Your Advanced Cobot Partner

HCR
Advanced

Hanwha Collaborative Robot

Hanwha
Corporation/Machinery

HCR Advanced
Hanwha Collaborative Robot

Automation is no longer difficult. The collaborative robots **HCR-3A, 5A, 12A** are easy to control in responding to changes in production layout, difficulty cutting down investment cost an operating expenses.

HCR-3A

Enhanced Specification

- 3 Tool ports with Advanced EtherCat Port
- Faster linear speed (Max. 1.5 m/s)
- Enhanced repeatability (0.05 mm)

Robot AI 3D Vision

- Pick & Place for any shapes of products
- Based on deep-learning based AI 3D vision

Mobility with Hanwha AGV

- Hanwha LGV (Laser Guided Vehicle)
- Hanwha AMR (Automated Mobile Robot)

Robot Monitoring Service

Under the cooperation with Hanwha Techwin CCTV, Hanwha robotics is providing the specialized robot monitoring service.

HCR-5A

HCR-12A

Easy
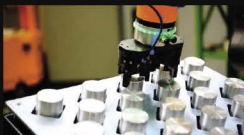One day training is enough to
be a robot operator.

Safe
Safety of HCR allows the cooperation
with employees in operation.

Flexible
Fast set-up optimizes flexible
change of manufacturing.

Easy & Simple in any APPLICATIONS

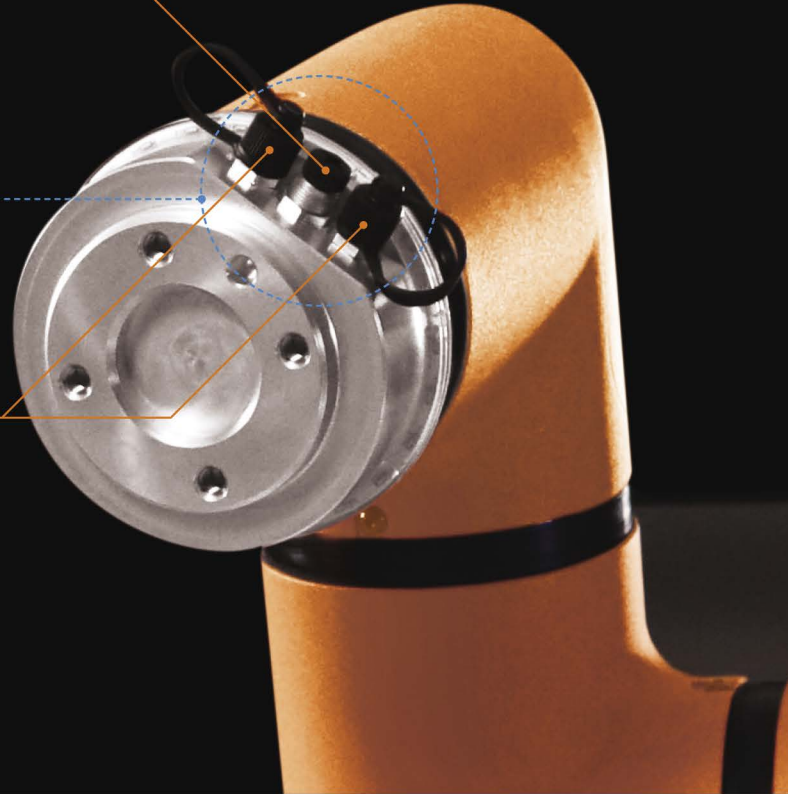| Machine tending	Palletizing	Welding	Automotive	Etc.

Advanced EtherCat Port
For Easy Plug & Play

I/O 2 Ports with 8 Pins
Direct Integration
for Dual Grippers

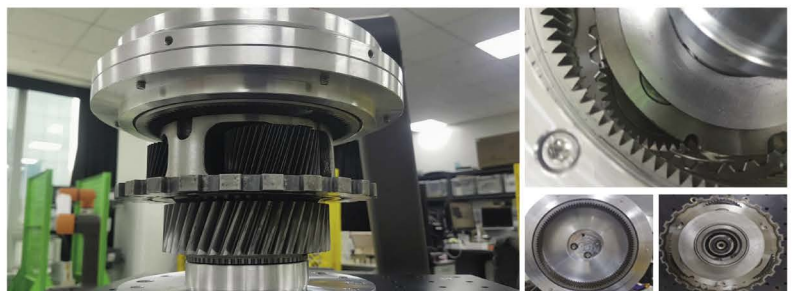# Simple Body for Easy & Cost Effective Robot Operation.

HCR pursues the simple body and easy programing.

