

# KASSOW robots

strong · fast · simple

## ctrlX KASSOW CONNECTOR

USER GUIDE V 1.0.0.0

KR ECOSYSTEM

Joining forces with



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# Introduction

The ctrlX Kassow Connector application serves as the primary bridge between the Kassow Robots KR series and the Bosch Rexroth ctrlX OS environment. It is designed to provide machine operators and system integrators with a centralized platform for real-time robot management, manual control, and motion execution.

## Key Integration Benefits

- **Centralized Management:** Control and monitor multiple KR series robots from a single ctrlX dashboard.
- **Manual Precision:** Full support for joint-level and linear jogging (MoveJ/MoveL).
- **Status Transparency:** Instant visibility into TCP values, joint positions, and safety modes.

## System Compatibility

Before proceeding with the installation, ensure your hardware and software meet the following specifications:

Component	Requirement
Operating System	<b>ctrlX OS 4.4VRS or greater</b>   Bosch Rexroth
Robot Hardware	<b>KR Series (7-axis)</b>   Kassow Robots
Required CBun	<b>KORD CBun v3.0.0</b>   (Tested & Recommended)
Base Path	<code>/kassow-connector/</code>

# Getting Started

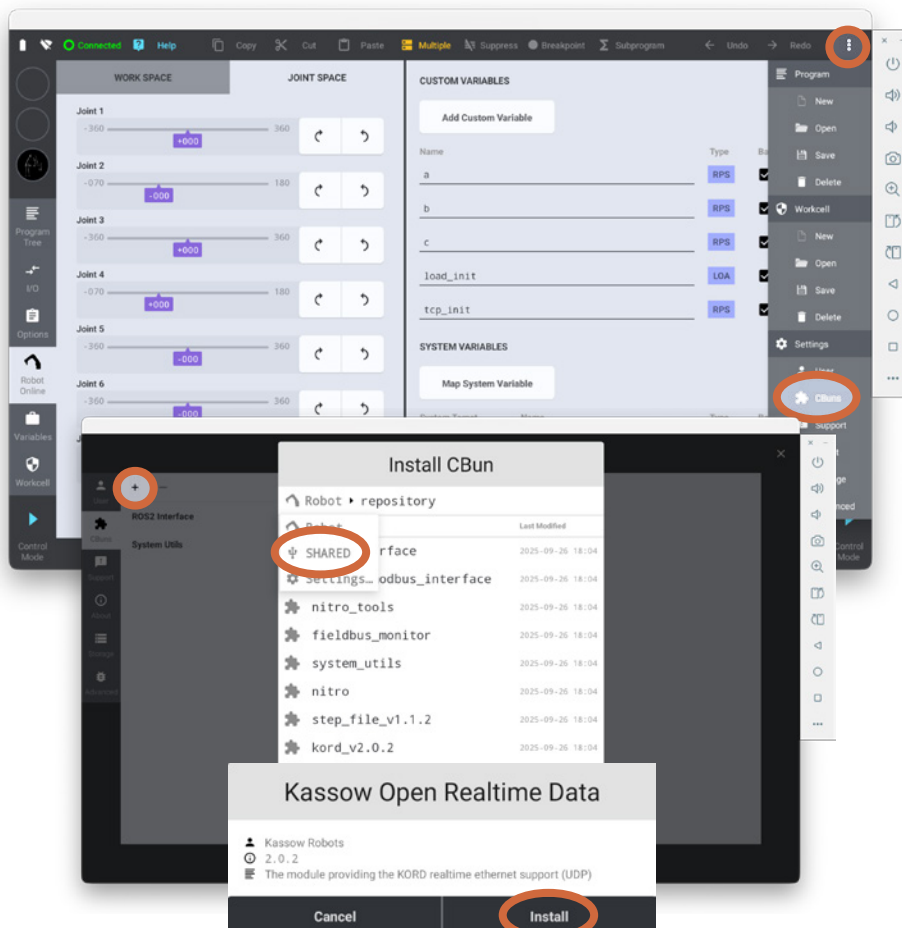
To begin, access the **ctrlX OS** environment by logging in with your authorized credentials. Navigate to the Kassow Connector application, which is located under the base path `/kassow-connector/` and accessible via the left-hand navigation panel.

