



Application Note  
0380-0199-10 Rev 2.6

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## EDT Software and MAJIC<sup>®</sup> Probe Update Procedures

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## EPI Development Tools Installation

There are two types of updates for the EPI Development Tools (EDT) software package: a *Production Release* and an *Engineering Update Service Pack*. A production release could be in a form of a CD or a self-extracting executable file downloaded from our web site. An engineering update service pack is a zip file that may be downloaded via FTP, or may be sent via email. This application note explains how to:

- Install a production release software update on a Windows PC,
- Install an engineering update service pack on a Windows PC,
- Update the firmware in your MAJIC® probe using the MAJIC Setup Wizard,
- Update the trace control PLD in your MAJIC<sup>PLUS</sup>® probe using the MAJIC Setup Wizard.

**Note:** The information in this application note is specific to using a Windows PC. Please refer to the *Using a MAJIC® Probe With A Linux PC* application note for equivalent information when using a Linux PC.

## Additional Documentation

Additional documentation for the EDT software package and MAJIC® series of intelligent debug probes is installed as part of the EDT software package. Use the **[Start]/Programs...** menu to browse into the **EPI Tools/EDT** folder and open **EDT Documentation Index**. Or, open **My Computer** and browse to the **manuals** directory on your CDROM drive and view **edtX\_doc\_index.html** with your browser (**edta** for ARM or Intel XScale®, or **edtm** for MIPS).

*MAJIC® User's Manual*

Complete information on configuration and operation of the MAJIC® probe, and the MON command language.

*Using a MAJIC® Probe With A Linux PC*

Application note providing EDT and MAJIC® update procedures for a Linux PC.

## Getting Support

Please do not hesitate to contact our technical support group if you have any questions or need assistance with these procedures. We are committed to making sure our tools work well for you.

## Installing an EDT Production Release

It is not necessary to uninstall previous EDT releases before installing a production release update. By default, the installer puts each release into its own directory. However, after you install a new production release update, you do need to update your debugger environment to begin using it. Just run the MAJIC Setup Wizard from the new release to set up your debugger of choice, using the same target initialization files that you have been using.

- 1) To install the EDT software package from a CD, insert the CD into your CDROM drive. If the installer does not start automatically, open **My Computer**, browse to your CDROM drive, and start the update program by double clicking on the **setup.exe** program.

**Or**, If you downloaded the EDT software package from our web site, simply run the self-extracting program from where ever you saved it.

- 2) An installation key is required to install the update. If you don't yet have the installation key (which is different for each major release), but have a current support contract, click on the **[Get Key...]** button to request the key. After completing the registration wizard, you may elect to install a temporary copy of the software while waiting for the permanent key. If you don't have a current support contract, you should contact [sales@epitools.com](mailto:sales@epitools.com) before attempting to install the update.
- 3) Once you receive the installation key, run the **Installation Key Update Wizard** from the EPI Tools program folder, and follow the instructions provided in the email to install the permanent key. Note that if you have more than one MAJIC® probe, you will have to install keys for each MAJIC® probe that you plan to use.

### Notes:

- The installer will add (or replace) the **EPI Tools** folder to your **[Start]/Programs...** menu, and that folder will also be open on your desktop. The set of shortcuts available depends on which software options you purchased, but will always include a shortcut for running the **MAJIC Setup Wizard**. Whether this is a new EDT installation or an update, you must (re)run the MAJIC Setup Wizard to (re)set up your debug environment(s). There will always be a shortcut to the **EDT Documentation Index** as well, which provides links to release notes and all of the installed documentation.
- The new software release includes new firmware for the MAJIC® probe. Don't forget to install the MAJIC® firmware update when you update your EDT software installation. The procedure for this is provided later in this application note.
- **Warning:** New EDT releases (since EDT 2.1a) no longer require the **PATH** environment variable to include the EDT **bin** directory. However, the software may get confused if the **PATH** still points to an older EDT release. After installing a new release of the EDT software package, make sure your old release is not included in the **PATH** environment variable.

