

**Application Note:** Procedure to update  
the firmware (U6)  
on DT-1920-VGA board.



**Version:** 1.00

**Date:** 7 July 2020

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# **Application Note**

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**Revision History**

Date	Rev No.	Page	Summary
7 Jul 2020	1.00	All	First issued

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# 1 Introduction

The DT-1920-VGA controller is an easy to use high quality VGA input interface for LCD panels up to 1920x1200 resolution.

One of the features of the DT-1920-VGA is the ability to update its firmware as detailed in this Application Note.

**IMPORTANT NOTE: Firmware Upgrading must only be done by suitably qualified professionals or technicians. Digital View is not responsible for damage or injury caused by the firmware upgrade procedure.**

# 2 Firmware Upgrade procedure

DT-1920-VGA firmware upgrade is done using a dedicated USB programming interface board P/N 4111024xx-3 available from DigitalView, this connects to the VGA connector (P1) on the DT-1920-VGA via standard VGA cable.

PC Requirements:

- On the PC the software required is an application called MStar ISP Utility which runs under Windows 7.
- The relevant firmware upgrade program - MStar ISP Utility V4.5.1.8.6 or up revision, this is available from your local Digital View office.

Additional Hardware Requirements :

- Dedicated USB programming interface board, called Programming board P/N 4111024xx-3 is required for firmware upgrade process. It connects to the VGA connector (P1) on the DT-1920-VGA via standard VGA cable.

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DT-1920-VGA Requirements:

- DT-1920-VGA to be upgraded needs to be fully connected with power and a display. This should be a bench or assembly setup and care must be taken to avoid short circuits or electrical shock. **Digital View does not accept responsibility for damage caused during a firmware upgrade procedure** – care must be exercised

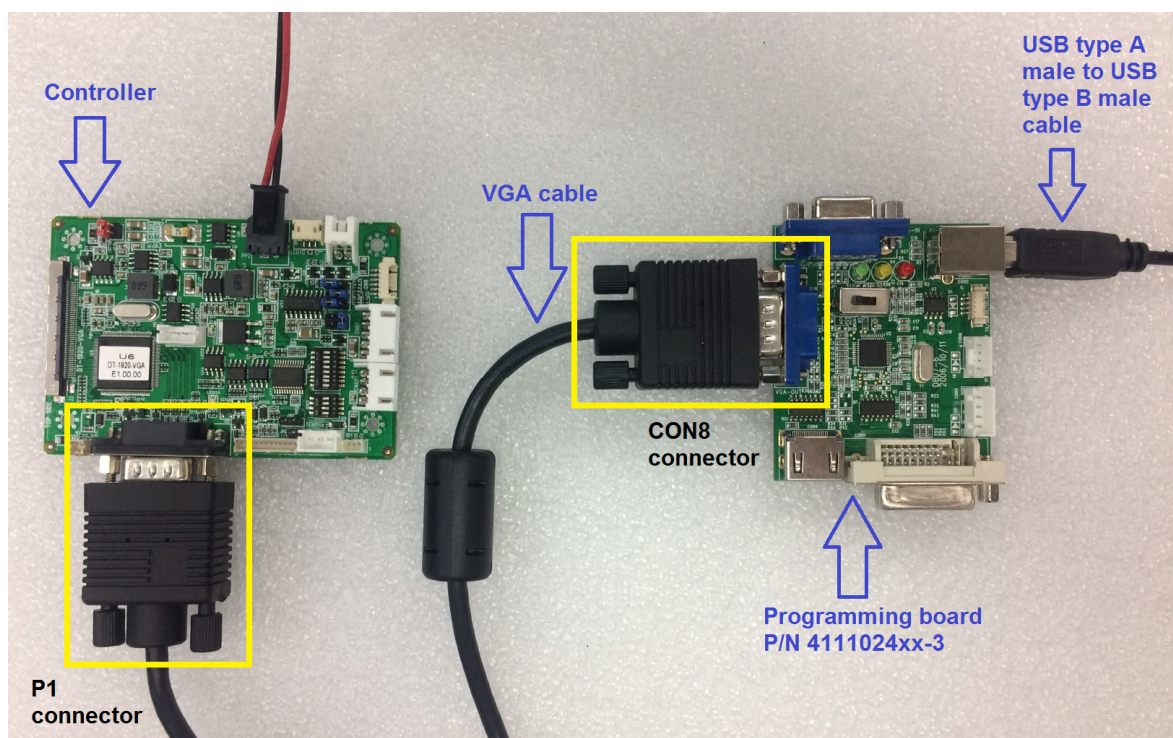
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## Hardware Configuration

