

Helios[™] LiveUSB Development Kit Quick Start



What's in the Box?

The development kit includes the following components:

- Helios platform with VGA expansion board
- Null modem cable (6 foot, DB9FF)
- 12 VDC adapter and regional AC power cord
- GPS antenna
- Tool to open USB Bay; spare retaining washers
- Wind River Linux LiveUSB flash drive, 16 GB, for booting a PC
- Utiliboot USB flash drive, 4 GB, for booting Helios
- FreeDOS USB flash drive, 2 GB, for booting Helios

Three Target Run-Time Options

Your kit can be configured to boot any of the following three Linux distributions:

- Wind River LiveUSB Linux Image (as shipped)
- Wind River Linux with Eurotech layers
- Wind River Linux with Eurotech layers and ESF (Eurotech's Everyware Software Framework)

Running the LiveUSB Evaluation

As initially shipped, your Helios boots the LiveUSB runtime evaluation, which is quick to set up.

To begin, connect both the Helios and the development PC to an Ethernet network that is connected to the Internet, then boot the PC with the supplied LiveUSB flash drive.

The Wind River Linux and Eurotech Helios/Catalyst FX LiveUSB Evaluation Getting Started Guide describes full details.

The Wind River LiveUSB flash drive includes the following:

- Instructions to set up your Wind River evaluation on the Helios Platform Development Kit
- Details about how to activate your free, 30-day license for the Wind River Workbench development suite
- Audio-visual guides that lead you through the Wind River Linux evaluation
- All the source code for Wind River Linux and the Eurotech Product layers
- Hardware documentation in the "Eurotech Helios Documents" folder on the desktop

Using the Eurotech Product Run-Times

The Eurotech Product Run-Times are customized Wind River Linux images that have been configured to include additional features not present in the Helios BSP:

- Ethernet is automatically configured using DHCP.
- sshd is started automatically.
- X Windows is included. Use "startx" to start it.

110124-3006B September-2010



- Device drivers and network features have been enabled to support WiFi, Bluetooth and wireless modem devices, NAT, NTP, etc.
- The root account password is "IsiTech".

This run-time image is ready for deployment as a product platform and is the base run-time used by Eurotech's ESF.

Installation

- 1. Insert the bootable Utiliboot USB flash drive into any available USB port on the Helios. Attach a keyboard and VGA display, then power on the system. If the system does not boot, you may need to press F12 to enter the BIOS Boot Device menu to select the USB flash drive.
- 2. Log in on the console using the root account with the password "IsiTech".
- 3. Determine which storage device is the 4 GB CompactFlash card (e.g. "mount" or "grep sd /var/log/messages" may show that it is /dev/sda1). You'll be given a chance to confirm the manufacturer and drive capacity during the installation process. Don't overwrite the Utiliboot drive (typically /dev/sdb)!
- 4. Install the Eurotech Product Run-Time by following the process described in one of the following files:
- README.txt-WRL-ONLY (WRL only)
- README.txt-WRL-ESF (WRL with Eurotech ESF)

Use the CompactFlash device found in Step 3 as the DEVICE parameter (e.g. "/dev/sda"). The load process takes four to ten minutes.

You can optionally run "make-media.sh-h" to display the options not used in the README files.

5. Use the "poweroff" command to safely shut down.

Hardware Features

USB Bay

- To open the hinged USB Bay cover, remove the two screws using the supplied tool.
- Do not forcibly pull on the USB devices to disconnect.
 The USB ports in the USB Bay use sockets with locking latches. Raise the latch on the socket to remove the device.

Indicator LEDs

The system has eight red/green/yellow LEDs with the following assignments:

LED Description

- 1 Power
- 2-7 Software-definable, SMBus
 - 8 Boot-mode Button State

Updating Your Development System

- To install the Eurotech Product Run-Time, use the Utiliboot key as described above.
- To re-install the Wind River Linux LiveUSB run-time, follow the instructions in Appendix A of the Wind River Linux and Eurotech Helios/Catalyst FX LiveUSB Evaluation Getting Started Guide.
- To update the BIOS, contact Eurotech Support for BIOS update files and utilities. You will install these files on the bootable FreeDOS USB flash drive.

Everyware [™] Software Framework

Information about Eurotech's ESF is available at http://esf.eurotech.com/

Eurotech Technical Support

For hardware support and issues relating to the Eurotech Product Run-Time, use the Eurotech support site. It includes errata reports, the latest releases of documents, and developer's forums. These resources are available to registered developers at:

http://support.eurotech-inc.com/

Wind River Technical Support

For Wind River Workbench licensing issues, see Appendix B of the getting started guide.

For Wind River Linux and LiveUSB support, contact http://www.windriver.com/support/

Next Steps

For additional information about the Helios, download the following documents from the Eurotech support site or contact your local sales representative.

Document

Helios Platform Hardware Reference Manual 110124-3000
Wind River Linux and Eurotech Helios/Catalyst FX 110124-3005
LiveUSB Evaluation Getting Started Guide

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