## Robot-Side Configuration

(KORD CBun Installation)

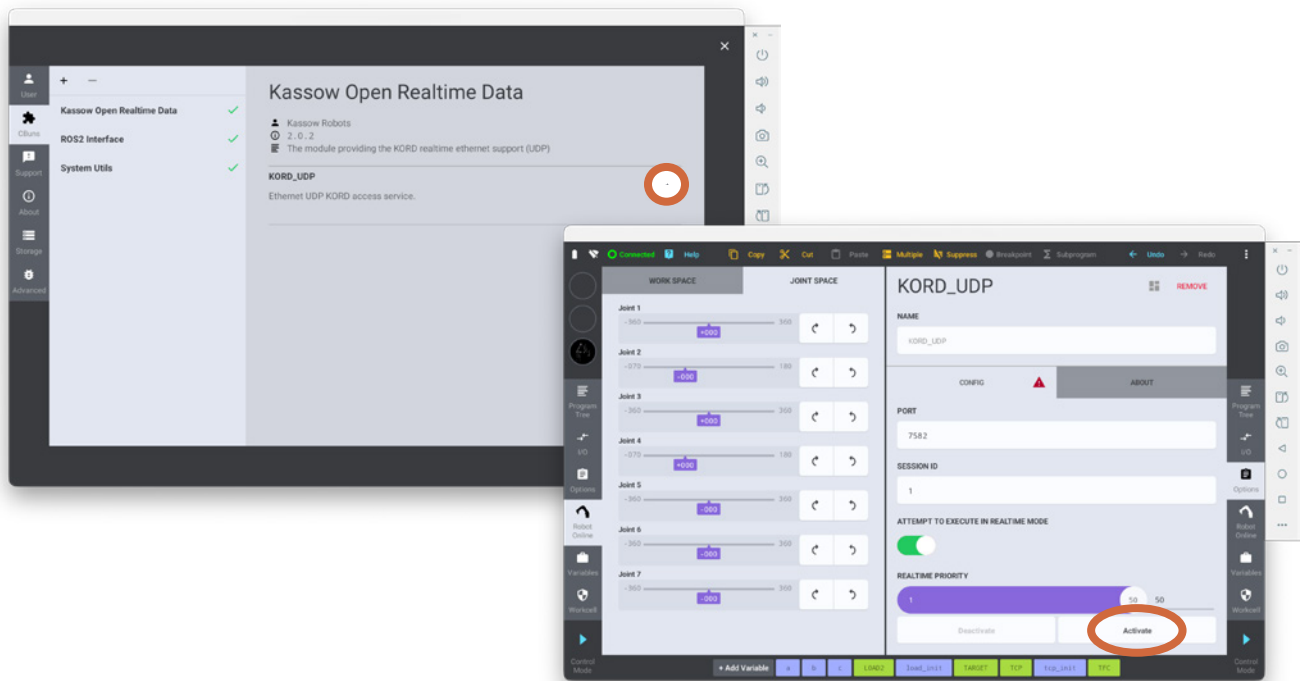
Before the ctrlX Kassow Connector can communicate with the hardware, the **KORD CBun** must be active on the robot controller.

- 1. Download:** Obtain the latest **KORD CBun** from the [Kassow Robots GitLab Wiki](#)  
*Note: Version 3.0.0 is recommended for verified compatibility.*
- 2. Transfer:** Move the `.cbun` file to a USB flash drive and insert it into the robot controller's USB port.
- 3. Installation:**
  - Open the Menu (*three dots*) at the top of the robot interface.
  - Select **CBuns** and click the **+** icon.
  - Set the location to **USB storage**, select the file, and click **Install**.



#### 4. Activation:

- Add **KORD\_UDP** from the configuration menu.
- Click **Activate**.
- Assign a custom port if required by your network, or retain the **Default** setting.



## Core Features Overview

Robots List | ctrlX OS

The ctrlX Kassow Connector provides a centralized dashboard for managing all configured robots, displaying real-time status (Online/Offline) and active connection states.

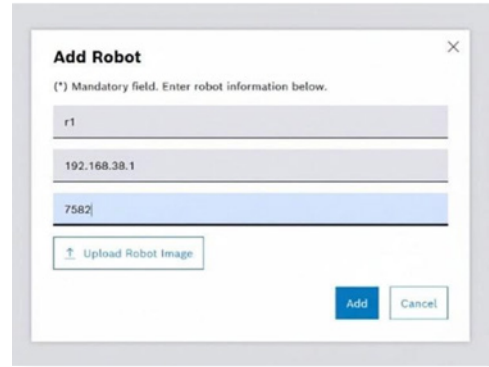
### Adding a Robot

To integrate a new KR series robot into the ctrlX environment, follow these steps:

