SATELLINE®-M3-TR3

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.

It 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 radio module configuration can be done with 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.

Available as:

| VHF |
| ▶ **UHF** |
| Licence free |
| NMS |
| IP67 |

Product type:

| Classic |
| Smart |
| ▶ **OEM** |

Setting up a local data transfer network is quick and cost effective with SATEL radio modems. The 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.

SATELLINE radio modems are always on line and provide reliable, real-time data communications over distances ranging from tens or hundreds of metres up to around 80 kilometres. Thanks to a store and forward function, any radio modem in a network can be used as a master station, substation and / or repeater.

SATELLINE radio modem networks are flexible, easy to expand and can cover a wide variety of solutions from simple point-to-point connections to large networks comprising hundreds of modems. Even for expanded networks, only one operating frequency is required.

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

SATEL
MISSION-CRITICAL CONNECTIVITY

SATELLINE-M3-TR3 is a flexible module which makes it a suitable unit for different uses.

Following items in the module can be customized upon request*:
- 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.

The module can be manufactured with an option for 128-bit encryption on the air interface to ensure the privacy.

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.

*For larger orders also shape of the PCB can be customized. Please contact us to learn more about the customization options.

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
Values are subject to change without notice.

TRANCEIVER MODULE	
Frequency	403...473 MHz
Channel Width	12.5 kHz / 25 kHz (software selectable)
Tuning Range	70 MHz
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	0.01, 0.1, 0.2, 0.5, 1 W programmable
DATA MODEM	
Electrical Interface	CMOS-UART
Interface Connector	1.27 mm pitch socket
Data Speed of Serial Interface	19200 ... 115200 bps
Data Speed of Radio Interface	19200 bps (25 kHz channel) 9600 bps (12.5 kHz channel)
Air Interface Encryption	AES128
GENERAL	
Input Voltage	+4 Vdc
Power Consumption, Typical	0.73 W (Receive) 4.7 W (Transmit 1 W)
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 Weight	57 x 36 x 6.7 mm (w. screw fasteners) 18 g

Distributor:

Manufacturer: