

phyBOARD®-Mira i.MX 6

Get your phyBOARD®-Mira powered up and connected in just a few simple steps.

1) Preparing the Hardware

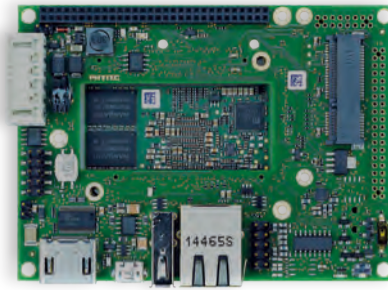
1. Check the kit content (see overview on the right hand side).
2. Have your connection cables at hand: You need an RS-232 cable (one-to-one) and a standard Ethernet cable. Phytect offers an accessory kit which includes these cables.
3. Power up the phyBOARD-Mira. **For the 24 V-kit version (A):** Connect the 2-pin PHOENIX connector (included) to a 12 V-24 V ($\pm 10\%$) DC power supply.
For the 5 V-kit version (B): Connect the 2-pin PHOENIX connector (included) to a 5 V ($\pm 5\%$) DC power supply. In both cases please note the polarity of the connectors (see picture A/B)!
If you have bought the optional power supply with your kit, it comes already with the 2-pin connector wired.
4. Turn your power supply on and plug the 2-pin PHOENIX connector into the green jack of your kit. The Power LED **D2** will light up.

Please note: only the 24V-kit version comes with the power adapter board.



Kit Contents

phyBOARD®-Mira i.MX 6



2-pin PHOENIX



RS-232 and CAN Adapter



Evaluation Module (PEB-EVAL-01)



Optional Accessories

Power Module 12 V-24 V (PEB-POW-01)



HDMI Adapter (PEB-AV-01)