In the **Add Robot** dialog, provide the following mandatory details:

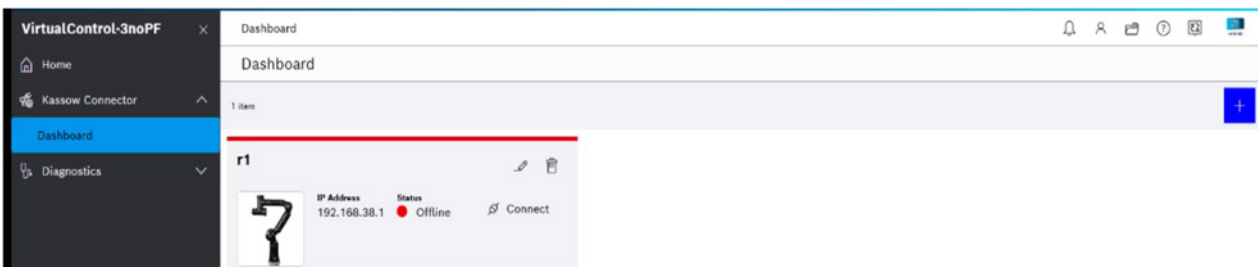
- **Robot Name:** A unique identifier for the unit. (required)
- **IP Address:** The network address of the KR controller. (required)
- **Port:** The 4-digit numeric port. (required)
- Click **Upload Robot Image** to attach a custom photo (PNG/GIF, size limit enforced) for easier visual identification. (optional)
- Click **Add** to finalize the configuration.

- \* Validation: Inline errors for missing/invalid IP, port range and type.
- **System Feedback:** The application will display a **Success toast** upon creation or an **Error toast** if the IP or port validation fails.



## Dashboard Controls

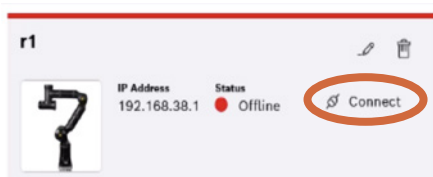
Category	Element	Function
ROW ACTIONS	<b>Details</b>	Opens the robot’s comprehensive detail page for monitoring and control.
	<b>Update</b>	Modifies robot metadata, including Name, IP Address, and Port.
	<b>Delete</b>	Removes the robot from the dashboard after user confirms in the dialog “Delete {robot_name}?”
CONNECTION	<b>Connect</b>	Establishes a communication session with the KR controller.
	<b>Disconnect</b>	Terminates the active session for the selected robot.
	<b>Disconnect All</b>	Administrative bulk action to end all active robot sessions.
STATUS	<b>Online</b>	Indicates the robot is reachable and ready for connection.
	<b>Offline</b>	Indicates the robot is unreachable or the KORD CBus is inactive.



# Monitoring

## Connection & Status

- **Connect/Disconnect** buttons with real-time feedback (success/failure).
- Status panel shows **“Online”/ “Offline”** and **“Connection”** state.



## Alarms

- **Clear Alarm:** Choose a clear request from the **“Select request”** dropdown.



- **Feedback:** **“Alarm cleared with {clear\_request} request”** or **error** on failure.

## Watch (Live Data)

- Display TCP Position and Orientation.
- View Joint Position values and TCP Path Values.

