

## Expanding the Boundaries of Imaging

The Jabil Omnidirectional Sensor removes the need for multiple independent sensors on robotics platforms. With its large field of view, the innovative solid-state sensor supports state-of-the-art object detection and collision avoidance algorithms. The Jabil Omnidirectional Sensor provides a new sensing tool for complex robotics platforms.

1 !

The first-generation omnidirectional sensor was optimized for autonomous mobile robots platforms. Complete radial coverage of an AMR can be obtained by mounting two sensors diagonally opposite. Jabil can design sensors with 360° HFOV coverage, if that format is more suitable for a particular AMR, collaborative robot, or drone implementation.

|                  |   |
|------------------|---|
| FOV              | HFOV: 270° VFOV: 60°                                  |
| Frame Rate       | 30fps   |
| Power Input      | 24v / 0.6a Average                                    |
| Resolution       | 640x480 Pixels  |
| Processor        | NXP iMX8M-Mini  |
| Wavelength       | 850nm / (940nm)                                       |
| Detection Range  | Up to 5m  |
| Dimensions       | Height: ~125mm<br>Width: ~95mm                        |
| Touch Display    | 320x240 Pixels  |
| Interface        | Wired or wireless<br>(customizable to customer needs) |
| Patent Portfolio | System, Optics, Control                               |
| Custom Lens      | Designed by Jabil Optics                              |

- Autonomous Mobile Robots (AMR)
- Collaborative Robotics
- Drones

Request an evaluation kit today at

## Sensor Data Flow

- Calibration
- Lens correction for distortion
- Per pixel gain and offset correction
- Transformation of polar data to cartesian data
- Noise filtering
- Greyscale or false color
- Web interface
- API
- IMX8 MINI - support customer application code on device

To learn more about the Jabil Omnidirectional Sensor Reference Design or to purchase an evaluation kit, please visit our webpage: