

## Micro X series

# Tiny Transmitter Module Frequency Synthesized

1 ppm Frequency Stability.

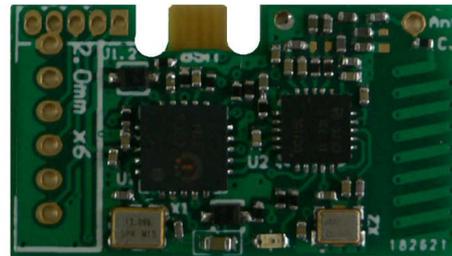
With Option POCSAG Encoder

### Main Features

- POCSAG Standard
- Oscillator by TCXO
- RF Power 10mW (about 10dbm)
- Frequency stability  $\leq 1$ ppm
- Frequency programmable
- RF Power programmable
- Capcode programmable
- Frequency Ranges:
  - 303 - 315 MHz
  - 410 - 490 MHz
  - 820 - 960 MHz
- Programming by micro USB
- 2 alarm inputs & 1 own data input
- I/O by connector wires or Dip pin on board
- Ultra fast Transmitter times
- LED indicate for TX and battery low
- Antenna on board
- External antenna option
- Operation Voltage by 3V (2.6-3.3V)
- Compact Size: 27mm x 15mm

### Application

- Send message to smart phone via IoT
- Send message direct to pager
- Fire Alarm on IoT
- PIR sensor on IoT
- Home and building automation
- Home security
- Door window open alarm
- Remote Controls
- Paging system



← Actual Size

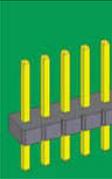
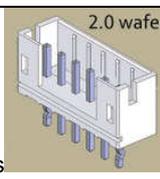
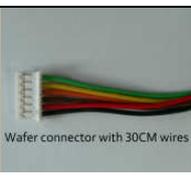
### ***Tiny size POCSAG Transmitter***

Design for Wireless alarm and security systems, Industrial monitoring and control systems with long range and long battery life... all functions Programmable by USB thru the PC Devices.

The Frequency range from 315-, 433-, 868-, 915-, 920-, 950-MHz, which meet all ISM/SRD US and Euro market requirements.

The new micro-x is a cost effective and high performance sub-1 GHz RF transmitter, which is integrated with a high configurable baseband modulator. The device support various FSK modulation formats and has a configurable data rates from 0.5 to 2.4K bps. **Option** Inside of POCSAG Copcode with message and high power output transmitter is an ideal for used for IoT and wireless data applications etc.

Also the Micro-x Tiny size Transmitter for alarm and service call system directly page the nurses or health care persons with pagers. Easy to get the urgent helps! And the installation is simple without any wiring connections.

Specification	
Description	Micro-x POCSAG Transmitter module
For Systems Targeting Compliance	EN 300 220 V2.3.1 (Europe) FCC CFR Part15. (U.S.A)
Frequency Range	ISM Band and SRD Band 315/434/868/915 MHz By PLL Frequency Synthesized. <i>If other Frequency required, contact wireless.com.tw</i>
Frequency stability	≤1ppm (inside oscillator by TCXO ).
Channel spacing	6.25K/12.5Khz or 25Khz.
Data Rate	From 512bps up to 2.4 Kbps.
Modulation	FSK.NRZ
Deviation	Typ. 4.5K Max.
Spurious and Harmonics	-60dBm.
POCSAG Encoder (Option)	2+1 Capcode 512/1200/2400bps Alphanumeric message **1
Message type	Numeric and alphanumeric. Max 40 characters.
Alarm trig input	3 Trig inputs ; 1 for negative trig (to touch GND) to TX, 1 for positive trig (touch to B+3V) to TX And 1 battery low sending alarm message (programmable)
Extra data input	2 level Data speed rate from 0-4K bps
Harmonic distortion	<2.5% maximum at 1200 bps.
RF Power output (programmable)	Max.13mW for 315-490 MHz ; 10mW for 868 and 915 MHz .
Transmitter attack time	<2mS for within 1.2K bps operation speed
RF Output antennas	Inside PCB antenna or sprint antenna for option.
Power Supply	DC 3V. (2.4V-3.6V).
Battery Low detect	2.1V to 2.8 V by programmable.
Temperature	-30°C — +70°C
Operation Current	Standby <5nA ; Transmitter <40mA. at 2 Sec per TX time.
Module Size	27mm x 15mm H3 mm.
Weight. (with BNC Jack)	2 grams.
Connector type A	 <p>1.27 mm SIP Header</p> <p>Direct dip on own PCB</p>
Connector type B	  <p>2.0 wafer</p> <p>wafer with 30 cm wires</p> <p>Wafer connector with 30CM wires</p>