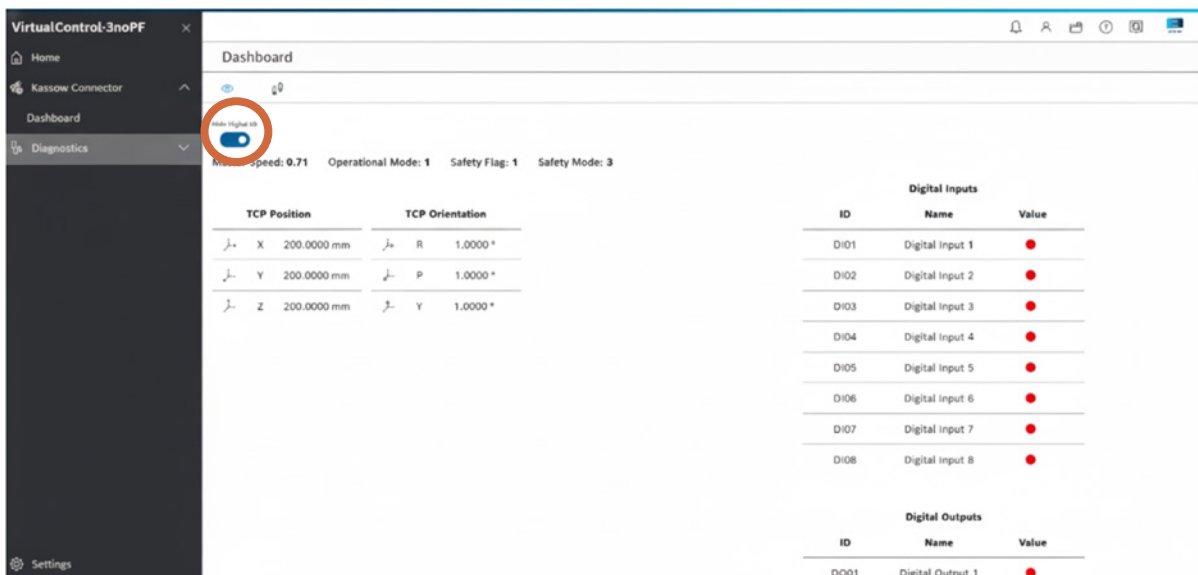
## Operational/Safety

- **Operational Mode:** Display of current mode.
- **Safety Flag/Mode:** Display and monitoring of safety state.

## Digital IO

**Toggle visibility:** **“Show Digital IO”** or **“Hide Digital IO”**

These are Read Only that shows the current state of the Digital IO.



# Active Control

## Jogging | Manual Control

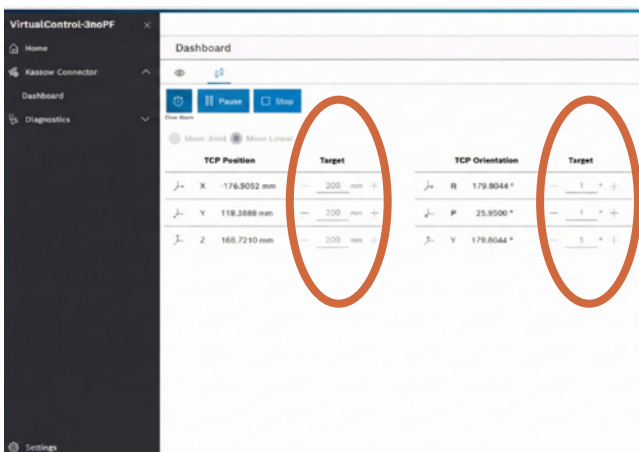
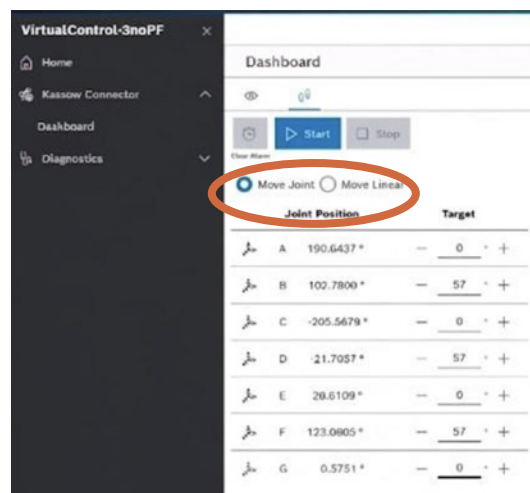
- **Primary Controls:** Use **Start** to initiate motion and **Stop** to terminate it. For temporary halts, use **Pause** and **Resume**.
- **Velocity Management:** The Master Speed indicator displays current velocity. Users can adjust the Override values using the **Increase/Decrease** controls.
- **System Feedback:** Successful updates are confirmed via an **“Override value updated”** notification.

## Motion Commands

**MoveJ (Move Joint):** commands are used to transition the robot to a specific configuration by sending target joint positions.

1. Click and select the **Move Joint**.
2. Enter the **target** values for all 7-axes.
3. Click **Start** to begin the trajectory.

Feedback: Success or Error telemetry upon command execution.



## Advanced Positioning

**MoveL (Move Linear):** MoveL executes a linear path to the target, ensuring the tool maintains a direct trajectory.

1. Click and select the **Move Linear**.
2. Enter the TCP **target** position.
3. Click **Start** to begin the trajectory.

Feedback: Success or Error upon command execution.

## TCP Targeting | Precision Fine-Tuning

For applications requiring high-precision alignment, the TCP Targeting module facilitates granular control.

