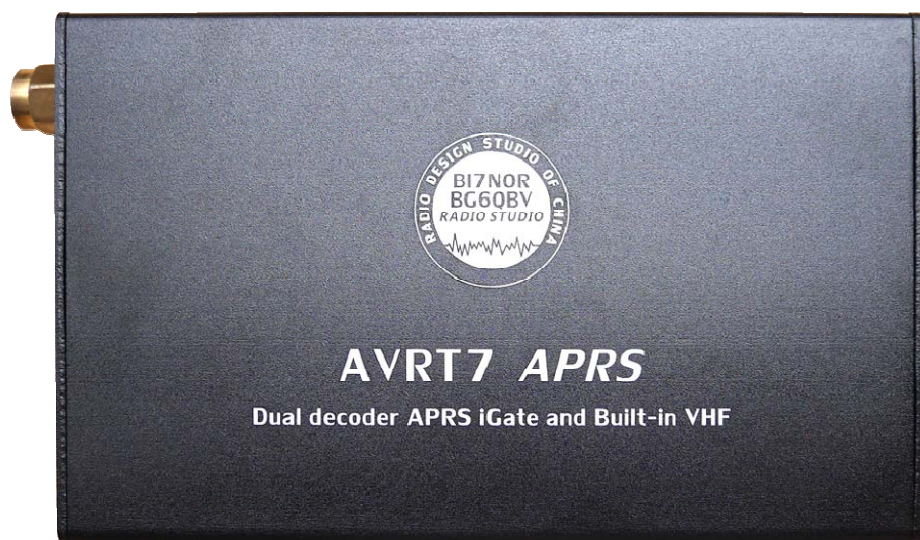


AVRT7 APRS User's manual

V1.0 (Only reference)



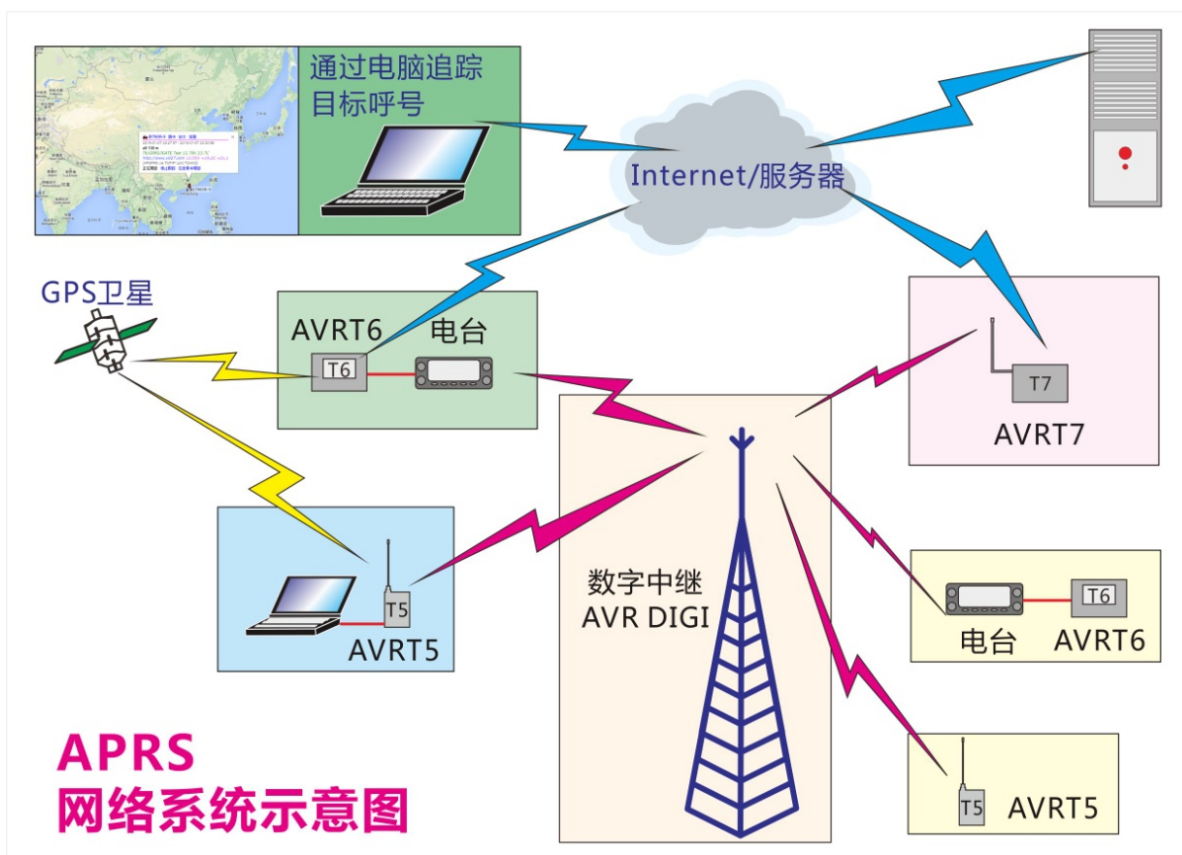
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前言

APRS is Automatic Position Reporting System, BI7NOR and BG6QBV design and production low cost AVRTx series of special equipment, Allow more radio amateurs with lower investment and fool-application, fast enjoy APRS mystery tour.

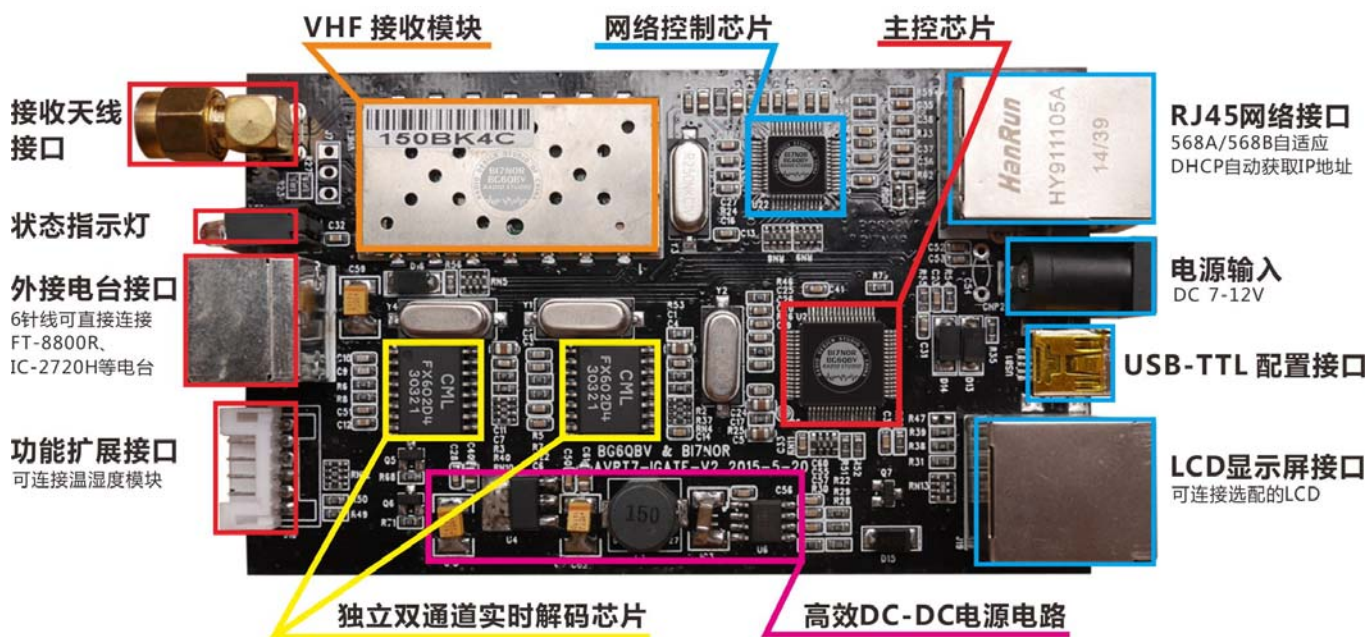
Main function is APRS IGATE (Gateway). Compatible with the common market of amateur and commercial equipment and various APRS DIGI APRS relay and IGATE, It is home to the first episode of a network and rated radio module IGate independent dual-channel real-time decoding uploaded versatile APRS network server



AVRTx series of special equipment

MODEL	AVR-DIGI	AVRT4(停产)	AVRT5	AVRT6	AVRT7
USE	APRS DIGI/TNC	CAR APRS tracker	Hand APRS Tracker	Car APRS tracker/Move gate	APRS iGate
Feature		Stop produce	APRS portable handset, built-in transceiver modules, 0.5-1W power (supports TF card recording tracks)	RF + GPRS dual-mode position report / APRS mobile gateway function	Built-in RF receiver module and extended radio decoding, Real time independent dual decoding uploaded to the server
GPS tracker		√	√	√	--
Blue-tooth	Optional		√	√	--
LCD				√	Optional
Radio interface	√	√		√	√
Other interface	Reserved	√	√	Reserved	√
APRS iGate				√	√
APRS Digi-repeater		√	√	√	√
Internal Radio			√		√
Receiving funtion			√		√
Temperature Sensor	Optional		√	√	Reserved
Pressure Sensors				√	Reserved
Beep			√	√	--
LED	√	√	√	√	√
TTL serial	√	√	√	√	√
Battery			√		--
Input power		√		√	√

AVRT7 主板概览



AVRT7 main function APRS IGATE (Gateway)。Built-in VHF receiver module and dual independent TNC codec comprehensive plan. Plug the network cable can be work (Must be plug in the power and the need to pre-set call signs), Compatible with the common market of amateur and commercial equipment and various APRS DIGI APRS relay and IGATE

- 1、 Built-in VHF receiver module and dual independent TNC decoder
- 2、 Optional LCD can be display Call, Distance, Direction.
- 3、 Optional BPM180、 18B20 Expand Temperature Pressure.
- 4、 LED display status :

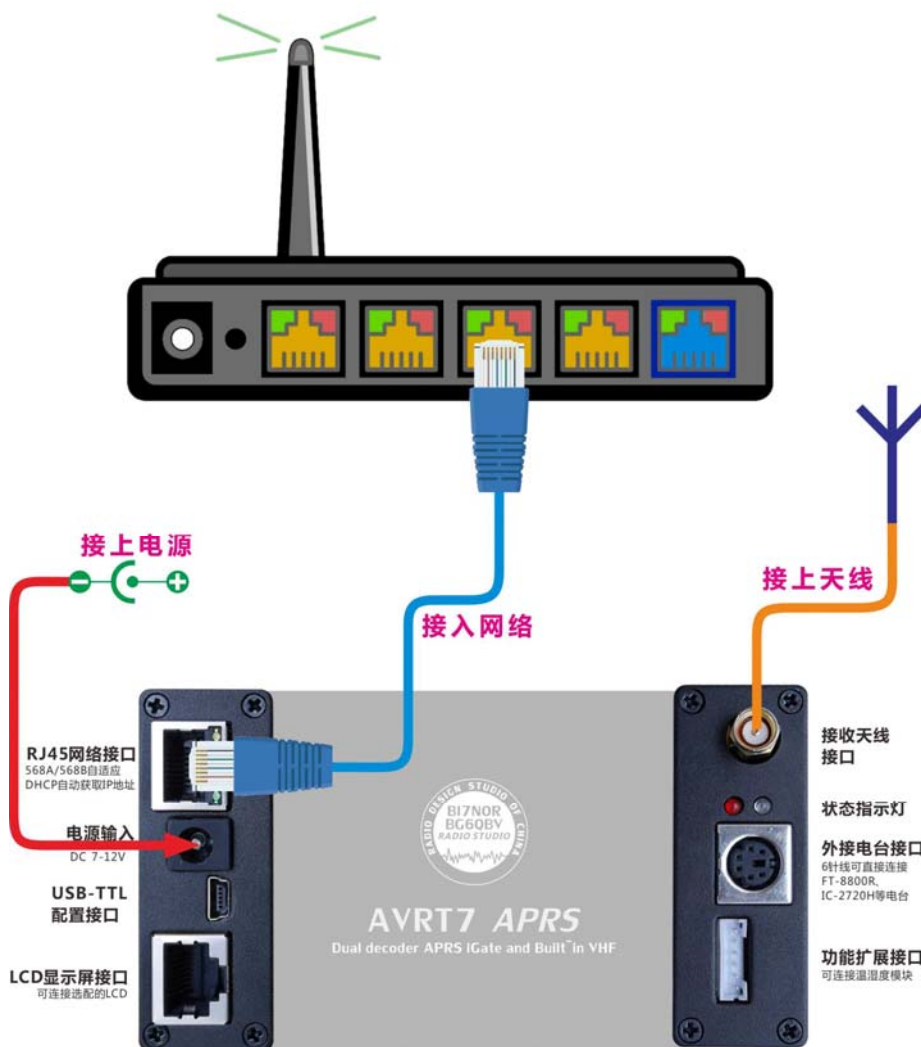
Colour	Power up	Internet connect...	Server connect ok	Server disconnect or fail	External radio decoding	Ineternal radio decoding
RED	blink	light	Slow blink	light	Fast blink	-
BLUE	-	-	-	-	-	Fast blink

AVRT7 config and use

AVRT7 simple configuration is very simple, Just connect the network cable and then after a few simple modifications to the application parameters.

If the connection is successful, you may need to shut down the state, the connection is completed reboot automatically retrieve and use.

Single gateway connected diagram:



Single gateway config diagram:

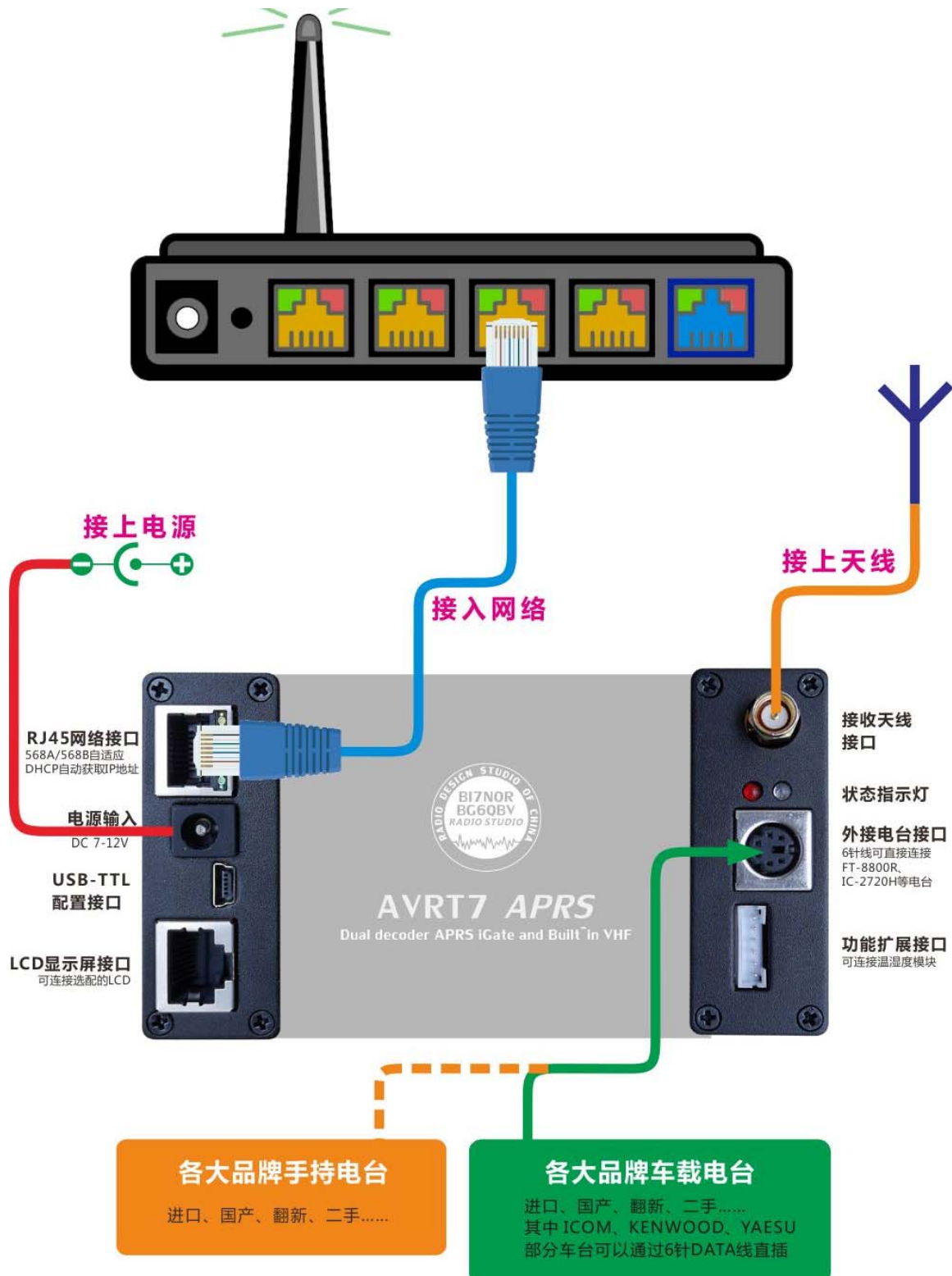


- 1、Callsign , Example. NOCALL-9 ;
- 2、Connect PASS;
- 3、Position data ;
- 4、VHF Receiving frequency, Example 144.6400 。

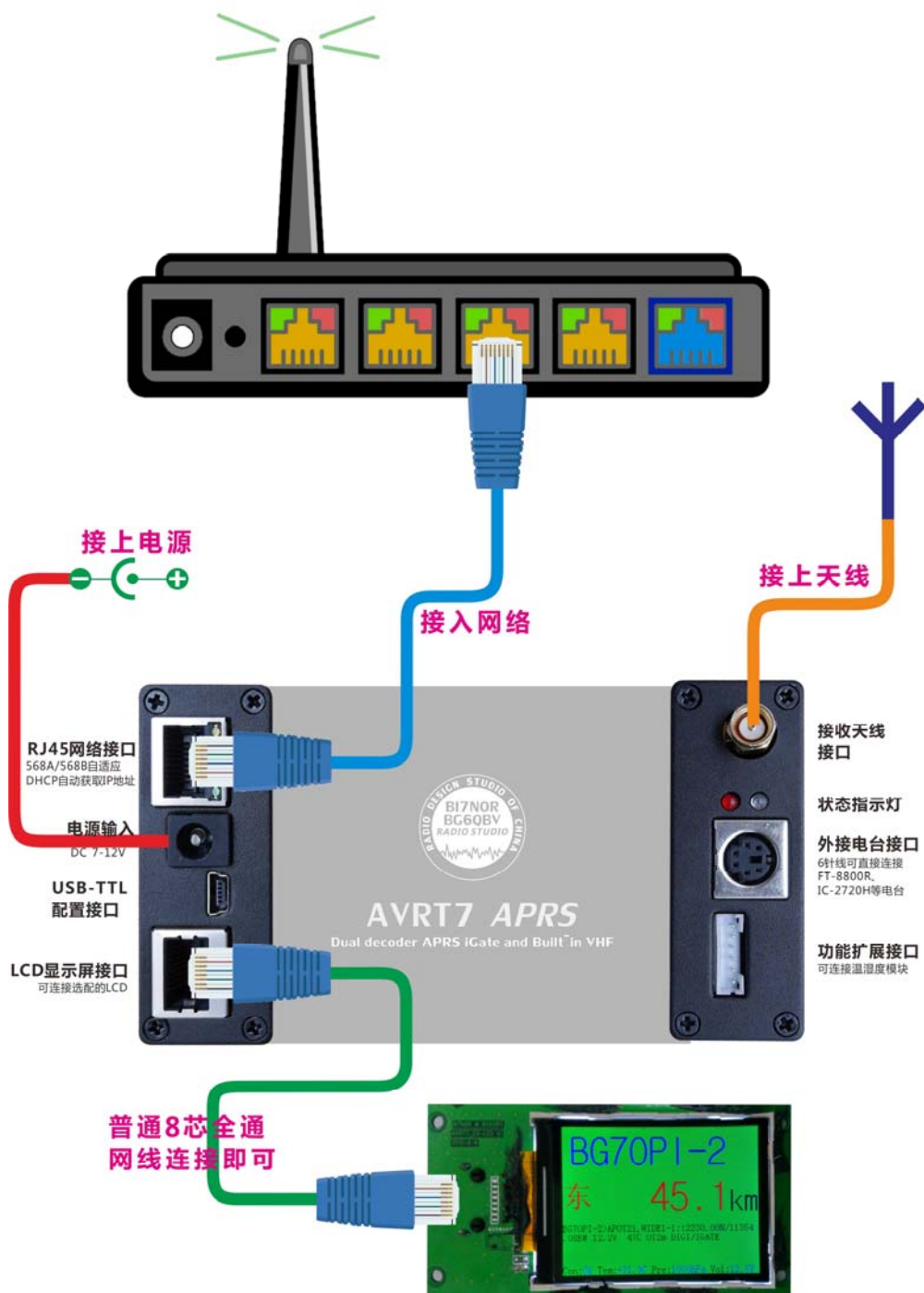


※Dual-channel real-time connection diagram dual solution :

System will built module receives real-time decoding beacon, a beacon and an external radio at the same time received real-time decoding and effective beacon simultaneously uploaded to the server APRS-IS.

