## What's This?

1) **Power Indicator** — Green when the MAJIC® probe is powered up, off when not powered.
2) **Status Indicator** — Blinks red when the MAJIC® probe is powered up, then turns off, then turns green when ready for use. Red while the probe is in use indicates a problem.
3) **ENET Indicator** — Green when Ethernet is ready, off when in use, and blinks red on a collision.
4) **Run Indicator** — Red when the target processor is reset by the MAJIC® probe, green while the target processor is executing, off when neither reset nor running.
5) **Connect Indicator** — Green when the MAJIC® probe's target interface is enabled *and* is sensing target power. Red when disconnected or the target is powered off.
6) **Mini-Probe Connector (MAJIC PLUS® only)** — The Mini-Probe option for the MAJIC PLUS® probe allows 1-8 TTL level test points to be traced. To use this feature, connect the 20-pin ribbon cable from this connector to the Mini-Probe, making sure to observe the keying. With both MAJIC PLUS® probe and target powered off, connect the ground clip to a ground point on your target, and the signal clips to your test points.
7) **Target Connector** — MAJIC® and MAJIC MX probes use a DB25 connector for the target connection. A MAJIC PLUS® probe uses a MAJIC PLUS® Adapter Module to adapt its high density connector to various target connector configurations. Each cable kit includes an application note with full information.
8) **Power +5VDC** — The MAJIC® probe comes with an external universal power supply and separate power cord. Plug the 5v D/C power cord labeled "**MAJIC**" into the MAJIC® probe's power input.
9) **Trig In** — Allows external test equipment (or another MAJIC® probe) to trigger the MAJIC® probe. To use this feature, connect a coax cable no more than 1 meter in length to the trigger source (no "T" or terminator is required), and set the `ice_trigger_input` option to the desired mode.
10) **Trace Enable (MAJIC PLUS® only)** — Allows external test equipment to trigger or conditionally inhibit the MAJIC PLUS® probe's trace acquisition. To use this feature, connect a coax cable no more than 1 meter in length to the trigger source (no "T" or terminator is required), and set the `trace_trigger` and `trace_gate` options as desired.
11) **Trig Out** — May be used to trigger external test equipment from the MAJIC® probe. To use this feature, connect a coax cable no more than 1 meter in length to the trigger input of the external test equipment (no "T" or terminator is required), and set the `ice_trigger_output` option to the desired mode.
12) **Serial** — To communicate with the MAJIC® probe using a serial link, connect a serial cable from the DB9 connector to a free serial port on your computer. Make sure that no other programs are using that port.
13) **Ethernet** — To connect to the MAJIC® probe using Ethernet, either connect the standard Ethernet cable to your hub, or connect a "crossover" cable directly to your computer's Ethernet port. A USB/Ethernet adapter may be used to connect a MAJIC® probe to the USB port on a Windows PC.

## Hardware Installation

A) Install the target connection cable kit from #7 to your target board. An application note included in the cable kit provides complete instructions.
B) Connect the serial or Ethernet cable to #12 or #13, respectively. When using a serial port, make sure that no other programs are using that port. You will need an IP address for the MAJIC® probe before you can connect over Ethernet. Basic instructions for configuring an Ethernet connection are provided on the software side of this quick start guide.
C) Plug the 5v D/C power cord labeled "**MAJIC**" into the MAJIC® probe's power input (#8). Double check that it is the **MAJIC** power supply, then connect the A/C power cord. The Power LED (#1) should turn green.
D) Monitor the Status LED (#2) as the MAJIC® probe boots up. It should blink red upon power up, then go off, then turn green when ready for use.

**Note:** We recommend plugging the target board and MAJIC® probe into a power strip so that you can switch them on and off together.

MAJIC® probes and target boards are sensitive to ElectroStatic Discharge (ESD). Observe ESD precautions when connecting a MAJIC® probe to the target board.

MAJIC® probes may be damaged if the wrong power supply is used. Always check for the "**MAJIC**" label on the D/C power cord.
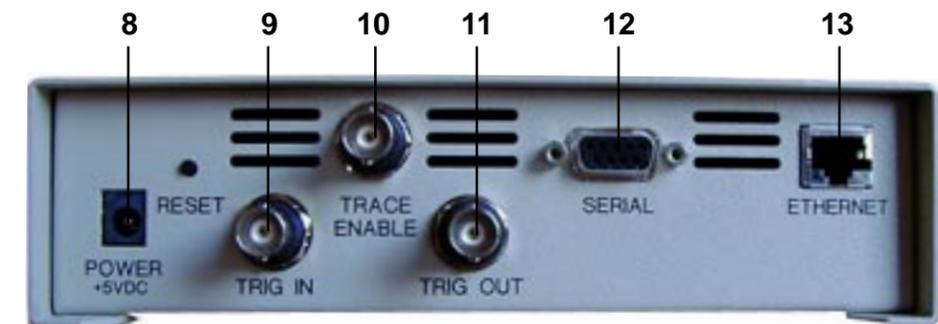
# MAJIC® Quick Start Guide — Software

0380-0185-10 Rev. 2.1

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## Software Installation

Follow the steps below to install the EPI Development Tools:

1. If you will be using Intel® SDT, Microsoft Platform Builder, or another third party debugger, you should install that software first.

