

# VisionNavi

## Machine Vision Edge Solution Ready Platform



### Features

- User-friendly, flowchart-based user interface to simplify development and deployment
- Support multiple tasks, branch, loop, and formula for advanced vision applications
- Support up to four GigE Vision, USB Vision cameras
- Thread-safe and multitasking vision inspection

### Introduction

Advantech VisionNavi is a programmable machine vision software that facilitates flowchart-based user interface to develop and deploy multiple task, complex machine vision applications. It supports a wide range of Advantech industrial PCs and cameras. VisionNavi provides an easy approach to system installation and project development while reducing future maintenance costs.

VisionNavi is suitable for a wide range of automated inspection applications aimed at defect inspection, gauging and quality assurance which need different conditional branches, steps or loops to complete the task. Programmer can easily configure each process and determine the next action depends on the different results, meanwhile the result can be inherited to the next steps, becomes the reference or parameters for the next process. Due to the comprehensive user interface, programmer can define NG/OK criteria for object classification, and communicate with the external device: position sensor, robots, NC, PLC, Motion control systems.

### Specifications

#### Image Acquisition

- **Compatibility** GigE Vision, USB Vision
- **No. of cameras** up to 4
- **Type** Camera, image file input
- **Mode** External trigger, Software trigger, Free run
- **Resolution** Up to 20 Mega Pixel (5472 x 3468)
- **Color Format** Mono, Bayer Pattern

#### Tools

- **R.O.I** Rectangle, Polygon, Circle, Ellipse, Ring, Pie
- **Identification** 1D bar code, Data Matrix Code, QR Code, O.C.R (Optical Character Recognition)
- **Alignment** Pattern Matching, Advanced Pattern Matching
- **Gauge** Line, Circle, Angle, Arc, Pitch
- **Inspection** Color domain, Spatial domain, Frequency domain preprocessing
- **Sequence** Switch Case, Loop, If else
- **System** User authority, Split Display, Statistical Analysis

#### Result Settings

- **Operator** AND, OR, NOT, XOR, Addition, Subtraction, Multiplication, Division
- **Data format** String, Numeric

#### I/O and Communication

- **Ethernet** TCP/IP
- **PLC Protocol** MITSUBISHI MC, OMRON FINS
- **Digital I/O** 4 Trigger input, 12 Digital output
- **History** CSV file, image file

#### Environment

- **O.S** Windows 10 32/64 bit
- **Language** English, Simplified Chinese
- **Display** 1200x800 or above

### Ordering Information

#### SW License

- **36ASESRPVEFU01 Full license**
- **36ASESRPVEAL01 Alignment partial license**
- **36ASESRPVEID01 ID partial license**

#### Industrial Camera

- **QCAM-GM640-300CE** 1440 x 1080 Mono GigE 300fps
- **QCAM-GC640-300CE** 1440 x 1080 Color GigE 300fps
- **QCAM-GM1440-073CE** 1440 x 1080 Mono GigE 73fps
- **QCAM-GC1440-073CE** 1440 x 1080 Color GigE 73fps
- **QCAM-GM2440-020CE** 2448 x 2048 Mono GigE 20fps
- **QCAM-GC2440-020CE** 2448 x 2048 Color GigE 20fps

#### Platform

- **AIIS-3410** Compact Vision System, Supports Intel® 6th generation Core i CPU
- **MIC-770** Compact Fanless System with 8th Gen Intel® Core™ i CPU Socket (LGA 1151)
- **IPC-220** Compact Industrial Computer System with 6th/7th Gen Intel® Core™ i CPU Socket (LGA 1151)
- **UNO-2100** Intel® 7th Core™ i7/i5® 3965U Regular-Size Modular Box Platform
- **TPC-300** Touch Panel Computer with 8th Gen. Intel® Core™ i3/i7 Processor
- **PPC-3181SW** Fanless Panel PC with Intel® Core™ i5-6300U Processor
- **AMAX-5580** Intel® Core™ i7/i5 Control IPC With EtherCAT Slice IO Expansion

#### Capture cards

- **PCIE-1674E** 4-Port PCI Express GigE vision frame grabber

#### I/O Cards

- **PCIE-1730-AE** 32-ch TTL and 32-ch isolated digital I/O PCIE card