

phyCORE®-i.MX 8M Plus AI Kit

Get your AI Kit powered up and connected in just a few simple steps.

1 | PREPARING THE HARDWARE

1. Connect the following components and cables (found in your kit):
 - Connect camera assembly via ribbon cable to CSI-1 (blue side up) (X11) (Figure A)
 - Screw camera lens into camera assembly (Figure B)
 - Connect the Ethernet cable to your preferred Ethernet source and X9
 - Insert the SD card into the SD card slot. Ensure the boot jumper is set to SD Card (Figure C).
2. Connect a USB cable to your host PC and the Debug FTDI (X1)
3. Connect a display to the board via the HDMI connector (X20)
4. Connect the +24 V power adapter (SV042) to power up the kit and begin the booting process.

Please note that all cable and devices need to be connected for the demo to function properly.

Kit Contents

phyBOARD-Pollux with phyCORE-i.MX 8M Plus PB-03123-Alpha.A0	USB-A to USB-B Micro Cable (WK345)	Power Adapter 24 V (SV055)
		
	Camera Ribbon Cable (WF271)	
		
Color Camera with Sensor Board (VM-016-COL-M-M12.A1)	Ethernet Cable (WK114)	
		

Figure A: Connecting the Camera Assembly

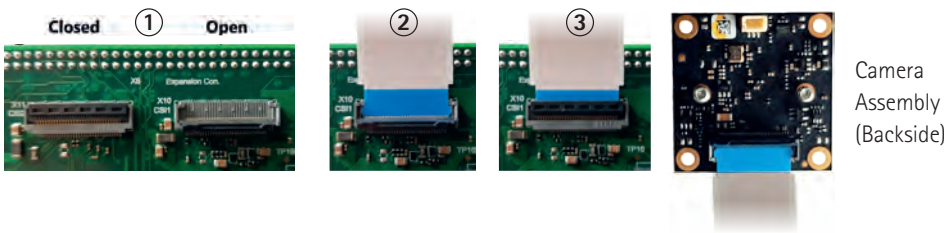


Figure B: Camera Assembly

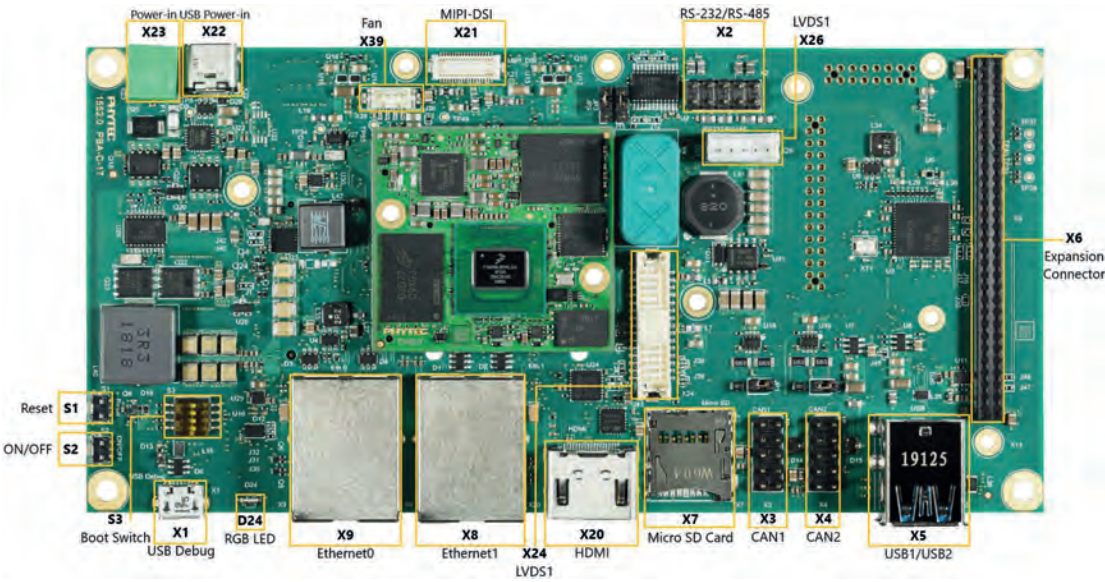


Figure C: SD Boot Mode

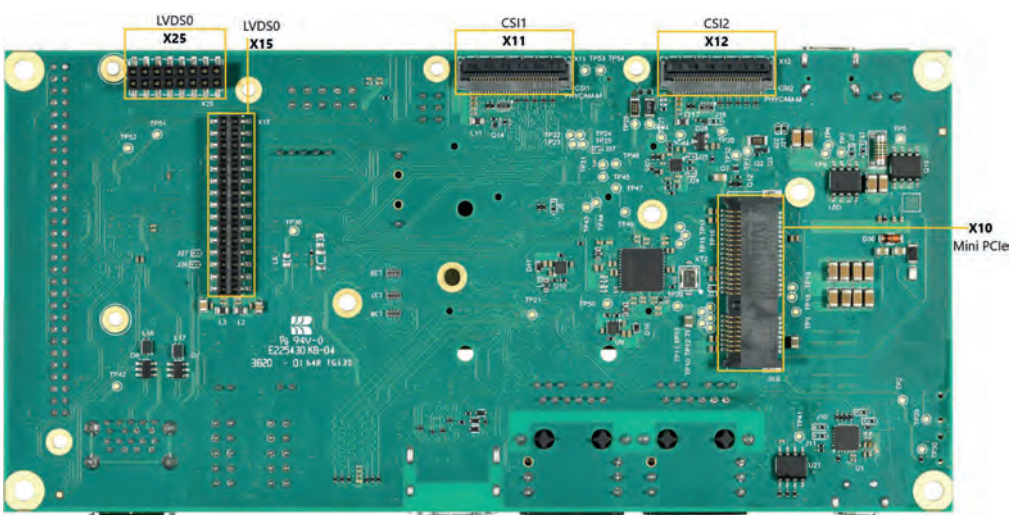


phyBOARD®-Pollux
with phyCORE®-i.MX 8M Plus

FRONT



BACK



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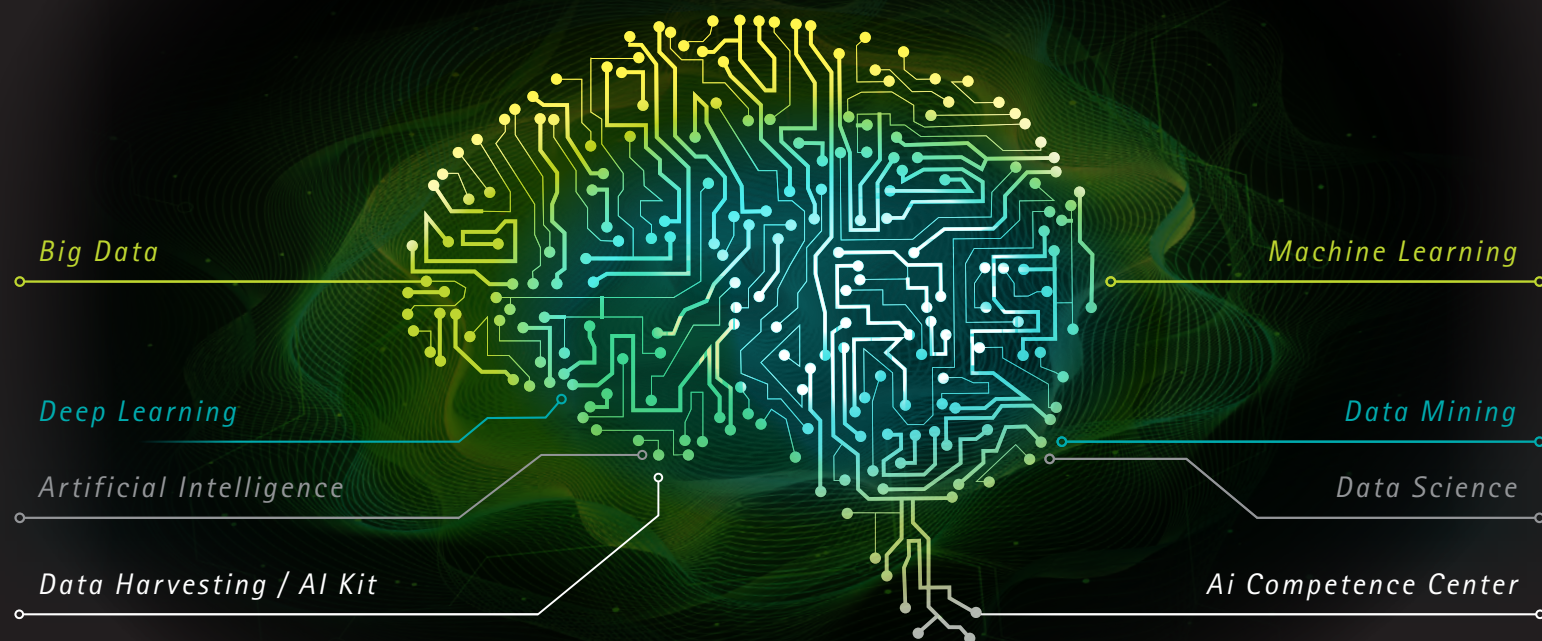
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Quick Start Guide



phyCORE[®]-i.MX 8M Plus AI Kit

2 | STARTING THE DEMO

 To adjust the picture, turn the camera lens left or right until you have a clear, sharp image (Figure B).

