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ZEBRA 3S80

3S80-4MKIT0-000DA
Structured-light sensor kit FOV 588mm x 444mm @ 653mm, with Aurora Design Assistant full license, and accessories.



- Shorter Cycle Times
- Large Scanning Volume
- Patented CMOS Sensors

PRODUCT DESCRIPTION

Zebra's 3S80 3D Sensors represent the pinnacle in high-speed, high-resolution structured-light imaging with sub-millimetre precision. Equipped with a 2 MP CMOS sensor capable of capturing up to 2 million 3D points (1680×1200) in only 45ms, the 3S80 produces motion-blur-free, true per-pixel point clouds with full RGB colour rendering. The parallel structured-light system, along with ambient-light suppression, enables dynamic scene capture, no matter if objects are moving at conveyor speed. Available in two variants, the mid-range 3S80-4M (497–939 mm range, 588 × 444 mm sweet-spot) and the extended-range 3S80-4L (778–3034 mm range, ~1027 × 836 mm sweet-spot), these devices support plug-and-play deployment via PoE+ or 24 V, 1 GbE GigE Vision interface and ship IP65-rated for dust and water resilience. The sensors pair seamlessly with Zebra's Aurora Design Assistant or Vision Studio software and the 4Sight EV7 controller for rapid integration into multi-camera networks.
The 3S80 excels in industrial inspection, precision dimensioning, and robotic automation. Its fast acquisition and sub-millimetre accuracy (≈0.37 mm point spacing at sweet-spot) make it ideal for bin picking, surface or assembly defect detection, and inline quality control, especially when used with Zebra's deep-learning tools to identify subtle, irregular anomalies. The 3S80-4L's extended range supports scanning large, static or moving objects EV batteries, automotive parts, crates, and delivers full 3D data and colour overlays to verify compliance and detect irregularities. Whether deployed for volume measurement in logistics, bin-picking in robotics, or detailed object inspection on manufacturing lines, the 3S80 is designed to reduce error rates, shorten cycle times, and enhance production throughput.

TECHNICAL DATA

Calibration accuracy (1 σ)	0.25 mm
DC input	PoE or 24V
Depth	85 mm
Height	68 mm
Point to point distance	0.37mm
Scanning area at maximum spot	588mm x 444mm
Scanning range max	939 mm
Scanning range min	497 mm
Temporal noise (1 σ)	0.05 mm
Width	428 mm