## Tips to set up the programming parameters

1. Install the WDI T W1 programming AP execution file



2. Click and then run the programming software.
3. Connect the USB plug into the device and PC USB port.

Example Programming Screen as Below:

1. #. Pager number : The Slot 01-08 column is Pager address, pager type, type of tones, and message.etc.
2. A. Capcode : 01-02 POCSAG address range 0000008-2097151 for POCSAG encoder option.
3. B. Tone A,B,C,D : For pager alert tone for POCSAG encoder option.
4. C. Type : For pager type selection, numeric or alphanumeric.
5. D. Message : Pre-programming the encoder messages for pager contents
6. E.ID : For the ID call system such as each specific nurse ID set-up.
7. F. RF chip set select : Selected [5L] for Micro-x, then click [G] check and linking with RF chip set.
8. H. Carrier Frequency set : Example 457.5750 or 868.250 or 931.9375..
9. J. Data Rate : POCSAG data speed and baud rate in 512bps or 1200bps or 2400bps types.
10. K.TX Power : RF output power set-up
11. L. Buzzer Sound : on/off the Micro-x No use.
12. M. TX LED : On air LED indicated on/off.
13. N. External data : Extra data input into this transmitter.(standalone Transmitter only without pocsag encoder)
14. P. Over lock 10 Sec : Ignore same key press two and up it in 10Sec.
15. Q. Battery indicate : Battery low indicated on/off.
16. R. Send battery low message : Send battery low message on/off.
17. S. Assigned Low Battery Alarm Message : When the battery low alarm, sending message by slot #01 or #08 select.
18. T. Battery low voltage set-up : Normal set [38F] by low to 2.4V alarm, if set [2AA] by low to 2V alarm...(more info call us)
19. U. Key ID : Normal Input A = Key1, Input B = Key2, Input C = Key3,..micro-x just use Input 1 and 2( Trig#1 and Trig#2)
20. V. Repeater : Each paging to be calling repeated times. 1-4 time or cycle for each press...
21. W. Stop repeater : Micro-X no function in this item
22. X. Repeater intervals : if select Cycle repeater how long by Sec sending again....
23. Y. Open : Open previous programmed own files.
24. Z. Save : Save programming files for buck up.
25. Read : Reading from own devices.
26. Write : Write to own devices.
27. Exit : Exit the programming stage

## I/O Connector and USB

J1 Main I/O (2.0mm x 6 Pin header) with wires for option B type

Connector pin 1. Called [Tx Data] for Extra Data input

Connector pin 2. NC

Connector pin.3 Called [+Trig2] for Alarm trig #2 trig this pin touch to B+ go TX, and capcode #2 will be sending..

Connector pin.4 Called [+Trig1] for Alarm trig #1 trig this pin touch to gnd go TX, and capcode #1 will be sending..

Connector pin.5 Called [Battery 3V+] for DC power IN by 3V (2.6-3.3V).

Connector pin 6 Called [GND] this pin is system GND (also battery B-)



1. B+3V (2.6-3.3V)  
2. GND  
3. Trig #1 Negative for TX (PTT)  
4. Trig #2 Positive for TX  
5. Extra Data input
- 1.2.3.4.5  
Sip 1.27mm 5pin



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