



# LPC-02

Expansion Module for Two RS-232 Ports and Two RS-232/RS-422/RS-485 Ports (5V or 12V)

## Quick Guide



The LPC-02 is an expansion module designed for connecting up to four external serial devices to existing VIA EPIA mainboards.

## Specifications

- I/O Coastline**
  - 4 x COM ports
    - Support RS-232/RS-422/RS-485 interface (COM1 ~ COM2)
    - Support RS-232 interface (COM3 ~ COM4)
    - Support 5V/12V voltage select for COM1 ~ COM4
- Dimension**
  - 100mm x 60mm

## Packing List

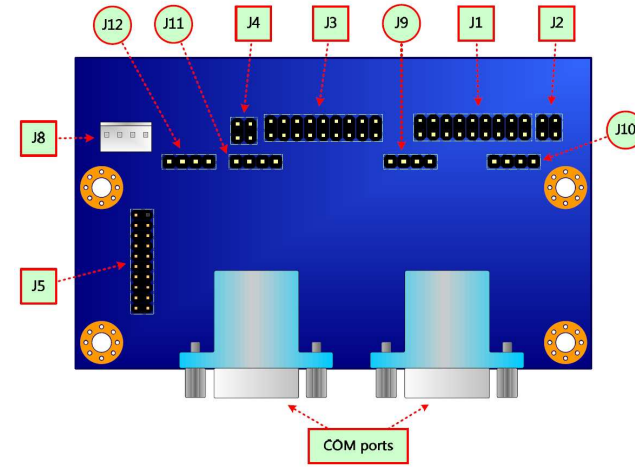
- 1 x LPC-02 module
- 1 x LPC cable

**Note:**  
Please ensure that all items in the packing list are present before using this product. If any of the items are missing or damaged, contact your distributor or sales representative immediately.

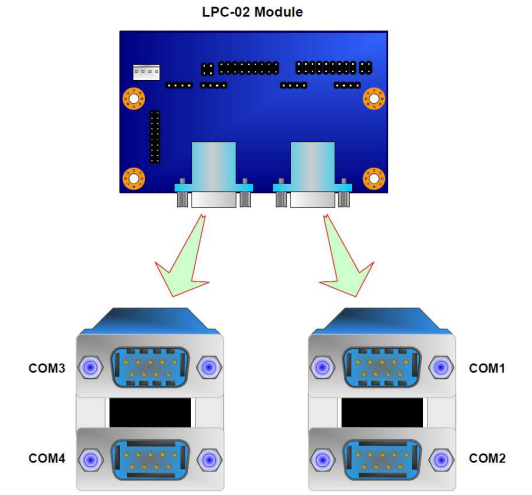
## Key Features

- Expansion module for four COM ports (5V or 12V)
- COM1 & COM2 are selectable for RS-232/RS-422/RS-485, and COM3 & COM4 are dedicated for RS-232
- Compatible with boards with standard LPC pin header

## LPC-02 Module Layout



## I/O Coastline

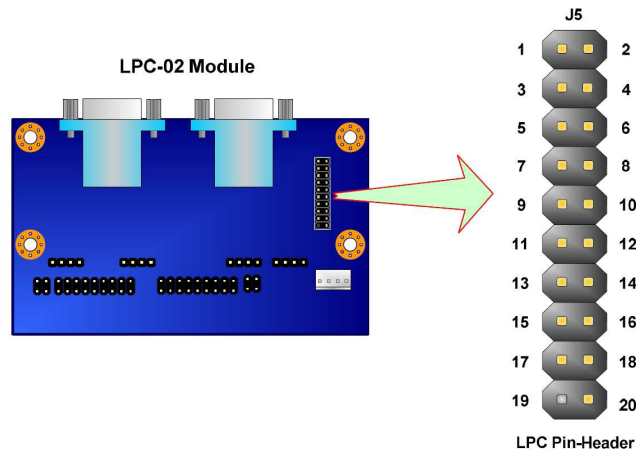


Pin	Signal		
	RS-232	RS-422	RS-485
1	DCD	-TX	-TX
2	RXD	TX	TX
3	TXD	RX	-
4	DTR	-RX	-
5	GND	GND	GND
6	DSR	-	-
7	RTS	-	-
8	CTS	-	-
9	RI	-	+12V

**Note:**  
COM1 & COM2 are selectable for RS-232/RS-422/RS-485, and COM3 & COM4 are dedicated for RS-232.

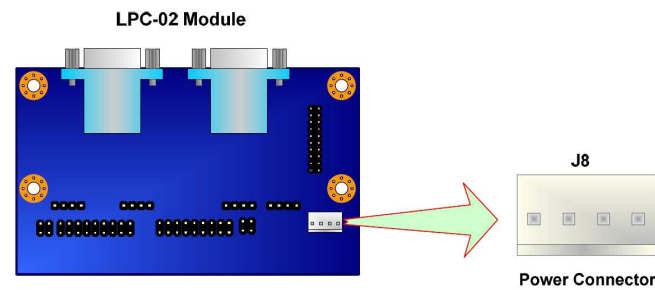
## Pin Header and Jumper Definition

### J5: LPC pin header



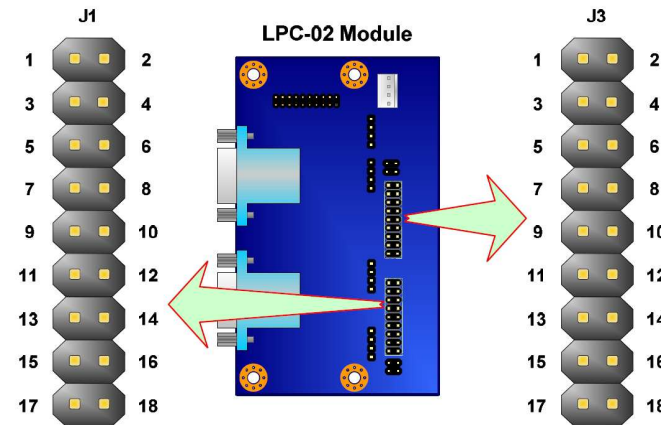
Pin	Signal	Pin	Signal
1	LAD1	2	LPC_33CLK
3	-PCIRSTX	4	GND
5	LAD0	6	2448_CLK
7	LAD2	8	GND
9	SERIRQ	10	LAD3
11	-LDRQ1	12	-EXTSMI
13	+5V	14	+3V
15	+5V	16	+3V
17	GND	18	GND
19	Key pin	20	-LFRAME

### J8: Power connector



Pin	Signal
1	+5V
2	GND
3	GND
4	+12V

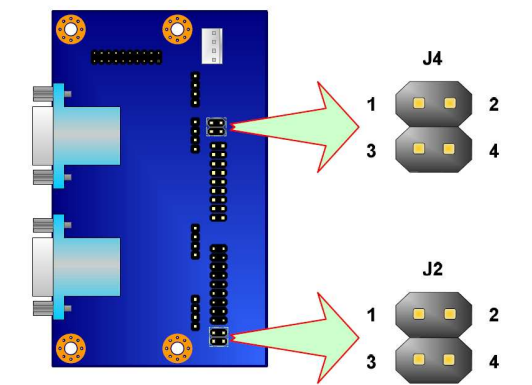
### J1, J2, J3 and J4: COM2 & COM3 select interface jumpers



#### J1 and J3 jumpers

Pin	Signal	Pin	Signal
1	RXD1	2	RXD_232-1
3	RXD1	4	RXD_422-1
5	RXD1	6	RXD_485-1
7	IC_DCD1	8	IC_RXD1
9	COM_DCD1	10	COM_RXD1
11	1-RS485-RS422_-TX	12	1-RS485-RS422_TX
13	IC_TXD1	14	IC_DTR1
15	COM_TXD1	16	COM_DTR1
17	1-RS422_RX	18	1-RS422_-RX

