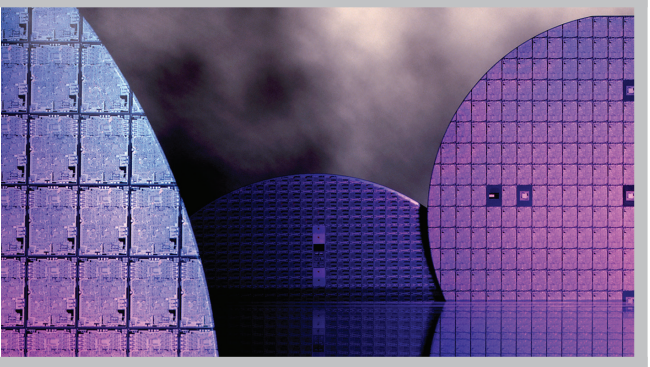
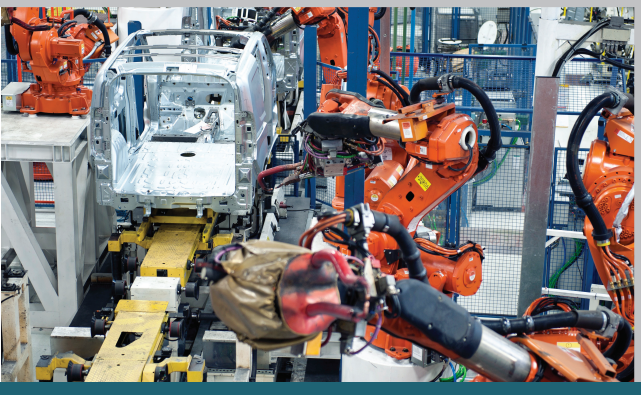
VISICS

Brave New World

Modular Vision™, Machine Vision 4.0

Where it is quicker to deploy powerful single and multiple camera Machine Vision Systems than it is to program a single Smart Camera.





Modular Vision

High Performance Vision You Can Deploy in a Day™

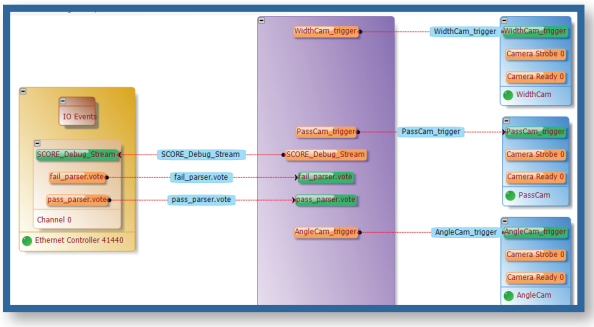
- One cable per device provides power, high speed communication, and synchronization with encoders, triggers, and lighting strobes.
- Perfect synchronization accurate to 1.2 µS
- Images are tagged with metadata that document how the image was taken and for which instance (ex: serial number) of the particular part to be inspected
- Fully utilize modern networks and computers, for high performance at very low cost
- Extremely high speed communication with all major PLCs and sensors
- Light control with no programming or strobe cables, whether driven directly by Opteon cameras, or remotely programmed and triggered over the network
- No Compromises – not on cost, performance, or reliability. Outperforms other systems by every measure.

OpenVision® Systems by Visics

Simple Powerful Effective

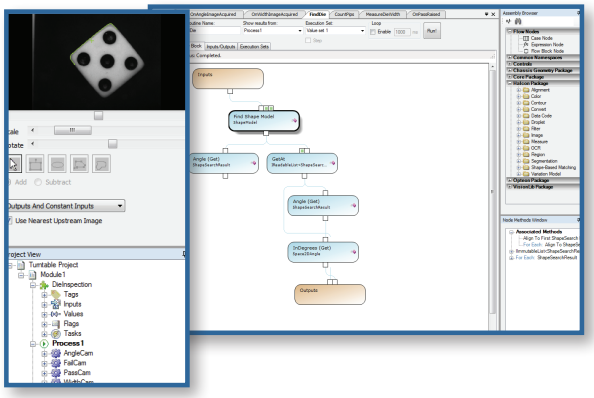
Open Architecture | Seamless Integration | Instantly Deployable | Perfectly Reliable

Choreographer



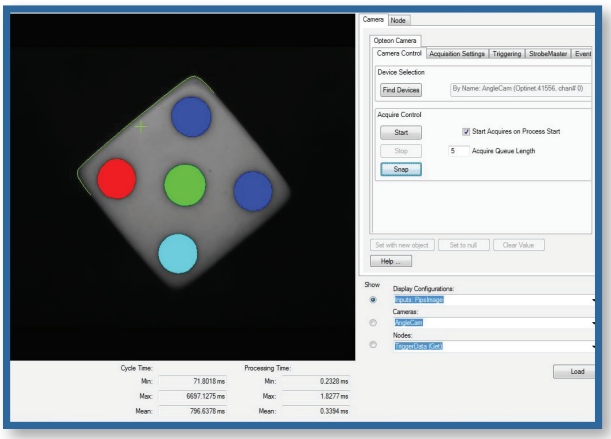
NO CODE, NO UNNCESSARY WIRES Choreographer lets the user draw connections on a graphical map of all of the components of the vision system to indicate the flow of control.

