Inofficial User Manual to connect a 2D-Grasping-Kit to a KUKA KRC Robot using EthernetKRL

**!!!PLEASE READ CAREFULLY BEFORE MAKING ANY PURCHASE OR PLANNING DECISIONS!!!**

# Prerequisites

This application was tested on a KR10 Robot using a KR C5 micro – 8.7.5 controller. The (paid) option package EthernetKRL is needed. We used V3.2.4 and cannot ensure to be compatible with other versions. Keep in mind that EthernetKRL is a paid option so if it is not present on your robot get in touch with your KUKA supplier.

# Hardware Connection

To connect the SCHUNK IPC and the KUKA controller plug an ethernet cable into the robot port of the SCHUNK IPC and port XF5 of the KUKA controller. This port uses the static IP address set in your robot settings. To access this IP address, go to your startup setting and view your network config. Open the web frontend of the SCHUNK Device and make sure your Robot port is in the same subnetwork as the robot.

Keep in mind that their IP Addresses should under any circumstances **NOT** be identical.

# Programming

We do not deliver code that is working 100% out of the box because we cannot forsee every different robot setup out there, especially as there are many different KUKA controllers that do not work the same depending also on their software version.

So, the provided code should only be used as foundation for your task and get you faster to the point of a working TCP/IP connection. We provided some examples for bit conversions of the response messages; it is your duty to confirm that they are working as intended by you and to extract the data that is relevant for your application.

**Because TCP/IP communications from KUKA robots with EthernetKRL are allowed to block the main program and do not allow advanced bit conversion capabilities we highly recommend you connect the SCHUNK Vision Controller to a PLC and use a fieldbus communication like PROFINET to send the relevant information to the robot.** In any serious robot application, you will use a PLC anyways and can therefore also save the money spent on the KUKA option package. Even if your application does not need a PLC right now it will probably still be a financially better choice to purchase one instead of EthernetKRL as it is not that much more expensive but a lot easier to integrate and will save you a lot of commissions time.