Tower Serial Module
User Manual

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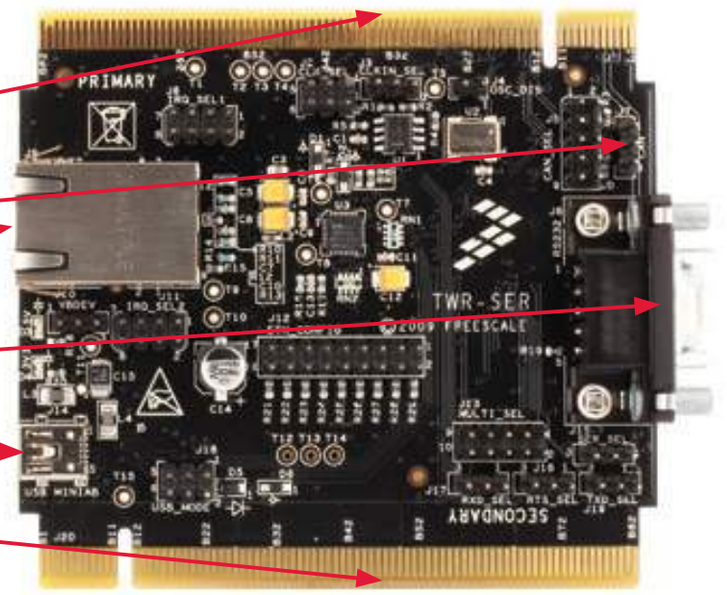
The TWR-SER module



Jumpered Options

The following is a list of all the jumpered options. The **default** installed jumper settings are shown in bold.

Jumper	Option	Setting	Description
J2	Ethernet PHY Clock Select	**1-2**	25 MHz
		3-4	50 MHz
		5-6	CLOCKOUT0
J3	CLOCKIN0 Driver Select	1-2	Route 25MHz clock to CLOCKIN0
		2-3	Route 50MHz clock to CLOCKIN0
J5	CAN Selection Options	**1-2**	Put CAN transceiver into sleep mode
		3-4	Connect Sleep pin to CAN pin (B43)
		5-6	Connect RXD pin to CANRX pin (B41)
		7-8	Connect TXD pin to CANTX pin (B42)
		9-10	Apply 120ohm termination resistor
J6	Ethernet PHY Interrupt Select	1-2	IRQ_H
		3-4	IRQ_F
		5-6	IRQ_D
		7-8	IRQ_B
J10	USB VBUS Select	**1-2**	Supply 5V on USB Connector (Host Mode)
		2-3	Source 5V from USB (Bus-powered Device)

Jumper	Option	Setting	Description
J11	USB OTG Interrupt Select	1-2	IRQ_H
		3-4	IRQ_F
		5-6	IRQ_D
		7-8	IRQ_B
J12	Ethernet PHY Configuration	1-2	Pull-up PHYAD2; PHY Address Select
		3-4	Pull-up PHYAD1; PHY Address Select
		5-6	Pull-down PHYAD0; PHY Address Select
		7-8	Pull-up CONFIG2; Loopback Select
		9-10	Pull-up CONFIG0; RMII Select
		11-12	Pull-up ISO; Isolation Mode Select
		13-14	Pull-down SPEED; 10Mbps Select
		15-16	Pull-down DUPLEX; Half-duplex Select
		17-18	Pull-down NWAYEN; Disable Auto-Negotiation
J13	Misc RS232/485 Config	1-2	Connect RS485 Receive En and Driver En
		3-4	Connect RS485 RX+ to TX+; Loopback
		5-6	Connect RS485 RX- to TX-; Loopback
		7-8	Enable ELE_CTS (A9) as RS232 CTS
		9-10	Supply 5V on DB9 pin 6
J15	RS232 / RS485 Select	**1-2**	RS232
		2-3	RS485
J16	USB Mode Select	**1-2**	Host Mode—supply 5V to VBUS
		3-4	Device Mode—source 5V from VBUS
		5-6	OTG Mode—VBUS controlled by OTG Charge Pump
J17	RS232 / RS485 RX Select	**1-2**	RS232
		2-3	RS485
J18	RS232 / RS485 RTS Select	1-2	RS232
		2-3	RS485
J19	RS232 / RS485 TX Select	**1-2**	RS232
		2-3	RS485

How to build your Tower

1. Press the card edge connector of each Tower module into a slot on the Elevator—take care to match the **primary** card edges and plug them into a **Functional Elevator**. A module may be placed into any slot on the Elevator.
2. Press another **Elevator** board onto the **secondary** card edges.

TWR-SER Features

- USB Host, Device, and OTG with Mini-AB connector
- 10/100 Ethernet PHY with MII and RMII interface
- Ethernet connector with integrated magnetics and LEDs
- RS232 and RS485 transceivers and single DB9 connector
- CAN transceiver with 3-pin head

Learn more at www.freescale.com/tower

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