1. Connect the USB type B connector on programming board P/N 4111024xx-3 to USB2.0 port of the computer via USB type A male to USB type B male cable. (USB3.0 port is not supported).
2. Connect the VGA connector(CON8) on Programming board P/N 4111024xx-3 to VGA connector(P1) on DT-1920-VGA via standard VGA cable



3. Insert 12V power source to PP2 connector and short JP6 / power on the DT-1920-VGA .

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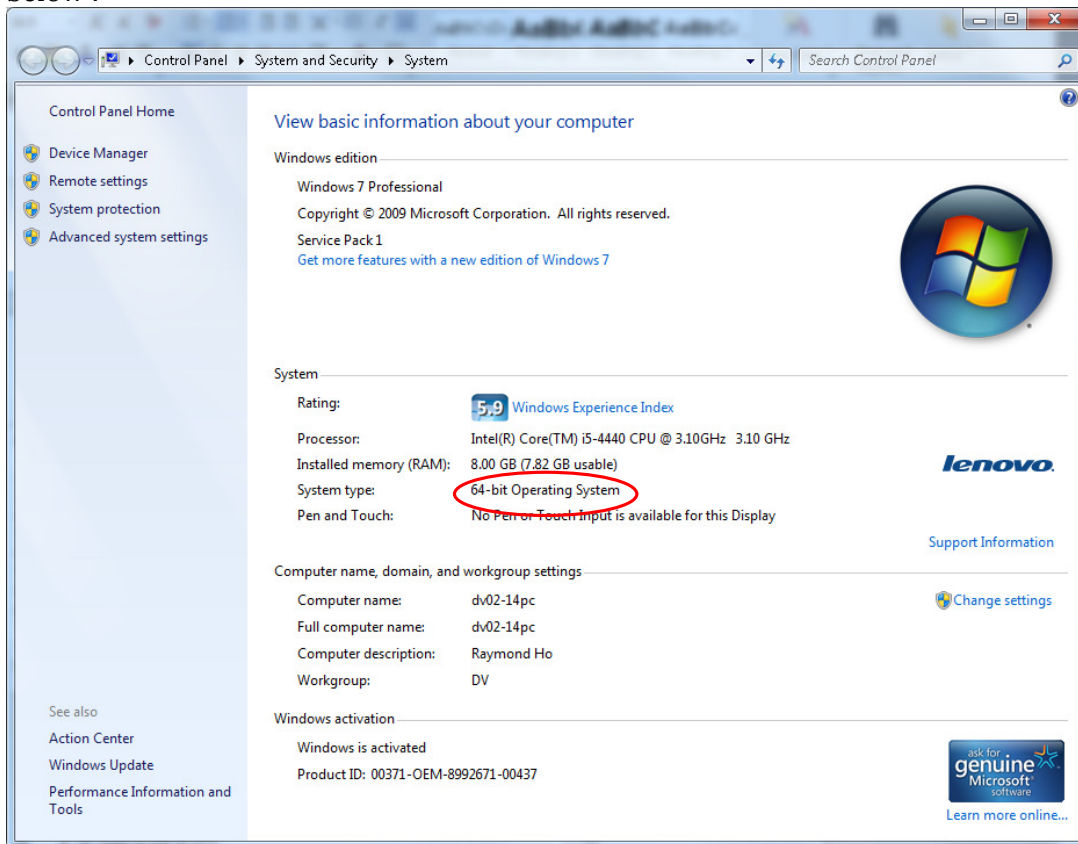
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## Software Configuration

**Step 1 :** Install the MStar USB driver.

- Check the Microsoft Windows operating system by opening “Control Panel” -> “System and Security” -> “System”. Then check the operating system is either 32-bit or 64-bit as below :



- For 32-bit Operating System, please decompress the file "Win 32bit CDM v2.12.04 WHQL Certified.zip" and install “dp-chooser.exe” (provided by DigitalView) to start driver installation.

