

Document No.:

# T100L Product Manual V1.0

Product Model	T100L
Product Name	1W Transceiver Integrated Radio Module
Author	
Approved	

## Revision History

Date	Version	Description	Author
2023-02-02	V1.0	Initial Document	

# Catalogue

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# T100L Product Manual

## 1. Performance Specifications

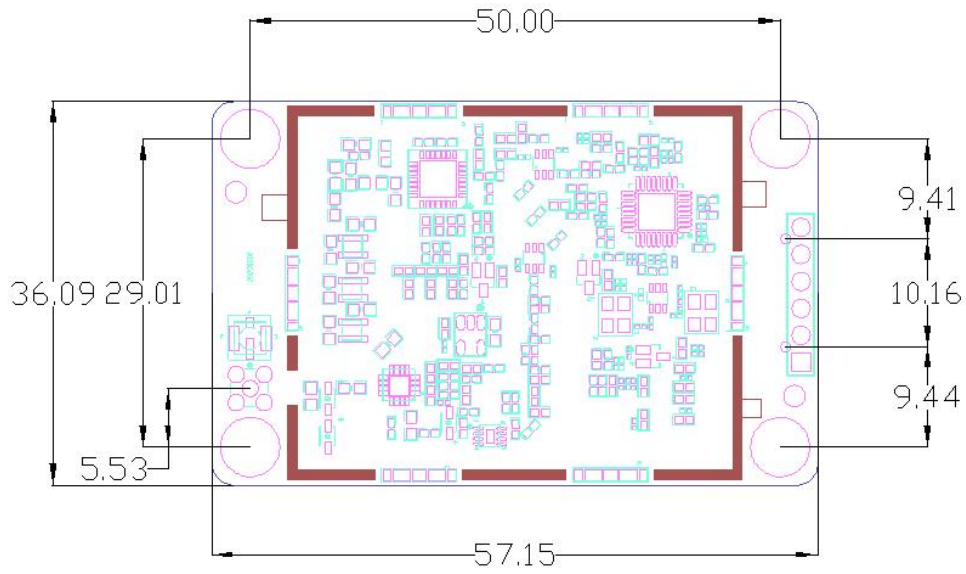
Overall Performance Specifications		
Specification Name	Specification Requirements	
Operating voltage	3.3V $\pm$ 5%(TX state, not more than3.8V)	
Frequency Range	410~470MHz	
Channel spacing	12.5KHz / 25KHz	
Modulation Method	GMSK、2FSK、4FSK	
Protocol	Trimtalk450s, South, Satel, Farlink	
Air Baudrate	9600bps, 19200bps	
Frequency Stability	$\leq$ $\pm$ 1.0ppm	
Power Consumption (Typical)	Transmitting(High Power)	3.3W@3.3V
	Receiving	0.45W@3.3V
Weight	16g	
Size	57×36×7mm	
Operating Temperature	-40~+85°C	
Storage Temperature	-45~+90°C	
Antenna Interface	IPX or MMCX	
Antenna Interface Impedance	50ohm	
Data Interface	20pin (pin to pin spacing 1.27mm)	
Transmitter Specification		
Specification Name	Specification Requirements	
RF Output power	High Power ( 1.0W )	30 $\pm$ 0.5dBm@DC 3.3V
RF power stability	$\pm$ 0.5dB	
Spurious Emission	<0.25uW(-36dBm)@1~1000MHz	
Second Harmonic	<0.25uW(-36dBm)	
Adjacent Channel Inhibition	>50dB	

Receiver Specifications	
Specification Name	Specification Requirements
Sensitivity	Better than -118dBm@others, 9600bps Better than -128dBm@Farlink
Block	>70dB
Co-channel Inhibition	>-12dB
Perturbation Resistance Stray	>55dB
Adjacent Channel Selectivity	>52dB@25KHz

