**TrueView™**

**Vision Guided Robotics**

**MAIN APPLICATIONS**
- Material handling
- Machine tending
- Glueing and sealing
- Press automation
- Powertrain assembly
- Body-in-white

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**TrueView transforms robotic manufacturing processes**

TrueView vision guided robotic (VGR) systems see and react to changes within the industrial work environment. TrueView enables ABB robots to precisely locate the grip points of a disoriented object within a 3D space.

**TrueView makes robot vision simple**

TrueView systems include the ABB robot, vision hardware, the eVisionFactory™ (eVF) software platform and the ABB standard specifications in the areas of robot dress, mechanical and electrical integration, and robot-vision programming modules.

The eVF software platform includes unique technologies such as AutoCal for easy calibration, and AccuTest and AccuTrain for quick and reliable integration. eVF is recognized by leading manufacturers as the most reliable and repeatable VGR software for ABB robots.

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**Integrated ABB vision is low maintenance and reliable**

With over 150 systems installed and seven years of continuous design innovations, TrueView is the most reliable and robust vision solution for ABB robots.

**Vision guided robotics provides savings**

- Manage variation in part styles and location.
- Eliminate costly precision fixturing, mechanical part crowding and dunnage.
- Automate operations that previously required human interaction.
- Increase “Up-Time” and eliminate robot crashes by seeing the part on racks.
- Enhance quality via basic inspection and/or part identification.
The TrueView eVF application platform

**Xi2D™**
- Single or multi camera 2D information in 3 degrees of freedom (x, y, Rz)

**IDM2.5D™**
- Single camera information in 4 degrees of freedom (x, y, z, Rz)

**SC3D™**
- Patented single camera 3D technology provides a full six degrees of freedom for rigid parts (x, y, z, Rx, Ry, Rz)
- Resilient to lighting changes and imperfect object appearances through advanced feature recognition technology.
- Extremely fast set-up and calibration processes
- Robust and reliable cable and hose management system with super high flex cables

**SR3D™**
- Surround 3D imaging combines information from multiple cameras viewing large parts from different viewpoints (e.g. car bodies, airplane wings)
- 3D position of parts in full six degrees of freedom

**SL3D™**
- Uses structured light (e.g. laser) stripes to scan part surfaces to provide added feature visibility
- Provides the 3D position of rigid parts with smooth, featureless surfaces, in full six degrees of freedom

**TECHNICAL DATA, TrueView Vision Systems**

**Supported Robot Types**

<table>
<thead>
<tr>
<th>Robot Controller</th>
<th>IRC 5, S4C+, S4C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot Type</td>
<td>All IRB Arms</td>
</tr>
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**Robot Controller Configuration Requirement**

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Analog/Digital Combi Board</th>
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<tbody>
<tr>
<td>Baseware</td>
<td>Version 3.2 or higher</td>
</tr>
<tr>
<td></td>
<td>PC Interface</td>
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**Performance**

<table>
<thead>
<tr>
<th>Vision Accuracy</th>
<th>+/- 0.5mm</th>
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<tbody>
<tr>
<td>Vision Processing Time</td>
<td>0.5 – 1.5 seconds</td>
</tr>
<tr>
<td>Typical Part Movement</td>
<td>+/- 15 degrees, +/- 300 mm</td>
</tr>
</tbody>
</table>

**Capability**

<table>
<thead>
<tr>
<th>Camera</th>
<th>Analog High resolution</th>
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<tbody>
<tr>
<td></td>
<td>Analog Standard resolution</td>
</tr>
<tr>
<td></td>
<td>Analog High Speed</td>
</tr>
<tr>
<td>Lens</td>
<td>Any size</td>
</tr>
<tr>
<td>Lights</td>
<td>LED – Multiple sizes</td>
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<tr>
<td>Structured Light</td>
<td>Yes</td>
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</tbody>
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TrueView Function Package Features

- Easy to use TrueView eVF runtime software license
- Extended robot cabinet with factory monitor
- LED Lighting system, mounting brackets and power supply
- Camera, lens, lens protector, and protective camera enclosure
- Super high-flex, 4 part camera and light cables
- Cable management and robot dress package
- Vision computer and frame grabber
- TrueView API (with easy to build vision robot programs)
- TrueView Installation & Commissioning Manual
- TrueView Service Manual
- TrueView Standard Drawing Package

www.abb.com/robotics