

Freescale Semiconductor Engineering Bulletin Document Number: EB738 Rev. 1, 11/2010

Multicore MSC8156 MJPEG Demo for the MSC8156EVM

This document provides instructions for running the multicore MSC8156 MJPEG demo on the MSC8156EVM.

1 What You Need to Run This Demo

Running the demo requires the following:

- Personal computer (PC) with a Gigabit Ethernet port (preferably operated under dual core XP Windows)
- SmartDSP OS v3.7.2 with marvell_phy.c update loaded on the PC
- MSC8156EVM board
- Ethernet cross cable
- CodeWarrior for StarCore-Based DSP IDE for the MSC8156EVM board connected to the PC.

NOTE

This demo is part of the SmartDSP OS demo suite.

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Steps to Run a Demo

2 Steps to Run a Demo

Use the following steps to prepare for and run the demo:

- 1. Configure the MSC8156EVM DIP switches as follows (note that 1 = OFF):
 - a) SW2: 1111_1000
 - b) SW6: 0101
- 2. Connect your PC to the MSC8156EVM using a Cross Ethernet cable.
- 3. Change the IP of your PC to 10.0.0.100 as shown in Figure 1.

🕹 Local Area Connection Properties 🛛 🔋 🗙	Internet Protocol (TCP/IP) Properties				
General Advanced	General				
Connect using: Broadcom NetXtreme Gigabit Etheme Configure	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.				
This connection uses the following items:	O Obtain an IP address automatically				
🗹 📮 File and Printer Sharing for Microsoft Networks 📃	Use the following IP address:				
Retwork Monitor Driver	IP address: 10 . 0 . 100				
✓ Internet Protocol (TCP/IP)	Subnet mask: 255 . 0 . 0 . 0				
Install Uninstall Properties	Default gateway:				
Description	C Obtain DNS server address automatically				
Transmission Control Protocol/Internet Protocol. The default	Use the following DNS server addresses:				
across diverse interconnected networks.	Preferred DNS server:				
Show icon in notification area when connected	Altemate DNS server:				
✓ Notify me when this connection has limited or no connectivity	Advanced				
OK Cancel	OK Cancel				

Figure 1. Setting the IP Value

4. Start the CodeWarrior IDE and import the project: "SmartDSP\demos\starcore\msc815x\mjpeg_demo\mjpeg_project\mjpeg_demo\.project"

NOTE

For more information about importing projects, Go to Help in the CodeWarrior IDE and search for "import a project."

- 5. Set the Active Target to "Core 0 EVM," and build/download/run all 6 cores
- 6. .Try to ping 10.0.0.1. It should work at this stage.
- Run the provided graphical user interface (GUI) using "SmartDSP\tools\MJPEG_Player\MJPEG_Player.exe" You should see all the utilization indicators go to 0%.





8. Using the GUI, open the file "SmartDSP\tools\MJPEG_Player\frames\SA00054001.bmp" (see Figure 2). The opening process takes several minutes. Wait until it completes.

		- Applic Core	ation Utilization : 0 Core 1	Core 2	Core 3	System
		04	% 0%	0%	0%	0%
	Open Look in: C frames	A00054 007.bmp	→ ← → </td <td>?× </td> <td></td> <td></td>	?× 		
Core enable	SA00054 002.bmp S SA00054 003.bmp S SA00054 004.bmp S SA00054 005.bmp S SA00054 006.bmp S	A00054 008.bmp A00054 009.bmp A00054 010.bmp A00054 011.bmp A00054 012.bmp	SA00054 01 SA00054 01 SA00054 01 SA00054 01 SA00054 01 SA00054 01	4.bmp 5.bmp 6.bmp 7.bmp 8.bmp	i average 0%	0%
Core color	File name: SA00054 001.bm	p	Dimensions: 352 Type: Bitmap In Size: 297 KB	2 x 288 hage		
Properties	Files of type: BMP Files (*.bmp			ancel		
Frames per sec: Frames sent:	ond: 2					

Figure 2. Graphical User Interface Display

9. After the GUI returns, push Send File and adjust the frames per second rate.

NOTE

Test and Restart buttons are for internal debug only. Avoid using these buttons while running demos.

3 Revision History

Revision	Date	Change Description		
0	Oct 2010	Initial public release		
1	Nov 2010	Section 2; Changed Step 1.b to correct switch setting. In Step 6, changed pin to ping.		

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> Document Number: EB738 Rev. 1 11/2010

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