

CamBot.system

KST BROADCAST SOLUTIONS



System - Overview

CAMBOT is a motion-control robotic camera system for beauty shots in television studios. Thanks to its innovative conception, it allows movements of high accuracy in a reduced space. Based on a software interface, the robotic arm can be fully automated with repeatable trajectories.

The combination of CAMBOT and AK-UB300 box camera or Varicam series creates a 4K-ready bundle that can be offered at news and sports studios, as well as concerts, entertainment shows and Augmented Reality applications. The system is controlled via IP, allowing flexible and remote configurations.

CAMBOT system is composed of a robotic arm, a control software and a remote controller. Multiple options are available, such as the possibility of adding a prompter, or extending the distance between the arm and the controller. The arm can be installed on the floor or on the ceiling, with fixed or mobile pedestals. Alternatively, it can be mounted on a motorized dolly, over straight racks.



System - Overview



The arm is manufactured by Universal Robots and has 6 rotating joints with a working range of 360 degrees each. Any axis can be operated manually from a 2-joystick controller with speed control.

Benefits:

- Smooth movements, perfect for beauty shots
- Time-based sequences, with accuracy and repeatability
- Centralized control interface, incl. PTZ cameras
- Noiseless movement (silent motors)
- **Collaborative: safe and reliable**
- Control from other automation systems (Vizrt, Blacktrax...)
- Can be fixed in various modes (dolly, pedestal, ceiling...)



- No tracker, no calibration
- It uses absolute positioning which ensures high-quality data and no deviance
- Lens control provides focus, zoom and iris data
- FreeD protocol is supported in real-time
- Compatible with most 3D engines (Vizrt, Zero Density, Brainstorm...)
- **Optional module**



CamBot for Virtual Sets

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Robots



Tracks /
Devices



Lenses



Devices/
3rd Party



Pan Tilt
Units

CamBot.control

middleware



Collision
Detection



News-
room
System



Virtual
Reality



Studio
Auto-
mation



Tracking



Cameras



GUI



Joystick

CamBot.remote is a motion control software based on the CamBot.control network. It allows to control studio hardware (e.g. robots, rails, pan tilt heads, . . .) and integrates feedback of other studio hard and software. The following types are supported:

