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Bin Picking Studio

Quick Start Guide

Scope of Delivery

01	Vision Controller - industrial-grade device	
02	Pre-installed Bin Picking Studio software	
03	Power adapter (230VAC/20VDC, 60W)	
04	Power cable	Ø
05	Power connector	
06	Power DC Cables	

Operation of the Bin Picking Studio

The Bin Picking Studio is operated through the Vision Controller. First, you need to plug the Vision Controller into a power outlet using the provided cables. To work with the Vision Controller, you need to connect the monitor, keyboard, and mouse (like a standard desktop). It is not required to have accessories connected the whole time.

Initial setup of the Vision Controller

Connect all cables as shown in Figure 1 below. Make sure all cable connections are secure and all screws on the green connector are tightened. The green connector has to be secured to the VC with screws as well.

Fig. 1. Power cables



Connect your Vision Controller to a monitor (using HDMI or DisplayPort connectors), mouse, and keyboard (using USB connectors) as displayed in Figure 2 below.

Fig. 2. User accessories ports layout



Initial setup of Bin Picking Studio

When all your accessories are connected to the Vision Controller and the power, you may turn on your Vision Controller. When the Vision Controller is booted up, the Bin Picking Studio application will launch automatically.

When Bin Picking Studio runs for the first time, a Welcome Page appears, which will guide you through the initial setup of BPS.



Firstly you will be asked to select your local timezone, either by clicking on the map or by selecting it from the list.



After selecting your timezone, you will be prompted to create a Master account. This account serves to manage Bin Picking Studio from your side. It allows full usage and setup of BPS solutions, plus access to employee user management.

master account configuration	
Please create your master account	
First name*	
John	
Last name*	
Doe	
Email*	
john.doe@example.com	
Password*	
Password confirmation*	

In the next step, you will see a form to create any number of Employee accounts, which have basic access to BPS solutions. You may safely skip this step - employee accounts can be added later via Account management.

← Back	Configure other users	Step 4/4
On Amelie Poulein	this page, you may create employee accounts. First name* Victor	
Victor Hugo	Last name*	
+ Add a new user	Hugo Email* victor.hugo@example.com Password* Password confirmation*	
	Continue to: Finish >	

After finishing this initial setup, your BPS installation will have one Master account and any number of Employee accounts (optional).

Connection to the scanner and robot

To connect the VC to the scanner and robot, please use 1 Gbit ethernet cable - RJ45 (not included) and connect them to the following ports (Figure 4). Please do not use other ports as they are not supported.

Fig. 4. Network ports overlay



Fig. 5. Bin Picking Studio product topology



When the robot and scanner are connected to the VC, you need to set up their IP addresses (both are mandatory) on the Network page (Figure 6) of the Bin Picking Studio.

Robot interface Scanner interface Metwork interface IPv4 address* () 5 192.168.1.2 IPv4 address 🚯 5 Subnet mask <1; 32>* () 10.6.118.165 24 Subnet mask <1; 32> 0 Bin Picking Server port <1024; 65535> () 16 None Gateway (10.6.0.1 Robot controller Primary DNS server () IPv4 address* () ๖ 192.168.1.1 Secondary DNS server () Robot State Server port <1024; 65535> (1) None U Test connection

For setting up the communication with the robot (unique for each robot brand), please read the user manuals and tutorials which you can find on the Documentation page (Figure 7). To obtain a robotic package for a specific brand (modules and robot program), please visit **photoneo.com.**

Fig. 6. Network page overview

Fig. 7. Documentation page overview

Photonco Bin Picking Studio 1.7.0										
Documentation Welc	Welcome to documentation section of Bin Picking Studio									
Initial setup Training material Initial setup Users and Permissions Network setup Remote access Autostart Robot communication Photoneo robotic API Rabase frame offsets Communication protocol changelog	3 Studio is the most versatile robotic intelligence system for bin picking applications that combines powerful, in-house 30 vision in the form of the PhoXi 30 Scanner and robotic intelligence software. Tentation is organized into the following sections: Source in the form of the PhoXi 30 Scanner and robotic intelligence software. Tesies IDPS, examples of network conjuguration, and a description of remote access methods or module Ithere appars to get familiar with communication between the robot and the Vision Controller. You can also find a step-trajentor guide for your robotic brand. <i>tions</i> etcling. section will help you during the configuration of your bin picking solution - read about the definition of gripping points, ping methods, environment and calibration. toyment about the performance inspection of your bin picking application and ways to improve it. le to got runt (and previou) versions of BPS can be found here. d not find an answer to your question, you can always contact us at support@photoneo.com .									

Solutions list

Fig. 8. Overview of the solutions

	Name		ID o	Robot	Author	Last modified ©	Flags	Actions
0	Example solution 1: Kawasaki with unique grasping method for each VS	0	4	RS-007L	me	2022-01-31 10:20	► ready	Duplicate Export X Delete
	Example solution 3: UR5 Demo with 2-finger gripper	0	2	UR5	me	2022-01-31 10:20	deployed	🔮 Duplicate 🕹 Export
0	Example solution 4: KUKA Demo with 2-finger gripper	0	3	KR 6 R700 2	me	2022-01-31 10:20		Duplicate Lete
	Example solution 8: Kawasaki with hand-eye calibration	0	1	RS-007L	Admin Binpicking	2022-01-31 10:18	factory default Fready	Duplicate LExport

The solution holds all bin picking configurations except for a network configuration of your installation. After completing all the steps in the solution wizard, the bin-picking application can be deployed on the Photoneo Vision Controller.

A completely configured solution is flagged by the "ready" label. The currently running solution has the "deployed" label.

A solution with the flag "factory default" is preconfigured by Photoneo and cannot be accessed directly (must be duplicated).

Remote support

Photoneo offers remote support for its customers. To connect to your Vision Controller, it needs to be connected to the internet (through the Network port). Your Vision Controller comes with a pre-installed TeamViewer. If you need remote support, please send an email to support@photoneo.com with a description of the issue and login credentials to the TeamViewer (Figure 8).

Fig. 8. TeamViewer login credentials





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