

Camera & Software Vision Package

## PC VISION SYSTEM FJ SERIES

Create your ideal system



» Flexible vision system

» Easy customization

» Highly robust cutting-edge algorithms

# Quick Installation on Your PC-based Systems

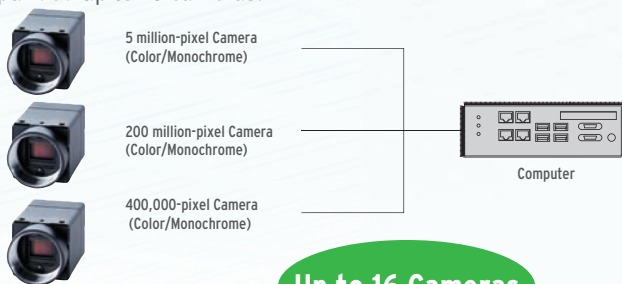
Omron now provides our machine vision solution developed for the manufacturing floor as a package that can be installed on PC-based systems.

## Cameras

Connect quickly and Expand easily

### GigE Cameras

Six different GigE cameras which has compatibility with FJ software are available. They can realize quick connectivity and stable working. It can be expanded up to 16 cameras.



## Measurement Controls

Simple programming and quick testing

### Menu driven Software

More than 100 proven processing items from OMRON, have a GUI developed for the manufacturing floor in a long factory automation experiences. This greatly reduces program development work in comparison with library based programming.



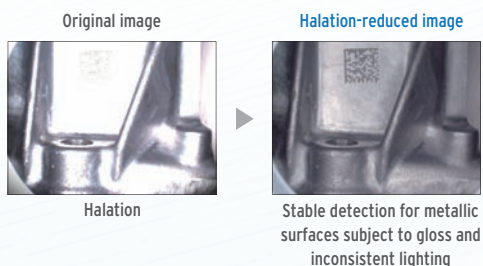
Computer with Application Software installed.

## Algorithms

Highly robust measurement algorithms.

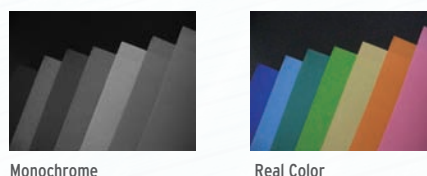
### HDR Sensing

The dynamic range has been increased by up to 5,000 times to enable clear imaging of inspection objects that was previous not possible due to lighting inconsistencies or halation.



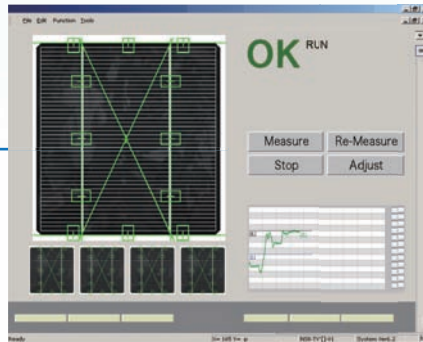
### Real Color Sensing

Inspecting real color data enables detecting minute differences in colors that are difficult to detect with color gray conversion or filtering.



## GUI Design

### Quick development original GUIs

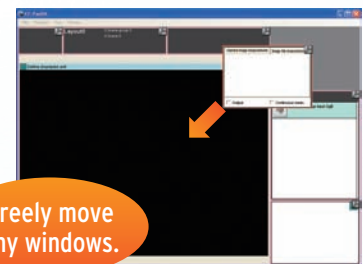


Operation GUI Example

(This example was created with FJ's Application Producer and Visual Studio®.)

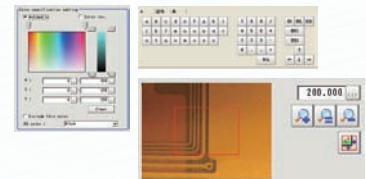
### Layout Editor

You can easily customize the positions, sizes, and functions of windows and buttons based on OMRON's GUIs, which are highly appraised for being easy to use and easy to understand.



