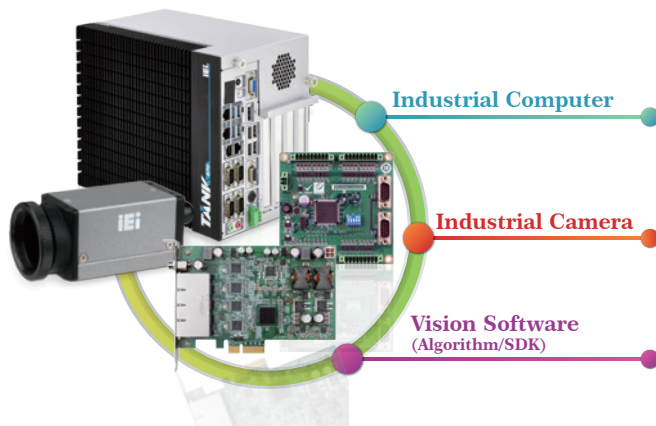


Machine Vision Solution

Industrial Camera & Barcode Reader

IEI MV System Components

Machine vision system needs more than just a camera, lens and light source. A stable vision system also requires computers for handling data transfer and image processes. Our goal is to provide compatible and solidify vision system which can greatly reduce your development time.



■ Camera

The architecture of the IEI Camera is based on USB3 Vision and GenICam standard, which offers you compatible interface with name-brand machine vision software. The plug and play USB3 interface can easily reduce the complex of vision system.

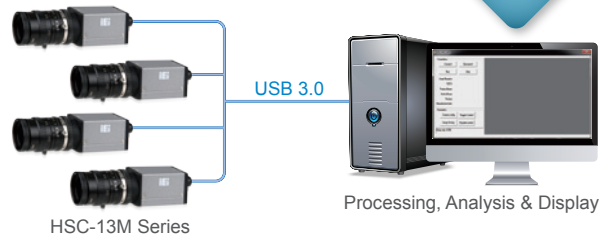
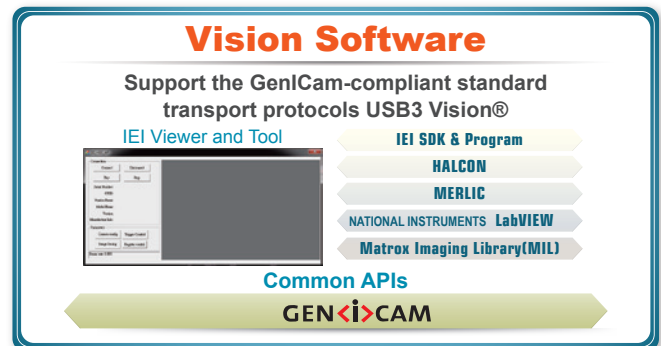
IEI has developed lots of customized optical imaging products and has lots of patents (barcode) in the image algorithm. IEI, now, has the ability to customize image preprocessing and camera design and manufacturing.

■ Industrial Computer

IEI offers high-quality and reliable industrial computers which are designed to against extreme environment to fulfill factory requirements. With high compatibility and performance, IEI industrial computers are suitable to be used with machine vision system. Additionally, the flexible expansion interface allows installation of add-on cards and peripheral devices such as PoE card, I/O board and motion board for different application environment.

■ Software

IEI offers viewer and tools for you to configure camera parameters to capture and display images, and to evaluate the camera. If your current inspection software does not support USB3 Vision, IEI also provides a powerful SDK for you to develop your software to access IEI cameras.



TANK-870-Q170

- 6th Gen Intel® Core™ i7 / i5 processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board power connector for providing power to add-on cards
- Great flexibility for hardware expansion
- 4 x USB 3.1 Gen 1 (5Gb/s)



TANK-870E-H110

- 6th Gen Intel® Core™ i7 / i5 processor platform with Intel® H110 chipset and DDR4 memory
- Support dual display VGA+HDMI
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion
- 4 x USB 3.1 Gen 1 (5Gb/s)



ITDB-100 Series

- Connection I/O interface: USB, Ethernet TCP/IP
- Support hardware and software trigger modes, both with one shot, series shot, batch and presentation options
- Automatic or manual CMOS sensor configuration: exposure, gain and brightness options supported
- LED: External / Internal
- Region of Interest setting



IPCIE-4POE

PoE Card

- PCI Express® x4 compliant
- Support for IEEE 802.3af for PoE (Power over Ethernet) with 15.4 watts per port
- Support link aggregation/jumbo frames (9 Kbyte)
- Supports 12V~24V AT/ATX DC input power



Camera Applications

PCBA Production & Inspection

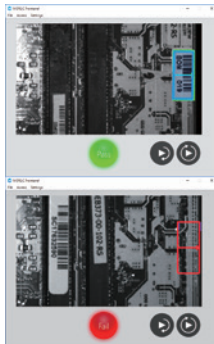
Industrial 4.0 is to implement a low volume and flexible manufacturing system. In electronics production lines, a variety of PCBAs can be produced, and a flexible inspection system for checking various PCBA components is the key to ensure the efficiency and effectiveness of mixing production.

Machine vision can bring great improvement on quality control of production lines. Almost all of the manufacturing processes need appearance inspection to check for defects, position, orientation...etc. to ensure devices such as motherboard, PCB have all components place on the accurate locations.



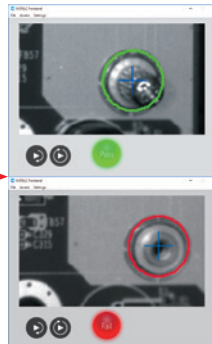
Motherboard Appearance Inspection

Barcode Position



Barcode Position

Screw Positioning



Screw Positioning

Functions:

- (1) BGA orientation
- (2) QFP shift
- (3) QFN missing
- (4) Screw missing
- (5) Label missing

Hardware Spec:

- 1 x HSC-13M3-O
- C-Mount 8mm lens
- TANK-870-Q170 i7 CPU IPC with I/O card

PCB Appearance Inspection

Barcode Recognition



Parts Absence

Label Positioning



OCR

Functions:

- (1) Pin missing
- (2) Barcode reading
- (3) Label missing
- (4) OCR
- (5) Part missing
- (6) Part shifting

Hardware Spec:

- 1 x HSC-13M3-O
- C-Mount 8mm lens
- TANK-870-Q170 i7 CPU IPC with I/O card