



**AT5820 Radar Setting Tool**  
**User Guide**  
**Version 1.1**

AirTouch

## 1 Summary

AT Radar Setting Tool is mainly used to set and query the working parameters of the AT radar module and obtain the working status of the radar.

The tool connects the radar module through the serial port on the PC side and controls the working status of the radar module through the customized protocol commands. Main features supported:

- Set the radar module sensing distance;
- Set the lighting time of the radar module;
- Set the light sensing threshold of the radar module;
- Set the radar module sensor switch;
- Set the switch of the radar light;
- Support radar to save the function of setting parameter;

## 2 User's Manual

### 2.1 Radar Module

A radar module with a serial interface provided by the AT, connected the PC through a common serial cable.

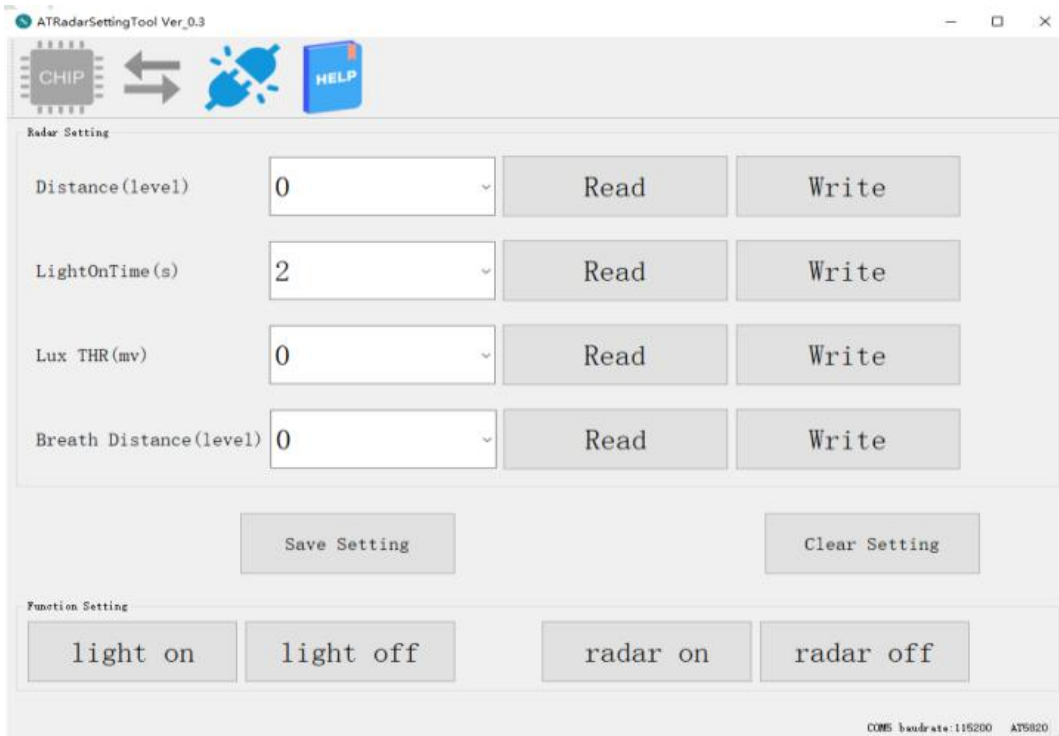
### 2.2 Programmer Upgrade

Please confirm with AT whether the radar module already supports the serial communication function. If yes, you can open AT Radar Setting Tool tool directly for controlling (see the tool usage in chapter 2.3); if it is not supported, you need to contact the MoreSense FAE to upgrade module programmer. If the customer has the SDK source coding, he can recompile and upgrade the radar module programmer as follows.

- 1) Configure in the target\_config.h file of the SDK:  
Open UART protocol communication function: #define CFG\_HCI  
Turn off printing LOG information: // #define CFG\_LOG
- 2) Compile and download the programmer to the radar module.

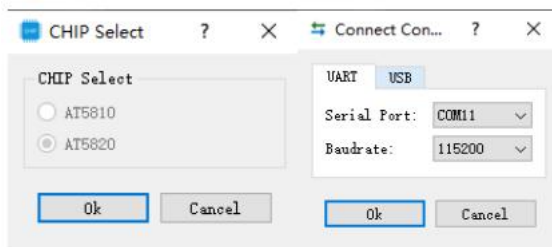
## 2.3 Tool Usage



Open AT Radar Setting Tool on the PC, the main interface of the programmer is as follows:



### 2.3.1 Serial Port Connection

Firstly,select the chip model in programmer main interface's Chip Select(currently AT Radar Setting Tool\_Ver.0.2 only supports AT5820 chip),select the corresponding serial port and baud rate in Connection,as shown below:



Then click on the main interface ,if the UART is opened successfully, the icon will be displayed as. 

### 2.3.2 Radar Module Working Parameter Setting

In the "Radar setting" area, you can set the Radar Sensing Distance (Distance), Radar Lighting Time (Light time) and Light Sensitivity Threshold (Lux THR) and other parameters. Firstly, you can read the current configuration on the radar module through the "Read" button, change the corresponding value, and then use the "Write" button to write the radar module configuration. All parameters written to the radar module will take effect in real time. By default, all parameters will be restored to the initial value state after the radar module is reset. You can save the setting parameters in the module through the "Save Setting" button.

1) Sensing Distance Setting: Select the corresponding level in the "Distance(level)", write by Write, Read can read the current module setting value.

The smaller the value, the more sensitive the radar sensing and the farther the distance.

Distance(level)	9	Read	Write	
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Note: When the module is powered on, the initial value is 255 (invalid value), and the set level cannot exceed the configurable level range of the radar module (0 ~ 31).

2) Select the corresponding value (unit: second) in the "LightOnTime(s)", write through Write, Read can read the current module setting value.

LightOnTime (s)	1800	Read	Write	
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3) Photosensitive Threshold Setting:

Select the corresponding value in the "Lux THR(mv)" and write it through Write. You can also read the current module setting value through Read,

If the radar module does not support the photosensitive threshold setting or there is a communication problem, the read failure will be displayed as follows:

Lux THR(mv)	0	Read	Write	
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Note: The radar module must support the photosensitive function, and the parameter unit is mv.

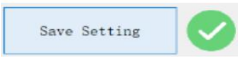
4) Respiratory Heart Rate Distance Setting:

Select the corresponding level in the "Breath Distance(level)",write through Write,and read the current module value through Read

The smaller the level is, the more sensitive the radar is.



5) Save and Clear Setting Parameters:

"Save Setting" button  :Save the setting parameters in the radar module,and it will also take effect after power off and restart.

"Clear Setting" button  :Clear the parameters which saved in the radar module.

### 2.3.3 Radar Module Control Function


1) Turn on the light ( "light on" ) and turn off the light ( "light off" )  
Set the control light's IO port level of the radar module to control the external light on and off. through "light on" and "light off" .

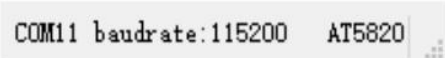


2) Switch of radar sensing function  
Set the switch of radar sensing function through "radar on" and "radar off"



### 2.3.4 Help function

The main interface  is used to view user help documents;

The status bar in the lower right corner is used to display the specific information of the current configuration: 

### 3 Revision History

<b>Revision</b>	<b>Date</b>	<b>Description</b>
1.0	2021-3-30	Initial draft
1.1	2021-05-10	Add breath heart rate distance using introduction.

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