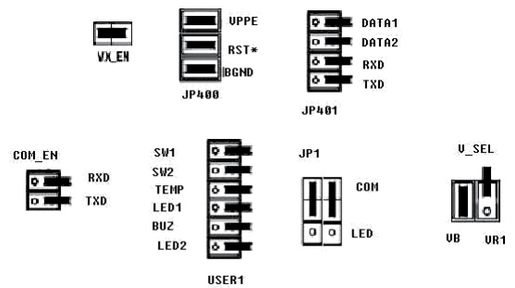
Default Jumper Settings

The following is a list of default jumper settings for DEMOLE4 board.



Jumper	Status
V_SEL,VB	installed
V_SEL,VR1	uninstalled
JP400,VPPE,RST,BGND	installed
JP401,DATA1,DATA2,RXD,TXD	uninstalled
COM_EN,TXD,RXD	uninstalled
JP1,TXD	COM
JP1,RXD	COM
VX_EN	installed
USER1,SW1,SW2,TEMP,LED1,LED2,BUZ	uninstalled

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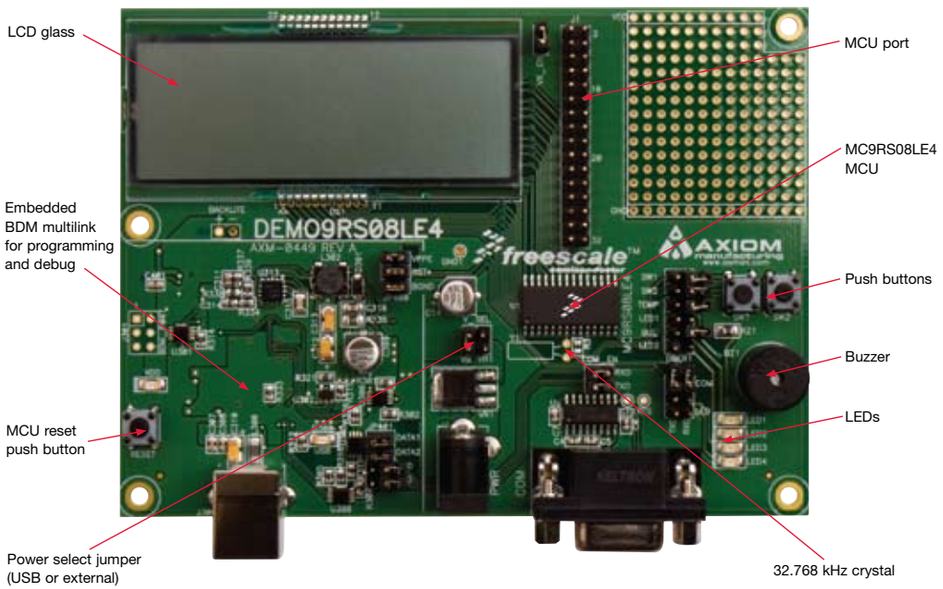
Figure 1.
DEMO9RS08LE4



MCU Port Connector Pin Out

The following is the pin out for the MCU port connector on the DEMOLE4 board (J1).

Symbol	Number	Number	Symbol
VX	1	2	NA
VSS	3	4	PTB0/TCLK/RESET/VPP
PTA1/TXD/LCD14	5	6	PTB1/BKGD/MS
PTA0/RXD/LCD15	7	8	NA
PTA5/KBIP1/LCD10	9	10	NA
PTA4/KBIP0/LCD11	11	12	NA
PTA3/TPM2CH0/KCD12	13	14	NA
PTA2/TPM2CH1/LCD13	15	16	NA
PTA6/KBIP2/LCD9	17	18	PTD7/ADP7/LCD7
PTA7/KBIP3/LCD8	19	20	PTD6/ADP6/LCD6
PTB7/TPM1CH1/LCD16	21	22	PTD5/ADP5/LCD5
PTB6/TPM1CH0/LCD17	23	24	PTD4/ADP4/LCD4
PTB5/ADP3/LCD18	25	26	PTD3/KBIP7/LCD3
PTB4/ADP2/LCD19	27	28	PTD2/KBIP6/LCD2
PTB3/ADP1/LCD20	29	30	PTD1/KBIP5/LCD1
PTB2/ADP0/LCD21	31	32	PTD0/KBIP4/LCD0

DEMO9RS08LE4 Lab

This lab document applies to DEMO9RS08LE4.

Start each lab with the board powered ON. Make sure to use only one utility at a time, as they share the same USB source. Familiarize yourself with these buttons:

Start/Continue (F5) button

MCU Change Wizard button

Debug button

DEMO9RS08LE4

LAB 1

LCD clock source configurability and LCD display in the low power mode

This lab will demonstrate two features of the MC9RS08LE4 MCU. One feature is the LCD clock source configurability. The clock source can be configured from the external oscillator or internal reference clock. The other feature is that the LCD can display in low-power mode (STOP mode). Please make sure that the 32.768 kHz crystal has been installed before running this application.

1. Open CodeWarrior for Microcontrollers. From Windows start menu, you can locate it using the “Programs >Freescale CodeWarrior > CW for Microcontroller V6.2 > CodeWarrior IDE.exe” path.
2. Click on File > Open and open the LE4_LP_DEMO.mcp file from the DEMOLE4 Toolkit directory.
3.  Compile and program the MC9RS08LE4 microcontroller by clicking on “Debug” button, launching debugger.
4. Connect the LE4 MCU by clicking on the button “Connect (Reset)” from the Connection Manager menu.
5. From Erase and Program Flash menu, click “Yes” to allow the debugger to mass erase the microcontroller’s on-chip flash memory and program it with the new application.
6.  Click on the “Start/Continue (F5)” button in debugger to run application.
7. Once the application has run, the LCD will display the Freescale logo and scroll the message “LE4DEM.” Actually the MCU will go to the STOP mode to save power and wake up each second to update the LCD display.

LAB 2

MC9RS08LE4 Display Demo

This lab will highlight the display capability of the MC9RS08LE4 microcontroller. This lab will also detail how to use the display software lib included with the demo to help you develop the application. In this lab the LCD will display the message the user types in the Terminal Window. Please install the jumpers JP401_ RXD and JP401_TXD to run this application.

1. Open CodeWarrior for Microcontrollers. From Windows start menu, you can locate it using the “Programs > Freescale CodeWarrior > CW for Microcontroller V6.2 > CodeWarrior IDE.exe” path.
2. Click on File > Open and open the LE4_DISPLAY_DEMO. mcp file from the DEMOLE4 Toolkit directory.
3.  Compile and program the MC9RS08LE4 microcontroller by clicking on “Debug” button, launching debugger.
4. Connect the LE4 MCU by clicking on the button “Connect (Reset)” from the Connection Manager menu.
5. From Erase and Program Flash menu, click “Yes” to allow the debugger to mass erase the microcontroller’s on-chip flash memory and program it with the new application.
6. After the MCU is programmed, start the TerminalWindow. exe from the DEMOLE4 Toolkit directory. It will open a terminal window connected to USB port. The USB COM port settings must be:
   - 38400 baud rate
   - 8 bits
   - No parity
   - 1 stop bit
7.  Click the “Start/Continue (F5)” button in debugger to run application.
8. The demo information message will be display on the Terminal Window.
9. Please input the information you want to displayed on the LCD.
10. The LCD displays the message you input.

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