2. Insert the EPI Development Tools (EDT) CD in your CDROM drive. If the installer does not start automatically, then run `setup.exe` (Windows) or `einstall` (Linux) from CD.

3. Windows — For a permanent license, choose `[Get Key]` to request an installation key, which you will receive by email after you complete the registration process. For a temporary evaluation version, choose `[Install Evaluation]`.

   Linux — The installer requires an installation key, which you will receive by email after you register. The `[Get Key]` button initiates the registration process. After you receive the installation key, rerun the installer and copy the key from the email into the installer.

4. Set up your serial or Ethernet connection.

5. Configure your debug environment.

### MAJIC Setup - Choose Operation:

**Setup a Debug Environment**

Choose your Debugger: [EDB] [Go]

**Update Your MAJIC**

Choose Update Type: [Hardware PLD Update] [Go]

**Configure MAJIC's Ethernet Port (Static IP).**

Type of Connection: [Static IP for USB Ethernet Adapter] [Go]

[QUIT]
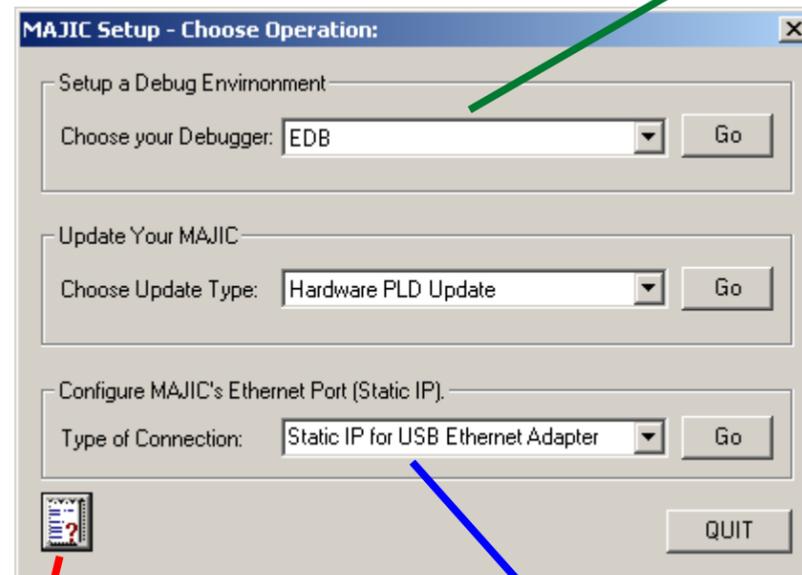
## Debugger Setup

Windows —The easiest way to set up the MAJIC® development environment on Windows is with the MAJIC Setup Wizard. Use the `[START]` button to run the MAJIC Setup Wizard from the `Programs > EPI Tools - EDTx` menu. Choose your debugger from the drop down list, then click `[Go]` and step through the wizard to assign a project name, set the MAJIC® probe and target details, and prepare the start up files.

Linux — To configure the MAJIC® development environment on a Linux PC, please see the *Using a MAJIC® Probe on a Linux PC* application note.

**Note:** Target configuration files for many common reference platforms are provided in the `targets` directory of your EDT software installation. On a Windows PC, you can select an existing target with the MAJIC Setup Wizard, or you can choose to create your own if there is no suitable file available. On a Linux PC, you can either start in the appropriate `targets` subdirectory, or copy the target configuration files to your project's build directory.

Please see Chapter 3 of the *MAJIC® User's Manual* for more information on MAJIC® probe and software configuration. Application notes covering details of many common debug environments are also available.

## Support

A thorough documentation package is installed as part of the EDT software package.

On a Windows PC, open the `EDT Documentation Index` via the MAJIC Setup Wizard, or use the `[START]` button, `Programs > EPI Tools - EDTx` menu. On a Linux PC, open the `edtX_doc_index.html` file in the `./manuals` directory of your EDT installation.

The documentation and `edtX_doc_index.html` file are also available in the `manuals` directory on the CD.

For additional help, please don't hesitate to contact EPI Technical Support by email, telephone, or our web site. We are committed to making sure our tools work well for you.

## Ethernet Setup

The easiest way to set up an Ethernet connection is to program a Static IP address into the MAJIC® probe using a temporary serial port connection. You will need to get a static IP address and optional host name from your IT manager. If you will connect via a gateway, you will need to get gateway information as well.

Chapter 2 of the *MAJIC® User's Manual* has complete information on setting up an Ethernet connection.

See the *Using a USB Ethernet Adapter with a MAJIC® Probe* application note for details on using USB.

Windows —To set up an Ethernet LAN or USB/Ethernet connection, use the `[START]` button to run the MAJIC Setup Wizard from the `Programs > EPI Tools - EDTx` menu.

Select the type of connection (LAN or USB), then click `[Go]` and follow through the wizard to enter your network parameters and choose the COM port you will use to program the settings.

Linux — To set up an Ethernet connection, please see the *Using a MAJIC® Probe on a Linux PC* application note.