

ZJ Technology Limited.

Z640-ETN User Manual

Rev. 2.0



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Contents

1.	Product Outline	2
	Technical Data(Specifications).....	2
	System Configuration	2
2.	Installation and Connections/Wiring.....	3
	Install	3
	LED Indicators.....	4
	Power Supply:.....	4
	Setting The Communications Conditions	4
	Default IP Address Settings of the Z640-ETN	5
3.	Communication Protocol.....	6
	1:1 Protocol (ASCII).....	6
	Command List.....	7
	Response Code List.....	7
	READ [0100].....	8
	WRITE [0200]	9
	SET NETWORK [A300].....	10
4.	Maps of Communications Areas (Reference Only)	11

1. Product Outline

The Z640-ETN Reader, designed to meet SEMI and Carrier ID standards, Read and write to the Tag.

The main component of this unit is a transmitter than generates radio waves through an antenna. This Tiris compatible, low-frequency(134.2KHz), low-power RF energy is used to read from or wrote to a transponder near the antenna. The RFID Reader/Writer provides serial communication with a host trough an Ethernet port, using ASCII.

Technical Data(Specifications)

Power	DC 24V, 100mA
Communications	TCP/IP Server, Port:7090 Protocol: ASCII
Environmental	Operating Temperature 0~30 C(non-condensing) Operating Humidity 30%~90% (non-condensing) Storge Temperature 0 ~ 55 C Storge Humidity 5%~90%
Housing material	Aluminum, ABS
Dimension	L:93,W:80,H:29 (mm)

