

## ready2\_educate with KR 4 & KR C5 micro

Customer info

V 2.1

Julian Stockschröder, Frank Zimmermann



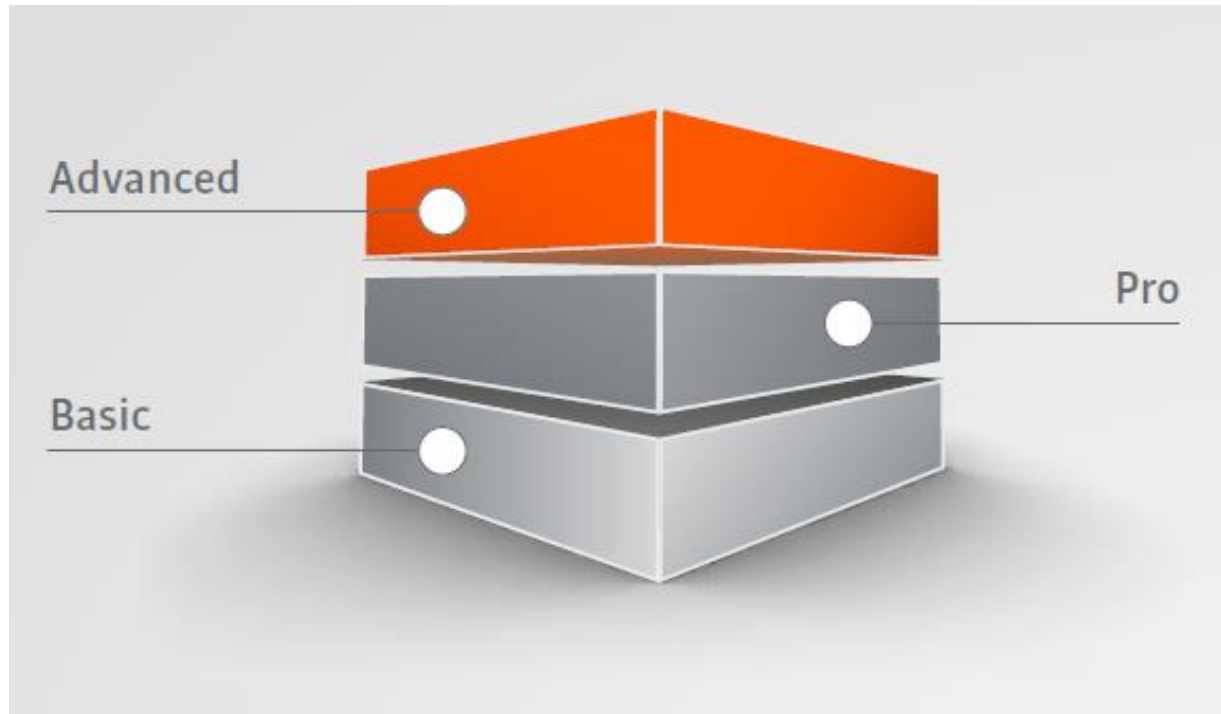
## KUKA ready2\_educate\_Different Levels

### „ready to automate“

- Ready2\_educate\_pro
- PLC package

### „ready to run“

- Cart
- Gripper & Cubes



### „ready to teach“

- Ready2\_educate\_basic
- Educational Application

\* Upgrades possible

## KUKA ready2\_educate\_**Product Portfolio**

### 1.) Ready2\_educate\_**basic**

- ready2\_educate\_KR4
- Ready2\_educate\_vp\_KR4



### 2.) Ready2\_educate\_**advanced**

- ready2\_educate\_KR4 (\*no media interface)  
+ Application package pro  
+ Application package PLC
- Ready2\_educate\_vp\_KR4  
+ Application package pro  
+ Application package PLC

### 3.) Ready2\_educate\_**pro**

- ready2\_educate\_KR4  
+ Application package pro
- Ready2\_educate\_vp\_KR4  
+ Application package pro