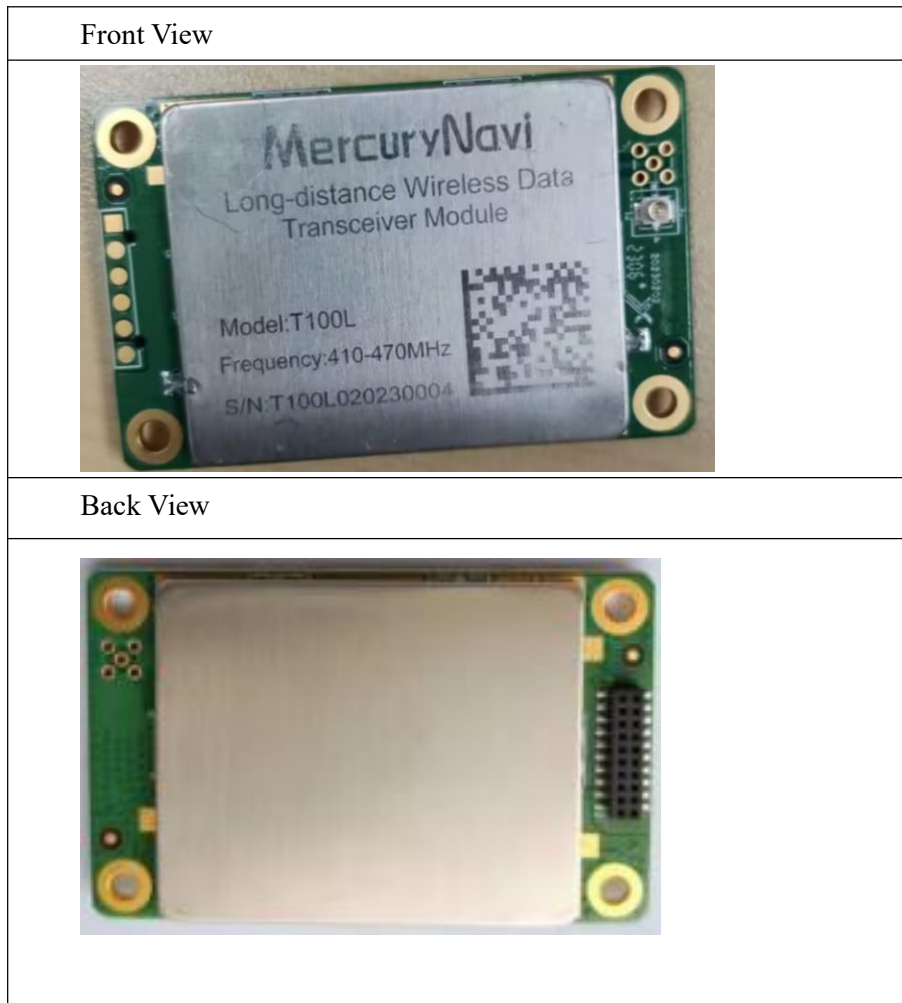
## 2. Definition of Interface Connector Pin

Pin No.	Input/Output	Definition
1	Input	VCC
2	Input	VCC
3	Input/Output	GND
4	Input/Output	GND
5	NC	No use
6	Input	Enable(Enable power supply to UHF radio module - high level available)
7	Output	TXD (UHF data output)
8	NC	No use
9	Input	RXD (UHF data input)
10	NC	No use
11	NC	No use
12	NC	No use
13	NC	No use
14	NC	No use
15	NC	No use
16	NC	No use
17	Input	Config_pin (default as high----radio data mode, pull low----- enter command configuration parameter mode)
18	NC	No use
19	NC	No use
20	NC	No use

### 3. Dimensions ---Top Perspective(unit mm)



### 4. Product Photos



## **FCC Warning:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body

## **IC warning statements:**

-English Warning Statement:

RSS-GEN ISSUE 5, 8.4 User manual notice

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

-French Warning Statement:

RSS - Gen version 5, 8.4 avis du manuel de l'utilisateur

Cet appareil contient un émetteur / récepteur sans licence conforme au RSS sans licence d'innovation, science et développement économique Canada. L'opération doit satisfaire aux deux conditions suivantes:

Cet équipement peut ne pas causer d'interférence.

L'équipement doit accepter toute interférence, y compris toute interférence qui pourrait entraîner un fonctionnement indésirable de l'équipement.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radio électriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation du débit d'absorption spécifique (DAS).

This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Lors de l'installation et du fonctionnement de cet équipement, la distance minimale entre le radiateur et le corps doit être de 20 cm.