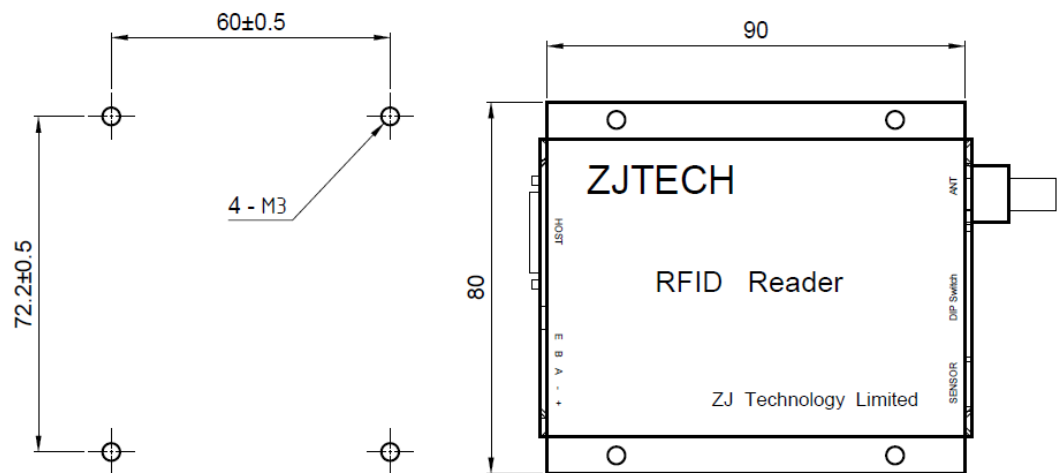
System Configuration



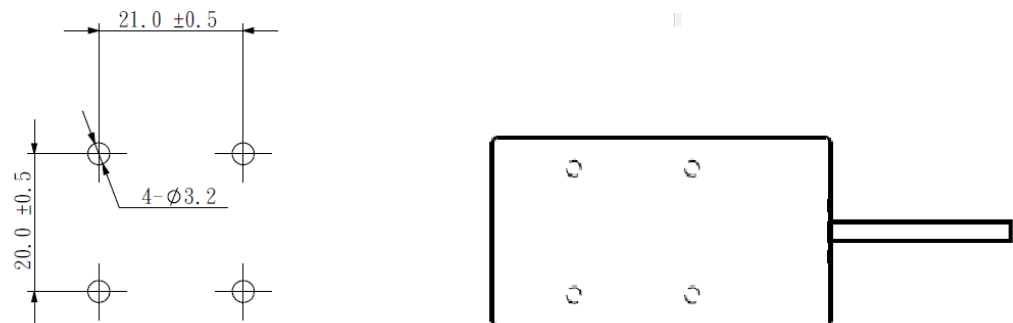
2. Installation and Connections/Wiring

Install

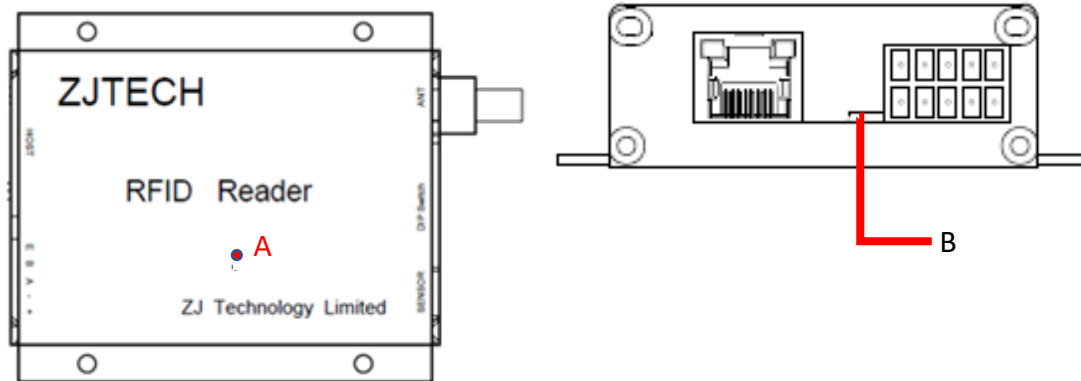
Main Unit: (unit: mm)



Antenna: (unit: mm)

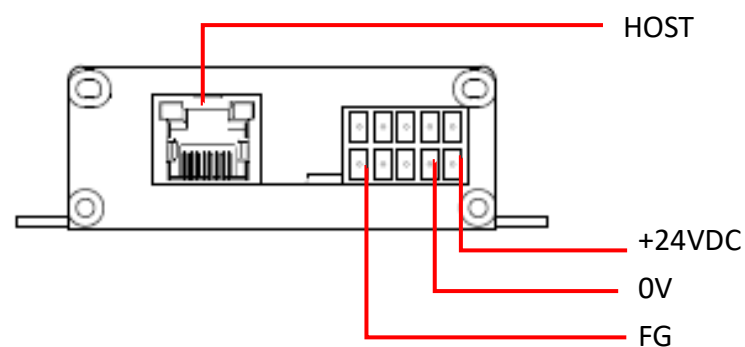


LED Indicators

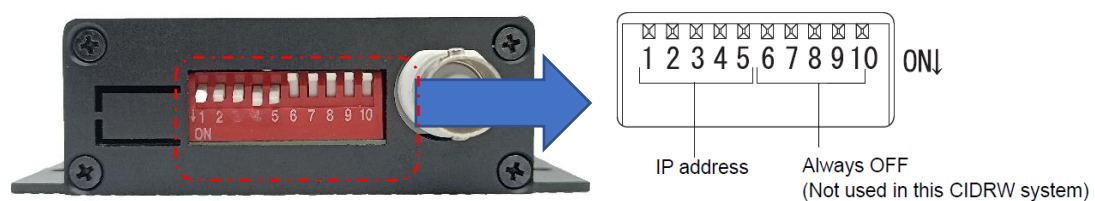


Item	Color	Function
A	Blue	System status: Blinking: Ready
B	Green/Red	R/W results: Green: Read OK Red: Read NG

Power Supply:



Setting The Communications Conditions



Node:

Node	DIP Switch				
	1	2	3	4	5
Setting in ROM	OFF	OFF	OFF	OFF	OFF
192.168.1.1	ON	OFF	OFF	OFF	OFF
192.168.1.2	OFF	ON	OFF	OFF	OFF
192.168.1.3	ON	ON	OFF	OFF	OFF
192.168.1.4	OFF	OFF	ON	OFF	OFF
192.168.1.5	ON	OFF	ON	OFF	OFF
192.168.1.6	OFF	ON	ON	OFF	OFF
192.168.1.7	ON	ON	ON	OFF	OFF
192.168.1.8	OFF	OFF	OFF	ON	OFF
192.168.1.9	ON	OFF	OFF	ON	OFF
192.168.1.10	OFF	ON	OFF	ON	OFF
192.168.1.11	ON	ON	OFF	ON	OFF
192.168.1.12	OFF	OFF	ON	ON	OFF
192.168.1.13	ON	OFF	ON	ON	OFF
192.168.1.14	OFF	ON	ON	ON	OFF
192.168.1.15	ON	ON	ON	ON	OFF
192.168.1.16	OFF	OFF	OFF	OFF	ON
192.168.1.17	ON	OFF	OFF	OFF	ON
192.168.1.18	OFF	ON	OFF	OFF	ON
192.168.1.19	ON	ON	OFF	OFF	ON
192.168.1.20	OFF	OFF	ON	OFF	ON
192.168.1.21	ON	OFF	ON	OFF	ON
192.168.1.22	OFF	ON	ON	OFF	ON
192.168.1.23	ON	ON	ON	OFF	ON
192.168.1.24	OFF	OFF	OFF	ON	ON
192.168.1.25	ON	OFF	OFF	ON	ON
192.168.1.26	OFF	ON	OFF	ON	ON
192.168.1.27	ON	ON	OFF	ON	ON
192.168.1.28	OFF	OFF	ON	ON	ON
192.168.1.29	ON	OFF	ON	ON	ON
192.168.1.30	OFF	ON	ON	ON	ON
192.168.1.31	ON	ON	ON	ON	ON

