

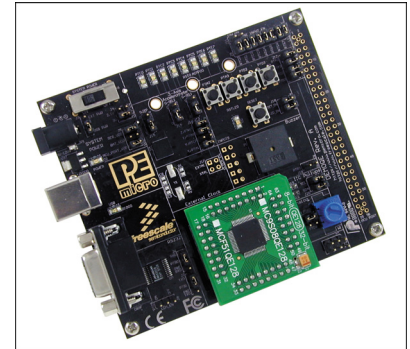
DEMOQE128 Quick Start Guide

Introduction

The DEMOQE128 Quick Start Guide will direct you how to connect the demo board to your computer, and run the quick start application.

Run the DEMOQE128 Quick Start Application

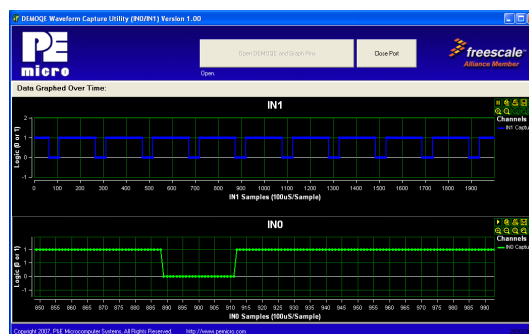
The DEMOQE128 Quick Start Application is stored in the on-chip flash memory of the green MC9S08QE128 daughter card. The source code for the quick start application is available in the accompanying DEMOQE Resource CD. Follow the steps below to begin working with the DEMOQE128.



DEMOQE Demonstration Board

- 1 Run the DEMOQE Resource CD to install P&E's Embedded Multilink Driver. Click on "Drivers And DEMOQE Toolkit." Then select "Install Embedded Multilink Driver" and follow the steps to install.

Note: You may also choose to install the evaluation software contained on the DEMOQE Resource CD. *PKGHC808_Starter* and *PKGCFZ_PRO_Starter* may be accessed using the Development Software button in the main menu of the Resource CD.
- 2 Remove the DEMOQE128 demonstration board from its anti-static pouch. The green MC9S08QE128 daughter card should be plugged into the header on the base board.
- 3 Connect a USB cable from your computer to the DEMOQE128 demonstration board. Depending on your operating system, you may need to follow steps to install the USB driver. Once the USB cable is connected properly the green USB LED on the DEMOQE128 should illuminate.
- 4 Turn on the DEMOQE128 power switch. The red Power LED should illuminate.
- 5 Press the buttons labelled PTA2, PTA3, PTD2, and PTD3. A different tone should be emitted when each button is pressed, and the corresponding LEDs labelled PTC1, PTC2, PTC3, and PTC4 should illuminate. In addition, the light intensity of the LEDs labelled PTC0 and PTC5 should vary as the potentiometer is rotated.
- 6 Optionally run the DEMOQE Logic Analyzer Application available in the DEMOQE toolkit on the DEMOQE Resource CD. This PC-based application graphs the IN0 and IN1 signals on the DEMOQE board. If both J11 jumpers are installed, IN0 shows PTC0 and IN1 shows PTC1. Push button PTA2 and turn the potentiometer to change these signals. This application may also be found at:
<http://www.pemicro.com/fixedlinks/demoQEt toolkit.html>



DEMOQE Logic Analyzer Application

Default Jumper Settings

The following is a list of the default jumper settings for the demo board. The settings listed indicate the "on" (or installed) position:

Jumper	Installed Settings
J3	2&3
J4	3&4
J5	1&2
J6	2&3
J7	2&3
J8	2&3
J9	1&2, 3&4, 5&6, 7&8, 9&10, 11&12, 13&14, 15&16
J11	1&2, 3&4
J12	1&2, 3&4, 5&6, 7&8
J16	1&2, 3&4, 5&6
J17	1&2, 3&4
J18	1&2, 3&4
J19	1&2
J20	1&2, 3&4
J21	1&2, 3&4
J24	1&2

Jumper Settings

Additional DEMOQE Toolkit Applications

In addition to the Quick Start Application and Logic Analyzer Utility, the DEMOQE Toolkit features other applications which work with the DEMOQE128 board. One such application is featured here.