## KUKA ready2\_educate\_Product Portfolio



### 4. Ready2\_educate\_advanced\_vision

- Ready2\_educate\_vp\_KR4
  - + Application package pro
  - + Application package PLC
  - + Application package Vision

### 5. Ready2\_educate\_pro\_vision

- Ready2\_educate\_vp\_KR4
  - + Application package pro
  - + Application package Vision

## KUKA ready2\_educate \_Cell Concept\_KR 4

- New KR 4 layout
  - centric robot position (analog ready2\_educate KR3)
  - Two application workspaces for both applications (pro & vision)
- Access via 2 sliding windows
- Scalable solution to minimize entry investment and enable experience level increase, step by step
- Solid Safety Cover with access to workspace, 2 sliding windows (counter balanced), 2 fix windows
- 2 application areas, grid drilling pattern enables quick changes and versatile furniture setups
- Interfaces to external systems possible
- Moveable by hand forklift
- Availability
  - Start of sales JAN 2021
  - Start of delivery MAY 2021



## KUKA ready2\_educate\_KR4 & vp\_KR4

- Robot
  - KR 4, KR C5 micro, SmartPAD 2
  - Basic Software: KSS 8.7, GripperTech,
- Cell
  - Solid sheet metal cart
  - Operator panel with Connectors 2x Ethernet, 1x USB, 2 input turning switches, 2 output signal lamps, 24V power supply for PLC
  - CE labeled, cTUVus certified
- Reasonable Options: KUKA SimPro, KUKA OfficeLite, KUKA RemoteSupportView,...



## KUKA ready2\_educate\_Application package pro



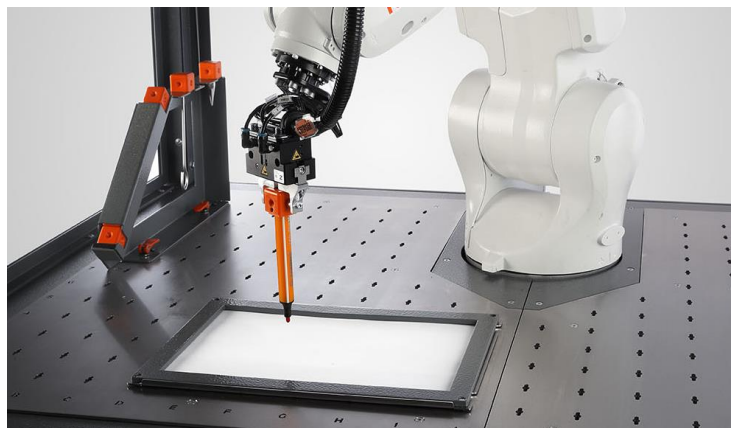
Sliding magazine for 9 cubes and integrated rack for 3 different tools.



**Gripper & Cubes**  
Gripper and cubes for pick-and-place training, which are the most used robot applications.



**„Hot Wire“ Application**  
For training of high precise motion. Students have to guide the eyelet through the wire contour. „Hot Wire“ Application  
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**Pen & Paper**  
To train path motions similar to welding or gluing processes. The pen is spring-suspended to prevent damage to the application. The use of standard A4 paper has the advantage that the trainer can also create his own exercises and use them in the lectures or as practical exam.

## KUKA ready2\_educate\_Application package PLC

- Siemens PLC
  - Licence for TIA Portal programming
  - 7 hardware digital IO's
  - Sub-D interface for Siemens HMI (not included)
- Automatic extern mode with virtual IO's over KUKA SmartPad and KUKA.HMI easy