Default IP Address Settings of the Z640-ETN

IP address 192.168.1.200
 Subnet mask 255.255.255.0
 Port:7090

3. Communication Protocol

1:1 Protocol (ASCII)

Command

Command code		Test Data								CR
		Data1		Data2		Data3		Data4		
1	0	1	2	3	4	5	6	7	8	0Dh

Response

Response code		Test Data								CR
		Data1		Data2		Data3		Data4		
0	0	1	2	3	4	5	6	7	8	0Dh

Command List

Name	Value	Function
READ	0100	When this command is received, the system communicates with the ID Tag, and reads the specified page(s) of data. Any pages up to a maximum of 16 can be selected.
WRITE	0200	When this command is received, the system communicates with the ID Tag, and writes the specified page(s) of data. Any pages up to a maximum of 16 can be selected.
SAME WRITE	0300	When this command is received, the system communicates with the ID Tag, and writes the same data in page units to the specified pages. Up to 17 pages, which is the maximum number of pages for an ID Tag, can be specified.
SET NETWORK	A300	Sets the network.
TEST	10	Sends received data to the host device

Response Code List

Type	Response code	Name	Description
Normal end	00	Normal end	Command execution is completed normally.
Host communications error	14	Format error	There is a mistake in the command format. (For example, the command code is undefined, or the page or address specification is inappropriate.) Communications error
Communications error	70	Communications error	Noise or another hindrance occurs during communications with an ID Tag, and communications cannot be completed normally.
	71	Verification error	Correct data cannot be written to an ID Tag.
	72	Verification error	Either there is no ID Tag in front of the CIDRW Head, or the CIDRW Head is unable to detect the ID Tag due to environmental factors (e.g., noise).
	7B	Outside write area	A write operation was not completed normally because the ID Tag was in an area in which the ID Tag could be read but not written.
	7E	ID system error (1)	The ID Tag is in a status where it cannot execute command processing
	7F	ID system error (2)	An inapplicable ID Tag has been used.

Command	Page designation (8 bytes)								CR
0100									0Dh

Response code		Read data																CR
		Page n							Page m(n<m)									
		Data 1	...	Data 8	Data 1	...	Data 8											
0	0																	0Dh

Page 1	12h	34h	56h	78h	90h	12h	34h	56h
Page 2	11h	22h	33h	44h	55h	66h	77h	88h
Page 3								
...								
Page 17								

[illegible]

Response code		Page 1																Page 2																CR
0	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	0Dh

WRITE [0200]

Command

Command Code	Page designation (8 bytes)	Write data												CR				
		Page n			...	Page m(n<m)												
		Data1	...	Data8	...	Data1	...	Data8										
0200																		0Dh

Bit	7	-	0	7	-	3	2	1	0	7	6	-	1	0	7	6	-	2	1	0
Page	sys	-	Sys	Sys	-	Sys	17	16	15	14	13		8	7	6	5	-	1	Sys	Sys
	0	0		0	0	0	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	-	0/1	0	0
Value	00			00~07						00~FF					00~FC					

Response

Response Code		CR
0	0	0Dh

SET NETWORK [A300]

Command

Command Code	First octet			Second octet			Third octet			Fourth octet			CR
A300													0Dh

Parameter Description

Parameter	Description
First to fourth octet	The address is set in decimal in four octets of three characters each.

Response

Response Code		CR
0	0	0Dh

If an error occurs when writing to EEPROM, error 9A will be returned.

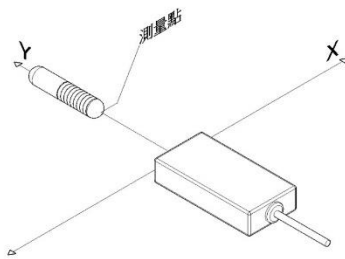
- Never turn OFF the power supply to the Amplifier Unit before a response is received from the Amplifier Unit for this command. Doing so may damage the Amplifier Unit.
- The values are enabled when the Amplifier Unit is restarted.

