

## Advantech AE Technical Share Document

<b>Date</b>	05/10/2019	<b>Release Note</b>	<input type="checkbox"/> Internal <input checked="" type="checkbox"/> External
<b>Category</b>	<input checked="" type="checkbox"/> FAQ <input type="checkbox"/> SOP	<b>Related OS</b>	Windows OS
<b>Abstract</b>	[FAQ] What's the correct Pin definition of EKI-1500 & EKI-1200 family		
<b>Keyword</b>	Device Server, EKI-1500, EKI-1200, Modbus Gateway, Pin Assignment		
<b>Related Product</b>	EKI-1500 series, EKI-1200 series, USB-4604 series		

### ■ Problem Description:

Pin assignment is quite important and when users start to connect EKI-serial device server family to end terminal device.

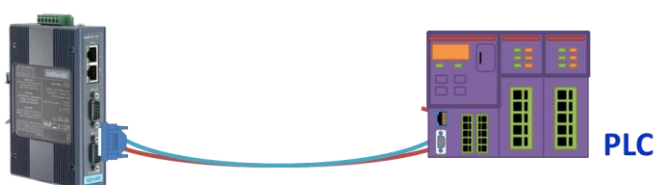
EKI-1500 series serial device server that include EKI-1521/2/4/8/16/8-DR & EKI-1200 serial Modbus gateway that include EKI-1221/2/4/6 and USB-4600 series USB-2-serial converter these module that also related with the old module like EKI-1500-AE hardware version and latest new hardware module like EKI-1500-CE/EKI-1200-CE version.

These modules have their own unique serial type pin assignment and also has different type of connector type like RJ-45 serial type for rack-mounted size serial device server (EKI-1528(6)-AE/BE) or DB9 serial type like most other modules.

This FAQ would use chart to show the different EKI device server family hardware module would accept its serial type pin definition.

### Two types of Serial Connection

#### DB9-to-Serial equipment



#### RJ-45-to-Serial equipment

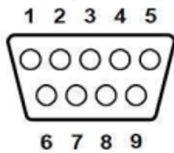


■ **Brief Solution - Step by Step:**

Below is whole EKI-1500/EKI-1200/USB-4604 support Pin assignment chart.

These modules all support in DB-9 type serial connector.

Male DB9 (DB9-M)



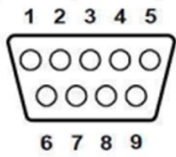
Pin	1	2	3	4	5	6	7	8	9
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS	RI
RS-422	TX-			TX+	GND		RX+		RX-
RS-485	DATA-			DATA+	GND				

**Support EKI serial converter model**

Wired Serial Device Server	EKI-1521/2/4-AE, EKI-1521/2/4-BE, EKI-1521/2/4/8/6-CE, EKI-1528-DR-AE, ADAM-457x EKI-1526T-DC-CE/EKI-1528T-DC-CE EKI-1526N-CE/EKI-1528N-CE
Wired/less Modbus Gateway	EKI-122x-AE, EKI-122x-BE, EKI-122x-CE EKI-136x-MB-AE, EKI-136x-MB-BE
GPRS/Wireless Serial Device Server	EKI-136x-AE/136x-BE, EKI-1321, EKI-1351, EKI-1352
USB2Serial Converter	USB-4604-BE

The old modules such as EKI-1526(8)-AE/BE that go with RJ-45 type connector and USB-4604-AE that goes with DB-9 type connector.

Male DB9 (DB9-M)

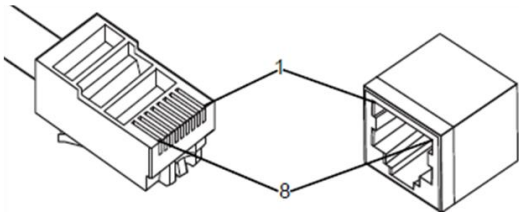


Pin	1	2	3	4	5	6	7	8	9
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS	-
RS-422	TX-	TX+	RX+	RX-	GND				
RS-485	DATA-	DATA+			GND				



Support EKI serial converter model	
Wired Serial Device Server	EKI-1526-AE/BE, EKI-1528-AE/BE (Rack-mounted series)
USB2Serial Converter	USB-4604-AE