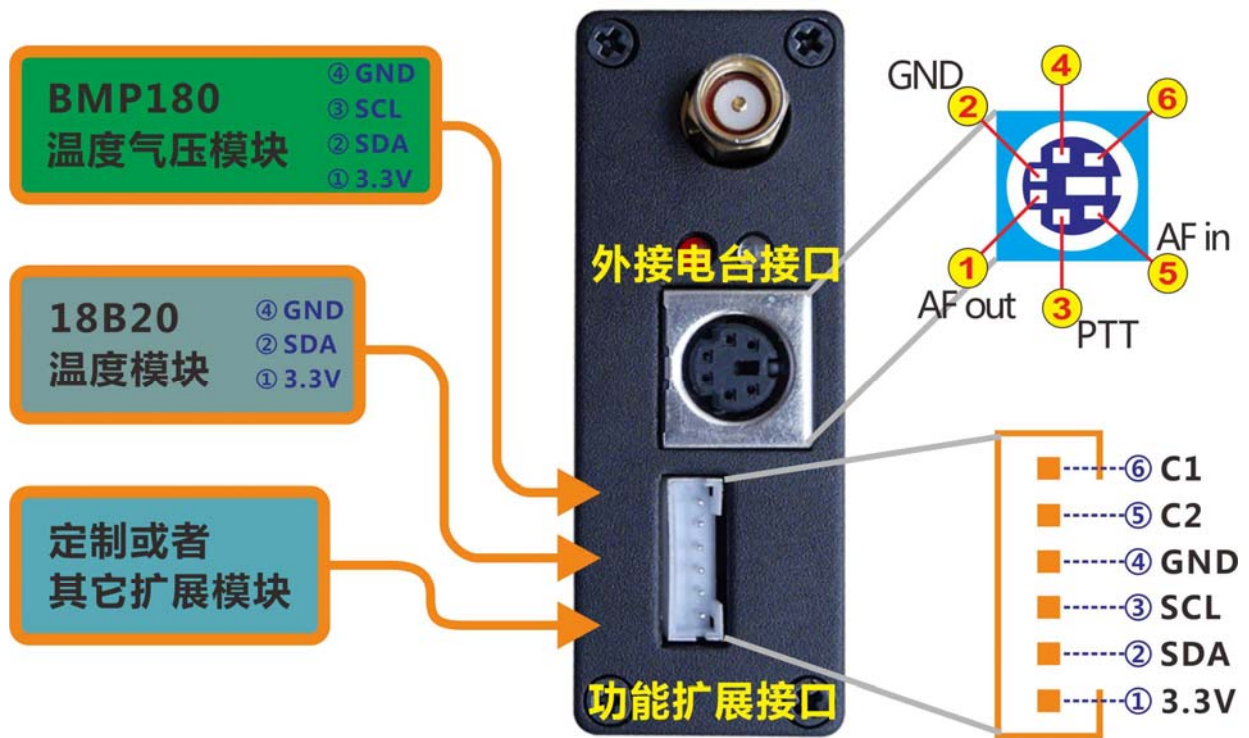


Optional accessories LCD monitor connection diagram :



- 1、LCD must be connected in the off state, then you can reboot;
- 2、Use 8-pin RJ45 wire connect AVRT7 LCD ;
- 3、LCD can display the received data, and you receive an external radio beacon is displayed by priority.

Function expansion interface definition and application:



- 1、Temperature Pressure Module can be connected BMP180 (model gy-68), the temperature module 18B20, Automatic identification, Don't need to configuration;
- 2、Customers can request custom expansion modules access.

AVRT7 software download and use

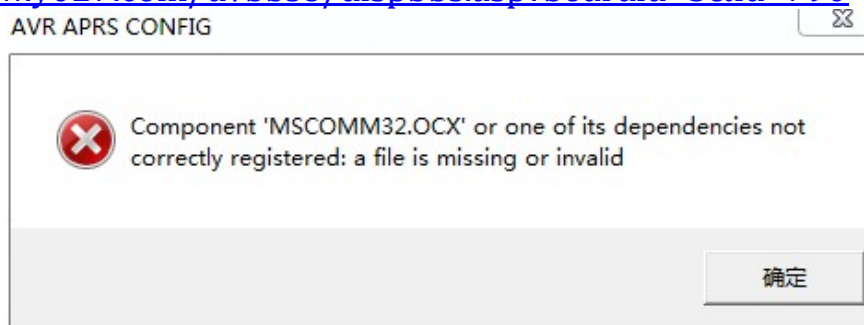
1、 Software download :

<http://www.y027.com/dvbbs8/dispbbs.asp?boardid=5&Id=1062>

2、 Software error and Solution :

Caution : If display “MSComm32.ocx” , Look this :

<http://www.y027.com/dvbbs8/dispbbs.asp?boardid=5&id=790>

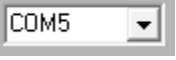


Caution : Config software display “Invalid picture” in the WIN7 64 PC

<http://www.y027.com/dvbbs8/dispbbs.asp?boardid=5&id=841>

3、 AVRT7 config and connect :

a. Plug the USB cable to the computer and plugged into the T7, Random installed with a USB cable PL2303 drive;

b. Open config software , Select serial port,  , Click “Read data” button ;

c. Click“Load default” , Revert to the default parameters, You can directly modify the default parameters directly;

d. After modifying, Click “Write data”.



4、ROM update:

Note: Use the included USB cable, containing USB-TTL circuits, not with an ordinary USB cable. AVRT7 firmware upgrade method: (to be written to the device ROM)

a. Open config software, Setup serial port. Example: ;

b. Click "ROM" bottom, Select new ROM file;

c. Click "update" bottom;

d. Wait update; (If fail, Please try again.)

Note 1: Each upgrade data ROM, will delete stored, please pay attention to save the configuration data;

Caution:

- 1, The supply voltage input of 7V-12V, 13.8V compatible vehicle use and design. You can also use the USB data cable 5V mobile power supply.
- 2, when the delivery of VHF antennas for mobile and easy to use test, used as a fixed gateway at your own connection to a higher-gain outdoor antenna.
- 4, Optional functions only as an extension for only a simple data monitoring, please pay attention to strengthening protection.
- 5, USB-TTL cable built-in conversion chip, Don't a substitute for an upgrade or configuration with an ordinary USB cable.

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