If Force Torque sensor is needed,
HCR Advanced model provides easy integration & programing
for F/T Sensor through EtherCAT port and intuitive Rodi X UI.

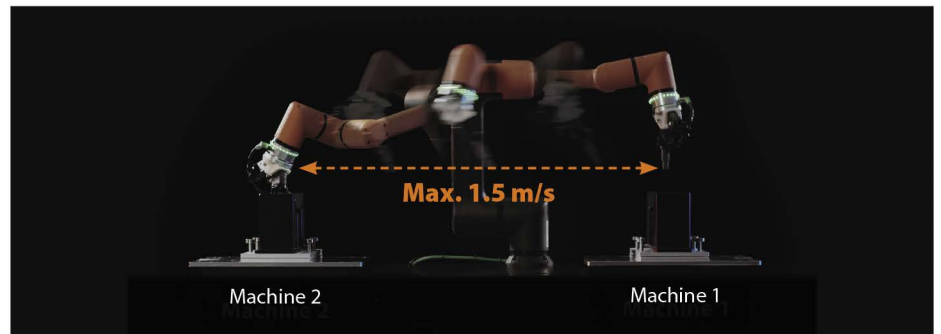Simple body and easy F/T Sensor
integration with **One cable**

Polishing

Assembly/ Inserting with spiral movement

Faster Speed Enhanced Repeatability

Linear Speed of HCR-5A is Increased to Max. 1.5 m/s

HCR Advanced realizes the increased productivity.
Linear speed of HCR-5A is increased to Max. 1.5 m/s.
Enhanced repeatability to Max. 0.05 mm

Max. 1.5 m/s

Machine 2   Machine 1

Body Cables

Enhanced Flexibility

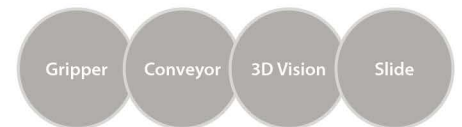Detachable & Flexible body cable (Max .10 m)

Rodi-X
for ECO Plug & Play

Expanding Interchangeability through Rodi-X & SDK

- Easy development for Rodi UI/UX
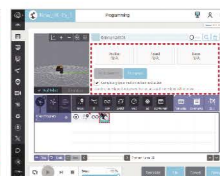- Shorter development time to implement applications
- Free SDK

Rodi SW

Rodi X
Service

+

Gripper   Conveyor   3D Vision   Slide

Rodi-X Plugins
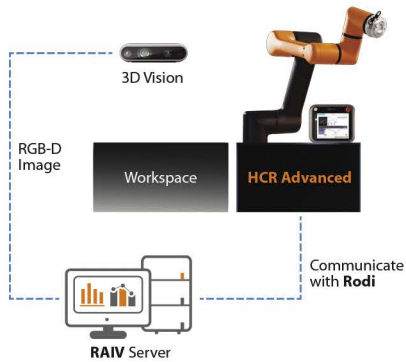

Extension   Program   Widget   Daemon

RAIV
Robot AI Vision

HCR`s Own Advanced AI 3D Vision Solution

Deep learning based, RAIV solution enables "Pick & Place" for any random shape products.

Bin Picking (Bearing)

Palletizing (Random shape)

Bin Picking (Random shape)

Depalletizing (Random shape)

RVS
Robot Visual Safety

HCR` Own Enhanced Safety Through Robot Visual Safety

- Yellow zone : Speed down
- Red zone : Stop
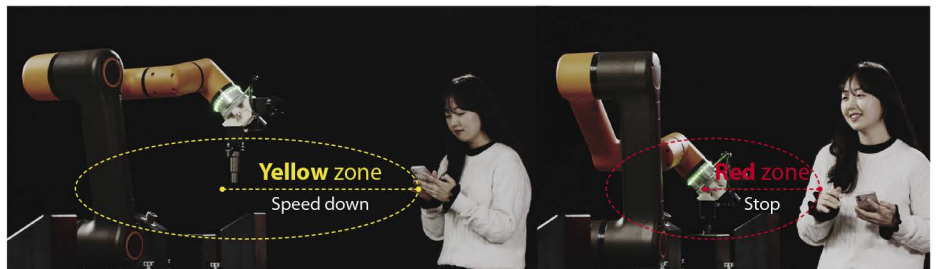
RPC
Robot Positioning Compensation

CNC Machine Tending Automation / 2D positioning compensation

2D vision & FOCAS interface for easiness & Flexibility of HCR compensation and interface with machine tools.

