

iVu Series



Vision Sensor

- Configure in minutes with or without a PC
- Perform more inspections with fewer devices
- All-in-one solution with sensor, lens, and light



The simplicity of a photoelectric sensor and the intelligence of a smart camera

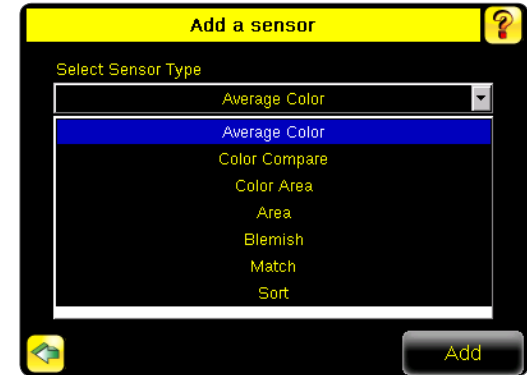
All-inclusive vision sensor with lens, light, I/O and touch screen programming



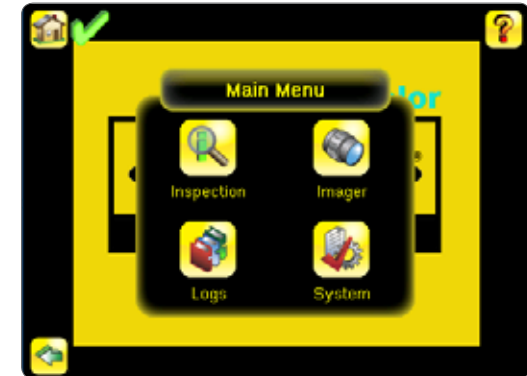
Simple setup from anywhere



Ability to change parameters on the fly saves valuable time without needing to stop and restart the inspection

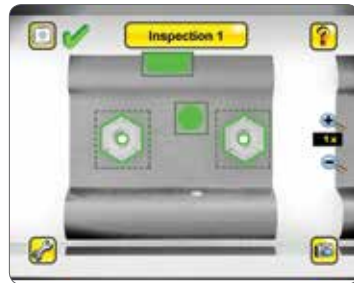


Application flexibility with the ability to add up to nine sensors per inspection and 30 inspections per iVu



Quickly set up your inspection with intuitive menus

Real time feedback to determine the mode of failure for an application





iVu Color Sensor

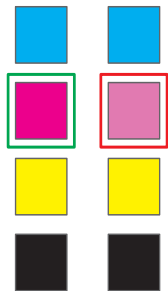


Used to monitor parts for color or color variations in addition to type, size, orientation or position

Average Color

Reports the average color of a part

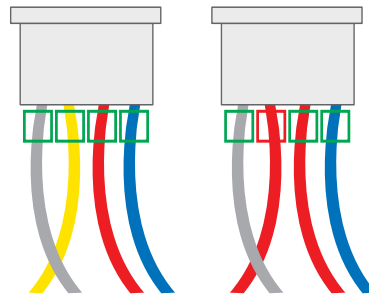
- Monitor ink color changes over time
- Provide color information for part sorting
- Verify trim pieces in automotive assembly



Color Area

Verifies a feature, or multiple features, are the correct color and present on a part

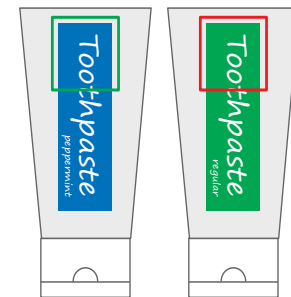
- Verify a wire placement and color
- Label verification based on color
- Verify the color and correct number of bottles in a case



Color Compare

Verify that a part matches its reference color

- Confirm label color on a package
- Verify color of a bottle cap
- Check stain color on wood





iVu Vision Sensor



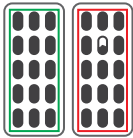
Used to monitor parts for type, size, orientation or position



Match

Verifies a pattern, shape or orientation is correct

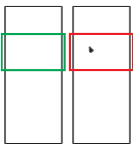
- Verifies orientation and that the correct label is applied
- Weld nut orientation inspection
- Validate shape of parts



Area

Verifies a feature, or multiple features, are present on a part

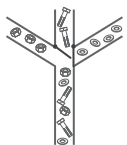
- Blister pack inspection
- Count holes on a stamped part
- Verify complete assembly of a filter



Blemish

Finds areas of high contrast in the image

- Detect foreign material on a web
- Confirm presence of text on a container
- Verify safety seal on a cap



Sort

Recognizes and sorts different patterns of parts

- Identify and sort parts on a production line
- Confirm the correct parts are in a medical kit



iVu Barcode Reader (BCR)



