LongWin Computer Inc.
3130 De La Cruz Blvd, #97
Santa Clara, CA 95054
Tel : (800) 970-6805
Fax : (866) 445-5802

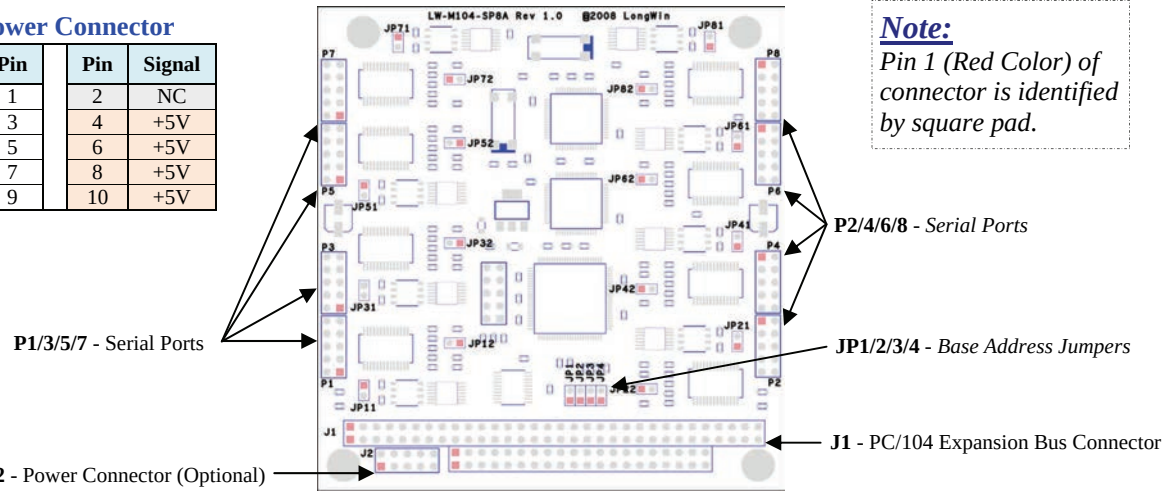
LW-M104-SP8A (DX) Quick Start

P1-8 Serial Port Connector (RS-485)

Signal	Pin		Pin	Signal
CD	1		2	DSR
RX (TX/RX+)	3		4	RTS (TX/RX-)
TX	5		6	CTS
DTR	7		8	RI
Ground	9		10	Key

J2 - Power Connector

Signal	Pin		Pin	Signal
Ground	1		2	NC
Ground	3		4	+5V
Ground	5		6	+5V
Ground	7		8	+5V
Ground	9		10	+5V



Note:
Pin 1 (Red Color) of connector is identified by square pad.

Protocol Setting Jumper *

Jumper	Function	
	Open	Closed
JPn1	RS-232 (Default)	RS-422/485
JPn2		RS485 Terminated

* n = UART Serial Port Channel Number of 1 to 8

JP1/2/3/4 - I/O Base Address Jumper

JP4	JP3	JP2	JP1 *	Base Address
Open	Open	Open	Open	0x100
Open	Open	Open	Closed	0x180 *
Open	Open	Closed	Open	0x200
Open	Open	Closed	Closed	0x280 *
Open	Closed	Open	Open	0x300 (Default)
Open	Closed	Open	Closed	0x380 *
Open	Closed	Closed	Open	0x400
Open	Closed	Closed	Closed	0x500 *
Closed	Open	Open	Open	0x600
Closed	Open	Open	Closed	0x700 *
Closed	Open	Closed	Open	0x800
Closed	Open	Closed	Closed	0x1500 *
Closed	Closed	Open	Open	0x3200
Closed	Closed	Open	Closed	0x4200 *
Closed	Closed	Closed	Open	0x5200
Closed	Closed	Closed	Closed	0x6200 *

* *For DX version, JP1 is used for power-off setting restore. When it is set to "Closed", the module will automatically restore/overwrite Base Address and Interrupts with last settings after power-on.*

Connectors List

Ref.	Description	Pitch
J1	PC/104 Expansion Connector	0.1 In
J2	Power Connector (Optional)	0.1 In
P1 - P8	8 Serial Port Connectors	0.1 In

I/O Address Map

Address	UART Channel
Base	Base of Channel 1 (P1)
Base + 0x08	Base of Channel 2 (P2)
Base + 0x10	Base of Channel 3 (P3)
Base + 0x18	Base of Channel 4 (P4)
Base + 0x20	Base of Channel 5 (P5)
Base + 0x28	Base of Channel 6 (P6)
Base + 0x30	Base of Channel 7 (P7)
Base + 0x38	Base of Channel 7 (P8)

UART Internal Registers

Address *	Read	Write
Base + 8x(n-1)	Receive Holding Register (RHR)	Transmit Holding Register (THR)
Base + 8x(n-1) + 1	Interrupt Enable Register (IER)	
Base + 8x(n-1) + 2	Interrupt Status Register (ISR)	FIFO Control Register (FCR)
Base + 8x(n-1) + 3	Line Control Register (LCR)	
Base + 8x(n-1) + 4	Modem Control Register (MCR)	
Base + 8x(n-1) + 5	Line Status Register (LSR)	Interrupt Number for COMn **
Base + 8x(n-1) + 6	Modem Status Register (MSR)	N/A ***
Base + 8x(n-1) + 7	Scratch Pad Register (SPR)	
Base + 0x06		Base Address (Low Byte) ***
Base + 0x0E		Base Address (High Byte) ***

* n = Serial Port Channel Number of 1 to 8
** [D3:D0] = Interrupt Number of .3-7, 9-12, 14-15.
*** Must write the 2-Byte Base Address in Sequence, Low Byte first, then High Byte.