- For 64-bit Operating System, please decompress and install the file "Win 64bit CDM v2.12.04 WHQL Certified.zip" (provided by DigitalView) and install “dp-chooser.exe” to start driver installation.

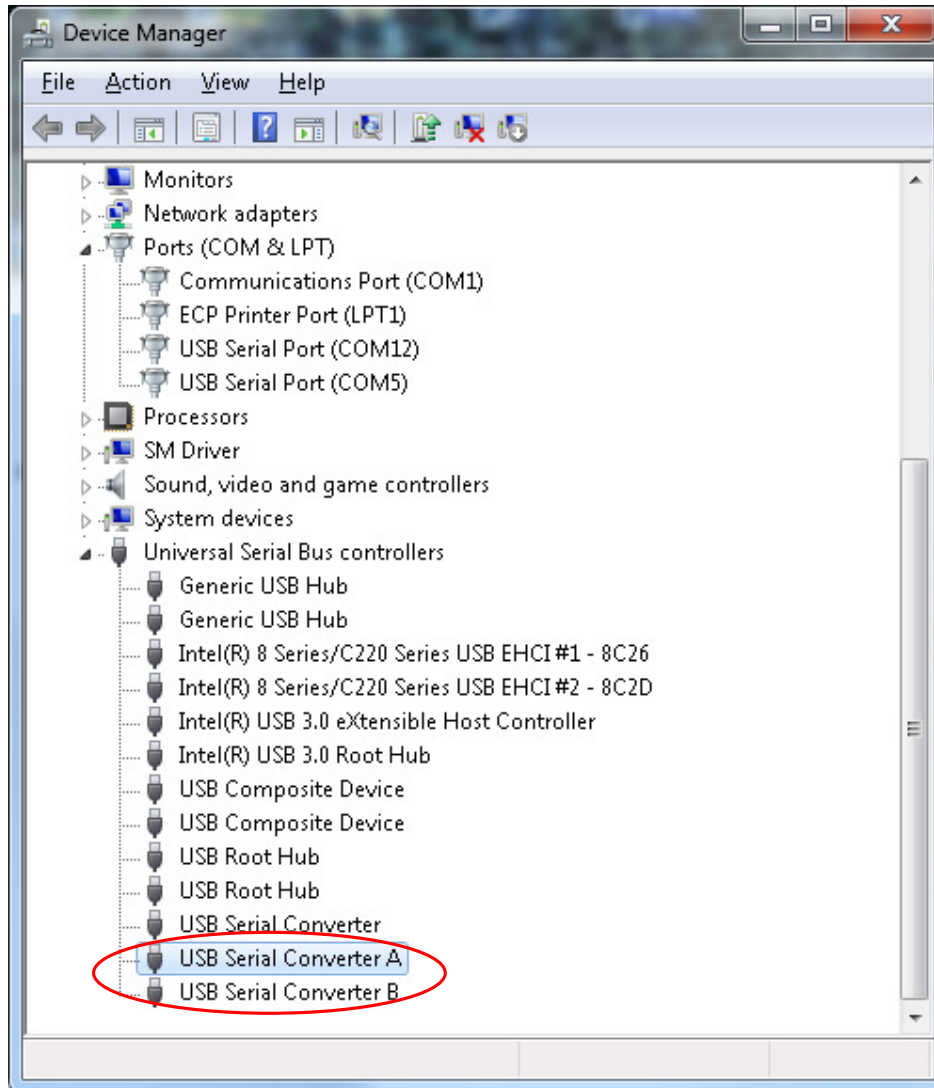
- Re-start the computer after installation to make effective the driver.