Barcode reading capabilities for traceability applications

2D Bar Codes

- Data Matrix (ECC200)
- QR & Micro QR

1D Bar Codes

- Code 128
- Code 39
- Code 93
- Codabar
- DataBar
- Interleaved 2 of 5
- EAN-13 (UPC-A)
- EAN-8
- UPC-E
- IMB
- PDF417
- Postnet
- Pharmacode





Build Your iVu

Series IVU2P	Touch Screen T	Sensor Type G	Ring Light Color R	Lens (mm) 04
	T = Integrated R = Remote*	C = Color† G = Grayscale B = Barcode	R = Red B = Blue G = Green W = White I = Infrared 6 = UV365 9 = UV395 XC = C-mount** X = No Ring Light	04 = 4.3 06 = 6 08 = 8 12 = 12 16 = 16 25 = 25 Blank = No lens (only C-Mount)

* Remote display or PC is required for set up and viewing of Remote Touch Screen sensors
 ** Requires C-mount lens
 † Color sensor only available in white, C-mount or no ring light

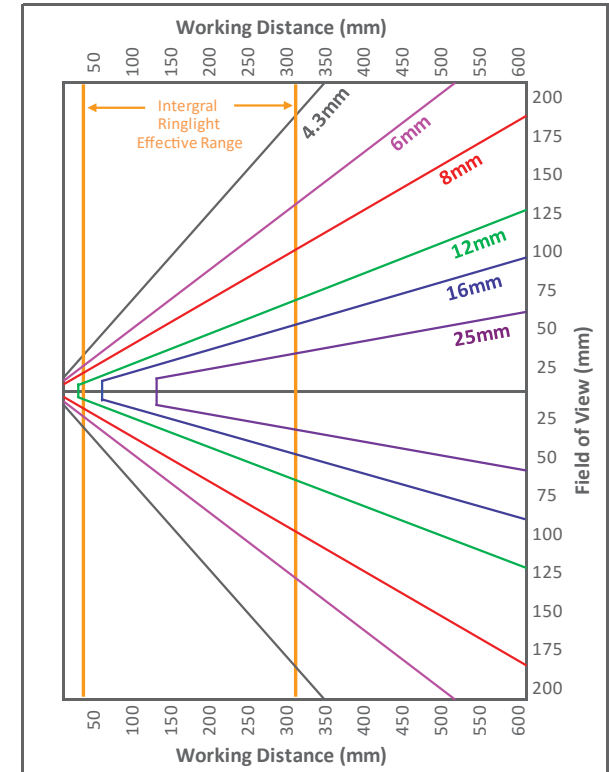


Machine-Mountable Remote Display

Description	Model
3.5" diagonal remote touch screen — for programming and monitoring	RDM35

Banner Vision Manager makes it quick and easy to setup any iVu Series vision sensor. It features an intuitive operating environment that users of all experience levels can easily navigate. Go to www.bannerengineering.com/vision-manager

iVu Lens Chart



* When set to max FOV

Lenses

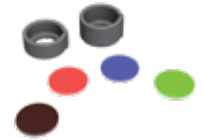
Additional interchangeable lenses available for application flexibility



Description	Model
4.3 mm	LMF04
6 mm	LMF06
8 mm	LMF08
12 mm	LMF12
16 mm	LMF16
25 mm	LMF25

Filter Kits[†]

Optional accessory used to create additional contrast



Description	Model
Red	FLTMR2
Blue	FLTMB
Green	FLTMG
Infrared	FLTMI*

* Infrared pass filters are preinstalled on infrared ring light models.
[†] Filter kits include 1 color and two sizes of filter holders.

C-Mount Standard Lenses

Required accessory for C-Mount sensor



Description	Model
4 mm	LCF04
8 mm	LCF08
12 mm	LCF12
16 mm	LCF16
25 mm	LCF25R
50 mm	LCF50L2R
75 mm	LCF75LR

C-Mount Lens Covers

Provides IP67 rating for C-Mount sensor



Description	Model
50 mm	IVUSLC50-P
75 mm	IVUSLC75-P

Cordsets

Power Required



M12/Euro-Style with Shield
 Straight connector models listed; for right-angle, add **RA** to the end of the model number (example, **MQDC2S-1206RA**)

12-Pin
MQDC2S-1206 2 m (6.5')
MQDC2S-1215 5 m (15')
MQDC2S-1230 9 m (30')
MQDC2S-1250 15 m (50')

Ethernet
 Required for Ethernet communications



RJ45 to 4-Pin Pico QD

4-Pin	
IVUC-E-406 2 m (6.5')	IVUC-E-450 12 m (50')
IVUC-E-415 5 m (15')	IVUC-E-475 23 m (75')
IVUC-E-430 9 m (30')	

