



HF Industrial Reader User Manual

Suitable for AR1332P

- ◆ Before you use this product, please read this manual carefully and properly keep it for future reference.
- ◆ As our products continue improving, they may be changed without advanced notice.
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1. Product Overview

1.1. Introduction

The AR1332P is a high-stability industrial-grade RFID reader developed based on low-power RF chips. It operates at 13.56MHz and supports reading tags that comply with the ISO15693 international standard protocol, such as NXP I-CODE 2 and I-CODE SLI. The device is equipped with built-in filtering and isolation modules, providing strong EMC anti-interference capabilities. It also features easy operation, excellent sealing and heat dissipation, high receiving sensitivity, stable performance, and high reliability.

The AR1332P supports the standard industrial communication protocol ProfiNET, allowing seamless integration into PLC and other control systems. The reader integrates RF communication protocols internally, eliminating the need for users to understand complex RF protocols. Users can simply use standard ProfiNET commands to operate the holding registers and input registers inside the reader to perform tag inventory, read memory, and write memory operations.

This product is suitable for industrial applications such as automated production lines, automated sorting systems, and component assembly lines.

1.2. Product Features

- Support ISO 15693 standard
- Communication interface: Industrial Ethernet
- Built-in filter and isolation module, with strong anti-interference ability to EMC
- Integrated design, compact structure, convenient for distributed installation and deployment
- Protection class IP67, suitable for various harsh environments in the industrial field

1.3. Product Pictures



Figure 1 Product appearance

1.4. Main Parameter

The detailed technical parameters of this product are as follows:

Table 1 Description of main technical parameters of the product

Parameter	Description
Operating Frequency	13.56 MHz
Support Standard	ISO 15693 protocol
Read And Write Distance	0-90mm(for $\phi 50$ tags)
Communication Interface	LAN (10/100M Ethernet); ProfiNET
Communication Rate	10/100M bps
Supply Voltage	24V DC(10~30V)
Maximum current	<0.08A@24V DC
Indicator Light	2 LED indicators
Dimensions	60*60*25mm
Weight	175g
Fixed way	4*M3 nut fixation
Shell Material	ABS
Shell Color	Dark gray
Operating Temperature	-30°C~+70°C

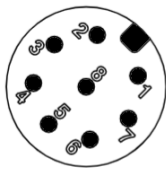
Operating Humidity	5%~95%RH
IP Rating	IP67

2. Hardware Interface Description

This product uses an 8-pin male (M12A) industrial connector for DC power supply, RS485 debugging interface, and 4-pin Ethernet communication interface.

The device is powered by 24V DC (10~30V).

Table 2 Pin Definition of Port 1

Port 1	Pin (8-pin Male)	Connection (Power + Communication Port)
 M12A male	1	TD+
	2	V+
	3	V-
	4	TD-
	5	RD+
	6	B(485)
	7	A(485)
	8	RD-

3. Communication Connection

3.1. Connection Instructions

The AR1332P reader can be networked with common PLCs through an Ethernet switch.

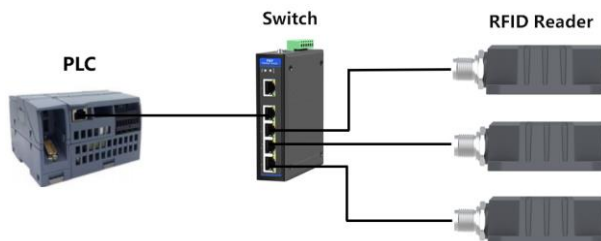


Figure 2 Product Working Network Topology

3.2. Connector Instructions

3.2.1. 2-Way Cable Splitter

The 2-way cable splitter separates the Ethernet communication cable from the DC power supply and 485 interface:

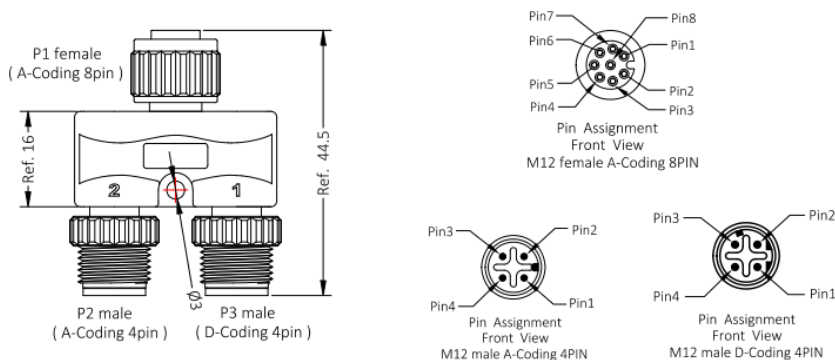
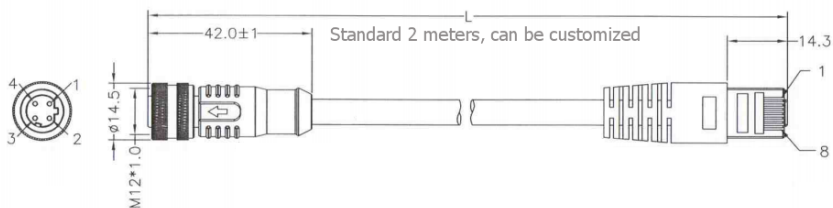


Figure 3 2-way Y-type Cable Splitter (Optional)

3.2.2. Ethernet Cable



P1: M12D female

P2: RJ45

Figure 4 Industrial Ethernet Connection Cable (Optional)

To improve communication reliability and system EMI performance, it is recommended to use CAT5E standard industrial Ethernet cables. The theoretical communication distance is up to 100 meters, but it is recommended to use within 80 meters in practical applications.

Table 3 Ethernet Port Connection

P1 (Y-type splitter port D)	P2 (Router)	Definition	Color
1	1	TD+	Orange-White
3	2	TD-	Orange
2	3	RD+	Green-White
4	6	RD-	Green
Metal Shielding Mesh	Metal Shielding Mesh	Signal Shielding Mesh	

3.2.3. DC Power Cable

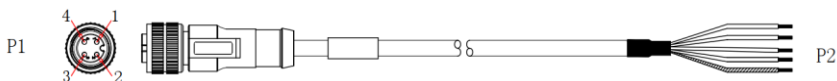


Figure 5 DC Power Cable (Optional)

Connect one end of the 24V DC power cable (M12A female) to the 4-pin port A of the Y-type cable splitter connected to the reader/writer. The other end with 4 loose wires is directly connected to the power supply and RS485.

Table 4 Power Port Connection

P1 (Y-type splitter port A)	P2 (DC power cable)	Definition	Color
1	1	V+	Brown
2	2	A(485)	White
3	3	V-	Blue
4	4	B(485)	Black
Metal Shielding Mesh	Metal Shielding Mesh	Signal Shielding Mesh	

3.2.4. 1-to-2 Cable (RJ45 Male)

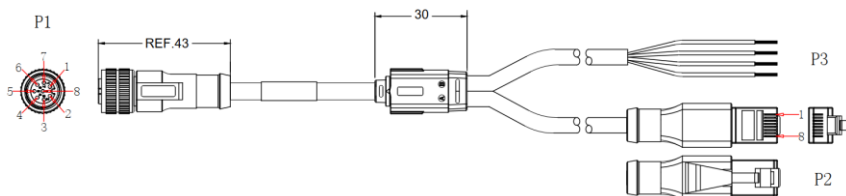


Figure 6 1-to-2 Cable (RJ45 Male) (Optional)

This cable can be directly connected to the reader. Connect port P1 to the reader interface.

Connect port P2 to the host computer or switch to establish communication with the reader.

Port P3 includes DC power cable and 485 debugging cable, which can be

connected to an external 24V DC (10~30V) power supply to power the reader. It can also be connected to a 485 cable for internal parameter configuration of the reader.

Table 5 Definition of P3 terminal line color

P3(DC power supply, 485 cable)	Definition	Color
1	V+	Brown
2	A(485)	White
3	V-	Blue
4	B(485)	Black

3.2.5. 1-to-2 Cable (RJ45 Female)

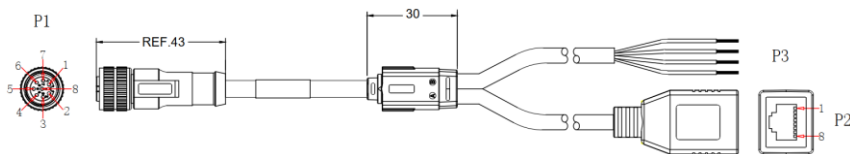


Figure 7 1-to-2 Cable (RJ45 Female) (Optional)

This cable can be directly connected to the reader. Connect port P1 to the reader interface.

Port P2 can be connected to an RJ45 male network cable to connect the reader to the host computer or switch for communication.

Port P3 includes DC power cable and 485 debugging cable, which can be connected to an external 24V DC (10~30V) power supply to power the reader/writer. It can also be connected to a 485 cable for internal parameter configuration of the reader.

Table 6 Definition of P3 terminal line color

P3(DC power supply, 485 cable)	Definition	Color
1	V+	Brown
2	A(485)	White
3	V-	Blue
4	B(485)	Black

4. Indicator Light Description



Figure 8 Reader Indicator Lights

Table 7 Reader Indicator Lights Description

LED	Status	Indication
Green LED	Slow blinking	Command card reading mode
	Fast blinking	Cyclic card reading mode
	Steady on	RFID tag detected
Blue LED	Steady on	Received communication data from host computer (blinking)

5. Technical Support

- **Download link for development data and testing**
<http://www.gzandea.com/download.php>
- **Call for equipment debugging and technical support**
Mobile phone: 138 0251 4535

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the 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.

NOTE: 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.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

(* The product should not be used in contact with the human body. The warning is as follows)

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



Guangzhou Andea Electronics Technology Co., Ltd.

Address: Room 1101, 1102, Building C2, No. 29, Bishan Street,
Huangpu District, Guangzhou.

Zip code: 510705

Website: <http://www.gzandea.com>