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- To verify if the driver is installed successfully, connect the programming board P/N 4111024xx-3 to USB2.0 port of the computer. (USB3.0 port is not supported). Go to Device Manager of Microsoft Windows, open Universal Serial Bus controllers. There should be two new drivers: USB Serial Converter A and USB Serial Converter B shown below :



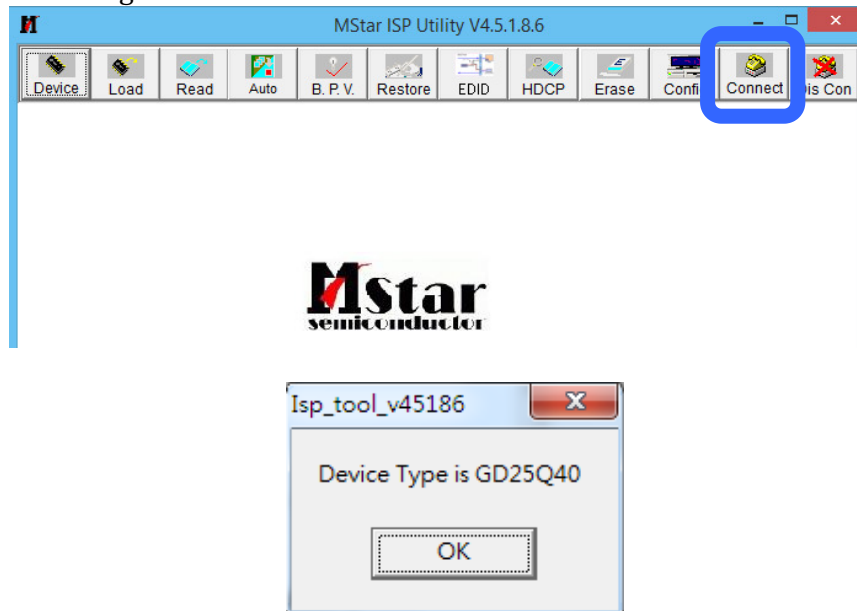
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**Step 2 :** Open the firmware upgrade program "ISP\_Tool\_v45186.exe" (provided by DigitalView).

Press "Connect" button at the top menu bar, then a dialog box pops up and shows the part number of the flash IC, which is used to save the firmware shown below. Press "OK" button to dismiss the dialog box