## Installing an Engineering Update Service Pack

- 1) If you have not already done so, install the EDT production release software as instructed above. Make a note of the root directory where you choose to install the tools.
- 2) Unzip the engineering service pack update file into the root directory of your EDT software installation. This is the directory which includes the **bin**, **ice**, **targets**, and several other sub-directories. The service pack will update some of the installed files, and may also install some new files.
- 3) If the service pack includes a new version of MAJIC® firmware, make sure to install the firmware update in your MAJIC® probe as explained in the next section of this application note.

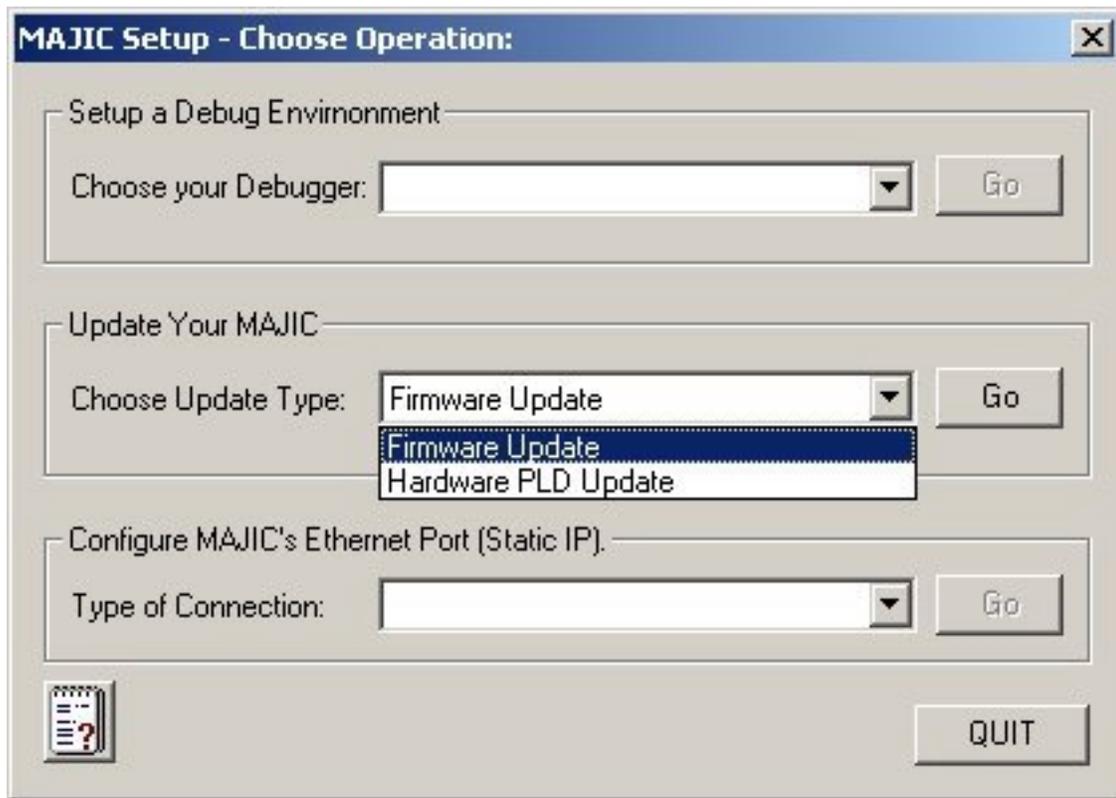
**Note:** Make sure that your unzip utility is set to preserve sub-directories as it decompresses the files, so they are saved in the right places within your EDT software installation.

