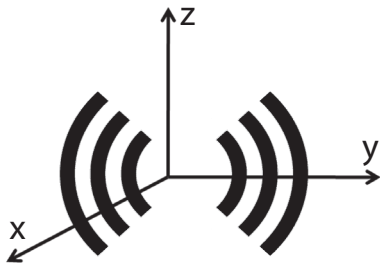
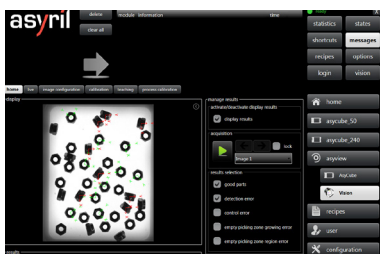
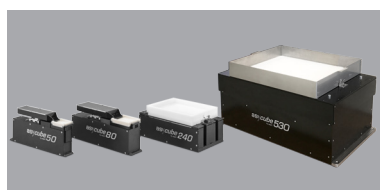
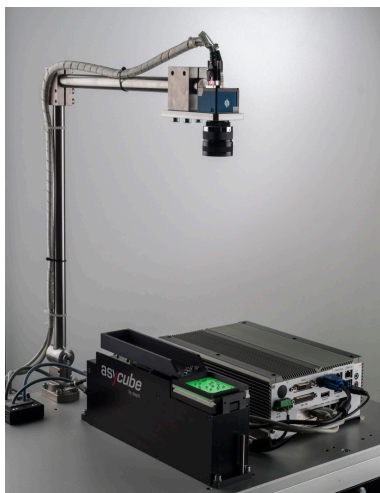


SmartSight

Intelligent Visual Part Detection System for Asycube Flexible Feeders



3-Axis Vibration Technology Innovation by asyrii



Advantages

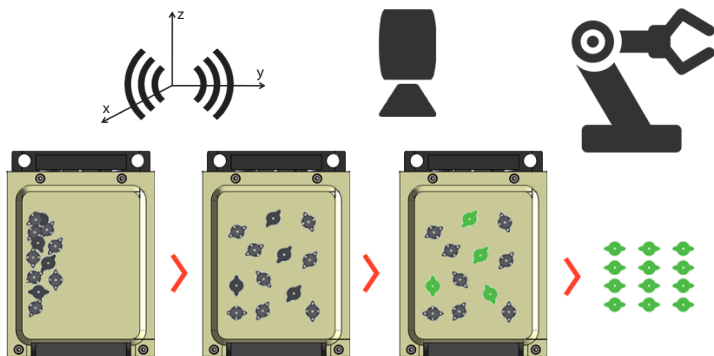
- ▶ **Fast integration** : direct output of part coordinates to the robot, fully automatic control of feeder vibrations and part detection
- ▶ **Quick setup and reduced development times** : get started immediately on your application
- ▶ **Attractive, highly competitive system costs** as up to 4 cameras and Asycube feeders can be controlled with a single SmartSight control unit
- ▶ **Software based on market standard** : proven industrial vision library
- ▶ **Intuitive teaching and configuration** with Asyrii's control software
- ▶ **Compatible with any Asycube vibrating platform**
- ▶ **Compatible with any PLC & industrial robot brand**

SmartSight

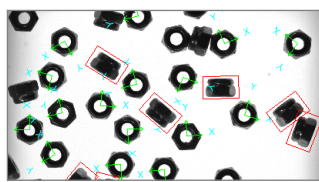
Intelligent Visual Part Detection System for Asycube Flexible Feeders

How it works

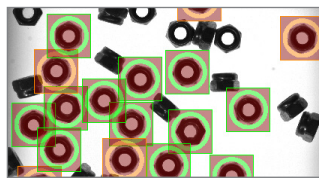
- ▶ SmartSight describes Asyri's intelligent visual part detection system, ensuring straightforward integration of any Asycube vibrating platform with any industrial robot brand. Comprising Asyri's powerful visual part detection software, an industrial control PC as well as an optimally configured vision kit including camera, lens and all necessary cabling, SmartSight makes the implementation of high performance flexible feeding systems straightforward.
 - ▶ SmartSight automatically controls the part movements on the feeder (Asycube) as well as the part supply (hopper) based on the vision system feedback about the part locations and quantity.
1. Homogeneous parts separation and orientation using Asyri's innovative 3-Axis Vibration Technology
 2. Detection of correctly oriented parts by asyri SmartSight vision system
 3. Part pick from platform and assembly by robot