4. Maps of Communications Areas

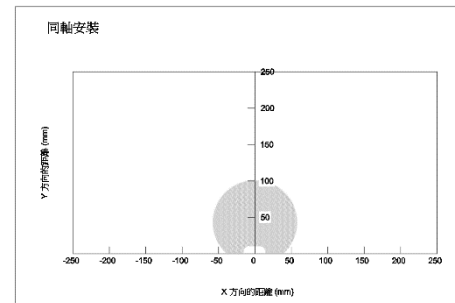
(Reference Only)

Antenna type: Z640-HS61

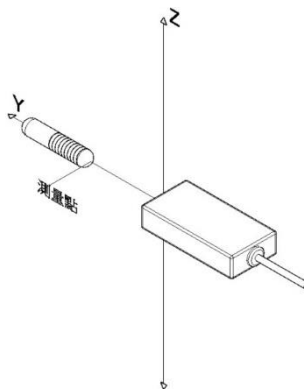
■ Coaxial Mounting



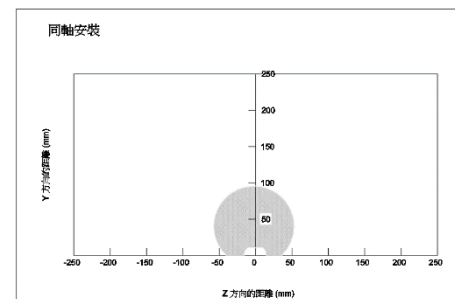
Tag:RI-TRP-DR2B-30



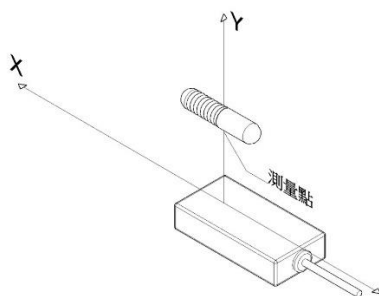
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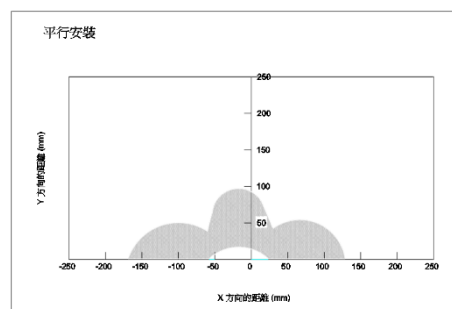
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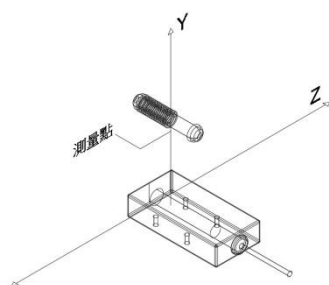
■ Parallel Mounting



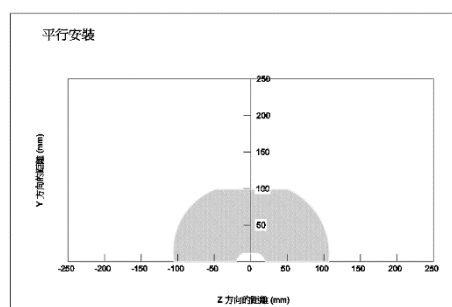
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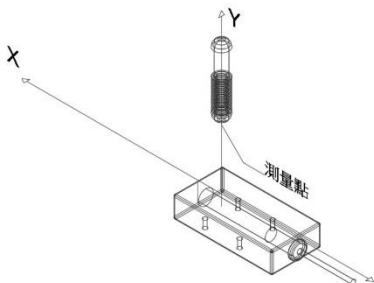
■ Parallel Mounting



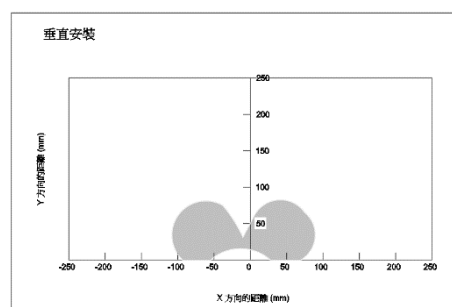
Tag:RI-TRP-DR2B-30



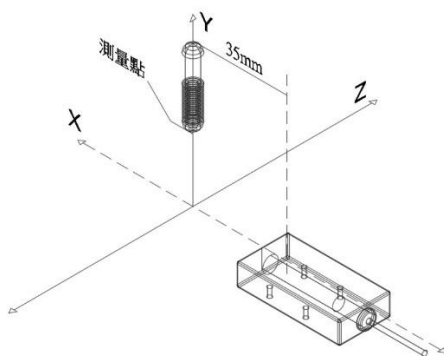
■ Vertical Mounting



Tag:RI-TRP-DR2B-30



■ Vertical Mounting



Tag:RI-TRP-DR2B-30

