

MDR–Mini–A

2022.7

Hillntoe Inc.

1. Overview of the device

- 1) 24GHz based radar
- 2) Small size and low cost with integrated antenna and MCU
- 3) Golf launch monitor, motion detector, presence of vehicles and people

2. Basic Specifications

- 1) Supply power: DC 5V
- 2) Operating current: 500mA max.
- 3) Operating temperature: -20 ~ 50°C
- 4) Detection distance: 8m Max
- 5) Output frequency: 24.125GHz CW (Center Freq)
- 6) Size: W30 * D30 * H4mm

3. How it works

After power is applied to the module, if a car or a person or golf swing is detected in the detection range of the front of the antenna, it is sent through the UART port.

Output the detected information.

4. installation place

It is an industrial radar device installed in a sealed enclosure, installation frame, pillar, heavy equipment, etc.

5. AS information

In case of product failure, please contact our A/S center directly.

A small fee will be charged for A/S requests after the warranty period has elapsed.

When requesting A/S, be sure to present the product warranty card or proof of receipt.

6. SPEC

	Parameter	Condition	Specification			Unit
			Min.	Typ.	Max.	
Microwave	Frequency			24.125		GHz
	Beam Width (NPBW)	Horizontal		140		deg
		Vertical		40		deg
Detection	Sensing Coverage	Horizontal		±70		deg
	Sensing Range	Front		7	8	m
Operating	Supply Voltage		4.8	5	5.3	V
	Current Consumption			100	500	mA
	Operating Temp.		-20		50	°C
Antenna	Array antenna		1TX, 1RX			
Size	Dimensions (max.)		30 x 30 x 4			mm
Output	Data out		GPIO, UART			
	Current				25	mA

6. Pin Information

PORT	PIN	Name	Description
Port1	1	VCC_5V	Main supply voltage.
	2	GND	Ground
	3	GPIO	UART data output
	4	N.C.	UART data input
	5	UART_TX	Not Connect
	6	UART_RX	Not Connect
	7	nRST	
	8	N.C.	

*The length of power line and signal line cable is less than 3m.

FCC Instructions

FCC Compliance Statement

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.

FCC Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. **This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.** This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Interference Statement

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 correct the interference by one 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 which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IC

Industry Canada Statement

This device complies with RSS-247 of the Industry Canada 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. Ce dispositif est conforme à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Industry Canada Radiation Exposure Statement

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Déclaration d'exposition aux radiations

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.