com.

SATELLINE radio modems are always connected and provide reliable, real-time data communications over distances ranging from tens of metres up to around 80 kilometres.

SATEL®

In order to make the SATELLINE-M3-TR3 module the most suitable unit for different uses, it is designed to be flexible. Following items can be customized:
- Shape of the PCB
- Mechanical fastening and its type
- Interface and antenna connector types

Please contact us to learn more about customization options.

SATELLINE-M3-TR3 can be added to existing systems; it is compatible with widely used SATELLINE-3AS and -EASy radio modems and it supports also other manufacturers' radio protocols (such as Pac-Crest-4FSK, -GMSK, -FST).

The channel bandwidths 12.5 and 25 kHz are software selectable and SATELLINE-M3-TR3 has a wide 70 MHz tuning range. End-users can select the operation frequency within the range of 403...473 MHz.

Data security is often a concern when using radio communication. In SATELLINE-M3-TR3 a 128-bit encryption on the air interface ensures privacy in the radio network.
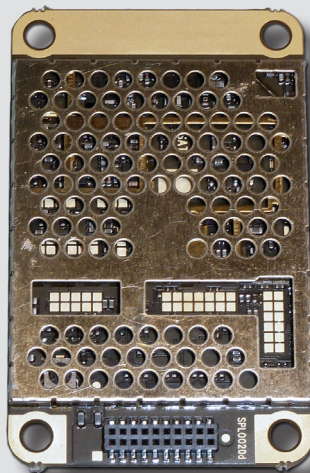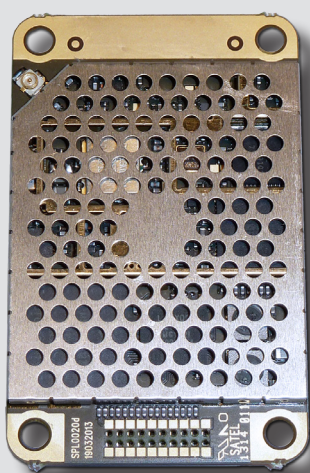
SATELLINE-M3-TR3 is supplied without a housing in PCB format with RF-shielding, facilitating installation in to the customer's own housing or into a host device.

TECHNICAL SPECIFICATIONS

SATELLINE-M3-TR3 complies with the following international standards: EN 300 113-2 Annex A, EN 301 489-1,-5, EN 60950-1 and FCC CFR47 Part 90

TRANSCEIVER MODULE	
Frequency Range	403 ... 473 MHz
Tuning Range	70 MHz
Channel Bandwidth	12.5 / 25 kHz, software derived
Frequency Control	Synthesized 6.25 kHz tuning resolution
Modulation	4FSK , GMSK
Sensitivity BER < 10E-3	-116 dBm (SATEL 3AS mode, 12.5 kHz, FEC ON)
Carrier Power	0.1, 0.2, 0.5, 1 W programmable
DATA MODEM	
Electrical Interface	CMOS-UART
Interface Connector	Samtec 20-pin through hole
Data Speed of Serial Interface	1200 ... 115200 bps
Data Speed of Radio Interface	19200 bps (25 kHz channel) 9600 bps (12.5 kHz channel)
Air Interface Encryption	AES128
GENERAL	
Operating Voltage	+4 Vdc
Power Consumption, Typical	0.83 W (Receive) 4.7 W (Transmit 1W)
Temperature Range	-25 °C ... +55 °C (complies with the standards) -30 °C ... +70 °C functional -40 °C ... +80 °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 Weigth	57 x 36 x 6.7 mm (w screw fasteners) 18 g

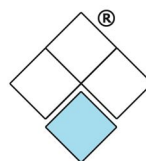Values are subject to change without notice.

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