Additional Equipment required

Power Adapter 5 V or 24 V



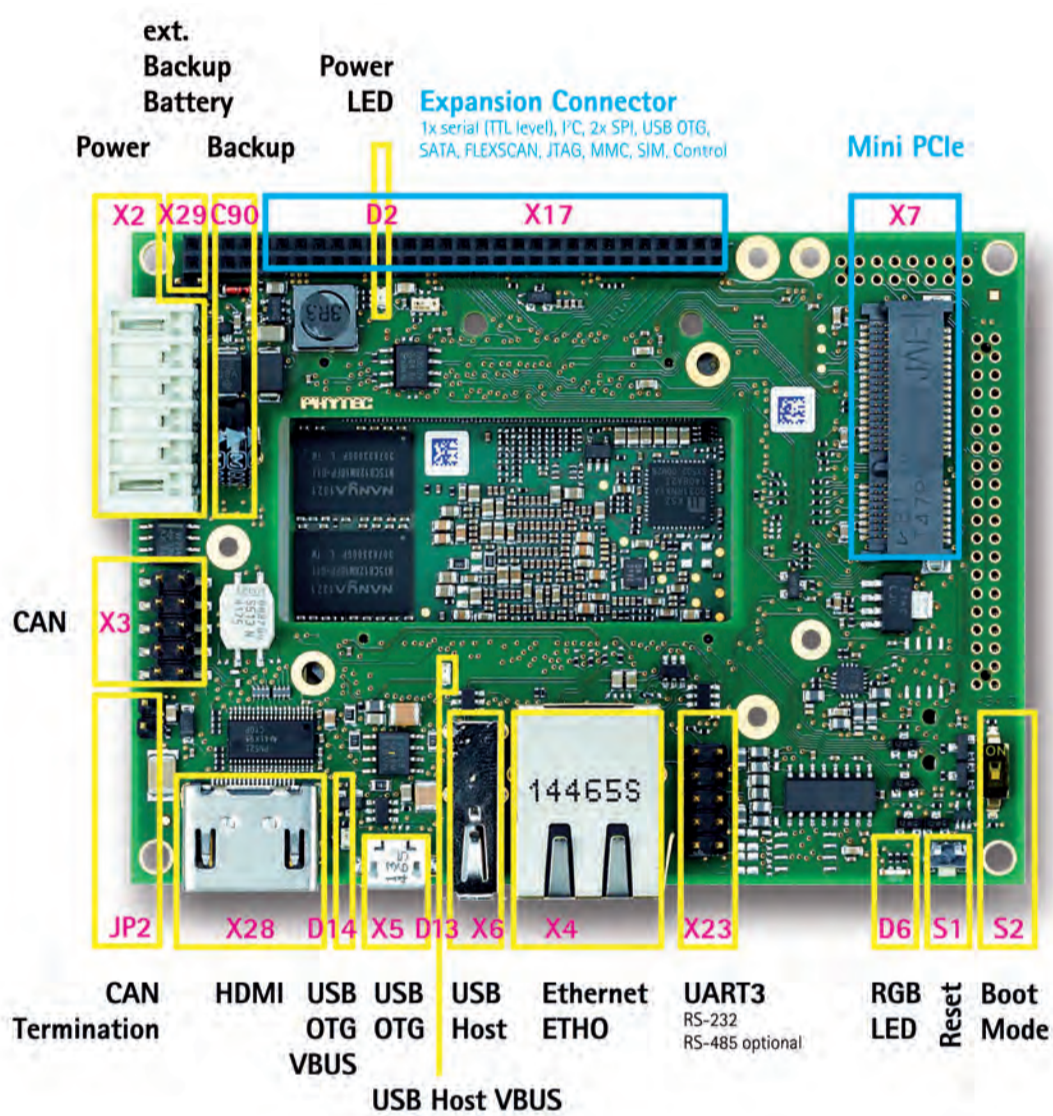
RS-232 Cable



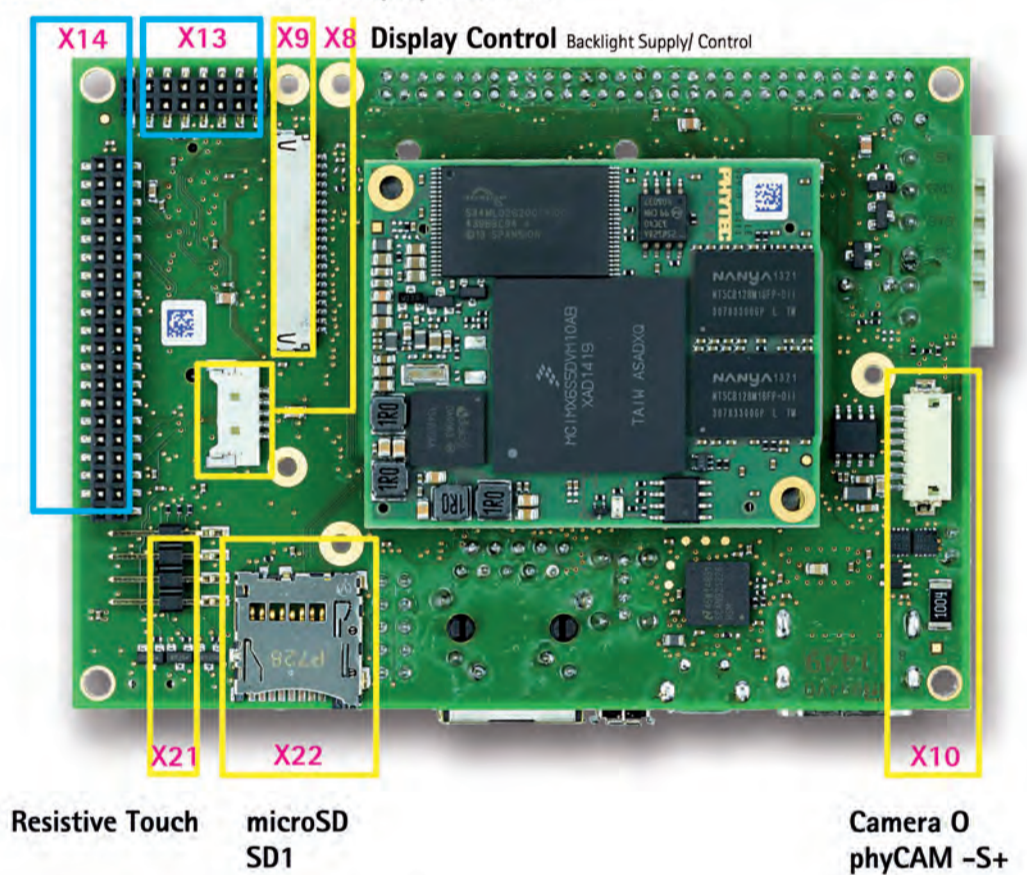
Ethernet Cable



Live System available from www.phytec.de or on an optionally purchasable USB Flash Drive



AV Connector 1 (dual entry) RGB Interface (24-bit) Backlight Supply Backlight Control
AV Connector 2 I²S, Touch, I²C, Control



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Quick Start Guide

2) Preparing and Starting the Live System

To follow this QuickStart and the descriptions in the Application Guide you need our phyBOARD-Mira Live System. The Live System includes all software installations (e.g. pre-built Yocto BSP, Eclipse, Qt Creator) necessary for a successful start-up of the phyBOARD-Mira. You can either use a bootable USB flash drive with the preinstalled Live System, or you can download a VM hard disk image from our website.

