





In-Line Vision Inspection System For **STAMPED TERMINALS** 

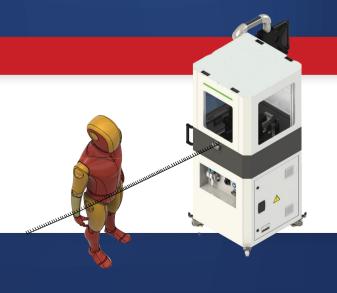


GTron is an in-line, machine-vision based inspection system for the optical gauging of critical dimensions of stamped terminals. The system uses advanced image processing algorithms to provide accurate measurements. High-end industrial optics in conjunction with robust mechanical design enables the system to capture sharp, high-resolution images of the terminals. The system stops both the stamping machine and the winding machine when a defective terminal is detected.

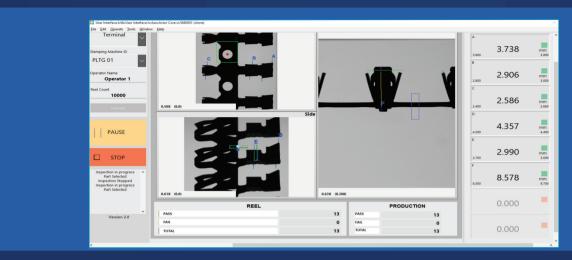
- ✓ 100 percent inspection
- Scale up production to any type of terminal at required spm
- ✓ Early detection of wear on stamping-press die
- Real time data analytics and report

## Failed Part Tracking

When a part fails, it is moved out of the vision area to a location where it can be easily accessed by the operator. The operator can then remove the faulty part and continue production, ensuring that the reel remains free of defects.



## **Multi-Camera** User Interface



The system can support up to three cameras, enabling a 3D inspection of a terminal. The multi-camera view allows the operator to observe all the measurements of a terminal in real time.



Operator can edit the tolerances, 'fail allowable' limits, enable/disable measurements and modify linearity & bias Values.

#### Inspection Data & Report

The system compiles measurement values and part images to generate part and batch reports. The recorded data can be stored and accessed from the cloud, allowing access from anywhere at any time.

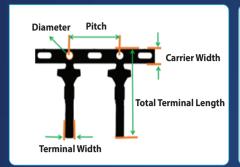


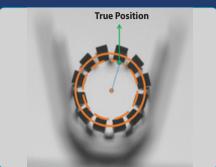


### Real-Time **Data Analytics**

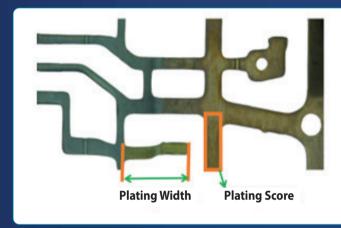
The system calculates Cp / Cpk, averages and trends with graphical representation. This assists in tracking the production process and detecting issues, variances & defects in real-time.

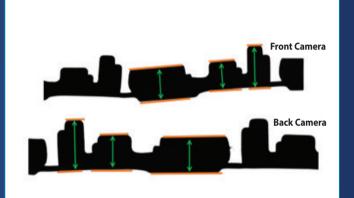
# **Dimensions**











Metrics	GT-SR-3-048-SF	GT-SR-3-064-SF	GT-SR-1-80-SF	GT-SR-1-100-SF
Throughput(Parts/min)	Up to 2000 PPM	Up to 2000PPM	Up to 1200 PPM	Up to 1000 PPM
No. of Camera	Up to 3	Up to 3	Configurable	Configurable
No. of Parts & Measurement	Configurable	Configurable	Configurable	Configurable
Object FOV	Up to ~30X25mm	Up to ~45X30mm	Up to ~60X45mm	Up to ~75X50mm
Camera Resolution	1.3 MP	3 MP	5 MP	9.1 MP
Accuracy	15 μm	15 μm	20 μm	20 μm
Repeatability	10 μm	10 μm	10 μm	10 μm



#### One Vision • One Mission • One Platform for Stamping Excellence

In the world of high-performance manufacturing,
the collaboration between Zentron and Huras Stanzautomation brings
together the best of automation, machine vision, and process engineering to
offer an unparalleled value proposition: A one-stop solution for the entire
stamping industry.



Founded in 1998, Huras is a family-owned European leader in stamping automation, hybrid part production, and process optimization. Its portfolio includes Servo Presses with precise, reproducible, energy-efficient control, Winding & De-coiler Machines, Laser-cutting and welding accessories, and advanced tool technologies - enabling customers to achieve best-in-class stamping performance.



Zentron, an innovation-driven Indian company, brings deep expertise in Machine Vision and embedded AI, transforming inspection and measurement with solutions like GTron for high-speed inline gauging, iMM for instant easurement, and Hortisort for vision-based fruit sorting.

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