## Updating the MAJIC® Firmware

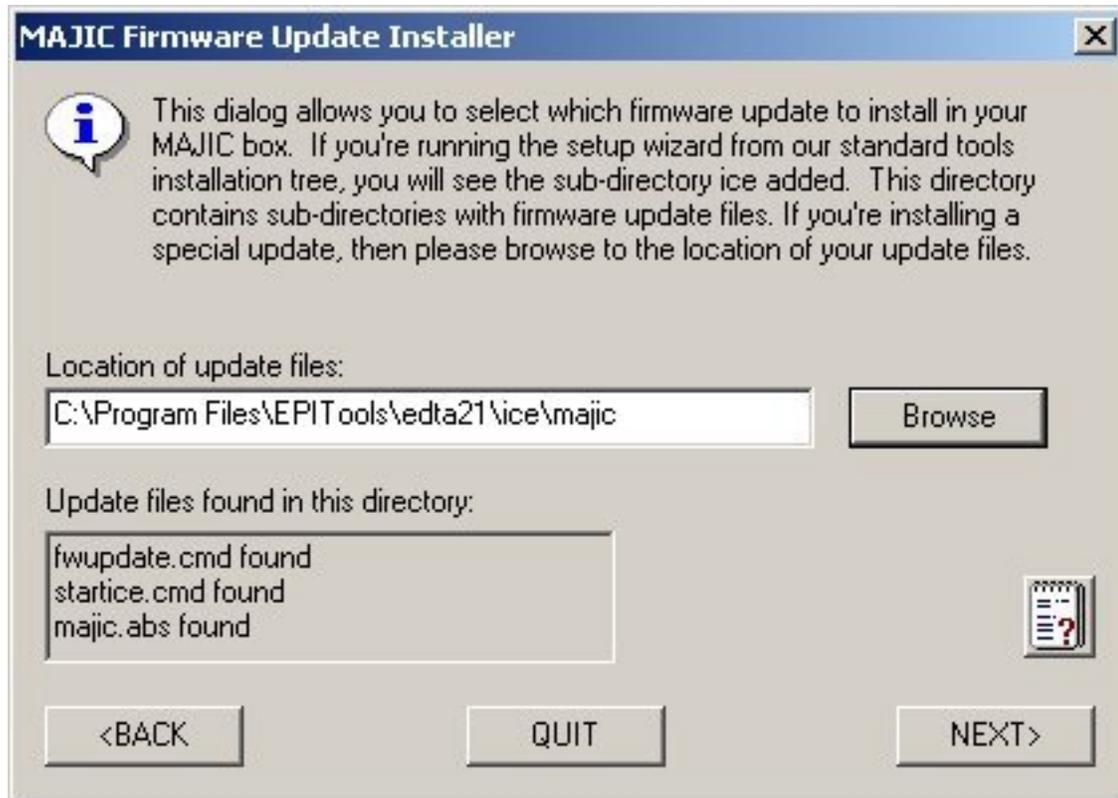
The MAJIC® probe's firmware image and related files are included in every EDT Production Release, and most Engineering Update Service Packs. For a production release, the firmware is located in the `.\ice\majic` directory of your EDT software installation. The firmware in an engineering update service pack is typically found in the `.\ice\majic.xyz` directory, where `xyz` is the firmware version number. This is done so that the production release version is still available after installing an engineering service pack.

