phyCORE®-RK3288 **Edge Computing Kit**

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

PREPARING THE HARDWARE

- 1. Connect the following components and cables (found in your kit):
 - USB camera to the **front** USB port; input device (mouse or keyboard) to the **back** USB port
 - Ethernet cable to your preferred Ethernet source
 - Insert the SD card into the SD card slot
- 2. Connect an HDMI display to the HDMI port (not included in kit)
- 3. Connect the 5 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

Required Additional Equipment: HDMI Display







PHYTEC

Germany PHYTEC Messtechnik GmbH D-55129 Mainz t +49 6131 9221-32 f +49 6131 9221-33 www.phytec.de www.phytec.eu

USA

PHYTEC America LLC Bainbridge Island, WA 98110 t +1 206 780 9047 f +1 206 780 9135 www.phytec.com

France PHYTEC France SARL F-72140 Sillé le Guillaume t +33 2 43 29 22 33 f +33 2 43 29 22 34 www.phytec.fr

China

India PHYTEC Embedded Pvt. Ltd. Bangalore 560102 t +91 80 40867046 www.phytec.in

PHYTEC Information Technology Co. Ltd. Nanshan District, Shenzhen 518026 PRC t +86 755 6180 2110 www.phytec.cn

Start Guice

rt



phyCORE[®]-RK3288 Edge Computing Kit

1 | STARTING THE DEMO

After the board is powered on, your display will show the screen to the right. There are 4 areas of interest for you:

- A The current view of the webcam.
- **B** Text about the last analyzed object. This displays the result of the Al analysis and how confident the analysis is.
- **C** The capture button is used to capture the image shown in (**A**) and analyze it using the AI model.
- **D** Endpoint drop-down menu: Select between a "Local" and "Remote" endpoint. Processing locally will use the deployed AI model on the board. Setting the remote endpoint will use the cloud service "Custom Vision" provided by Microsoft.

2 | TRY THE DEMO

The PHYTEC Edge Computing kit enables you to work with the latest AI functionalities in the Microsoft Azure environment. The kit comes with a camera module and a pre-installed connection to the Microsoft Azure cloud.

The pre-trained model recognizes different PHYTEC System on Modules (SOMs) and Single Board Computers (SBCs), as well as the new PHYTEC reel board. To test this, you have to connect the camera to the board via the USB connection and a monitor via the HDMI port. Then connect the power adapter to the kit which starts the board. After the board has booted, the application will start automatically. This process can take several minutes.

Now you can hold a PHYTEC module to the camera. We trained the model to recognize all PHYTEC products. Some examples are shown here: >

We have added a sample module to your kit. Simply hold the module to the camera to capture an image. The image need to fill the screen and be in focused to get the best recognition results. After the image has been captured, the application will analyze the image and return a result which will be displayed in the (**B**) section of the display.











Use one of the many official Microsoft Azure and community generated services for the Azure cloud to create any application, for example analysis algorithms, artificial intelligence, and data processing application. Your generated application can then be deployed to your IoT Edge device or a PHYTEC Kit.

The IoT Edge device can operate independently from the cloud, saving on valuable bandwidth and service costs. If you decide to run additional applications or IoT Edge devices, you can easily deploy, manage and update from the centralized Azure cloud.

Now that you have tried out the example application, we will now show you how tor work with the Microsoft Azure infrastructure in more detail. Have a look at this detailed guide for your next steps: *www.phytec.de/edgecomputing*



PHYTEC

YOUR EDGE COMPUTING ENABLER