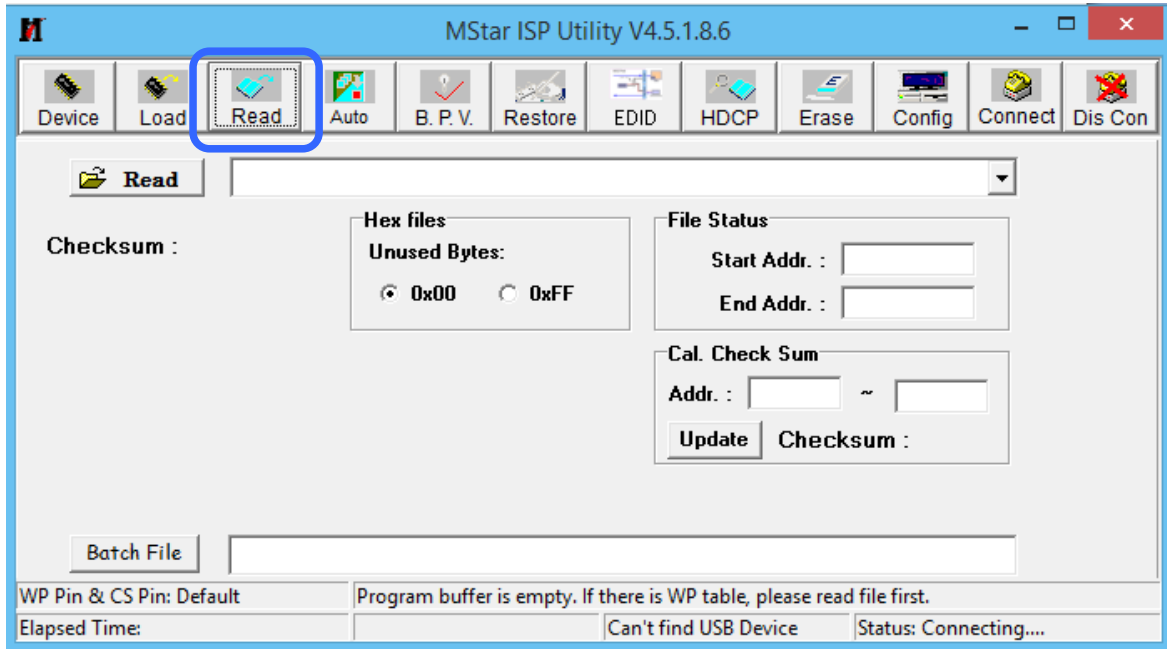
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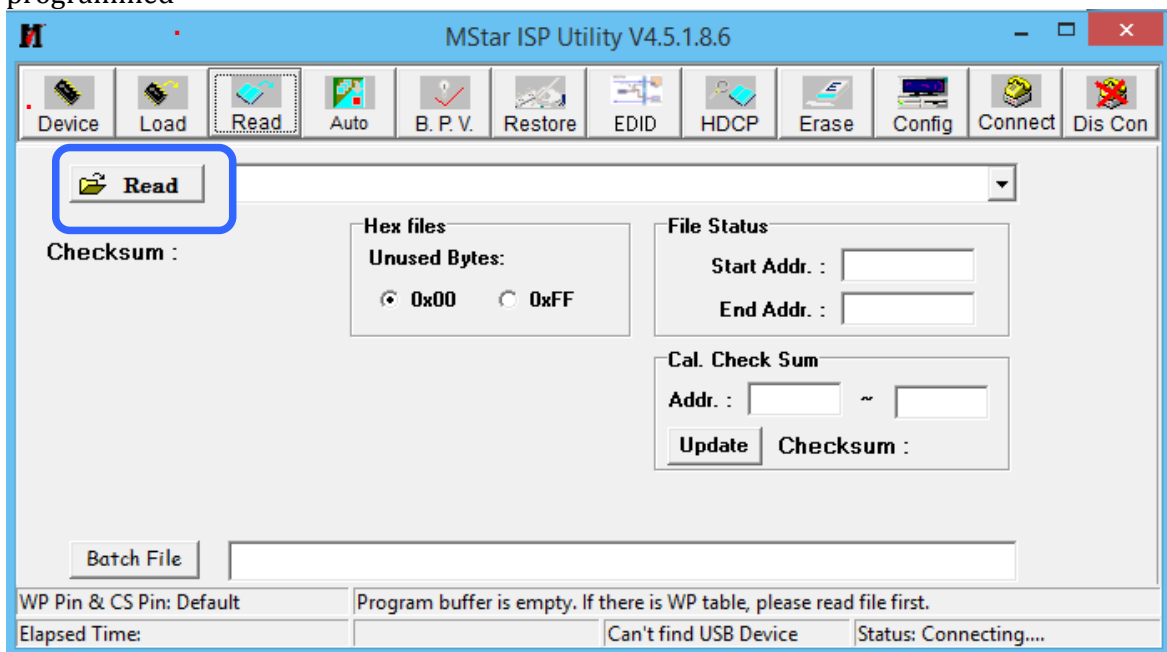
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**Step 3 :** Press the “Read” button at the top menu bar, then the “Read” page is shown as below.



