



Quick Start Guide

MPC830x-TLCD

3.2" QVGA LCD Touch Screen with
12-Key Capacitive Touch Keypad



Get to Know the MPC830x-TLCD



Top



Bottom

Display Connector
Mounting Standoffs
Configuration Switches

MPC830x-TLCD

The MPC830x-TLCD is a 3.2" QVGA LCD touch screen with a 12-key capacitive touch keypad. The LCD panel can be driven with a parallel bus, SPI or RGB display interface signaling.

1

Configuring Display

Configure the display interface as a parallel bus interface (DIF_SEL=OFF), SPI interface (DIF_SEL=ON, DISABLE_SPI=ON and DISABLE_RGB=OFF) or an RGB interface (DIF_SEL=ON) with optional SPI depending on the DISABLE_SPI setting. Set the TFT_PS0-3 settings in accordance with the selected display interface. See configuration switch settings.

2

Mount Display

Note: Configure the module before mounting since the configuration switch is inaccessible once mounted. Ensure that the display connector is properly aligned to the mating connector and press down. Insert at least one screw through an aligned mounting hole on the mating board into a mounting standoff to secure the module.

3 Software Driver Development

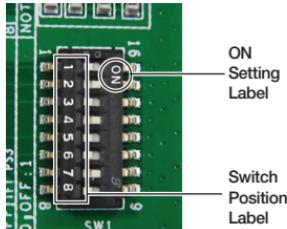
Visit freescale.com/MPC830x-TLCD for more information on how to configure and control the LCD panel, touch screen and keypad functionality.

4 Configuration Switch Settings

See configuration switch setting tables.

Configuration Switch Settings

SW ¹	Signals ²	Settings ²	Switch ³	Description
1	DIF_SEL	0	ON	RGB + SPI interface
		1	OFF	Parallel bus interface
2	DISABLE_SPI ⁴	0	ON	Enable SPI and parallel interfaces
		1	OFF	Disable SPI and parallel interfaces
3	DISABLE_RGB ⁴	0	ON	Enable RGB interface
		1	OFF	Disable RGB interface
4	NC	-	-	Not used, unconnected
5-8	TFT_PS0-3	1101	OFF, OFF, ON, OFF	16-bit big-endian parallel interface
		Any	Any	PS0-3* display mode signals



*PS Mode Settings

PS3	PS2	PS1	PS0	Display Interface Mode
1	1	1	1	3-wire SPI
1	1	1	0	4-wire SPI
1	0	1	1	16-bit big-endian parallel interface
1	0	1	0	8-bit big-endian parallel interface
1	0	0	1	16-bit little-endian parallel interface
1	0	0	0	8-bit little-endian parallel interface
0	1	1	1	18-bit big-endian parallel interface
0	1	1	0	9-bit big-endian parallel interface
0	1	0	1	18-bit little-endian parallel interface
0	1	0	0	9-bit little-endian parallel interface
0	0	1	1	Reserved
0	0	1	0	Reserved
0	0	0	1	18-bit RGB interface + 4-wire SPI

1) Switch positions as printed on the switch

2) Schematic signal names and logical state

3) Switch settings as printed on the switch, factory settings highlighted red

4) These signals condition DIF_SEL interface selection
DIF_SEL will select between an enabled RGB or parallel interface

Support

Visit freescale.com/support for a list of phone numbers within your region.

Warranty

Visit freescale.com/warranty for complete warranty information.

To learn more about the MPC830x-TLCD,
please visit freescale.com/MPC830x-TLCD

Freescale and the Freescale logo are trademarks of Freescale Semiconductor, Inc., Reg. U.S. Pat. & Tm. Off. All other product or service names are the property of their respective owners.
© 2011 Freescale Semiconductor, Inc.

Document Number: MPC830XLCDQSG REV 0
Agile Number: 926-78659 REV A

