Quick Start Guide

TRK-MPC5606B

Automotive Body and Industrial
Applications

freescale

Get to Know the TRK-MPC5606B

LIN Connectors

MPC5606B

LEDs

USB Connector/
Power Supply

Switches

MCZ3390S5EK
System Basis Chip
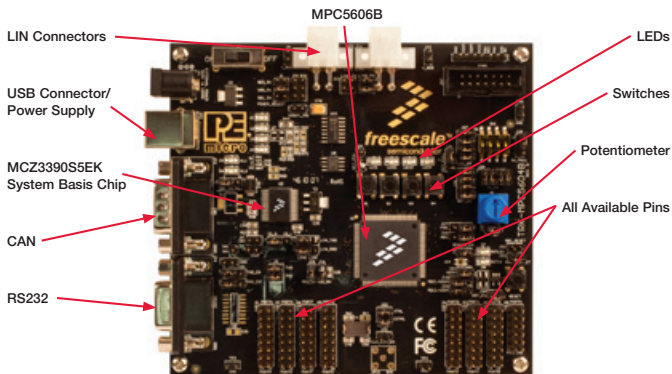
Potentiometer

CAN

All Available Pins

RS232

Figure 1: TRK-MPC5606B Board*

TRK-MPC5606B
Freescale StarterTRAK

The TRK-MPC5606B board is part of the Freescale StarterTRAK series, a development platform that enables rapid prototyping and tool re-use. Take your design to the next level and begin constructing with your StarterTRAK system today.

* Graphic subject to change

TRK-MPC5606B Features

- MPC560xB/C/D series MCU (144-pin LQFP)
- On-board JTAG connection via open source OSBDM circuit using the MPC9S08JM MCU
  - See **pemicro.com/osbdm** for source code

- MCZ3390S5EK system basis chip with advanced power management and integrated CAN tranciever and LIN 2.0 interface
- CAN interface
- LIN interface
- Analog interface with potentiometer
- High-efficiency LEDs
- Serial communication interface

Step-by-Step Installation Instructions

In this quick start guide, you will learn how to set up the TRK-MPC5606B board and run the default low-power lab exercise.

1 **Install Software and Tools**

- Install CodeWarrior Development Studio for 55xx/56xx Architectures V2.10 or later

- Install RAppID initialization tool

Install in the order listed. These programs are included on the DVD. CodeWarrior and RAppID include a 30-day evaluation license. For updates, please visit **freescale.com/StarterTRAK**.

2 Connect the USB Cable

Connect one end of the USB cable to the PC and the other end to the mini-B connector on the TRK-MPC5606B board. Allow the PC to automatically configure the USB drivers if needed.

3 Open Supporting Documentation

Open the Qorivva Simple Cookbook and TRK-MPC5606B user manual from the Documentation and Training tab on the included DVD.

4 Explore Further with the Qorivva Simple Cookbook: Low-Power Lab Exercise

To run a demonstration using the TRK-MP5606B, follow the instructions for the low-power lab exercise for MPC560xB in the Qorivva Simple Cookbook, located under the documentation tab on the DVD.

5 Learn More About the MPC5606B

Read the release notes and documentation located on the DVD and at **freescale.com/StarterTRAK**.

• The Qorivva Simple Cookbook provides simple code examples for manipulating different peripherals on the MPC5606B

• The RAppID graphical initialization software will help you get to market faster

• CodeWarrior for 55xx/56xx with examples from the Simple Cookbook

Note: The lab exercise to use low power is located on p.110 in section 13.3.1. Check **freescale.com/TRK-MPC5606B** for the latest training and labs.