Accelerometer Demo Application

This graphing application will graph data from the serial port or virtual serial port on the DEMOQE board. The state of the on-board three-axis accelerometer is sampled by the microcontroller-based serial accelerometer demonstration code using on-chip A/D converter channels. This data is converted into ASCII characters and sent out the serial port of the DEMOQE board. The data is then graphed by the PC-based graphing application for the user to view. This application may be used to graph any data as long as the data is formatted properly.

Both the MCU-based demonstration code and the PC-based graphing application may be downloaded from:

<http://www.pemicro.com/fixedlinks/demoQEtoolkit.html>

Virtual Serial Port

The DEMOQE128 board also has the capability of implementing a virtual serial port on the PC. This allows the PC to be able to send and receive serial data via the serial communication pins of P&E's Embedded Multilink design. Using jumpers J6 and J7, this virtual serial port may be configured to connect to the SCI port on the QE128 processor.

DEMOQE128 Header Pinout

Following is the pinout for the header on the DEMOQE128 board:

VDD	1	2	PTA5/IRQ/TPM1CLK/RESET
VSS	3	4	PTA5/IRQ/TPM1CLK/RESET
PTB1/KBI1P5/TxD1/ADP5	5	6	PTA4/ACMP1O/BKGD/MS
PTB0/KBI1P4/RxD1/ADP4	7	8	PTE7/TPM3CLK (n/c for 32 LQFP)
PTA2/KBI1P2/SDA1/ADP2	9	10	VREFH
PTA3/KBI1P3/SCL1/ADP3	11	12	VREFL
PTC0/TPM3CH0	13	14	PTA0/KBI1P0/TPM1CH0/ADP0/ACMP1+
PTC1/TPM3CH1	15	16	PTA1/KBI1P1/TPM2CH0/ADP1/ACMP1-
PTB3/KBI1P7/MOSI1/ADP7	17	18	PTF0/ADP10 (n/c for 32 LQFP)
PTB4/TPM2CH1/MISO1	19	20	PTF1/ADP11 (n/c for 32 LQFP)
PTB2/KBI1P6/SPSCK1/ADP6	21	22	PTA6/TPM1CH2/ADP8
PTB5/TPM1CH1/SS1	23	24	PTA7/TPM2CH2/ADP9
PTD1/KBI2P1/MOSI2	25	26	PTH6/SCL2 (n/c for 32 LQFP)
PTD2/KBI2P2/MISO2	27	28	PTH7/SDA2 (n/c for 32 LQFP)
PTD0/KBI2P0/SPSCK2	29	30	PTD4/KBI2P4 (n/c for 32 LQFP)
PTD3/KBI2P3/SS2	31	32	PTD5/KBI2P5 (n/c for 32 LQFP)
PTC2/TPM3CH2	33	34	PTD6/KBI2P6 (n/c for 32 LQFP)
PTC3/TPM3CH3	35	36	PTD7/KBI2P7 (n/c for 32 LQFP)
PTC4/TPM3CH4/RSTO	37	38	PTC7/TxD2/ACMP2-
PTC5/TPM3CH5/ACMPO	39	40	PTC6/RxD2/ACMP2+
(n/c for 32 LQFP) PTF2/ADP12	41	42	PTB7/SCL1/EXTAL
(n/c for 32 LQFP) PTF3/ADP13	43	44	PTB6/SDA1/XTAL
(n/c for 32 LQFP) PTF4/ADP14	45	46	PTG0 (n/c for 32 LQFP)
(n/c for 32 LQFP) PTF5/ADP15	47	48	PTG1 (n/c for 32 LQFP)
(n/c for 32 LQFP) PTF6/ADP16	49	50	PTH0 (n/c for 32 LQFP)
(n/c for 32 LQFP) PTF7/ADP17	51	52	PTH1 (n/c for 32 LQFP)
(n/c for 32 LQFP) PTG2/ADP18	53	54	PTE6 (n/c for 32 LQFP)
(n/c for 32 LQFP) PTG3/ADP19	55	56	NC

DEMOQE128 Header Pinout