**Step 4 :** Click the “Read” button beside the directory text box to select the bin file to be programmed

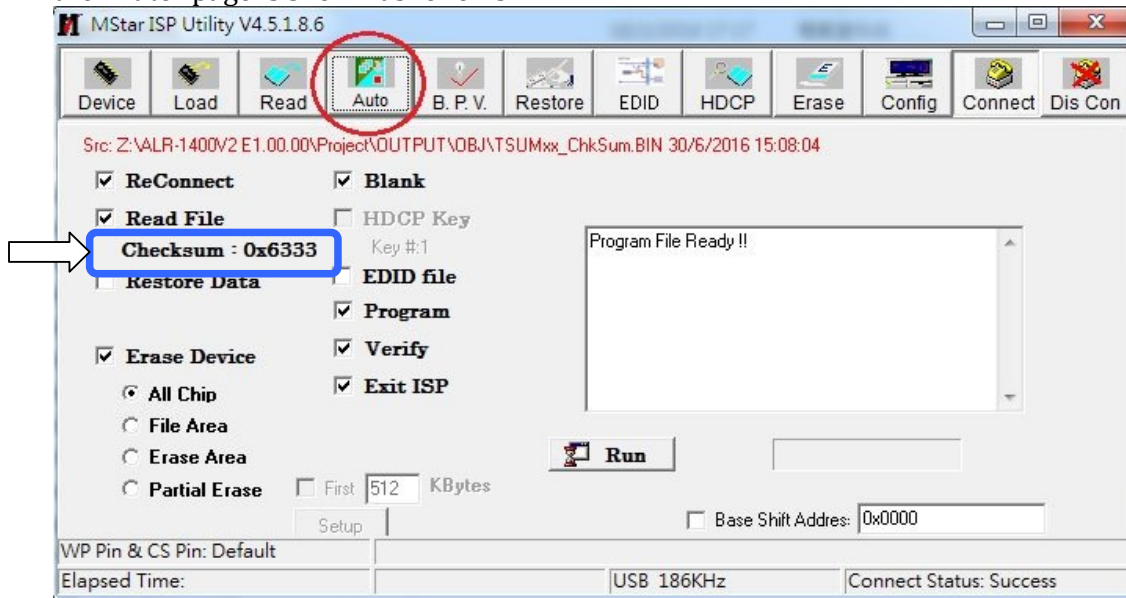


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**Step 5 :** After the checksum is shown, press the “AUTO” button at the top menu bar, then the “Auto” page is shown as follows.



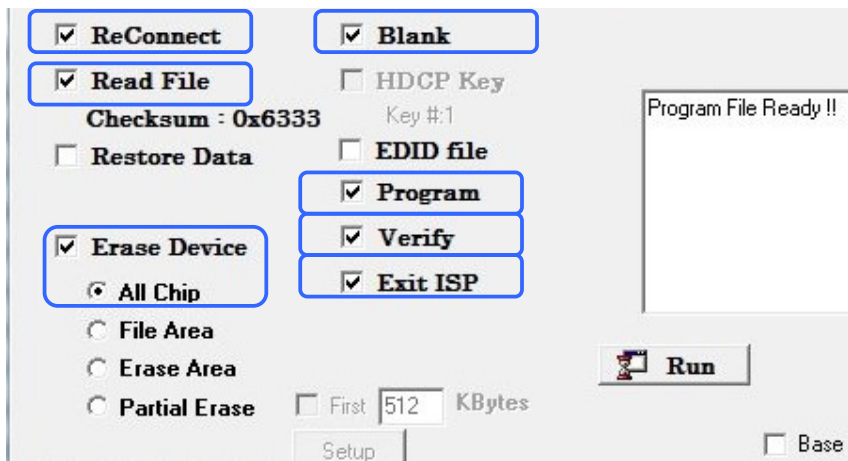
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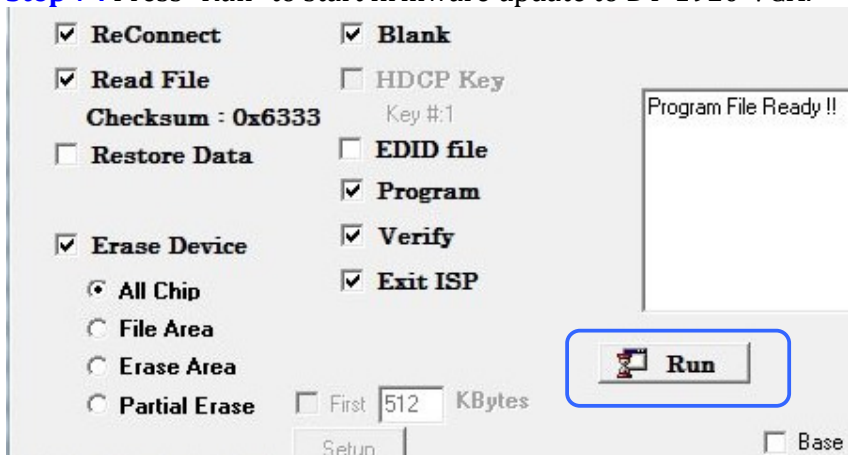
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**Step 6 :** Ensure that the following items inside this page are selected:

- a) ReConnect
- b) Read File
- c) Erase Device
  - i. All Chip
- d) Blank
- e) Program
- f) Verify
- g) Exit ISP



**Step 7 :** Press “Run” to start firmware update to DT-1920-VGA.



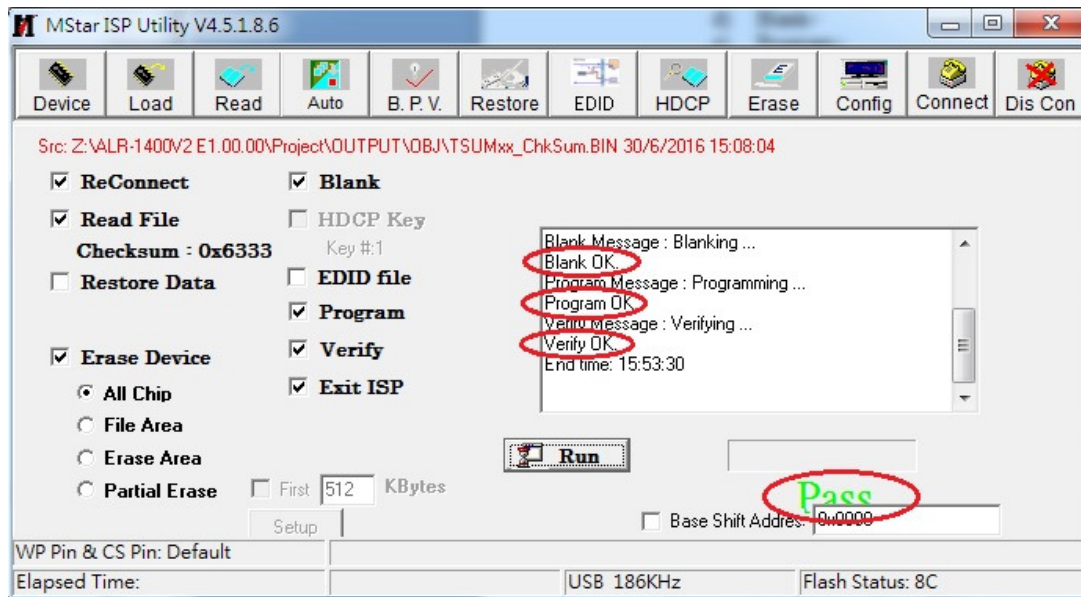
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**Step 8 :** Once firmware programming is completed successfully, the status text box shows Blank OK, Program OK and Verify OK. Also, at the bottom right side of the page, it shows the green word “Pass”.



**Step 9 :** Power Off the DT-1920-VGA.

-END-

### **Points to be noted :**

- If firmware programming is failed, the status text box shows error message. Please try to program again by press “Run” button.

- If firmware programming is failed for several times, please press “Config” button at the top of the menu bar. Then set the I<sup>2</sup>C speed to lower speed options.

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The content subject to change without notice

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