## KUKA ready2\_educate\_Application package vision

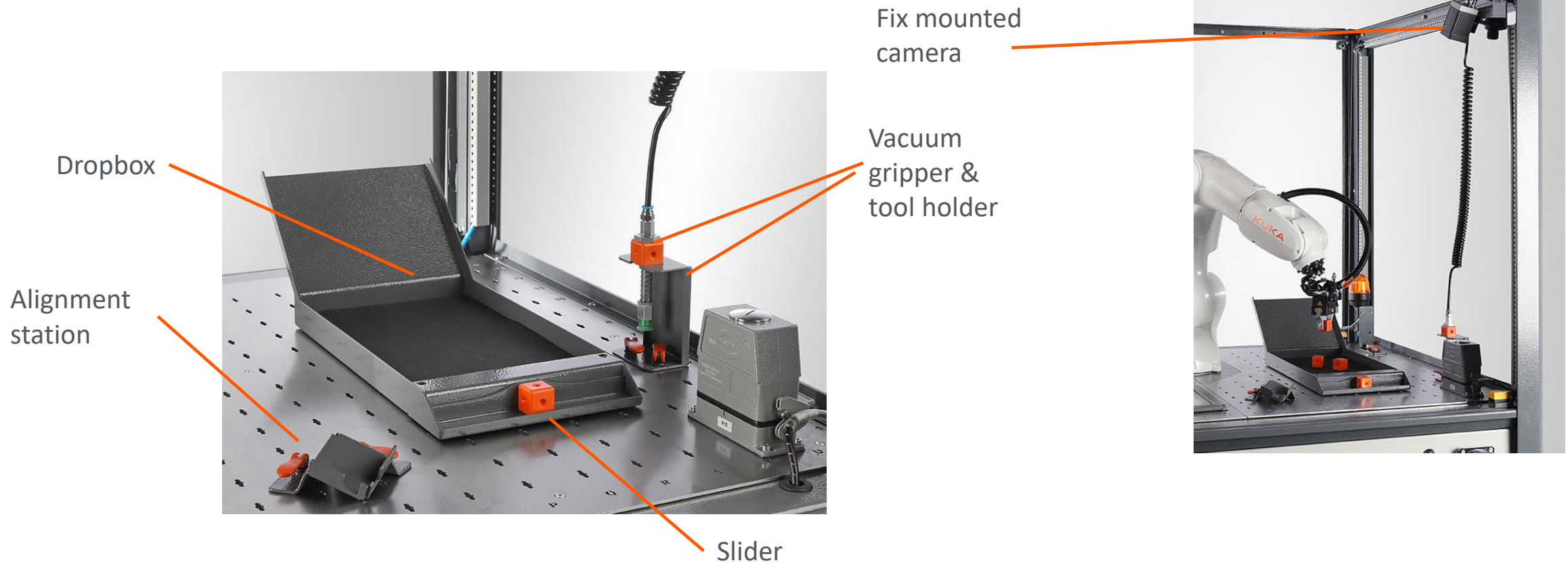
- 2 cell configurations possible
  - Requirement: ready2\_educate\_vp\_KR4
  - ready2\_educate\_pro\_vision
  - ready2\_educate\_advanced\_vision
- Vision package scope
  - Application (dropbox, slider, additional vacuum gripper, alignment station, calibration plate)
  - Fix mounted smartcamera
  - Incl. lenses + auto focus
  - Incl. Illumination (red light)
  - Unlimited offline programming licences
  - cabling & energy supply (electric and pneumatic components)