Application Example



Detection of part location, orientation as well as pitch-and-toss



Define part gripper geometry and exclusion zones to avoid collisions

Input	Output	ID	X	Y	Z	Theta	Accepted	Reason
00	-6.65635	-15.70763	0.00000	-2.7587	True	None		
01	27.59823	15.70434	0.00000	-0.9375	True	None		
02	10.84061	-25.51491	0.00000	-1.2982	True	None		
03	-22.84455	-1.86138	0.00000	1.1948	False	Detection		
04	-19.59392	-5.75551	0.00000	0.5342	False	Detection		
05	-18.67354	16.56145	0.00000	-0.2781	False	Detection		
06	18.06766	10.49035	0.00000	1.3469	False	Detection		
07	33.06099	-2.42469	0.00000	-1.5540	True	None		
08	6.40942	-5.61627	0.00000	-0.7126	False	Detection		
09	17.34833	-15.43261	0.00000	-0.5659	False	Detection		
10	23.41996	8.53149	0.00000	0.8697	False	Detection		
11	-21.64968	-19.64231	0.00000	-0.6446	True	None		
12	-5.90521	-10.81606	0.00000	0.0165	False	Detection		
13	-9.52245	-27.76240	0.00000	2.8331	True	None		
14	26.44599	-5.61690	0.00000	-1.3312	True	None		
15	-1.02734	-0.97440	0.00000	-3.9939	True	None		
16	28.43890	-13.31599	0.00000	-0.3062	True	None		
17	31.95419	10.50325	0.00000	0.2238	True	None		
18	25.89691	-20.33318	0.00000	0.5090	True	None		
19	27.96882	2.56262	0.00000	-1.0006	True	None		
20	-7.16421	8.33166	0.00000	1.2693	True	None		
21	5.71722	5.99004	0.00000	0.0525	True	None		
22	7.21025	14.65096	0.00000	-2.0179	True	None		

Coordinates of accepted parts are easily output to any industrial robot

About Asyri

- ▶ Asyri develops, produces and markets high performance flexible feeding systems for parts and components from <0.1 up to 150 mm in size. Our innovative 3-axis vibration technology can handle bulk parts of any geometry and allows for extremely gentle part feeding.
- ▶ Asyri's key competences and extensive know-how encompass all three sub-domains of modern part feeding systems: vibration technology, industrial vision and precision robotics. This unique focus combined with our many years of experience enable us to deliver superior, innovative flexible feeding systems for today's and tomorrow automation challenges.

Specifications

FEATURES

Compatible with all materials & component geometries
Component position and orientation recognition (x, y, pitch/toss)
Simple recipe changeover and new parts programming
Integrated calibration procedure
Power supply : 24 V
Communication : TCP / IP

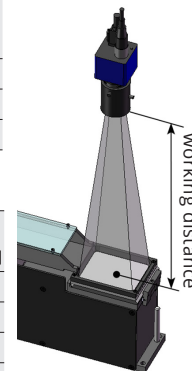
Working Distance

STANDARD RESOLUTION (1.4 MPX)

Feeder	Large Distance		Close Distance	
	[mm]	[~inches]	[mm]	[~inches]
Asycube 240	790	~31.1	490	~19.3
Asycube 80	830	~32.7	400	~15.7
Asycube 50	560	~22.0	270	~10.6

HIGH RESOLUTION (5 MPX)

Feeder	Large Distance		Close Distance	
	[mm]	[~inches]	[mm]	[~inches]
Asycube 240	830	~32.7	580	~22.8
Asycube 80	790	~31.1	420	~16.5
Asycube 50	560	~22.0	300	~11.8
Asycube 50, Small Field of View			380	~15.0



VERY HIGH RESOLUTION (9 MPX)

Feeder	Large Distance		Close Distance	
	[mm]	[~inches]	[mm]	[~inches]
Asycube 240	810	~ 31.9	565	~ 22.2
Asycube 80			550	~ 21.7
Asycube 50			400	~15.7

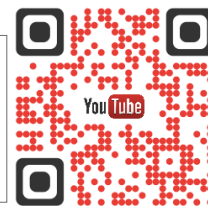
Options

Connect and control up to 4 Asycube feeders & cameras with a single control unit	
Alternative camera configurations	control part presence, position in gripper, deposition
Camera	standard resolution (1.4 Mpx) high resolution (5 Mpx, 9 Mpx)
Coaxial frontlight	backlight integrated in Asycube feeding platform
Calibration plates	for optics and robot

Contact



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