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**RELEASE NOTES**

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**Patch Code**  
**for**  
**TVP5150AM1 ROM v4.00**

**Release Notes**

**Patch Code Version 4.9001**  
**(Tuesday, August 18, 2009)**

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## 1. Introduction

This release is intended for the users of the TVP5150AM1.

The release is based on the TVP5150AM1, v4.00 ROM

## 2. Minimum System Requirements (when using TI EVM)

### **Hardware**

- IBM PC with MS windows 98, 2000, or XP.
- Parallel cable
- TI EVM

### **Software**

- WinVCC4 v4.41.
- WinVCC4 command file, Patch\_049001.cmd
- Patch file for TI EVM, P5150A\_049001.hra
- Patch file for customer backend system, P5150A\_049001.c
- Patch Download Size: 5868 Bytes

## 3. Device/Firmware Affected

Device	TVP5150AM1
Firmware	04.00
WinVCC4	v4.41
Datasheet	SLES098

## 4. Improvements and Fixes Implemented in this Release

- Output 720 active pixel per line for NTSC and PAL format.

## 5. Changes to

### **Datasheet Features**

None

### **Register Map**

### **Pin Out and Pin List**

None

### **Electrical Specifications**

None

## 6. Errata in this patch release

- Users are requested not to use the Color Burst Reference bit (bit 6 in register 0x02h) as listed in the datasheet.

## 7. Instructions for Patch Code Download

### ***TI EVM***

1. Power-on the board with TVP5150AM1 device on it. Connect source to Input and Output to monitor
2. From WinVCC4 open Patch\_049001.CMD file.

3. Load line 1

"Set up after Power On, For ROM 4.0 only All Switch (Init: NTSC)"

Now you should get good picture on monitor. There is no code loading here, just setups for TVP5150AM1 & ADI7194.

Check the version number from property sheets on WinVCC4. You will see 04.00

4. Load line 2

"Patch Code P5150A\_049001.hra, for ROM 4.0 only "

Now the patch code is downloaded & microprocessor is restarted. The decoder is running ROM + Patch RAM code.

Check the version number from the property sheets, you will see 04.90. You should see the changes in this patch now.

### ***Customer System***

Ensure the device used is a TVP5150AM1 ROM v4.00.

1. Power on the board with TVP5150AM1 ROM v4.00 device on it.
2. Start the TVP5150AM1 without the patch code.

There are only 2 register writes to get the 5150AM1 up and running. The user has to enable the outputs (register 0x03) and start the internal microprocessor (writing 0x00 into register 0x7F). There is no code loading here, this just sets up the TVP5150AM1 for normal operation.

Check the version number in registers 0x82 and 0x83. The values you will see are 0x04 and 0x00 respectively.

3. Load the code

There is password for patch ram download. After the password is set, it is a good idea to lock the device again, by writing 00 into that address. The password prevents

undesirable writes into the device at startup due to power surges etc. The following code demonstrates the method for unlocking and then locking the device again.

\*\*\*\* Code starts here \*\*\*\*

a. Unlock the device

I2C subaddr	Data	
0x21,	0x51	//MSB data
0x22,	0x50	//LSB data
0x23,	0xFF	//Data address
0x24,	0x04	//Write command

b. Download real patch code P5150A\_049001.hra through 0x7E

c. Restart Microprocessor

Write into register 0x7F, data 0x00 // Restart TVP5150AM1 microprocessor

d. Lock the device

I2C subaddr	Data	
0x21,	0x00	//MSB data
0x22,	0x00	//LSB data
0x23,	0xFF	//Data address
0x24,	0x04	//Write command

\*\*\*\* Code ends here \*\*\*\*

Now decoder should run ROM + Patch RAM code.

Check the version number in registers 0x82 and 0x83. The values you will see are 0x04 and 0x90 respectively.

You should see that the decoder now incorporates the fixes mentioned in the previous section.

4. If there is a H/W reset to the TVP5150AM1 (active low pulse to pin-8), the original ROM code is restarted to run (patch code is disabled). To let patch code run without downloading the whole patch code again, please follow the following procedure.

Set the correct password by doing the 4 writes as mentioned above to unlock the device. Then write 0x05 to I2C address 0x10. Now the patch code is running. (Verify the version number in registers 0x82 and 0x83. The values you will see are 0x04 and 0x90 respectively). Finally, lock the device as in the previous section.

## 8. Related Documentation

Description	File	Purpose
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Patch version 04.9001 Release Notes	ReleaseNotesforPatchv4.9001.doc	<b>This Document.</b> Latest bugs, Updates and Installation.
5150AM1 Data Sheet	TVP5150AM1 Data Manual (SLES098.pdf)	<b>Device Data Sheet.</b> 5150AM1 Detailed Data Sheet.