## KUKA ready2\_educate\_Application package vision

Compatible with

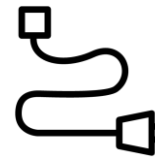
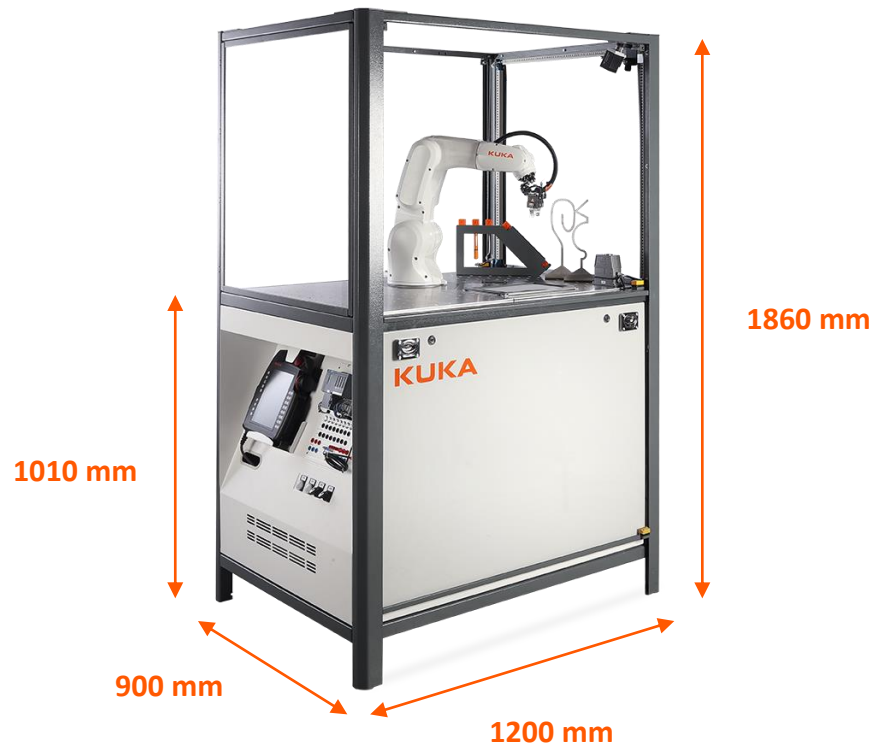
- ready2\_educate\_vp\_KR4



## KUKA ready2\_educate\_Application package vision



## KUKA ready2\_educate\_Technical Data



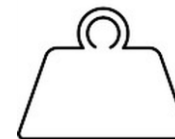
Power Supply\*:

AC 1x 200 V - 240 V



Compressed Air\*:

Operating pressure 6 -8 bar



Weight:

390 kg

\* to be provided by customer

## ready2\_educate\_KR4\_Product\_Portfolio

	Ready2_educate_KR4	Ready2_educate_vp_KR4 (vision prepared)
Application package pro	x	x
Application package PLC	x	x
Application package Vision		x
Option Drives ready lamp UL	x	x
Option Load distribution plates	x	x
Option Wave table	x	x
Option SmartPad Cable Wheel	x	x
Media interface (HAN Modular)		√

√: integrated

x: optional or upgrade

  : upgrade restrictions

## KUKA ready2\_educate\_Instructor Qualification

- For successful operation and training with KUKA ready2\_educate cells it is recommended to qualify teachers to be experienced and confident.
- This qualification can be chosen individual according to own knowledge and can be aquired at all official KUKA Colleges
- **Strongly recommended seminars to participate:**
  - **Robot Programming 1 KSS 8.x (KR C4)** at local KUKA College
  - **Robot Programming 2 KSS 8.x (KR C4)** at local KUKA College
- Additional seminars: <https://college.kuka.com/>
- \* Training seminars are not included in product package.



## Teaching Materials\_Course Structure

### Education Level 1 (15 lectures, 10 exercises)

focuses on basic robot operation and is therefore suitable as introduction into robotics and for students in academic high school or vocational colleges as part of professional education.

### Education Level 2 (15 lectures, 10 exercises)

is about complex robot programming in KRL. It qualifies for the use in technician schools or higher professional education.

### Education Level 3 (20 lectures)

completes the education package with the required engineering knowledge. It is meant to be used in engineering schools and universities.



Suitable to **ready2\_educate** with **Application package pro**

## KUKA ready2\_educate\_Teaching Materials\_Availability & Supply

- The ready2\_educate specific teaching materials are tailored to and only available for schools, universities & company internal apprentice education
- This package is not part of the robot delivery. It has to be requested via [Inquiry form](#) | KUKA AG
- Please consider: This request needs information about customer contact data as well as KUKA Order Confirmation data (OC Number, robot serial number,...). Please keep necessary documents ready!





„Learning is  
experience.  
Everything else is  
just information“

- Albert Einstein