### LPC-02 Module



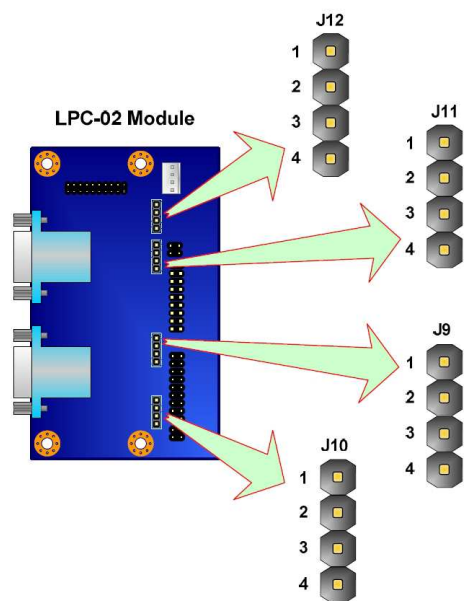
#### J2 jumper

Pin	Signal	Pin	Signal
1	RXD_422-2	2	RXD_LED2
3	RXD_485-2	4	RXD_LED2

#### J4 jumper

Pin	Signal	Pin	Signal
1	RXD_422-1	2	RXD_LED1
3	RXD_485-1	4	RXD_LED1

## J9, J10, J11 and J12: COM voltage select jumper



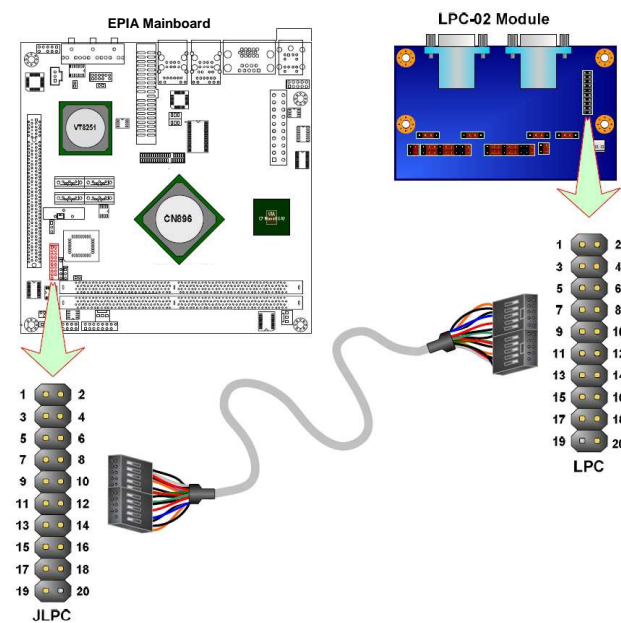
J9, J10, J11, and J12 jumpers

Pin	Signal
1	+5V
2	GND
3	GND
4	+12V

## Connecting LPC Cable

### Step 1

Connect the board-to-board LPC cable to the LPC pin header (J5) on the LPC-02 module.



### Step 2

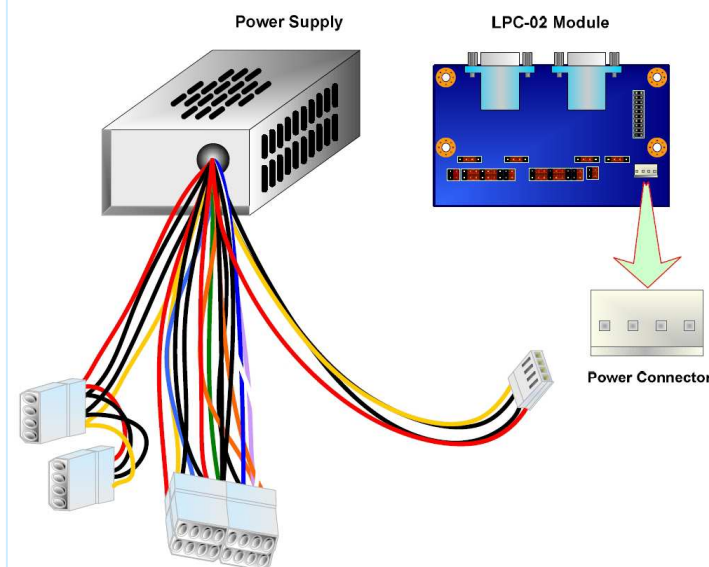
Connect the other end of the board-to-board LPC cable to the JLPC pin header on the EPIA mainboard.

**Note:**  
The configuration of JLPC pin header can be found in EPIA mainboard's user manual.

## Connecting Power Connector

### Step 1

Connect the power input connector (4-pin) to the power connector (J8) on the LPC-02 module.



## Jumper Settings

### J1 and J2 jumper settings

J1 and J2 jumpers are for COM2 port. Both J1 and J2 jumpers controls the selection of standard interface such as RS-232, RS-422 and RS-485.

	RS232 Setting	RS422 Setting	RS485 Setting
J1			
J2			

## J3 and J4 jumper settings

J3 and J4 jumpers are for COM1 port. Both J3 and J4 jumpers controls the selection of standard interface such as RS-232, RS-422 and RS-485.

	RS232 Setting	RS422 Setting	RS485 Setting
J3			
J4			

## J9, J10, J11 and J12 jumper settings

J9, J10, J11 and J12 are voltage select jumpers for COM ports.

	Normal Operation	+5V	+12V
J9			
J10			
J11			
J12			

**Notes:**  
J9 : Voltage select jumper for COM port 1 (COM1)  
J10 : Voltage select jumper for COM port 2 (COM2)  
J11 : Voltage select jumper for COM port 3 (COM3)  
J12 : Voltage select jumper for COM port 4 (COM4)

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