Using the Live System with a bootable USB flash drive

If you have purchased our bootable USB flash drive you are already in possession of our Live System.

1. Plug-in the USB flash drive and ensure that your PC system's boot priorities are set to boot from the USB flash drive first.
2. Restart your PC system to boot the Live System.
3. The UNetbootin boot menu, shown on the right hand side, appears (A).
4. Press **Enter** to confirm the already marked selection **Default**, or wait 10 seconds to start the Live System. The modified Ubuntu desktop appears (B).
5. Continue with 3) Getting connected.

Or using the prepared VM hard disk image

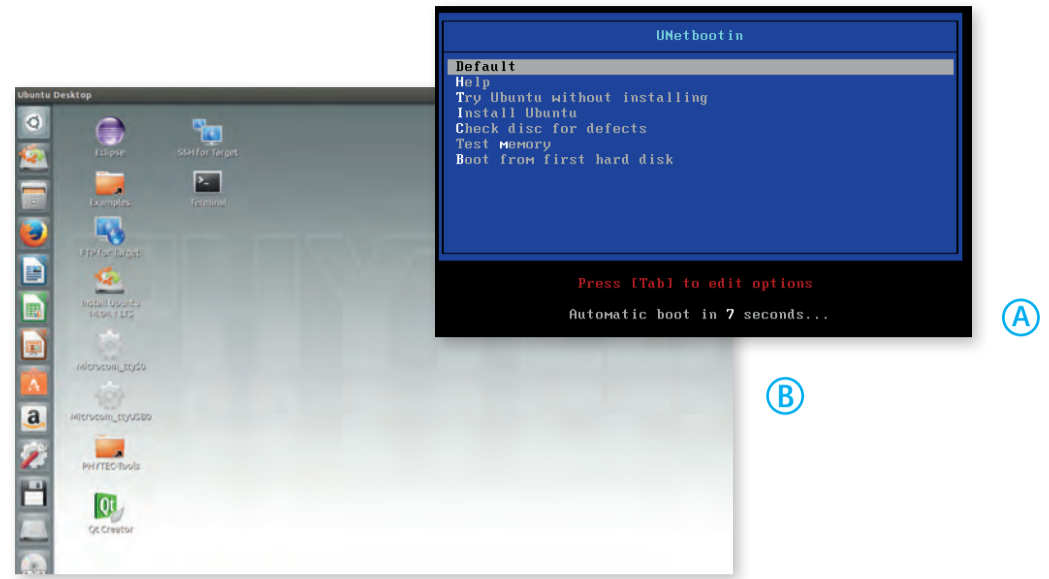
You can also use our prepared VM hard disk image (.vmdk) which includes our Live System as an alternative to using an USB flash drive. This compressed image has a size of approx. 15 GB and can be freely downloaded from our website to mount it into a virtual machine.