USB

Used to update firmware and access sensor files



4-Pin Pico

PSG-4M-4005-USB 0.15 m (0.5')
PSG-4M-401-USB 0.3 m (1')
PSG-4M-403-USB 0.9 m (3')
PSG-4M-410-USB 3 m (10')

Straight connector models listed

Machine Mountable Remote Display
 Required for use of RDM35 remote display



8-Pin

IVURDM-QD-803 1 m (3')
IVURDM-QD-806 2 m (6')
IVURDM-QD-815 5 m (15')
IVURDM-QD-830 9 m (30')
IVURDM-QD-850 16 m (50')

Double-ended M12 Euro Style
 Straight connector models listed; for right-angle, add **RA** to the end of the model number (example, **IVURDM-QD-803RA**)

Brackets



SMBIVURAL
 Stainless steel left mount right-angle bracket



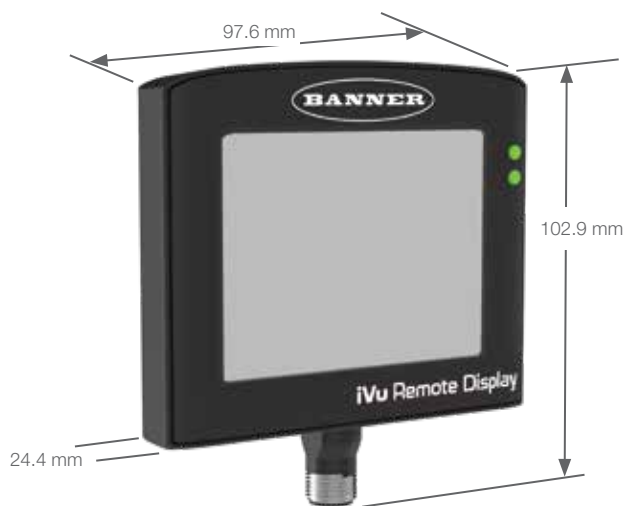
SMBIVURAR
 Stainless steel right mount right-angle bracket







SMBIVUU
 Stainless steel U-shaped swivel bracket



SMBRDM35
 Docking station for machine mountable remote display



Specifications

Power Requirements	Voltage: 10 to 30 V dc Current: 1 A maximum (exclusive of I/O load)																								
Connections	USB 2.0 Host: 4-pin Pico (M8) female connector Ethernet: 4-pin Pico (M8) male connector Power: 12-pin (M12) Euro male connector																								
Communications	Ethernet (10/100 Mbps), Serial RS-232																								
Ethernet Protocols	EtherNet/IP™, Modbus/TCP, PROFINET®																								
Output Configuration	3 software selectable NPN or PNP, Strobe Out																								
Output Rating	150 mA																								
External Strobe Output	+5 V dc																								
Acquisition	60 fps (frames per second)																								
Exposure Time	0.1 ms to 1.049 s																								
Imager	1/3 inch CMOS 752 × 480 pixels; adjustable Field of View (FOV)																								
Lens Mount	Micro Video Lens models: M12 × 1 mm thread C-Mount models: Standard C-mount																								
Construction	Housing: Black PBT Back Cover: Die-cast zinc Window: Acrylic																								
Environmental Rating	IEC IP67; C-mount models require lens cover																								
Operating Conditions	Integrated models: 0 to +45 °C (+32 to +113 °F) Remote models: 0 to +40 °C (+32 to +104 °F)																								
PC Requirements	Microsoft Windows version 7, 8 or 10																								
Vision Sensor Capabilities	<table border="1"> <thead> <tr> <th>iVu</th> <th>iVu BCR</th> <th>iVu Color</th> </tr> </thead> <tbody> <tr> <td>Match</td> <td>1D codes</td> <td>Average Color</td> </tr> <tr> <td>Area</td> <td>2D codes</td> <td>Color Compare</td> </tr> <tr> <td>Blemish</td> <td></td> <td>Color Area</td> </tr> <tr> <td>Sort</td> <td></td> <td>Match (grayscale only)</td> </tr> <tr> <td></td> <td></td> <td>Area (grayscale only)</td> </tr> <tr> <td></td> <td></td> <td>Blemish (grayscale only)</td> </tr> <tr> <td></td> <td></td> <td>Sort (grayscale only)</td> </tr> </tbody> </table>	iVu	iVu BCR	iVu Color	Match	1D codes	Average Color	Area	2D codes	Color Compare	Blemish		Color Area	Sort		Match (grayscale only)			Area (grayscale only)			Blemish (grayscale only)			Sort (grayscale only)
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