### MAJIC Update Process

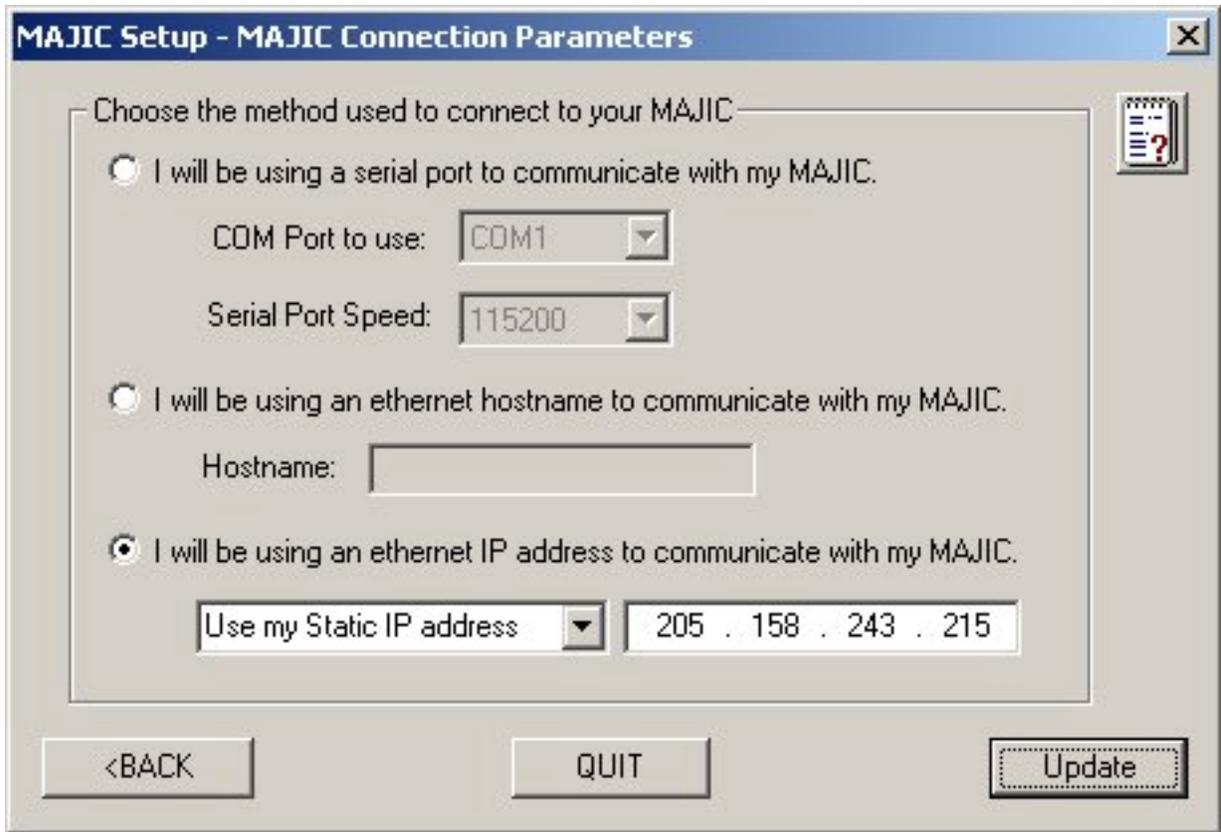
- 1) Power up the MAJIC® probe. You may leave the target system turned off or disconnected during the update process, or you may connect it normally. Make sure the Status LED is green before proceeding.
- 2) Use the `[Start]/Programs...` menu to browse into the `EPI Tools - EDT` folder and run the `MAJIC Setup Wizard`. Read the introduction, then click the `[NEXT]` button to advance to the `Choose Operation` form, below.



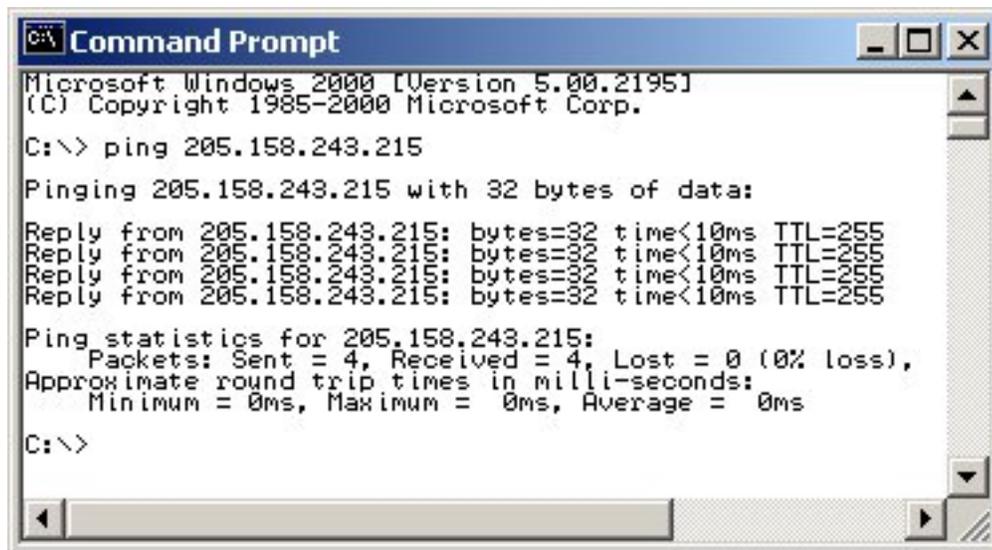
- 3) In the `Update Your MAJIC` box, choose `Firmware Update` from the drop-down list and then press the `[Go]` button right next to it to advance to the next form.