1. Download the compressed VM hard disk image (VPB-01501-xxx-v1.tar.xz) from <http://www.phytec.de/de/support/faq/faq-phyboard-mira>.
2. Unpack the compressed file to get the included .vmdk file, which is suitable for most virtualization software (VMware Player and VirtualBox are tested).
3. Follow the instructions of your virtualization software to create a new virtual machine. However, pay regard to the following settings required to obtain an appropriate virtual machine:
 - choose Linux-Ubuntu 64-bit version as operating system
 - use the unpacked file VPB-01501-xxx-v1.vmdk as hard disk
 - an Ethernet adapter, as well as a serial interface must be available to connect to the phyBOARD-Mira serial interface, or the USB controller

In order to avoid any conflicts we recommend to have only the Ethernet adapter in the virtual machine which will be used for the peer-to-peer connection between your PC and the phyBOARD-Mira.

4. Start the virtual machine with our hard disk image. You will see the modified Ubuntu desktop (B). For further use of the virtual machine the pre-created login data is:
 - username: „phyvm” – password: „phytec”.

Now you are ready to connect your PC with the phyBOARD-Mira.



3) Getting Connected

Serial connection

1. Connect one end of the serial cable to the DB-9 connector on the Evaluation Module (PEB-EVAL-01).
2. Connect the other end to the first serial interface of your PC (or to an USB to DB-9 dongle, connected to your host).
3. Click the **Microcom_ttyS0** icon (C) on the Ubuntu desktop (for direct serial interface connection) or click the **Microcom_ttyUSB0** icon if you are using an USB to DB-9 dongle.
4. Click the reset button **S1** on the phyBOARD-Mira (or power the board off and on).

A serial console has been started within your Live System. You should see a boot message and the login-prompt on this console (D). Congratulations!

5. Use "root" as the login name on the serial console and press **Enter**.
6. As a good example (and helpful for understanding the next step) enter **ifconfig**. You will get information about the configuration of the Ethernet interface on the phyBOARD-Mira (E).

Ethernet connection

We recommend disconnecting your host-PC from any other network, because a peer-to-peer connection from your PC to the phyBOARD-Mira will be established.

1. Connect your preferred Ethernet interface on your PC with RJ45 connector **X4** (eth0) on the phyBOARD-Mira using a standard Ethernet cable.
2. Configure the IP-settings on your host platform in Ubuntu:
 - In the **Unity-panel** (left side of your desktop) click on the **Ubuntu** logo (F).
 - The Ubuntu dashboard will open; enter **System Settings** in the search field (you will see the corresponding icon showing up already during typing of the search string).
 - Open **System Settings** (G) and click on the **Network** icon.
 - Select the physical interface to which you have connected the Ethernet cable (H) (if you have more than one network in the list) and click on **Options**.
 - Select the **IPv4Settings** tab (I) and choose **Manual** (K) in the **Method** drop down box.
 - Click **Add** (L) and enter the IP address **192.168.3.10** and **255.255.255.0** as subnet mask.
 - Last, click on **Save** (M) to save these connection settings and close the windows.

You are now ready to test the Ethernet network connection.

3. Click on the **SSH for Target** icon (N) on your desktop. A console window will open and you will see an authentication question. Type **yes** and press **Enter**.

You are now connected to the target (O). Congratulations!

Your possible next steps

- Read our Application Guide available on the desktop of the Live System.
- Check out the FAQ pages on the PHYTEC website for latest information and downloads (www.phytec.de/de/support/faq/faq-phyboard-mira)
- Contact our support team if you have any questions getting the phyBOARD-Mira up and running. **Enjoy!**