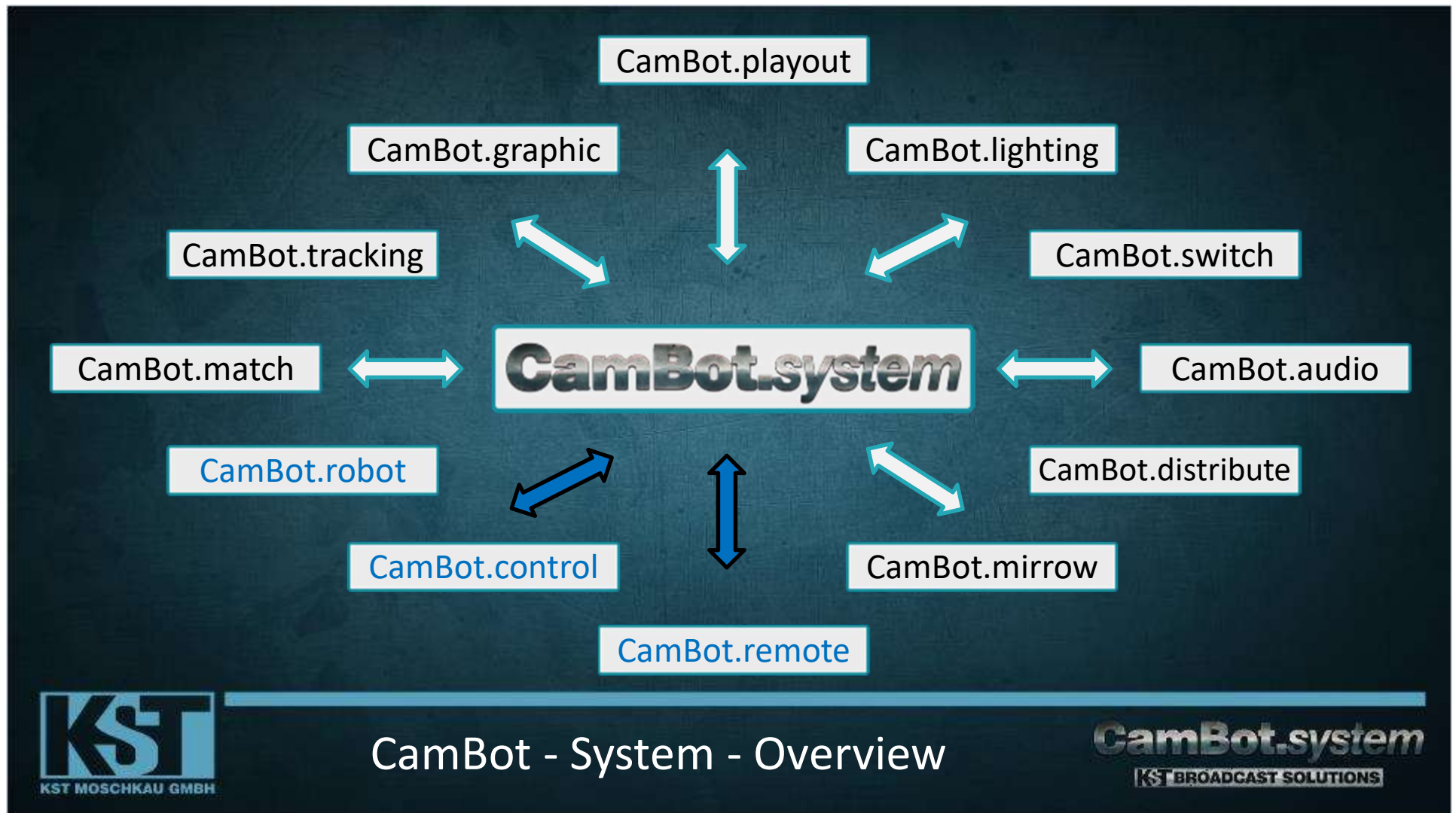
- Staubli RX160/L, TX90/L, TX60/L
- Universal Robots UR3, UR5
- **Universal Robots UR10**