TRK-MPC5606B Jumper Options

Jumper	Option	Setting	Description
J1	System Power	1-2	External Power 9V DC to 12V DC Regulated Down to 5V DC
		3-4	USB OSBDM Supplies 5V DC
		5-6	SBC33905 Supplies 5V DC
J2	SBC I/O LED Pull Up/Down	1-2	Pull Up
		2-3	Pull Down
J3	SBC I/O Signal	1-2	I/O-0
		2-3	I/O-1
J4	SBC DBG Short to GND	1-2	Short SBC DBG Pin to GND, Bypass R21 and D11
J5	SBC DBG Pull Up	1-2	Pull Up SBC DBG Pin to SBC Power Supply via 330 Ohm Resistor
J6	CAN Signals to Transceiver Enable	1-2, 3-4	Enables TXD and RXD Signals to CAN Transceiver
J7	RS232 TXD Signal	1-2	MCU TXD to Virtual Serial Port
		2-3	MCU TXD to RS232 Transceiver
J8	RS232 RXD Signal	1-2	MCU RXD to Virtual Serial Port
		2-3	MCU RXD to RS232 Transceiver
J9	LIN1 VBus Enable	1-2	Provides Power to LIN1 Connector
J10	LIN0 VBus Enable	1-2	Provides Power to LIN0 Connector
J11	LIN0 Signals to Connector Enable	1-2, 3-4	Connects LIN0 Signals to LIN0 Connector
J12	LIN1 Signals to Connector Enable	1-2, 3-4	Connects LIN1 Signals to LIN1 Connector

TRK-MPC5606B Jumper Options *(continued)*

Jumper	Option	Setting	Description
J13	LIN TXD Signal	1-2	MCU LIN0TX to Transceiver
		2-3	MCU LIN1TX to Transceiver
J14	LIN RXD Signal	1-2	MCU LIN0RX to Transceiver
		2-3	MCU LIN1RX to Transceiver
J15	MCU VDD Enable	1-2	Provides Power to MCU, Current Measurement
J16	VDD_BV Enable	1-2	Provides Power to VDD_BV
J17	FAB	1-2	FAB Pulled Up High
		2-3	FAB Pulled Down Low
J18	ABS	1-2	ABS Pulled Up High
		2-3	ABS Pulled Down Low
J19	MPC5604B/ MPC5606B for Pin 81	1-2	MPC5604B PB11
		2-3	MPC5606B VSSA
J20	MPC5604B/ MPC5606B for Pin 82	1-2	MPC5604B PD12
		2-3	MPC5606B VDDA
J21	VDDA Enable	1-2	Provides Power to VDDA, Current Measurement
J22	External Crystal Circuitry Enable	1-2	XTAL
		2-3	EXTAL
J23	External Oscillator via SMA Enable	1-2	EXTAL
J24	Push Button Active High or Low, Opposite of J25	1-2	Active Low
		2-3	Active High

TRK-MPC5606B Jumper Options *(continued)*

Jumper	Option	Setting	Description
J25	Push Button Pull Up/Down Enable, Opposite of J24	1-2	Pull Up
		2-3	Pull Down
J27	LED Signals Enable	1-2, 3-4, 5-6, 7-8	Connects MCU Port G10, G11, G12 and G13 to Corresponding LEDs
J28	DIL Switch Signals Enable	1-2, 3-4, 5-6, 7-8	Connects MCU Port G6, G7, G8 and G9 to Corresponding DIL Switch
J29	DIL Switch Active High or Low	1-2	Active High
		2-3	Active Low
J30	Analog Input Enable	1-2	Connects MCU ANP0 to Potentiometer
J31	Photo Sensor Enable	1-2	Connects MCU ANP1 to Photo Cell
J32	SBC Reset to MCU Enable	1-2	Enables SBC Reset Signal to Trigger MCU Reset
J33	OSBDM Reset to MCU Enable	1-2	Enables OSBDM Reset Signal to Trigger MCU Reset
J34	System Reset Enable	1-2	Connects Reset Sources to MCU Reset Signal
J35	OSBDM IRQ Enable	1-2	Enables OSBDM to Generate an Interrupt

Support

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

Warranty

Visit **freescale.com/warranty** for complete warranty information.

For more information, visit
freescale.com/StarterTRAK

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