The phyBOARD-Pollux AI Kit can demonstrate the capabilities of the embedded neural processing unit (NPU).

The demo will recognize your face and extract embeddings via an artificial neural network (ANN). Your embeddings will be compared with precalculated embeddings from 10k images of known Hollywood celebs. The ANN inference time lasts around a mean of 0.016s. The whole process takes a bit longer (~1s). Note that the 1st time startup can take up to 70 seconds.

 There is a known issue regarding HDMI displays. If your HDMI display does not work with this kit, please try another display.

 For optimal performance, please use a well-lit room. Unlit or dimly lit conditions may result in poor results.

After the board is powered on and your 1st startup is completed, your display will show the screen to the right. There are several areas of interest for you:

- A Main screen with a live video.
- B Faces which are recognized are marked with a green rectangle.
- C Detected face is cropped and displayed here.
- D After a few seconds, the celebrity lookalike will be displayed here.
- E The name and euclidean distance will be displayed. The lower the value the better the match.
- F You can choose between continuous mode, which analyses any recognized face and restarts after 5 seconds, or you can trigger it yourself.
- G The trigger, if continuous mode is off. The live stream restarts by itself when the recognition is finished. Each click on the trigger button starts a recognition.

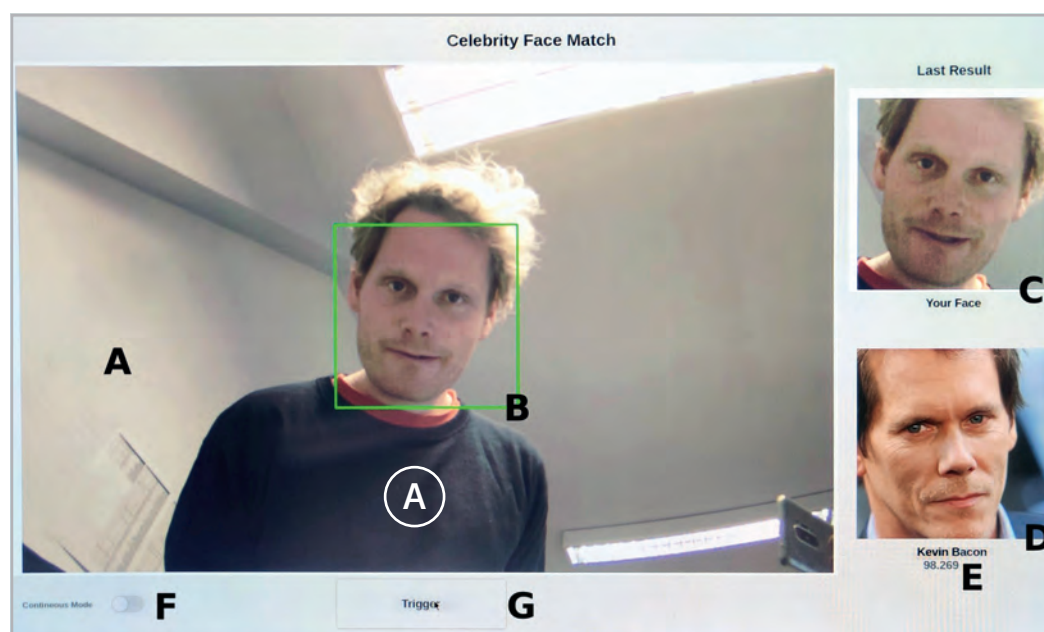
3 | WHAT'S NEXT!

For more information about the phyCORE-iMX.8M Plus AI Kit, please visit:
www.phytec.de/p/dk/phyboard-pollux-ki-kit/#downloads

There we have several important and interesting manuals and documents for you.

PHYTEC's [phyCORE-i.MX 8M Plus AI Kit Guide](#) provides you with more information about the AI application itself, as well as the different ways it can be used.

Check back with our download page often, as we continue to provide more manuals, guides, and other information as we further develop this product.



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