GEVA 3000CL Vision System

GEVA 3000CL

Benefits

- Turbo charged Core i7 processor for demanding applications

- Well suited for applications using line scan technology

- Field proven application software embedded

- Full complement of vision capabilities for tackling challenging tasks

- Flexible camera interface supports area and line scan imaging

- Integrated factory communication protocols simplify 3rd party connections

- Industrial fanless enclosure allows operation in harsh environments

Overview

Flexible Machine Vision for the Factory Floor

GEVA 3000CL is a compact industrial vision system with excellent performance for applications that need higher resolution, faster frame rates or line scan acquisition. The GEVA 3000CL supports the industry standard Camera Link interface and allows simultaneous acquisition from two base style cameras or one medium style camera. The product's rugged, fanless design reduces downtime and maintenance costs associated with deploying standard PC solutions in harsh industrial environments.

GEVA 3000CL is equipped with a low power, Gen3 Core i7 processor and high-speed system resources to effectively manage multi-camera applications. Each of the Camera link ports internally connect through independent high-speed data lanes to alleviate bandwidth bottlenecks often associated with multi-camera acquisition. In addition, the product provides two GigE network ports that can be configured for either camera or network use. The GEVA 3000CL camera ports are compatible with a resolution range of mono or color line and area scan cameras.

In addition to Camera Link and Ethernet ports, the GEVA 3000CL provides standard external interfaces for system integration, including display, 6 USB ports and a serial port. Camera triggering and I/O control is supported directly in the case of Camera Link through an I/O connector on the unit and indirectly in the case of GigE using a companion breakout module. The PL-USB module provides an easy and safe way to connect factory I/O to the GEVA 3000CL and associated cameras.

Vision solutions on GEVA 3000CL are setup using Teledyne DALSA's Sherlock application software. Sherlock offers a full complement of tools, together with interfacing and control options for both user and equipment. Sherlock is field proven software that has been deployed across thousands of industrial applications.

A fully functional software emulator is installed on the GEVA 3000CL that allows users to develop or debug applications offline. The emulator maximizes machine up time during application development and maintenance.

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Specifications

- Storage: 60GB SSD
- Program: 8GB
- Processor: Gen3 Core i7 @ 3.2GHz
- Camera Ports: Camera Link (x2)
- Serial Communication: USB 2.0 (x6), RS232 (x2), GigE Ethernet (x2)
- I/O: 4 IN/4 OUT via DSUB connector on unit
- Display: VGA to QXGA (2048x1536/75Hz)
- Power: 24V (60W) via screw terminal connector
- Temp: 0-45C Operating
- Cooling: Fanless via passive heatsink
- Size: 277 x 89 x 194 mm
- Mounting: Panel mount
- Certifications: CE, FCC Class A, RoHS

Sherlock Application Software

Sherlock is an advanced machine vision application that offers the flexibility and capabilities to satisfy a wide range of automation tasks. The software supports a variety of camera types and communication interfaces that allow optimal matching of inspection and system requirements. The Sherlock development environment enables rapid prototyping and debugging of solutions that can be exposed at runtime through a custom operator interface.
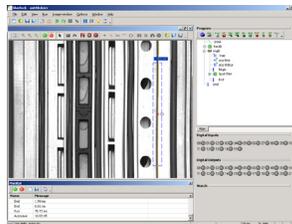
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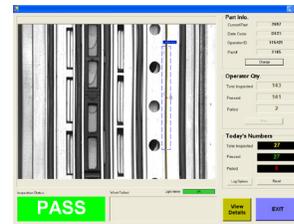
Custom Operator Interface

GEVA 3000CL I/O Interfacing (Camera Link)

The GEVA 3000CL inputs and outputs are available through a 37-pin DSUB connector on the back of the unit. All signals are opto-isolated. Supported I/O includes 4 inputs, 4 outputs, 2 triggers, 2 shaft encoder inputs (phase A and B) and 2 strobe outputs. The physical interface to the cameras is established through the Camera Link connectors and the camera setup is configured using the Teledyne DALSA Sapera CamExpert tool.

GEVA 3000CL in Line Scan Applications

The GEVA 3000CL is well suited for applications that use line scan camera technology. These cameras provide a linear array of pixels that scan a moving object on a line by line basis to form a 2D image. Since the 2D image size is variable, large images can be accumulated for inspection at much lower cost than comparable area based cameras. Line scan applications vary widely in scope, but data transfer bandwidth, image buffers and raw processing power are critical design considerations. Typical applications include unwrapping cylindrical objects as they rotate in front of the camera to inspect for surface defects, assembly or label correctness. Teledyne DALSA is a leading supplier of line scan cameras and solutions.

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