### Wide Range of GUI Modules

You can use a lot of custom controls and sample codes implemented in Application Producer to create your own GUIs easily.



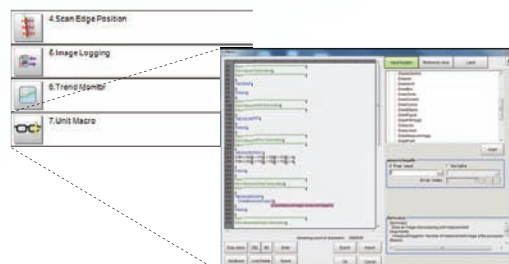
## Programming

### Implement own program

You can implement your own program as original processing item with using Visual Studio® and Application Producer easily.

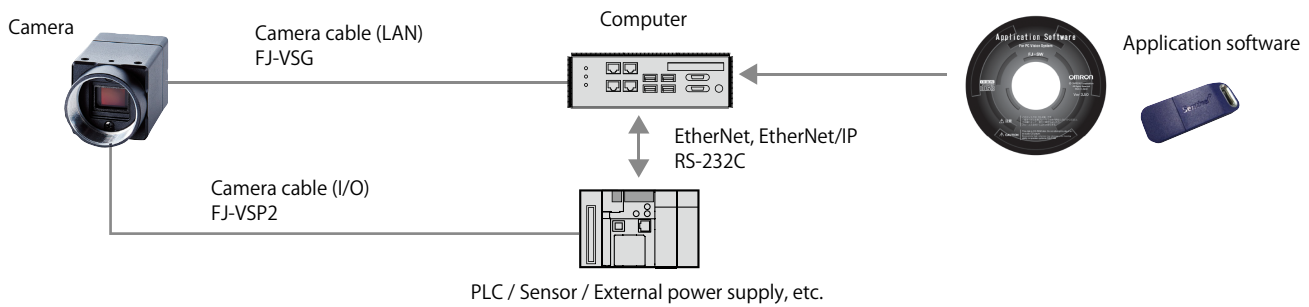
### Macro Processing Items

You can implement even advanced calculations on the processing flow as a Macro processing items easily. It allow you to edit the program on the controller and the compiling is not necessary. So you can develop and adjust the system quickly.



·Microsoft® Visual Studio® and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.  
·Intel and the Intel logo are trademarks of Intel Corporation in the U.S. and/or other countries.  
·Other company names and product names in this document are the trademarks or registered trademarks of their respective companies.