Benefits

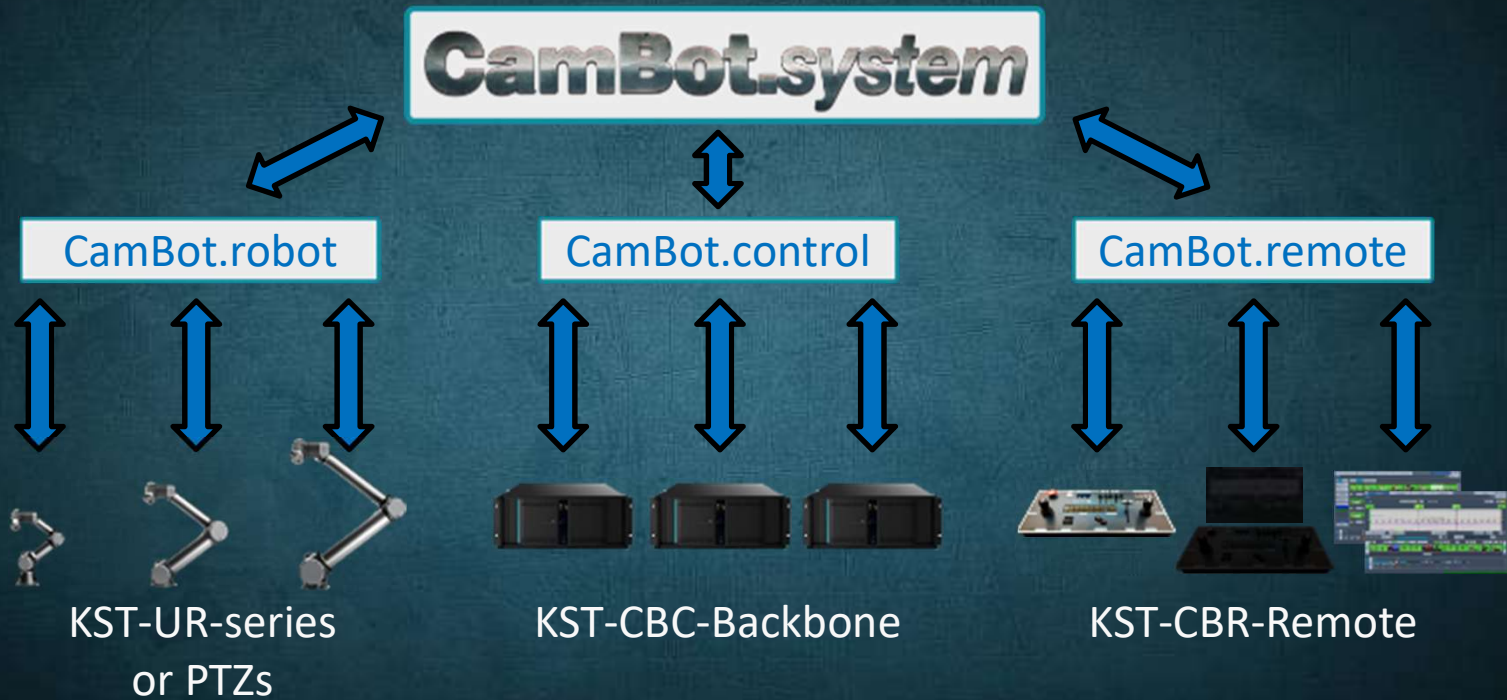
- Movement is created with keyframes on a timeline
- Timeline can be edited at anytime
- Easy to use, based on touchscreen display
- External trigger is supported
- Optimized for broadcast use



