

RBS (Random Box Stack)

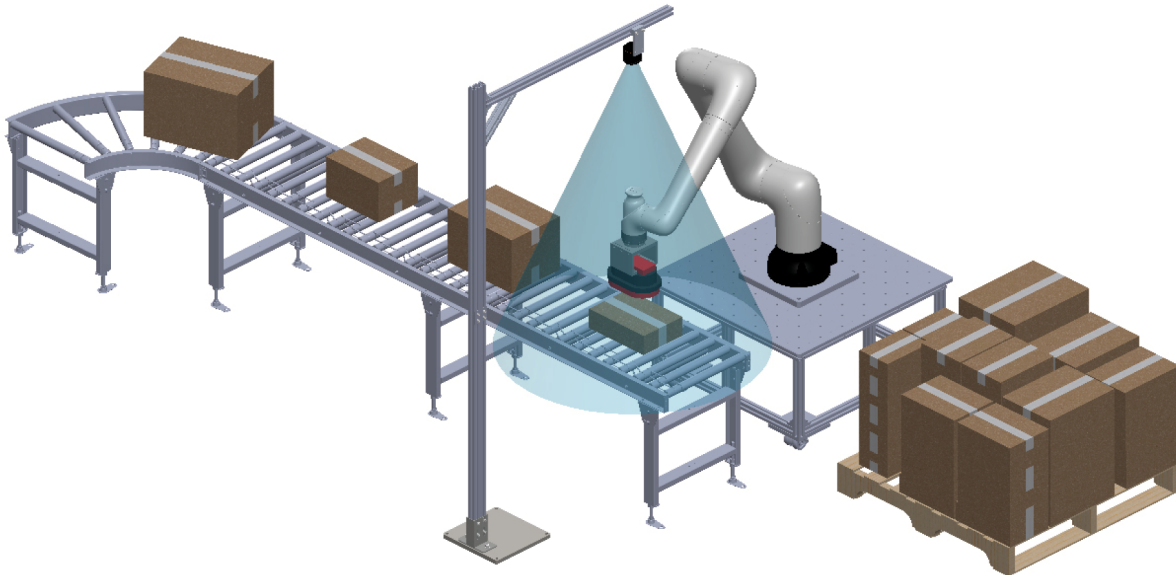
Unstructured Random Boxes

Robotic Palletizing & Depalletizing Solution



RBS Palletizing

Robots automatically stack (palletize) boxes of various sizes.



Box weight

1 – 20 kg



Speed

6+ boxes/min*



Stack height

1.5 m+

When stacking boxes of various sizes (palletizing),

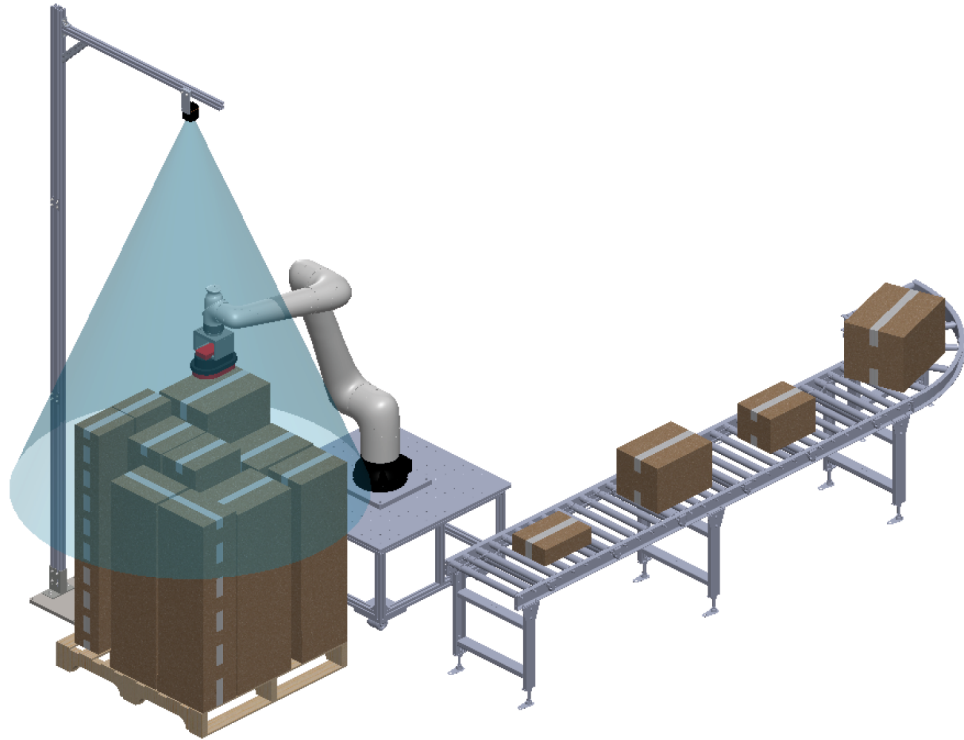
RBS Palletizing Solution is the answer.

An affordable 3D camera automatically recognizes each box's size and position, and the robot stacks it quickly and space-efficiently wherever you specify.

* May vary by robot and layout

RBS Depalletizing

Robots automatically unload (depalletize) boxes of various sizes.



Box weight

1 – 20 kg



Speed

6+ boxes/min*



Stack height

1.5 m+

When unloading boxes of various sizes (depalletizing),

RBS Depalletizing Solution is the answer.

With a wide field of view and an affordable 3D camera, the robot adapts quickly even when box sizes change.

* May vary by robot and layout

RBS System Configuration

✓ **RBS communicates directly with the robot and camera.**

No PLC in between — fast communication and a simple system.

✓ **Works with any robot.**

RBS talks to the robot directly, so it works with any robot that can communicate, regardless of maker or type.

✓ **Fast operation.**

RBS sends its computed result to the robot within 1 second.

* RBS can also use I/O communication via a PLC (optional).



PLC (optional)*



PC (RBS software)



Robot (industrial/cobot)



3D camera

RBS 3D Camera

ToF (Time of Flight) 3D camera



- ✓ **Price-competitive.**
Far cheaper than conventional 3D cameras (stereo or structured light).
- ✓ **Fast capture.**
Up to 25 shots per second, so task delay is minimal.
- ✓ **Compact.**
At $72 \times 65 \times 82.6$ mm and 770 g, the camera is small and light, so mounting it on a robot doesn't get in the way.
- ✓ **No extra lighting needed.**
Built-in LEDs emit invisible 850 nm infrared light and time its return, making it highly resistant to ambient light.
- ✓ **A reliable German product.**
Made by ifm, a renowned German sensor maker — excellent performance and durability.

RBS Use Cases

RBS Palletizing Solution (Company L)



RBS system



Result 1



Result 2

RBS Depalletizing Solution (Company I)



Contract talks and inquiries under way with many other logistics, robotics and automation companies