Chassis



NO NEED TO WRITE CODE. A graphical design environment for building even the most sophisticated, multiple camera machine vision applications.

Console



Choreographer®

Graphical Specification and Presentation of System Communication

Chassis®

Code Free Vision Task Development, Open Architecture. Natively use any combination of hardware and software from any vendor as part of your system. Supports GeniCam devices. Directly incorporates any software with a .NET interface and all devices with .NET APIs.

Console

Extensible Operator's Console that allows plant personnel to immediately load and run vision applications and view the results of any portion of the machine vision system. User selection of data to accumulated locally and/or forwarded to Enterprise servers.Connects with industry standard data bases.

CRITIC

Every great performance should have a discerning critic. Chassis deployments have it in CRITIC, a real time continuous monitoring system that logs system data for later review, but also allows you to select in advance which information you would like to record and/or transmit to other consumers on your Enterprise network.

This can include description of which cases should trigger remote notification for process modification or adjustment of the vision system.

The recipients can be other automated systems or in the form of email to on-call personnel. CRITIC functionality also provides the basis for a wide variety of reporting tasks like automatic preparation of control charts for use in measuring your critical production quality parameters. standard data bases.

EASY™

Embedded Application SYstem: 1 to 20 Intel Cores in the same 4x6x2 inch rugged case. Includes a PoE GigE switch to power and coordinate communication with all system peripherals and optionally can also include a 16 port PLC with guaranteed 1.2 µS response.

Maestro®, Composer™, SCORE™

Development environment for generating a natural language description of the machine interactions in a system and compiling it into a race-free control program.

IE Gateway

Industrial Ethernet Gateways are available which communicate any information you choose to and from all major vendors' Programmable Logic Controllers with bi-directional communication using each PLC's native methods and at their maximum rates.

Data will be transmitted to the IE Gateway with the same 1.2 µS guaranteed action time maintained throughout the vision network and is presented to the external PLC at the earliest time the target PLC can receive it. Information received from the PLC is available everywhere in the vision network within 1.2 µS of its transmission from the PLC.

Dedicated IE Gateways are available for each of the major suppliers of PLCs and machine controls:

- Ethernet/IP Adapter
- EtherCAT Slave
- Open Modbus/TCP
- Powerlink
- Profinet IO-RT Device
- Sercos Slave
- Varan Client

EASY

High performance integrated computer, network switch, and PLC system for high speed industrial process control and image processing

Maestro Composer, SCORE

```
itle "Remote Trigger from External Trigger or Trigger Ladder"
egin configuration
onstant unsigned integer TriggerPin is "Camera Trigger Pin" within 0..7
onstant unsigned integer TriggerLadder is "Camera Trigger Ladder" within 0..3
nd

ontinuous process TriggerGenFromInput
egin
       wait for rising edge of input TriggerPin
              send sender 0
nd

ontinuous process TriggerGenFromLadder
egin
       wait for trigger ladder TriggerLadder
              send sender 0
nd

ne-shot process setup
egin
```

SCORE IS A NATURAL LANGUAGE for unambiguously describing all of the normal and abnormal conditions that may arise in the machine and vision systems and their real time responses.

IE Gateway

Opteon's Industrial Ethernet Gateway facilitates the communication of systems incorporating multiple Opteon devices with a variety of Industrial Ethernet networks.

Remote Servers

Opteon's line of NxN Data Gateways are available in single, dual, and quad port PCIe boards that greatly enhance system efficiency and reliability while supplying power to down-stream devices.

Environmentally Protected Cameras

Remote Servers

Conventional Ethernet adaptors squander a substantial amount of the scarce processor resources available on your host computers moving image data rather than operating on it. They can also inject higher latency than your application may tolerate. And they do nothing to ameliorate the high system overhead of displaying imagery in real time.

Opteon's line of NxN Data Gateways are available in single, dual, and quad port PCIe boards that eliminate all three of these potential problems and greatly enhance system reliability. Opteon data gateways are capable of providing up to 90 W per channel of PoE power to subnets composed of embedded computers, cameras, and peripherals with no other source of power required.

Environmentally Protected Cameras: IP 67 & NEMA 4X

Cameras are usually the parts of a machine vision that are closest to where the action is. So they need to be tough enough to accommodate harsh environments and the often even tougher cleaning and sterilization regimes that your applications may require.

Weather your cameras need to meet IP 67 standards for many manufacturing environments, or NEMA 4X for pharmaceutical, medical device, agricultural, or food processing applications all Opteon camera are available with these options.

VISICS

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