# Hirata
The Global Production Engineering Company

| Product Information **New Production** | **3D vision system(HV-P series)** |
|---|---|
| RPI-0175 Date of issue : 1st July 2020 | |

■ Release overview

3D vision system 『HV-P series』 has been released in order to enable to construct machine vision system combined with Hirata robots. This product has 3D vision (camera), controller, and software.

By combining with Hirata robots, it can be realize an application such like random piled-picking etc.

■ Period of starting orders

July 2020

■ Main feature

Controller can easily set connection with external devices, adjusting shooting conditions, by touch panel operation. It has Parameter auto-adjusting function to set some important parameters in vision system such like a "camera exposure light time" and so on.

Using taken images, possible to do Off-line validation. And the validation result can be sent the controller, so that, it can support quick start-up of the system.

| Main feature | Detail |
|---|---|
| 4 types of 3D visions are lined-up | Selectable from 4 types of 3D visions (camera) according to your needed field of view to measure. |
| Project/Task management function | Multiple tasks can be registered, and it can be edit (add, set, delete and copy) . Tasks can be registered by each work-pieces, and it can be operate by switching. ※The "task" means a unit of work of system, such like "inspecting work-piece", "Picking & placing the work-piece". ※The task of inspection for some different work-pieces can be managed together as an unit called "Project". |
| Multi-color light projection function | 7 (white, red, green, blue, cyan, magenta, yellow) colors of light projection is possible. Selectable proper color according to surface characteristics of work-pieces. |
| Connection with robot, Calibration function | Standard support for connection function with Hirata robot/controller (HNC). Possible to connect in standard setting. |
| Operation function (Add, set, delete, copy) | For each operation, dedicated setting display is prepared, it can be edited easily. ※The "Operation" means an unit of motion which cannot be indecomposable anymore in Task, such like "3D matching(recognizing work-piece", "3D picking (calculating position to grip by robot)". |
| User own operation adding function | Possible to add operations created on User's own accord. |
| Utility function of communication | Utility function, like status check of communication with external devices, or Testing |

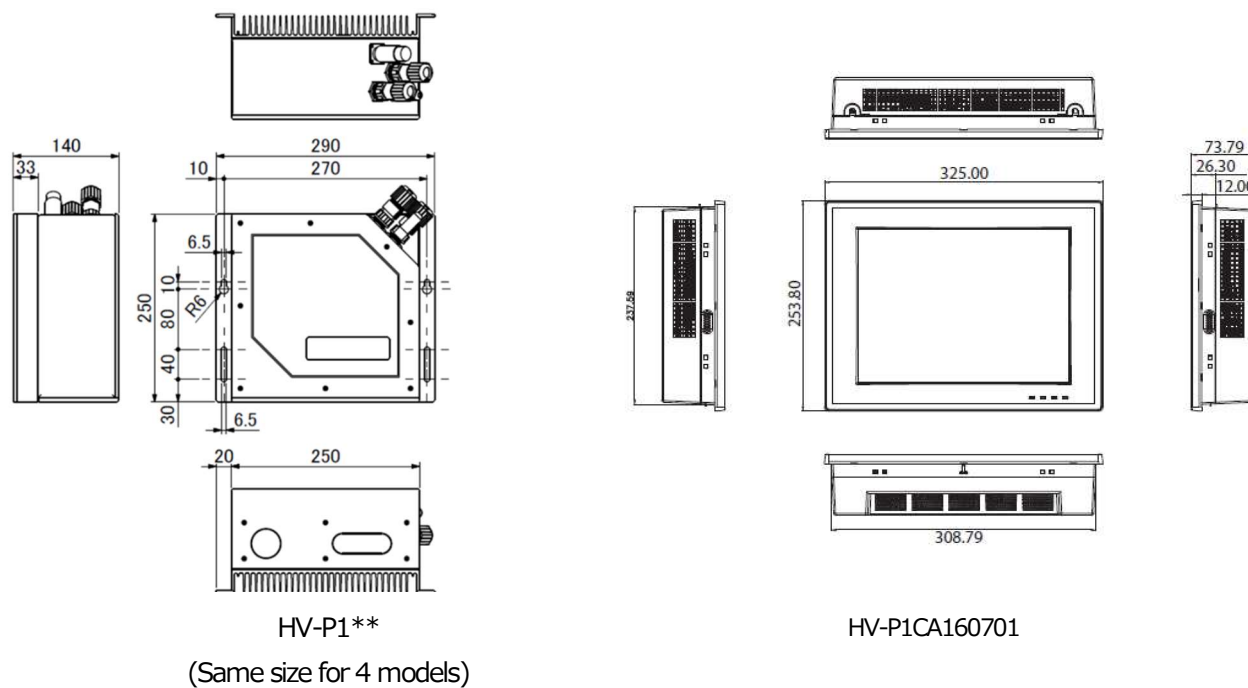| check and log etc. | by image logs, is prepared. |
|---|---|
| Touch operation | With touch operation, zooming, moving and setting change is available. |
| Multi-language | Standard language is Japanese and English. Regarding the other languages, please contact us. |

■ Model

3D vision is prepared 4 types depends on a distance between the shooting target (hereinafter called WD).

| Model | HV-P103 | HV-P106 | HV-P110 | HV-P115 |
|---|---|---|---|---|
| **WD** | 250 - 300 mm | 500 - 600 mm | 800 - 1000 mm | 1200 - 1500 mm |
| **Field of view** | 115x180 mm | 225x340 mm | 360x515 mm | 540x750 mm |
| **External dimension** | 290 x 250 x 140mm | | | |
| **Weight** | 6.5 kg | | | |
| **Power supply** | DC24V±10% | | | |
| **Power source** | Rated 7.1A | | | |
| **Protection level from water/dust** | Approx. IP64 | | | |
| **Environmental temperature during operation** | 0 - 45℃ | | | |
| **Max number of camera connections** | 2 cameras (1 camera is external) | | | |
| **Measurement method** | Pattern projection | | | |
| **Communication method** | 1000BASE-T (IEEE 802.3z) | | | |
| **Shooting trigger** | Software trigger/ hardware trigger | | | |
| **Resolution (per 1px)** | 0.15x0.2 mm | 0.25x0.3 mm | 0.45x0.5 mm | 0.55x0.6 mm |

Controller is common for all 3D visions.

| Model | HV-P1CA160701 |
|---|---|
| **Appearance** | |
| **Power supply** | DC 12-30V （65W） |
| **Environmental temperature during operation** | 0~50℃ |
| **Storage temperature** | -40 ~ 60℃ |
| **Humidity** | 10~95% @40℃ (※No condensation) |
| **Protection level from water/dust** | Approx.IP64 （※Only front panel） |
| **Weight** | 3.8kg |
| **External dimension** | 325 x 253.8 x 73.8 mm |
| **Language** | Japanese / English |

■ External view



HV-P1**

(Same size for 4 models)

HV-P1CA160701

■ Screen image