- **Position:** Configure specific TCP Position and **target** (path) values.
- **Orientation:** Adjust the **target** (measured in deg) to align with the workpiece.

Utilize the Increase **“+”** and Decrease **“-”** controls for fine-grained positioning.

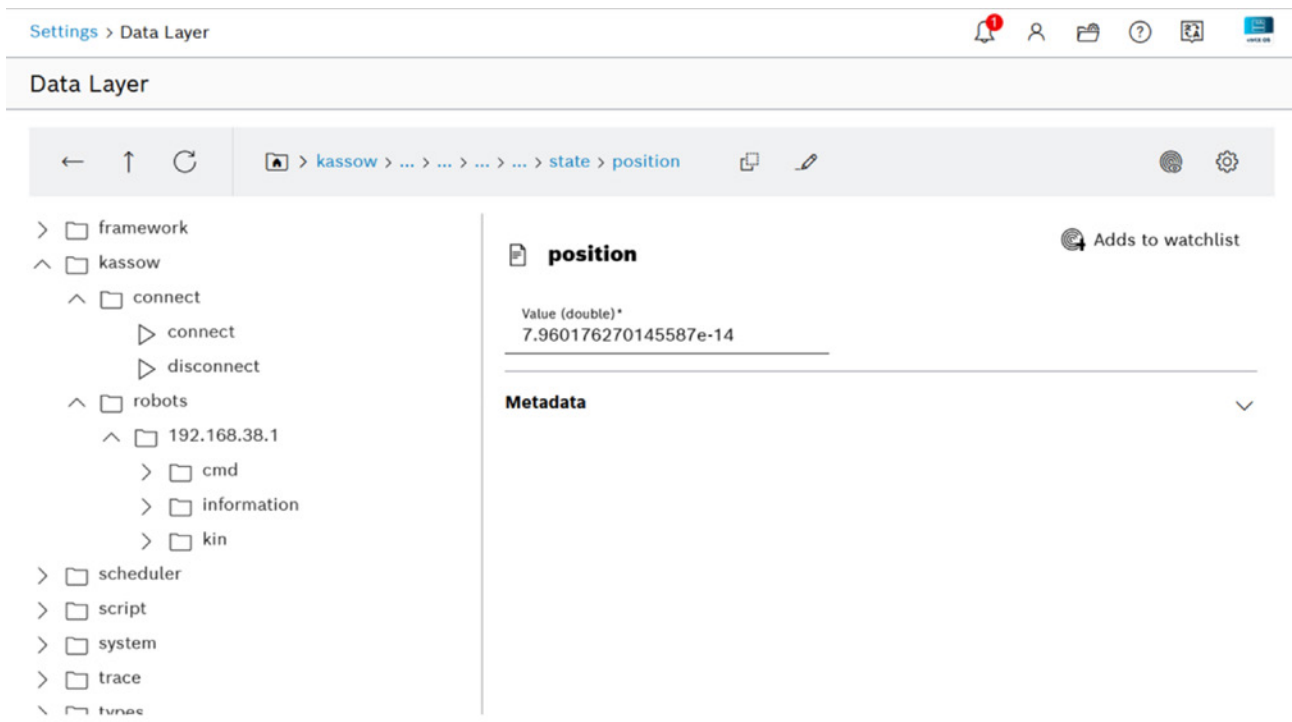
## The Data Layer | Advanced Integration

For complex automated environments, controlling the Kassow Robot via the **Data Layer** provides enhanced flexibility and granular system control. This interface allows for deep integration with the **ctrlX OS** ecosystem beyond the standard dashboard features.

### Accessing the Data Layer

The data layer is accessible through the primary ctrlX configuration menu.

- **Navigation Path:** Navigate to **Settings** > **Data Layer** > **kassow**
- **Dynamic Generation:** Upon every successful connection to a robot, the system automatically generates a unique **Data Layer tree** which gives access to a varied list of operations.



kassow robots

# Thank you for choosing Kassow Robots.

ENGINEERED FOR FLEXIBILITY. INTEGRATED BY YOU.

We are honored to support your innovation  
and dedicated to your continued success.



## ECOSYSTEM SUPPORT

We strive for documentation as precise as our robots. If you encounter an outdated step or an unclear instruction, please help us improve by reporting it.

[SUBMIT REQUEST](#)

## TECHNICAL SUPPORT

The ctrlX Kassow Connector is engineered for stability, but complex integrations may require fine-tuning.

SCAN FOR INSTANT SUPPORT

