

ezTCP Technical Documents

Serial Port Specification

Version 1.2

☞ ***Caution: Specifications of this document may be changed for improvement without prior notice.***

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1 Overview

ezTCP is a converter which converts serial to TCP/IP and vice versa. The specifications on a serial port(s) of products are listed and compared in this document to help users narrow the choice.



Figure 1-1 an example of system using ezTCP

We have been developing and producing a number of products for various interfaces. As you can see in the figure below, there are many standards of classifications in the serial parts.

Number of Ports	1 port	2 ports	4 ports		
Serial Interface	3.3V TTL	5V TTL	RS232	RS422	RS485
Network Interface	Wired LAN	Wireless LAN	PPP		
Product Type	Module	Board	External		

Figure 1-2 standards of classifications

2 Serial to Ethernet Converters

A serial to Ethernet converter enables user's devices or MCU to communicate in Ethernet using TCP/IP.

2.1 Single Port Products

Single port products have just one serial port. There are many products in this type.

2.1.1 External Type

External type products fully equip all connectors for interfacing other devices including a case. Because of this, these products are easy to use for everyone.

Table 2-1 comparison of single port external products

Division		EZL-200F /220	CSE-H25	CSE-H53	CSE-H55	CIE-H10
RS232		○	○	○		○
RS422		○	-	-	○	-
RS485		○	-	-	○	-
Max. Baud Rate(bps)		1,200	300	300	300	300
Min. Baud Rate(bps)		115,200	230,400	230,400	230,400	230,400
D-SUB		○	○	○	-	○
Terminal Block		-	-	-	○	-
Flow Control	RTS/CTS	○	○	○		○
	DTR/DSR	-	○	-	-	○
	Xon/Xoff	○	-	○	○	-

2.1.2 Module Type

Module type products need a board for interfacing serial port, network and power. These are mostly used by mass production companies.

Table 2-2 comparison of module type products

Division		EZL-50L(A)	EZL-50M(A)	CSE-M53	CIE-M10
TTL(3.3V)		-	-	○	○
TTL(5V)		○	○	-	-
TXDE		○	○	○	○
Max. Baud Rate(bps)		1,200	1,200	300	300
Min. Baud Rate(bps)		115,200	115,200	921,600 (230,400)	230,400
Flow Control	RTS/CTS	○	○	○	○
	Xon/Xoff	○	○	○	-

☞ **Although you can set the baud rate of CSE-M53 up to 921,600, it is restricted to 230,400 when using Xon/Xoff flow control or RS485 communication.**

☞ **Modules which support TXDE are expandable to RS422/485 application.**

2.1.3 Board Type

This type of products can be easily applied to your system due to an RJ45 connector.

Table 2-3 comparison of board type products

Division		EZL-70(A)	CSE-M73
TTL(3.3V)		-	○(5V Tolerance)
TTL(5V)		○	-
RS232		○	○
RS422		○	○
RS485		○	○
Max. Baud Rate(bps)		1,200	300
Min. Baud Rate(bps)		115,200	230,400
Flow Control	RTS/CTS	○	○
	Xon/Xoff	○	-

2.2 Multi-Port Products

Multi-port products have two or more serial ports. These are mostly used on the systems which built with multiple devices or new device is likely to be added to in the future.

Table 2-4 comparison of multi-port products

Division		EZL-410	EZL-400S	CSE-M32	CSE-H20	CSE-H21
Type		Module	Module	Module	External	External
Number of Ports		4	4	2	2	2
TTL(3.3V)		○	-	○	-	-
TXDE		-	-	○	-	-
RS232		-	○	-	○	○
Max. Baud Rate(bps)		600	600	300	300	300
Min. Baud Rate(bps)		115,200	115,200	1,840,200 (921,600)	230,400	230,400
D-SUB		-	○	-	-	○
RJ45		-	-	-	○	-
Flow Control	RTS/CTS	○	○	○	○	○

- ☞ *The maximum baud rate of CSE-M32 is 1,840,200 when using single COM port but if you use both COM1 and COM2 ports, it is restricted to 921,600.*
- ☞ *Note that the "RJ45" item means an interface type of the serial port not the Ethernet port.*

3 Serial to Wireless LAN Converters

A serial to wireless LAN converter enables user's devices or MCU to communicate in wireless LAN (Wi-Fi) using TCP/IP.

Table 3-1 comparison of wireless LAN products

Division		CSW-M83	CSW-M85	CSW-H80
Type		Module	Module	External
Number of Ports		1	1	1
TTL(3.3V)		○	○	-
TXDE		○	○	-
RS232		-	-	○
Max. Baud Rate(bps)		300	300	300
Min. Baud Rate(bps)		230,400	230,400	230,400
D-SUB		-	-	○
Flow Control	RTS/CTS	○	○	○

4 Serial to PPP Converters

A serial to PPP converter enables user's devices or MCU to communicate in PPP network using TCP/IP.

Table 4-1 comparison of PPP products

Division		EZP-250	CSP-H50
Type		Module	External
Number of Ports		1	1
TTL(3.3V)		○	-
TTL(5V)		○	-
RS232		-	○
Max. Baud Rate(bps)		1,200	1,200
Min Baud Rate(bps)		230,400	230,400
D-SUB		-	○
Flow Control	RTS/CTS	○	○

5 Revision History

Date	Version	Description	Author
2011.01.14	1.0	○ Created	Roy LEE
2011.07.11	1.1	○ table 2-1 has been corrected	Amy Kim
2011.11.11	1.2	○ added TXDE item ○ added a new product, CSW-M85 ○ removed EZU-100	Roy LEE