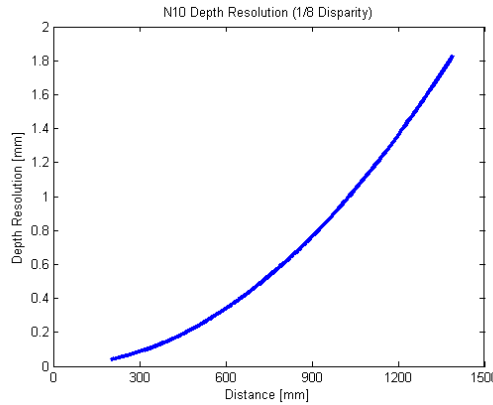
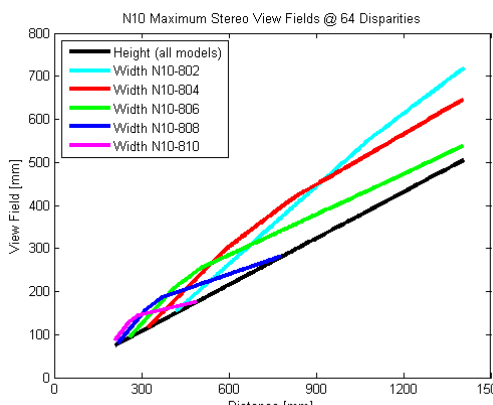


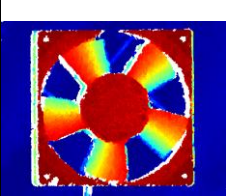
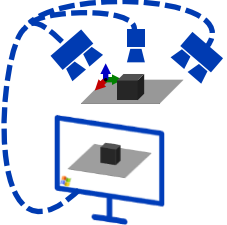
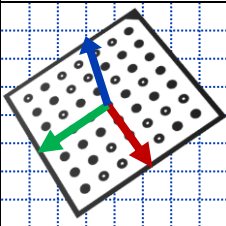
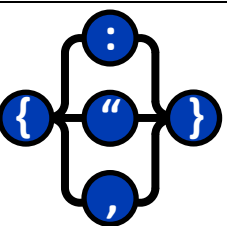
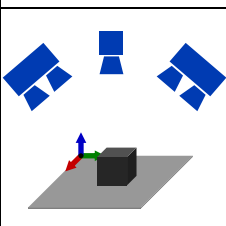
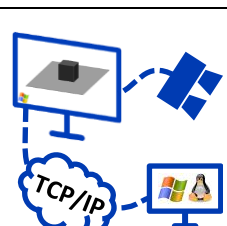
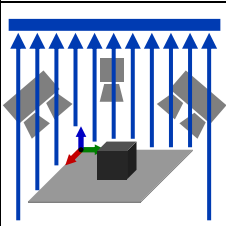

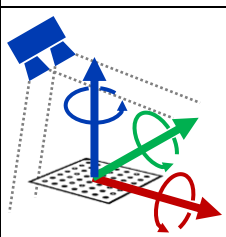
## Ensenso N10 – Stereo 3D Camera



### Hardware Features

Dimensions	150 (159 <sup>1</sup> ) mm x 45mm x 45mm	<sup>1</sup> including IO Connector
Weight	400g	
Operating Distance	280 - 1400 mm (depending on model)	
Hardware Features	<ul style="list-style-type: none"> <li>/ Robust alloy housing, lockable cables (USB and GPIO)</li> <li>/ 12 - 24V GPIO on 3-Pin M8 Sensor/Actuator Connector, opto-coupled</li> <li>/ Hardware-Trigger Input and Output via GPIO</li> <li>/ Acquisition of unicolored surfaces using the integrated model projector</li> <li>/ Capturing of moving objects</li> <li>/ Power supply via USB Bus (5V, 500mA, 2.5W)</li> </ul>	
Image Resolution	752 x 480 Pixels (WVGA)	
Depth Image Frame Rate	Up to 30 Hz (on Intel Core i7 CPU @ 64 Disparities)	
Depth Resolution	<p>0.1 mm – 1.6 mm, varying with Object distance</p> <div style="text-align: center;">  </div> <p>The actual accuracy depends on the model's focus and the viewed surface's geometry and material properties.</p>	
Fields of View	<div style="text-align: center;">  </div> <p>Actual view fields might be slightly smaller due to mounting tolerances.</p>	

## NxLib - Stereo Processing Library

	<p><b>Full 3D Information:</b> Depth images provide dense, per-pixel x, y, z coordinates</p>		<p><b>Scene Rendering:</b> Rendered 3D views of the combined surface model and the calibration pattern pose</p>
	<p><b>Workspace Calibration:</b> Specify your workspace coordinate system via the calibration pattern</p>		<p><b>JSON API:</b> Powerful and extensible API based on JSON with object-oriented interface for C++</p>
	<p><b>Multi-View:</b> Integrated data fusion from multiple stereo and color cameras</p>		<p><b>Remote Connectivity:</b> Remote API access via TCP for easy exchange of process or configuration data</p>
	<p><b>Telecentric View:</b> Generate fully rectified depth maps with fixed pixel size and orientation for easier processing</p>		<p><b>HALCON Interface:</b> Image acquisition interface for the MVTec HALCON with complete API access</p>
	<p><b>Pattern Gauging:</b> Real-time, <math>\mu\text{m}</math> accurate 6DoF measurement of calibration pattern pose</p>	<pre> 33 34 class Json { 35     protected: 36         bool getV; 37         void setJ; 38     public: 39         Json();                     </pre>	<p><b>Examples:</b> Get started by trying simple HDevelop scripts and example programs with source code</p>