

# NexBot Robotics 322-017 3D Vision Camera 5MP Structured Light

**NexBot  
Robotics**

SKU: NXB-SNS-322-017 | Category: Sensors & Vision  
> Vision Systems > 3D Vision Cameras

## Overview

The NexBot Robotics 322-017 is a high-performance structured light 3D vision camera designed to provide detailed spatial data for robotic guidance, verification, and inspection tasks. This camera projects a controlled light pattern to capture high-density 3D point clouds, enabling robots to perceive and interact with complex, unstructured environments. Its primary use is to give automation systems the ability to identify, locate, and orient parts with high precision. Key features include a 5 Megapixel (MP) imager that captures fine details, making it suitable for applications involving small or intricate components. The structured light technology ensures reliable performance even on low-contrast or specular surfaces where passive stereo vision systems might fail. The camera is housed in a rugged, IP67-rated enclosure, certifying it as fully protected against dust ingress and capable of withstanding water immersion, making it ideal for demanding industrial environments including washdown areas. Common applications for the 322-017 camera include robotic bin picking, where it can identify randomly oriented parts in a container, and automated inspection, where it can compare a manufactured part against a CAD model to detect defects. It is also used for assembly guidance, providing precise coordinates for part mating, and for depalletizing and palletizing operations. Data is transmitted via a standard GigE Vision interface, which provides high-speed, reliable communication over long distances using standard Ethernet hardware. This simplifies integration with industrial PCs and robot controllers. The camera is designed for straightforward mounting on robot end-of-arm tooling, getting your vision-guided application online with minimal downtime.

## Technical Specifications

Parameter	Value	Unit
Weight	1.5	kg
Material	Anodized Aluminum 6061-T6	
Voltage	24VDC	
IP Rating	IP67	
Country of Origin	JP	
Protocol	GigE Vision	

Parameter	Value	Unit
Dimensions	180 x 100 x 75 mm	

**Safety Notice:** This product must be installed and operated by qualified personnel in accordance with applicable safety standards (ISO 10218, IEC 61508).