iVu Barcode Reader (BCR)

Datasheet

Features

The iVu Series Barcode Reader (BCR) package consists of lighting, sensor, and lens, and display. Appropriate cables and mounting brackets can be ordered for each application. Additionally, other lenses, brackets, filters and external lights are available. Installation, setup, and configuration can be done quickly without requiring a PC to configure the sensor.

- No external PC required to configure the sensor
- Image processing expertise is not required
- USB 2.0 compliant host provided for easy updating and diagnotistics
- An RS232 serial communications port that is used to output barcode data to other applications.
- High speed processing

The iVu BCR reads the following barcode types:

- DataMatrix (ECC 200) barcodes
- Linear barcodes:
  - Code128
  - Code39
  - CODABAR
  - Interleaved 2 of 5
  - EAN13
  - EAN8
  - UPCE
  - Postnet
  - IMB
  - Pharmacode

Models

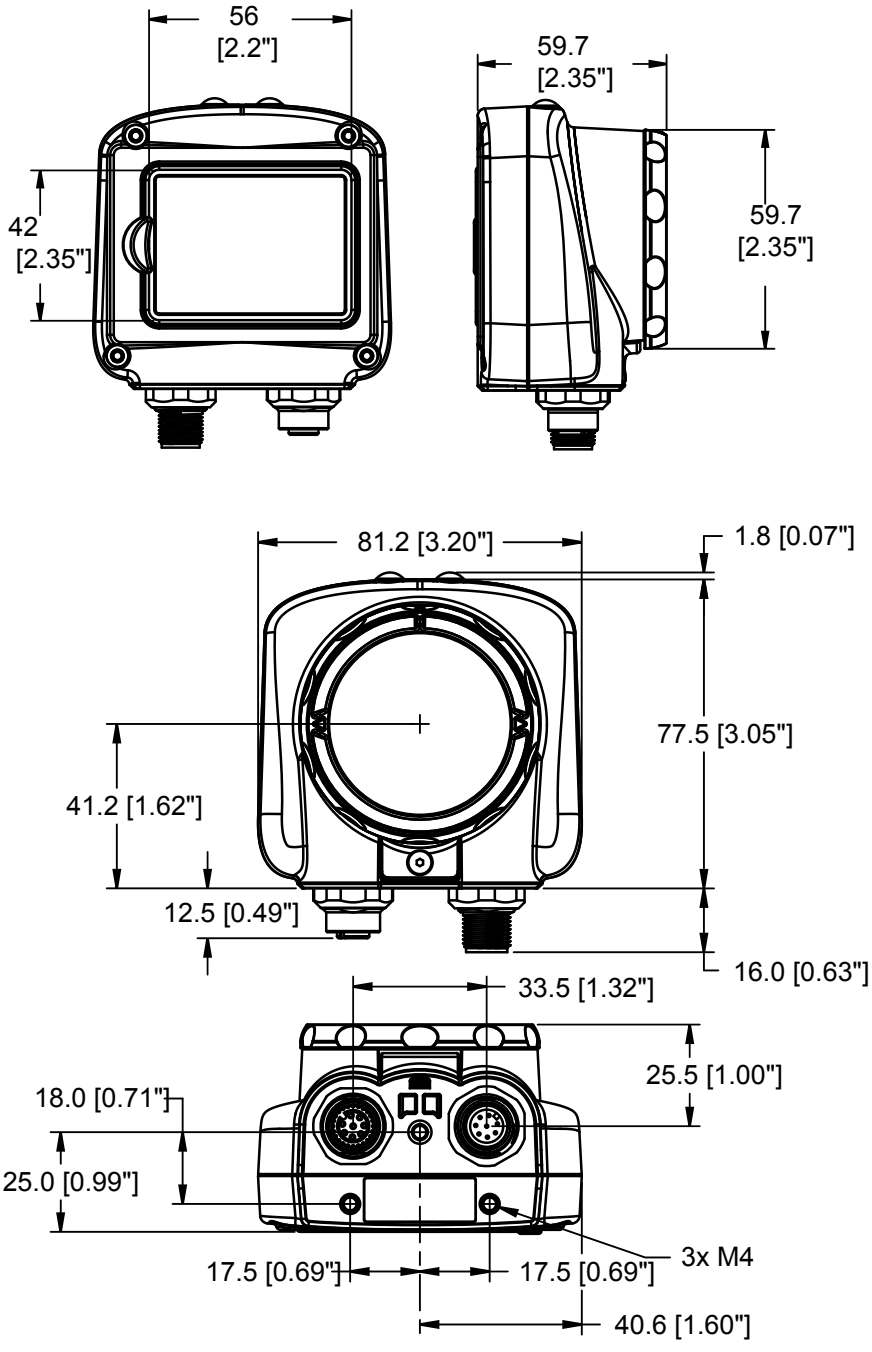
Ring Light Options	Lens Options						
	4.3 mm	6 mm	8 mm	12 mm	16 mm	25 mm	Output Type
None	**IVUTBNX04**	**IVUTBNX06**	**IVUTBNX08**	**IVUTBNX12**	**IVUTBNX16**	**IVUTBNX25**	NPN
	IVUTBPX04	**IVUTBPX06**	**IVUTBPX08**	**IVUTBPX12**	**IVUTBPX16**	**IVUTBPX25**	PNP
Red	**IVUTBNR04**	**IVUTBNR06**	**IVUTBNR08**	**IVUTBNR12**	**IVUTBNR16**	**IVUTBNR25**	NPN
	IVUTBPR04	**IVUTBPR06**	**IVUTBPR08**	**IVUTBPR12**	**IVUTBPR16**	**IVUTBPR25**	PNP
IR	**IVUTBNI04**	**IVUTBNI06**	**IVUTBNI08**	**IVUTBNI12**	**IVUTBNI16**	**IVUTBNI25**	NPN

Ring Light Options	Lens Options						
	4.3 mm	6 mm	8 mm	12 mm	16 mm	25 mm	Output Type
	IVUTBPI04	**IVUTBPI06**	**IVUTBPI08**	**IVUTBPI12**	**IVUTBPI16**	**IVUTBPI25**	PNP
White	**IVUTBNW04**	**IVUTBNW06**	**IVUTBNW08**	**IVUTBNW12**	**IVUTBNW16**	**IVUTBNW25**	NPN
	IVUTBPW04	**IVUTBPW06**	**IVUTBPW08**	**IVUTBPW12**	**IVUTBPW16**	**IVUTBPW25**	PNP

Sensor Specifications

Feature	Description
Power Connection	12-pin Euro-style (M12) male connector; accessory cable required for operation (see (*Power Cable — Required* on page 6).
USB 2.0 Host	8-pin Euro-style (M12) female connector; optional USB cable required for operation of USB Thumb Drive(see *USB Cable — Optional* on page 6).
Power Requirements	**Voltage:** 10-30V dc; **Current:** 800 mA maximum (exclusive of I/O load)
Output Configuration	NPN or PNP determined by model
Demo Mode	Full tool functionality on canned images
Sensor Lock	Optional password protection
External Strobe Output	+ 5V dc
Integrated Ring Light	Red, IR, White
Output Rating	150 mA
Display	68.5 mm (2.7") LCD Color Integrated Display 320 X 240 pixels
Acquisition	50 fps (frames per second) max.
Exposure Time	0.1 ms to 1.049 s
Imager	1/3 inch CMOS 752 X 480 pixels; adjustable Field of View (FOV)
Lens Mount	M12 X 1 mm thread; micro video lens 4.3, 6, 8, 12, 16, 25 mm
Construction	Black Valox™ sensor housing; acrylic window **Weight:** Approximately .295 kg (10.4 oz.)
Environmental Rating	IP67
Operating Conditions	**Stable Ambient Temperature:** 0° to + 50° C (+32° to + 122° F) **Relative Humidity:** 95%, max. relative, non-condensing
Certifications	CE

Dimensions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3x M4
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17.5 [0.69"]
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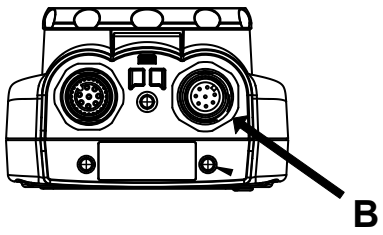
Cable Connections for iVu BCR with Integrated Display

The power and I/O cable for the iVu Series sensor is available in 2, 5, 9, and 15 m (6, 15, 30, 50') lengths. The connector on the sensor is shown below (**B**).



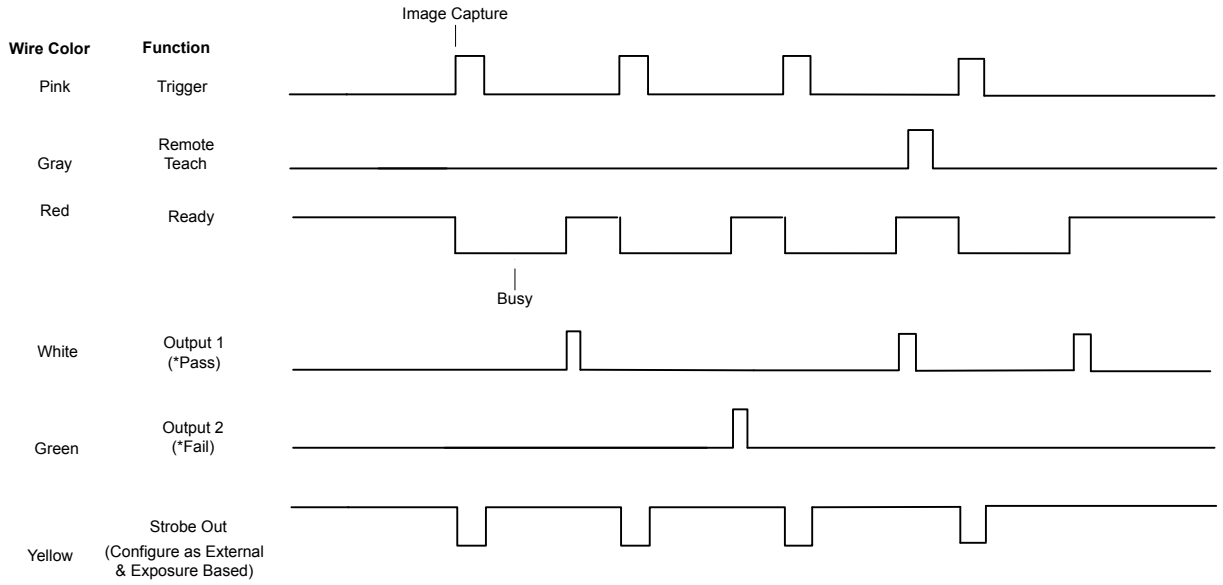
Power I/O Connections			
Pin #	**Wire Color**	**Description**	**Direction**
2	Brown	10-30V dc	Input
7	Blue	Common (Signal Ground)	Input
6	Pink	External Trigger	Input
5	Gray	Remote Teach	Input
1	White	Output 1	Output
8	Red	Ready	Output
4	Yellow	Strobe Out (5V dc only)	Output
3	Green	Output 2	Output
9	Orange	Not used	N/A
10	Light Blue	RS-232 TX	Output
11	Black	RS-232 Signal Ground	Output
12	Violet	RS-232 Rx	Input

iVu Trigger and Remote Teach

The iVu has two input signals—Trigger and Remote Teach. The default setting for PNP sensors is to detect the Trigger or Remote Teach input on the low to high transition. For NPN sensors the default setting is to detect the Trigger or Remote Teach input on the high to low transition. This setting can be changed in the Input Polarity screen on the sensor.

PNP Sensor

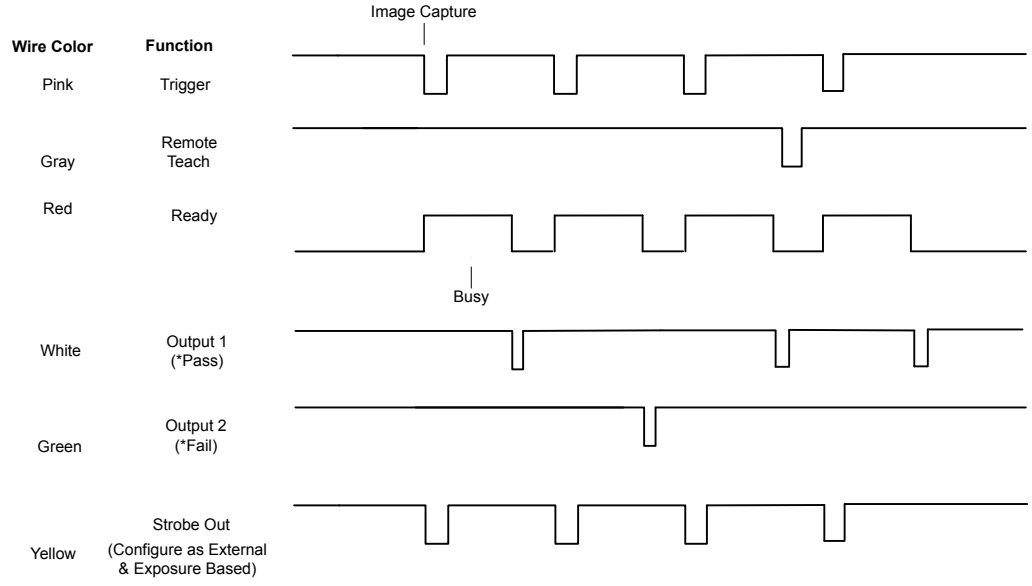
Below are the iVu PNP sensor waveforms. The PNP sensor triggers from low to high, and Remote Teach behaves electrically like trigger.



* Programmable

NPN Sensor

Below are the NPN sensor waveforms. By default, the NPN version of the sensor triggers from high to low, and Remote Teach behaves electrically like trigger.



* Programmable

Power Cable — Required

Model	Length	Description
MQDC2S-1206	2 m (6')	12-pin cable, straight
MQDC2S-1215	5 m (15')	
MQDC2S-1230	9 m (30')	
MQDC2S-1250	16 m (50')	

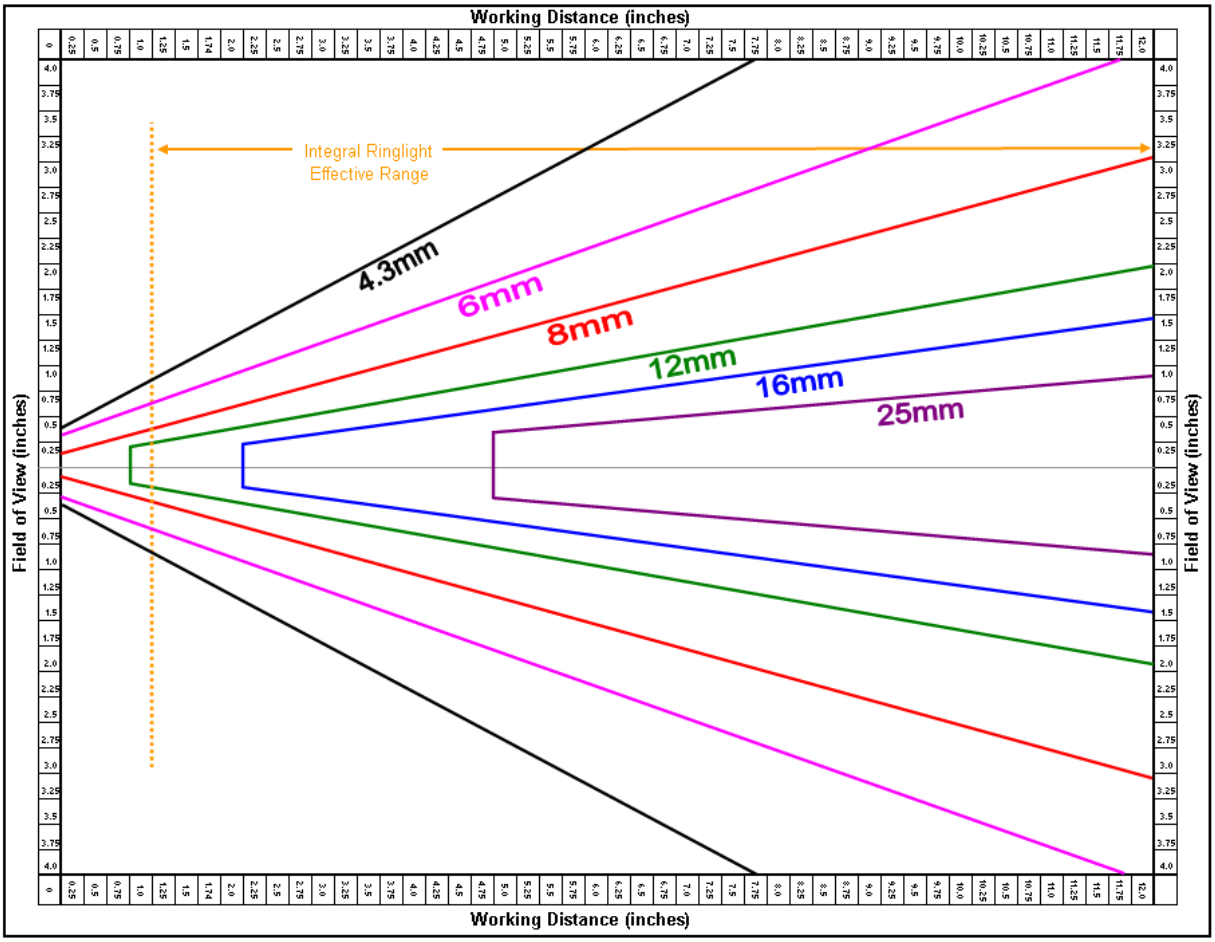
USB Cable — Optional

Model	Length	Description
MQDEC-8005-USB	.15 m (6")	USB cable, straight
MQDEC-801-USB	.30 m (1')	
MQDEC-803-USB	.90 m (3')	
MQDEC-810-USB	3 m (10')	
MQDEC-8005RA-USB	.15 m (6")	USB cable, right angle
MQDEC-801RA-USB	.30 m (1')	
MQDEC-803RA-USB	.90 m (3')	
MQDEC-810RA-USB	3 m (10')	

Lens Choices

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

iVu Lens Chart



Filters — Optional

Model	Description
FLTMR	Red filter kit
FLTMB	Blue filter kit
FLTMG	Green filter kit
FLTMI	IR Filter kit

Bracket Choices

Model	Description	Mounting Bracket
SMBIVURAL	Right angle, left mounting bracket	
SMBIVURAR	Right angle, right mounting bracket	
SMBIVUB	Bottom mounting bracket kit	
SMBIVUU	U-shape mounting bracket kit **Note:** Banner recommends that cables with right-angle connectors be used with this bracket kit.