- With its Self-developed 2D vision positioning compensation solutions, Hanwha can provides more simple/fast/economic way by skipping re-teaching.
- One QR code + 2D vision + Hanwha a algorithm

Mobility
Hanwha AGV

Hanwha LGV (Laser Guided Vehicle)

For logistics & Heavy part CNC machine tending

Hanwha AMR (Automated Mobile Robot)

HCR DC-controller
HCR-3A/5A: HC-S2DC, HCR-12A: HC-P2DC
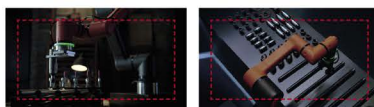

LGV

AMR

SMART FACTORY with HCR and
Hanwha AGV

Monitoring
Service

Hanwha Techwin CCTV Monitors & Records
Hanwha Robotics Together.

You can monitor Hanwha robotics wherever you are with your smart phone.

RMS
Robot Monitoring Service

RAS
Robot Alarming Service

HCR Advanced
Hanwha Collaborative Robot

			HCR-3A	HCR-5A	HCR-12A
Robot Body	DOF		6 rotating joints	6 rotating joints	6 rotating joints
	Payload		3 kg	5 kg	12 kg
	Reach		630 mm	915 mm	1,300 mm
	Speed (Tool)		1 m/s	1 m/s (Max. 1.5m/s)	1 m/s (Max. 1.2 m/s)
	Repeatability		±0.05 mm	±0.05 mm	±0.07 mm
	Weight		13 kg	21 kg	53 kg
	Tool/IO 1	Connector	M8, 8pin, A Coding (Standard)	M8, 8pin, A Coding	M8, 8pin, A Coding
		Power	DC24V (set on GUI) 1.5A Max	24V (set on GUI) 3A Max (1.5A/pin)	24V (set on GUI) 3A Max (1.5A/pin)
		Digital In (Type)	2 (PNP)	2 (PNP)	2 (PNP)
		Digital Out (Type)	2 (NPN)	2 (NPN)	2 (NPN)
		Analog In	2	2	2
	Tool/IO 2	Connector		M8, 8 pin, A Coding	M8, 8 pin, A Coding
		Power		DC 24V (1.5A max)	DC 24V (1.5A max)
		Digital In (Type)		D-in 2 (PNP)	D-in 2 (PNP)
		Digital Out (Type)		D-out 2 (NPN)	D-out 2 (NPN)
	EtherCAT	Connector	M8, 6 pin	M8, 6 pin	M8, 6 pin
		DC	TX+, TX-, RX+, RX-DC 24V	TX+, TX-, RX+, RX-DC 24V	TX+, TX-, RX+, RX-DC 24V
	Sound Level		Less than 60 dBA	Less than 65 dBA	Less than 70 dBA
	Motion Range, Speed	J1	± 360°, Max 180°/sec	± 360°, Max 178°/sec	±180°, Max 130°/sec
		J2	± 360°, Max 180°/sec	± 360°, Max 178°/sec	±150°, Max 130°/sec
		J3	± 160°, Max 180°/sec	± 165°, Max 178°/sec	±165°, Max 200°/sec
		J4	± 360°, Max 360°/sec	± 360°, Max 180°/sec	± 190°, Max 200°/sec
		J5	± 360°, Max 360°/sec	± 360°, Max 180°/sec	± 170°, Max 200°/sec
		J6	Infinite, Max 360°/sec	± 360°, Max 180°/sec	± 360°, Max 200°/sec
	IP protection		IP64	IP54	IP54
Controller	Size		450 x 470 x 223 mm	450 x 470 x 223 mm	450 x 470 x 223 mm
	Weight		17.6 kg	17.6 kg	19.8 kg
	Power		100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (1kW)
	Internal I/O Ports	Emergency	2ch (4 ports)	2ch (4 ports)	2ch (4 ports)
		Safety	2ch (4 ports)	2ch (4 ports)	2ch (4 ports)
		Remote Power On/Off	Yes / Yes	Yes / Yes	Yes / Yes
		Digital In	Flexible In 8 ch (SINK) General In 8 ch (SINK)	Flexible In 8 ch (SINK) General In 8 ch (SINK)	Flexible In 8 ch (SINK) General In 8 ch (SINK)
		Digital Out	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel
		Incremental Encoder In	2 ch	2 ch	2 ch
	Communication Protocols		TCP/IP, Modbus TCP, Profinet and EthernetIP		
T/P	Size		343 x 270 x 81 mm		
	Weight		1.8 kg		
	Monitor	Display Size	12.1 inch		
		Resolution	1,024 x 768		
		Touch Tech	Resistive		
	User Interface	Power Switch	1 EA		
		Emergency Switch	1 EA		
	I/O Port		USB 2.0 1 EA		
	Accessory		T/P Holder 1 EA		

HB TURNKEY GmbH

Hanwha Corporation/Machinery