

Upgrading DVT SmartCamera's Bootcode to Support Larger Intellect Firmware Files.

This document outlines the procedure for loading new DVT bootcode into a DVT SmartCamera. Bootcode is special software, which executes when a Camera first powers up. Please read though the following instructions before upgrading the bootcode. Otherwise, loss of system file or complete camera malfunction can take place. DVT bootcode first runs camera diagnostics, and then moves the camera's application firmware from permanent flash memory to RAM memory. Periodically, DVT will make changes to the bootcode to provide new enhancements for the end-user. The latest revision of bootcode (1.4.0) is able to support the compression of the firmware application that is available in Intellect 1.1.2. The application compression allows the intellect firmware to be stored in a compressed format in flash memory. This provides extra storage space for storing more products and allows Intellect 1.1 to run on lower end SmartCameras with limited Flash Memory*.

Steps for Upgrading Bootcode

- 1) Backup the camera's existing system file
 - a. Connect to Camera with Intellect software.
 - b. Save Camera's System file by selecting **File | Save System As...**
 - c. Disconnect from System by selecting **System | Disconnect.**
- 2) Load appropriate bootcode firmware
 - a. Record the camera's current IP address
 - b. Place the system in diagnostics mode (an Ethernet switch must be used)
 - c. Reset the camera's IP address to the IP address recorded in step (a).
 - d. Load bootcode firmware (filename: boot140.xxx where xxx is the Camera model, ie 542C etc). Select "YES" to reformat flash memory when prompted.
 - e. Wait for the bootcode to completely load by monitoring the camera's status light and Intellect's Network Explorer**. Wait for the Application column in the Network Explorer to change to the new bootcode version (Legend XXX Diagnostics 1.4.0) , this may take up to 2 minutes. Disregard Intellect's message to "Wait until the status light no longer blinks red", this message was not intended for bootcode loading.
 - f. Reset the camera's IP address to the IP address recorded in step (a).
- 3) Load application firmware (Intellect)
 - a. Load Intellect application firmware (filename: intellectyyy.xxx where yyy is the version of intellect firmware and xxx is the Camera model, ie 542C etc)
 - b. Connect to Camera and store application firmware to Flash Memory when prompted.
- 4) Restore camera's system file
 - a. When connected to the Camera, select **File | Open...** and select the DVT System file saved in step 1a. (DVT Intellect system files: *.dvtisys).
 - b. When prompted, restored all system parameters.
 - c. Save all product files to Flash memory when prompted.
 - d. Disconnect from the camera by selecting **System | Disconnect.**
 - e. Cycle power to the Camera.
 - f. Reconnect to the System.

* Legend 510, 520, and 530 systems shipped prior to February 28th 2005 contain 4 MB of Flash. Systems after March 1st 2005 contain 16 MB of Flash Memory. Although this version of bootcode allows users to run intellect 1.1 on cameras with 4 MB of Flash, DVT recommends these systems be upgraded with part number UPG-500MEM to increase the Camera's memory to 16MB Flash memory and 32 MB RAM. This memory upgrade also allow the camera to upgrade to future Intellect versions.

**Warning: The camera's power must be maintained while bootcode is being loaded. Failure to do so could result in the camera needing to be returned to DVT for service.