IN-SIGHT 7000 SERIES VISION SYSTEM

The In-Sight® 7000 series vision system represents a breakthrough in flexibility, performance and ease of integration. This powerful vision system performs fast, accurate inspections while its compact footprint easily fits into space-constrained production lines. The unique, modular design is highly field-customizable to your application requirements.

Enhanced performance keeps pace with increasing line speeds
With ever-increasing production line speeds, customers no longer have to choose between high-speed and industrial performance—the In-Sight 7000 offers both! With blazing fast acquisition and industry leading vision tools, including PatMax RedLine®, SurfaceFX™ and OCRMax®, the In-Sight 7000 vision system quickly locates the part and accurately performs the necessary inspection.

Flexible design is field customizable to your application
When it comes to factory automation, one size rarely fits all. That’s why the In-Sight 7000 is designed with Flexible Image Technology™ (FIT™) that optimizes image formation and minimizes the need for expensive external lighting. Field-changeable and user-configurable lighting and optics modules provide users with ultimate flexibility to customize the system for their application.

cognex.com/InSight7000
Full-featured system to tackle a wide range of vision applications

The In-Sight 7000 vision system is engineered with the full suite of powerful Cognex vision algorithms and convenient features to help you solve your applications easily and reliably.

Suite of enhanced vision tools including PatMax RedLine, SurfaceFX and OCRMax for rapid part location and inspection.

Flexible Image Technology (FIT) optimizes image formation and minimizes the need for expensive external lighting.

Field changeable C-mount and S-mount lenses and an autofocus option for best image resolution based on working distance.

Onboard SD card for additional data storage and easy transfer of job files between systems.

Wrap-around LED indicator light provides clear visual pass/fail inspection results that can be seen from a distance regardless of product orientation.

IP67-rated housing provides protection in harsh factory environments.

Additional internal lighting options

In addition to other small form factor lights, the In-Sight 7000 is compatible with ImageMax™ technology used with DataMan® 360 series barcode readers. The ImageMax technology module offers diffuse illumination ideal for inspecting parts at varying working distances.

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Integrates easily into your system infrastructure

Like all In-Sight vision systems, the In-Sight 7000 uses In-Sight Explorer EasyBuilder® to set up and monitor machine vision inspections. The intuitive interface guides operators through a step-by-step setup process allowing both novice and experienced users to configure vision applications quickly and easily.

The majority of applications can be solved using the point-and-click EasyBuilder interface, however should your application requirements change, the In-Sight spreadsheet provides you with ultimate control through direct access to the vision tools and communication options. Access to the spreadsheet not only provides programming flexibility to make essential adjustments, it also offers assurance that you will be able to solve any of your vision applications.

cognex.com/easybuilder

The EasyBuilder user interface provides intuitive steps for even the most difficult applications. With no programming or spreadsheets needed, applications are deployed at breakthrough speed.
## SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>In-Sight 7600/7800</th>
<th>In-Sight 7801</th>
<th>In-Sight 7802</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job/Program Memory</td>
<td>7.2 GB on board + 8 GB on SD card (included)</td>
<td>512 MB</td>
<td>8 GB SD card, network drive via FTP over gigabit network</td>
</tr>
<tr>
<td>Image Processing Memory</td>
<td>512 MB</td>
<td>10/100/1000 BaseT with auto MDIX. IEEE 802.3 TCP/IP Protocol.</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 °C to 40 °C (32 °C to 104 °F)</td>
<td>0 °C to 40 °C (32 °C to 104 °F)</td>
<td>0 °C to 40 °C (32 °C to 104 °F)</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 x 480/800 x 600</td>
<td>1280 x 1024</td>
<td>1600 x 1200</td>
</tr>
<tr>
<td>Frames Per Second (FPS)</td>
<td>217/165</td>
<td>76</td>
<td>53</td>
</tr>
<tr>
<td>Lens Type</td>
<td>C-mount/S-mount/Autofocus</td>
<td>C-mount/S-mount/Autofocus</td>
<td>C-mount/S-mount/Autofocus</td>
</tr>
<tr>
<td>Light Options</td>
<td>Internal vision torch light, other add-on lighting options; External light powered by 7000; External light independent power</td>
<td>Internal vision torch light, other add-on lighting options; External light powered by 7000; External light independent power</td>
<td>Internal vision torch light, other add-on lighting options; External light powered by 7000; External light independent power</td>
</tr>
<tr>
<td>Internal Light Color</td>
<td>Red, white, blue, IR</td>
<td>Red, white, blue, IR</td>
<td>Red, white, blue, IR</td>
</tr>
<tr>
<td>Indicator LEDs</td>
<td>System status; 360-degree viewing LED indicator ring</td>
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<td>System status; 360-degree viewing LED indicator ring</td>
</tr>
<tr>
<td>Built in I/O</td>
<td>1 optically isolated trigger input; 1 dedicated input; 2 dedicated outputs; 2 bi-directional lines; RS-232; Additional I/O available via external I/O modules: CIO-MICRO or CIO-1400</td>
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</tr>
<tr>
<td>Power</td>
<td>24 VDC ±10%, 1.5 A maximum</td>
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</tr>
<tr>
<td>Industrial M12 Connectors</td>
<td>3: Power/I/O; Ethernet; External light power/control</td>
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</tr>
<tr>
<td>Weight</td>
<td>240 g</td>
<td>240 g</td>
<td>240 g</td>
</tr>
<tr>
<td>Protection</td>
<td>IP67 with internal light option or C-mount lens cover</td>
<td>IP67 with internal light option or C-mount lens cover</td>
<td>IP67 with internal light option or C-mount lens cover</td>
</tr>
<tr>
<td>Network Communications</td>
<td>10/100/1000 BaseT with auto MDIX. IEEE 802.3 TCP/IP Protocol.</td>
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<td>10/100/1000 BaseT with auto MDIX. IEEE 802.3 TCP/IP Protocol.</td>
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<tr>
<td>IEEE 1588 Support</td>
<td>Timestamp resolution: 8 ns</td>
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<tr>
<td>Synchronization accuracy through transparent clock: 5 μs</td>
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</tbody>
</table>

### In-Sight 7000 with C-mount Cover

![In-Sight 7000 with C-mount Cover](image)

### In-Sight 7000 with Extended C-mount Cover

![In-Sight 7000 with Extended C-mount Cover](image)

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