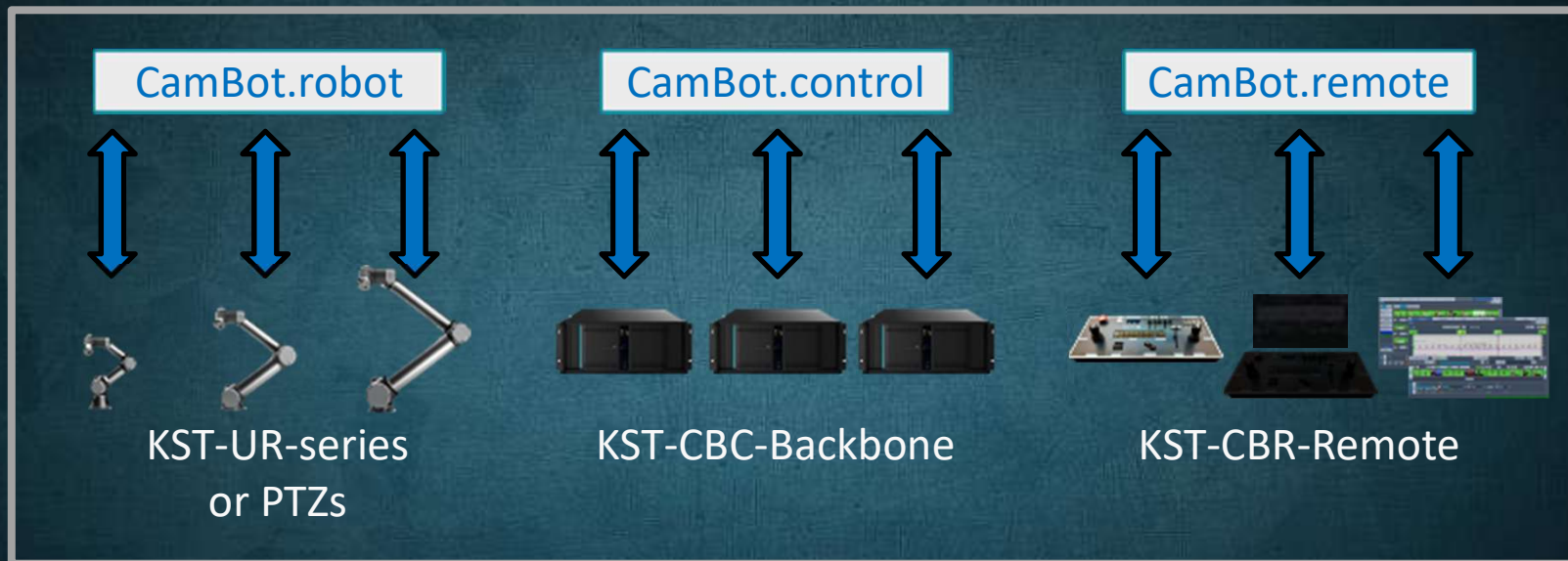
UR10 with Panasonic AK-UB300 4K Camera



What is available now ?



In combination we get a „Robotic-Camera-System“ !



What do we need to design a robotic camera system ?

CamBot.robot Choose the **robotic system**

PTZ Camera System



CamBot.control can use the complete range of Panasonic PTZ systems. Depending on the type more or less detailed features are possible. VR/AR is up to now just possible with AW-UE150.

Robotic-System



CamBot.control can use a lot of different robots. For Panasonic projects the KST-UR-series is the most senseful. Caused by it's coloboration it is very easy to implement into a studio workflow.

Robyhead/RobyCam



CamBot.control is allready compatible with the Movicom Robyhead. A implementation of RobyCam and RobyCam compact is in progress and will be available ~ Q3/Q4 2019

Camera-System



Box-style cameras are ideal for robotic-systems or robyhead / cam. The choice of the camera type depends on the usage. In connection with VR, the Varicam is particularly recommended. In conventional applications UB300 can be used, too. EVA1 is possible, if no Blackburst is needed.

CamBot.robot

configure the KST-UR system

System-Version



plus



UR-Standard
Controller

= **KST-UR3/5/10SC**

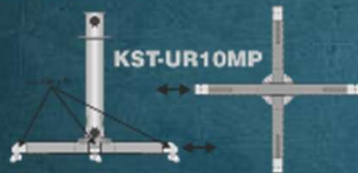
plus



UR-19" Broadcast
Controller

= **KST-UR3/5/10BC**

Floor-Mounts



Pedestal for flexible use. Alu construction with iron blocks in the shiftable legs in combination with blockable rolls locking the pedestal as good as possible to the floor. Notice : A pedestal mount is always a compromise. Try to find a way to fix the robot directly with a screwed connection to have smooth moves.

or



Pedestal for fixed use. Massive iron construction in combination with adjustable feet. Fixes the pedestal as good as possible to the floor. Notice : A pedestal mount is always a compromise. Try to find a way to fix the robot directly with a screwed connection to have smooth moves.

Rail-System

KST-UR10HMS or VMS



Horizontal move system for KST-UR systems : KST-UR10HMS. It allows to shift the CamBot robot as a 7th axis with a speed of maximum ~ 1m/sec up to 3m. The system is based on a F34 GlobalTruss Rig, which can be simply integrated into the existing truss.

Alternatively it is possible to place it with the Floor-Option directly on the floor. Notice : A flexible robot will never be as stable as a fixed system.

Vertical move system for KST-UR systems : KST-UR10VMS. It allows to shift the CamBot robot as a 7th axis with a speed of maximum ~ 1m/sec up to 3m. The system is based on a F34 GlobalTruss Rig, which can be simply integrated into an existing truss.

In contrast to the the KST-UR10HMS the VMS is equipped with a robot mount optimized for vertical use.



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