## System configuration



## Ordering Information

Type		Model		Operating environment	
Camera & Software Vision Package • Application software × 1 license (CD-ROM × 1, Dongle key × 1) • Camera × 1 unit		400,000 pixels	Monochrome	<b>FJ-SG2-S</b>	<ul style="list-style-type: none"> <li>• CPU: Intel Pentium Processor (SSE2 or higher)</li> <li>• OS: Windows7 Professional (32/64bit) or Enterprise (32/64bit) or Ultimate (32/64bit), Windows 10 Pro (32/64bit)</li> <li>• .NET Framework: .NET Framework 3.5 or higher</li> <li>• Memory: At least 2 GB RAM</li> <li>• Available disk space: At least 2 GB</li> <li>• Camera interface: Ethernet 1000BASE-T</li> <li>• Display: XGA (1024 × 768), True Color (32-bit) or higher</li> <li>• Optical drive: CD/DVD drive</li> </ul>
		400,000 pixels	Color	<b>FJ-SCG2-S</b>	
		2 million pixels	Monochrome	<b>FJ-S2MG2-S</b>	
		2 million pixels	Color	<b>FJ-SC2MG2-S</b>	
		5 million pixels	Monochrome	<b>FJ-S5MG2-S</b>	
		5 million pixels	Color	<b>FJ-SC5MG2-S</b>	
Camera (Single unit)		400,000 pixels	Monochrome	<b>FJ-SG2</b>	
		400,000 pixels	Color	<b>FJ-SCG2</b>	
		2 million pixels	Monochrome	<b>FJ-S2MG2</b>	
		2 million pixels	Color	<b>FJ-SC2MG2</b>	
		5 million pixels	Monochrome	<b>FJ-S5MG2</b>	
		5 million pixels	Color	<b>FJ-SC5MG2</b>	
Tripod Mount (Optional adapter for fastening the camera with tripod screws)		—		<b>TP-KWA</b>	
Camera cable (LAN)		Cable length: 3 m, 5 m, 10 m, 20 m, 40 m		<b>FJ-VSG □M</b>	
Camera cable (Power, I/O)		Cable length: 3 m, 5 m, 10 m		<b>FJ-VSP2 □M</b>	
Development environment Application Producer (Version 6.31A or higher)	Media only	CD-ROM		<b>FH-AP1</b>	<ul style="list-style-type: none"> <li>• CPU: Intel Pentium Processor (SSE2 or higher)</li> <li>• OS: Windows 7 Professional (32/64bit) or Enterprise (32/64bit) or Ultimate (32/64bit), Windows 8 Pro (32/64bit) or Enterprise (32/64bit), Windows 8.1 Pro (32/64bit) or Enterprise (32/64bit), Windows 10 Pro (32/64bit) or Enterprise (32/64bit)W</li> <li>The following operating environment is required to use the camera FJ-S□□G2.</li> <li>Windows 7 Professional (32/64bit) or Enterprise (32/64bit) or Ultimate (32/64bit), Windows 10 (32/64bit)</li> <li>• .NET Framework: .NET Framework 3.5 SP1 or higher</li> <li>• Memory: At least 2 GB RAM</li> <li>• Available disk space: At least 2 GB</li> <li>• Browser: Microsoft® Internet Explorer 6.0 or later</li> <li>• Display: XGA (1024 × 768), True Color (32-bit) or higher</li> <li>• Optical drive: CD/DVD drive</li> <li>• The following operating environment is required to use the Camera FJ-S□□G2.</li> <li>Camera interface: Ethernet 1000BASE-T</li> <li>• The following software is required to customize the software: Microsoft® Visual Studio® 2008 Professional, or Microsoft® Visual Studio® 2010 Professional, or Microsoft® Visual Studio® 2010 Professional</li> </ul>
	1 license	—		<b>FH-AP1L</b>	

## Ratings and Performance

### Camera

	FJ-SCG2/SG2	FJ-SC2MG2/S2MG2	FJ-SC5MG2/S5MG2
<b>Imaging element</b>	Progressive scan 1/2.9" CMOS	Progressive scan 1/1.7" CMOS	Progressive scan 2/3" CMOS
<b>Effective pixels</b>	720 (H) × 540 (V)	1,624 (H) × 1,240 (V)	2,448 (H) × 2,048 (V)
<b>Frame rate</b>	282.8 fps	54.6 fps	21.9 fps
<b>I/F</b>	Gigabit Ethernet (1 Gbit/s)		
<b>Lens mount</b>	C mount		

Refer to the datasheet for details.

**OMRON Corporation** Industrial Automation Company  
Tokyo, JAPAN

Contact: [www.ia.omron.com](http://www.ia.omron.com)

#### Regional Headquarters

##### OMRON EUROPE B.V.

Wegalaan 67-69-2132 JD Hoofddorp  
The Netherlands  
Tel: (31)2356-81-300/Fax: (31)2356-81-388

##### OMRON ELECTRONICS LLC

One Commerce Drive Schaumburg,  
IL 60173-5302 U.S.A.  
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

##### OMRON ASIA PACIFIC PTE. LTD.

No. 438A Alexandra Road # 05-05/08 (Lobby 2),  
Alexandra Technopark,  
Singapore 119967  
Tel: (65) 6835-3011/Fax: (65) 6835-2711

##### OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

#### Authorized Distributor:

© OMRON Corporation 2011-2020 All Rights Reserved.  
In the interest of product improvement,  
specifications are subject to change without notice.

**CSM\_4\_3**  
**Cat. No. Q185-E1-04**

Printed in Japan  
1220(0811)