- 4) Use the **[Browse]** button to select the **Location of update files**. For the firmware included in a production release, browse to `.\ice\majic`. For engineering update service packs, browse to `.\ice\majic.xyz`, where `xyz` is the firmware version number. The three files shown in the lower text box must all be present in the selected directory. Click **[NEXT]** once you have the right firmware selected, to set the connection parameters.



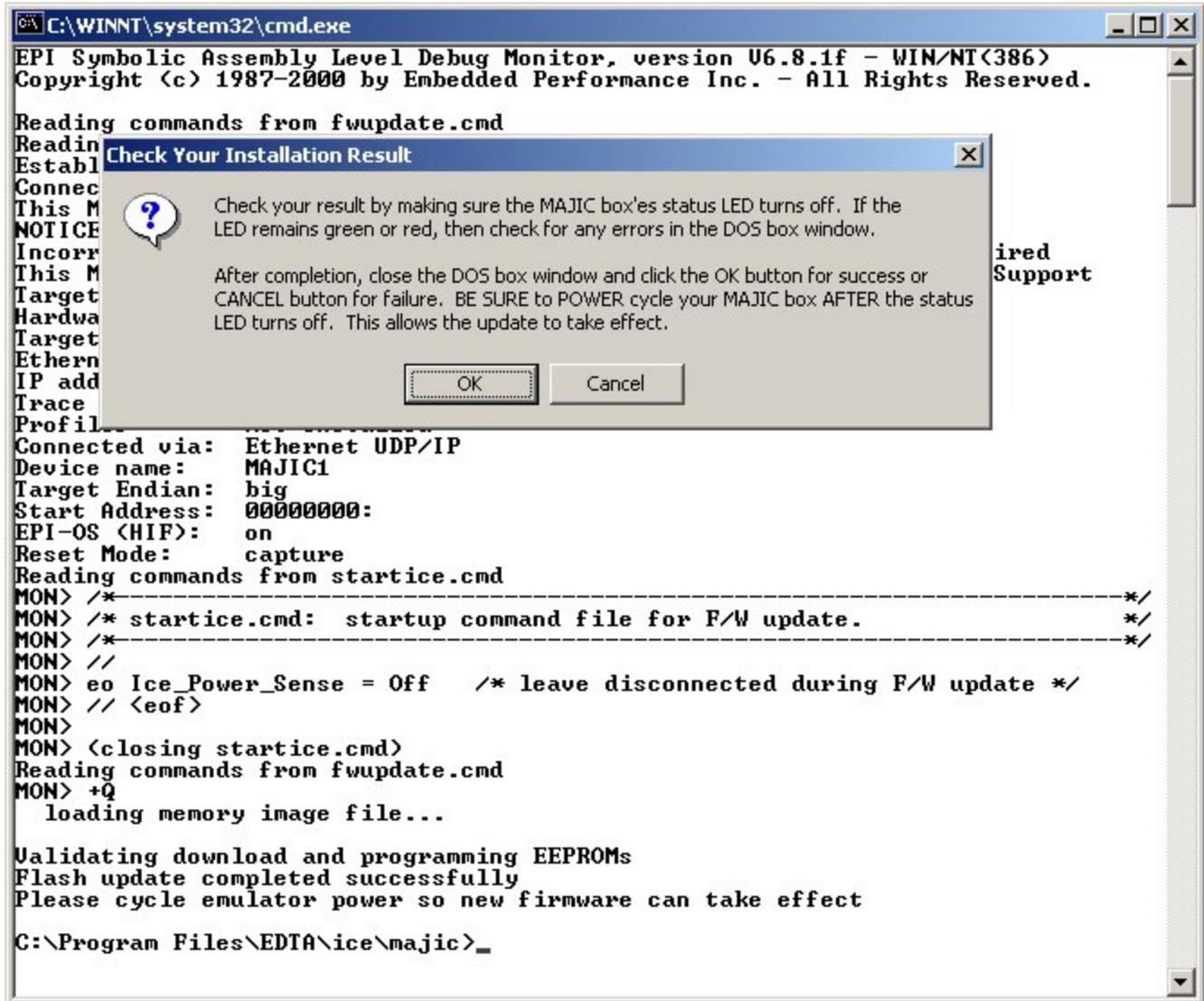
- 5) Specify the communication method to be used during the update. If serial is selected, make sure the COM port is not in use by any other program, and that the serial cable is correctly installed. For Ethernet, make sure you can ping the MAJIC® probe before proceeding.



**Note:** Chapter 2 of the *MAJIC® User's Manual* provides full details on setting up the serial or Ethernet connection.

- Click [Update] then [OK] on the **Install Update** form to initiate the update process. A console window (DOS box) opens to update the MAJIC® firmware using MONICE.

**Warning:** The Status LED will go RED for several seconds during the critical stage of the update. DO NOT disturb the MAJIC® probe or console window while the LED is red. The LED will turn off when it is safe to proceed.



- After the Status LED goes out, click [OK] on the **Check Your Installation Result** form and close the console window. If the Status LED does not go out, click [Cancel] and check the console window for errors.

## Updating the MAJIC<sup>PLUS</sup>® Trace Control PLD

The MAJIC<sup>PLUS</sup>® probe can support both ARM Embedded Trace Macrocell (ETM) and MIPS EJTAG PCTrace. However, the Trace Control PLD must be programmed with the right version for the trace interface you are using. Normally each new MAJIC<sup>PLUS</sup>® probe is preconfigured with the right PLD, based on which cable kit or active probe you ordered, but if you want to switch from one trace interface to another then you must reprogram the Trace Control PLD.

To check which PLD version is installed in your MAJIC<sup>PLUS</sup>® probe, use the Display Information (**di**) MON command. Look for the line that displays the hardware revision information (shown below). The last field in this line indicates which Trace Control PLD image is presently installed.

Hardware Rev: 90:33:41:60

20	MIPS/PCTrace.
40	Original ARM/ETM version suitable for the CKP_ARM series of passive probes.
60	Current ARM/ETM version supporting both the CKP_ARM series of passive probes, and AP_ARM series of active probes.

**Note:** The hardware revision display was recently changed. The table shown above assumes you have installed MAJIC® firmware version 3.3.2 or later. If you are using firmware version 3.3.2 or later, and the value in the fourth field is not shown in the table above, then please contact EPI technical support for assistance.

## Hardware Update Procedure

When switching from one trace interface to another, you must reprogram the Trace Control PLD. This is accomplished by performing a hardware update procedure that is very similar to updating the MAJIC® firmware.

- 1) Power up the MAJIC® probe. You may leave the target system turned off or disconnected during the update process, or you may connect it normally. Make sure the Status LED is green before proceeding.
- 2) Use the **[Start]/Programs...** menu to browse into the **EPI Tools - EDT** folder and run the **MAJIC Setup Wizard**. Read the introduction, and then click the **[NEXT]** button to advance to the **Choose Operation** form.
- 3) In the **Update Your MAJIC** box, choose **Hardware Update** from the drop-down list and then press the **[Go]** button right next to it to begin.
- 4) Use the **[Browse]** button to select the **Location of update files**. The files shown in the lower text box should all be present in the selected directory.
  - For ARM/ETM, the files are located in the `./ice/majicplus_v6_etm.pld` directory of your EDTA software installation.
  - For MIPS/PCTrace, the files are located in the `./ice/majicplus_v2_pctrace.pld` directory of your EDTM software installation.
- 5) Follow the wizard through to initiate the hardware update process via MONICE, just as with the firmware update process described above.

**Warning:** The Status LED will go RED for several seconds during the critical stage of the update. DO NOT disturb the MAJIC® probe or console window while the LED is red. The LED will turn off when it is safe to proceed.