RJ-45



## Appendix:

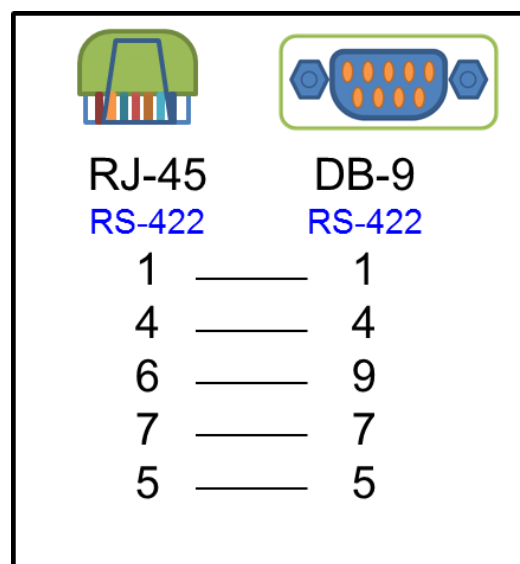
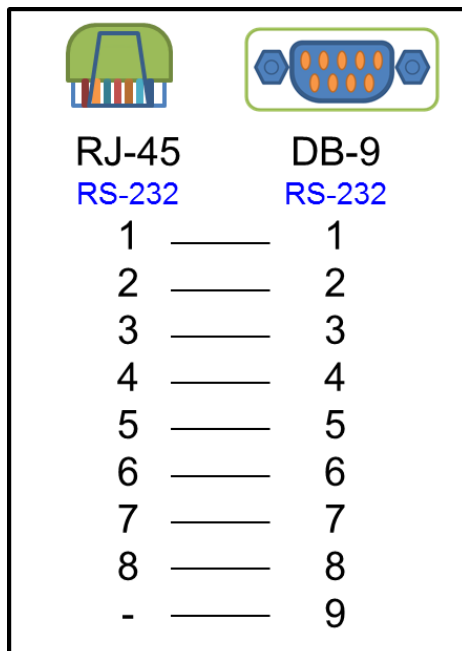
The latest one rack-mounted EKI-1526(8)-CE device server module use DB-9 connector that is different serial type compare with EKI-1526(8)-BE that originally use RJ-45 serial type. In this situation, it may need some accessory to fit the modification. We have two kinds of accessory that can meet it require.

Option1: Part number: **OPT1-DB9-J1-A**

Who would need option1 accessory?

- User that used serial type RS-232 mode in EKI-1526(8)-AE/BE
- New user needs RJ-45 type connector for RS-232/RS-422/RS-485.

RJ45 Pin definition	△							
	1	2	3	4	5	6	7	8
RS-232	DCD	RX	TX	DTR	GND	DSR	RTS	CTS
RS-422	TX-			TX+		RX-	RX+	
RS-485	DATA-			DATA+	GND			



## Option2: Part number: **OPT1-DB9-J2-A**

Who needed: User that used serial type RS-422/RS-485 mode in EKI-1526(8)-AE/BE or new user need RJ-45 type connector for RS-422/RS-485. Please check this below Pin defines.

RJ45 Pin definition	△							
	1	2	3	4	5	6	7	8
RS-422	TX-	TX+	RX+	RX-	GND			
RS-485	DATA-	DATA +			GND			



RJ-45		DB-9
RS-422/485		RS-422/485
1	_____	1
2	_____	4
3	_____	7
4	_____	9
5	_____	5

Option3: Part number: **OPT1-DB9-AE**

What kind of User needed: user need terminal type connector for RS-422/RS-485. Please check this below Pin defines.



Terminal Pin	△				
	1	2	3	4	5
RS-422	TX-	TX+	RX+	RX-	GND
RS-485	D-	D+	-	-	GND

**TX/RX DIP with 120ohm resister**

**Reference:**

EKI-1521\_1522\_1524\_Manual\_Ed3.pdf (Ed3)

EKI-1500 Series\_UM\_DF-A\_10272016.pdf

EKI-1528\_1526\_Manual\_Ed1.pdf (Ed1)

EKI-1526I-CE&EKI-1528I-CE\_UM\_Ed1\_05122017.pdf

EKI-1200 Series\_UM\_10042016.pdf

USB-4600\_Series\_User\_Manual\_ed3.pdf

USB-4604B(M)-BE UM\_D2\_11302015.pdf

■ **Contact Window and File Link:**

If you have any questions, please contact [ICG.Support@advantech.com.tw](mailto:ICG.Support@advantech.com.tw)