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STC-R640/R645

OEM Board Cameras



STC-R640 OEM Module (without cable)

The STC-R640 is the base module for the STC-R640 series cameras. The camera control unit (CCU) is a compact 45 (W) x 45 (H) x 14 (D) mm; whereas the CCD board is 22 (L) x 8 Ø mm. The STC-R640 is offered *without* a mating cable between the CCU and CCD board.



LEN-R640-L8

For many applications, what our customers really want is the CCD and processing module of the camera. This makes it easier for them to put the camera inside of their system or to build a speciality camera for their specific application. In order to support this, Sentech provides these various board level OEM color cameras.

Accessories

Cables

CAB-3BNC
CAB-6BNC
CAB-6Y/C
12W-3.6PS

Power Supplies

45-601
45-752A
PWR-PSI450-6
PWR-PSISP-6Y6C

Lenses

Model No.	Focal Length
LEN-R640-L2.7	2.7mm
LEN-R640-L4	4mm
LEN-R640-L8	8mm
LEN-R640-L16	16mm
LEN-R640-L611	16mm
LEN-R640-L2511	25mm

Lens Mount

LEN-R640-LC

Programming Jig

Jig-ColorUSB

STC-R640C OEM Module

The STC-R640C is the same as the STC-R640 except it is offered with a cable between the CCU and CCD board. The cable length can be 2, 3, 5, or 10 meters and there are a variety of head configurations available.



STC-R640MC & STC-R640HD2

The STC-R640MC with the STC-R640HD2 have the same features as the R640C except that it features a Hirose connector that can be used for OEM applications that require the disconnection of the camera head.

OEM COLOR CAMERAS

NTSC & PAL (2, 3, 5 Meter Cables)

Models	STC-R640	STC-R645
Image Sensor:	1/4" Color CCD	
Horizontal Resolution:	480 TV Lines	
Signal Format:	NTSC	PAL
Effective Picture Element:	768 (H) x 494 (V)	752 (H) x 582 (V)
Vertical Frequency:	59.94Hz	50.00Hz
Horizontal Frequency:	15.734kHz	15.625kHz
Scanning System:	2:1 Interlace	
Sync System:	Internal/External VS (CT mode) / HD/VD (CC model)	
Serial I/O:	RS-232C Controllable (for DSP)	
Electronic Iris:	1/60 (1/50) ~ 1/10,000	
Shutter Speed:	1/60 (1/50) ~ 1/10,000 (8 steps)	
Minimum Illumination:	1.99 Lux @ F1.2, 50 IRE	2.15 Lux @ F1.2, 50 IRE
Gain:	AGC / Manual	
S/N Ratio:	> 48dB (AGC:OFF)	
Gamma:	0.45 (default), DSP Adjustable (32 steps)	
Lens Mount:	Micro and C-Mount (w/ adapter)	
Video Output (s):	Composite and Y/C (available on select models)	
Video Output Level:	1.0Vp-p 75 Ω	
Y/C Video Output Level:	0.7Vp-p 75 Ω	
DSP:	10-Bit, User Programmable	
White Balance:	Manual / Full Auto / Push-to-Set	
Operating Voltage:	DC + 12V ± 10%	
Power Consumption:	2.64W, 220mA	
Operating Temperature:	-10°C ~ 45°C (14°F ~ 113°F)	
Dimensions:	45 (W) x 45 (H) x 14 (D) mm (1.8" x 1.8" x 0.56")	
	- Board Version CCU 8mm Ø	
Weight:	190g (6.7 oz.)	
	- Board Version CCU 45g (1.58 oz.)	

STC-R640 Series Board Heads:



Mod# STC-R640L



Mod# STC-R640U



Straight Head
Mod# STC-R640
or
Mod# STC-R40C

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STC-R920/R925

OEM Board Cameras



STC-R920M (EIA, 570 TVL)
STC-R925M (CCIR, 560 TVL)

The STC-R920M is a board level B/W DSP camera specifically developed for silicon wafer inspection. This camera features a 10 bit DSP which is programmable by Sentech for your application. The STC-R920M is a single compact board, slightly larger than a credit card, with a remote head CCD. The CCD board is 25 (W) x 20 (H) mm with a 67mm (2.7") or 120mm (4.7") wire harness separating it from the CCU board.

FEATURES

- 1/2" MONOCHROME CCD FORMAT
- 2:1 INTERLACE
- 570 TV LINES
- DSP PROGRAMMABLE
- MIRROR IMAGING
- FIELD OR FRAME ACCUMULATION
- EIA OR CCIR FORMATS
- CABLE LENGTH:
 - STC-R920/925M (2.9" HEAD CABLE)
 - STC-R920/925MB (4.7" HEAD CABLE)

Accessories

Cables

12W-0.45
12W-02, 03, 05
CAB-3BNC
CAB-6BNC

Connectors

Hirose: HR10-10P-12S
Hirose: HR10-10R-12P

Power Supplies

45-601
45-752
45-752A
PWR-PSISP-6
PWR-PSISP-6YC6

Lenses (Mount not Included)

Various CS-Mount Lenses
Various C-Mount Lenses
Various Telecentric Lenses

OEM CAMERAS MONOCHROME EIA & CCIR



Models	STC-R920M	STC-R925M
Image Sensor:	1/2" Monochrome CCD	
Horizontal Resolution:	570 TV Lines	560 TV Lines
Vertical Resolution:	350 TVL (Field Integration) 485 TVL (Frame Integration)	410 TVL (Field Integration) 575 TVL (Frame Integration)
Signal Format:	EIA	CCIR
Effective Picture Element:	768 (H) x 494 (V)	752 (H) x 582 (V)
Chip Size (mm):	7.40 (H) x 5.95 (V)	
Cell Size (µm):	8.4 (H) x 9.8 (V)	8.6 (H) x 8.3 (V)
Vertical Frequency:	59.94Hz	50.00Hz
Horizontal Frequency:	15.734kHz	15.625kHz
Scanning Systems:	2:1 Interlace	
Electronic Shutter:	1/30 (EIA Default Setting)	1/25 (CCIR Default Setting)
Minimum Illumination:	0.05 Lux @ F1.2, 50 IRE	
Gain:	Sentech Programmable	
S/N Ratio:	56 dB (Gain Minimum)	
Gamma:	1.0 Sentech Programmable	
Integration Mode:	Field / Frame (DSP Selectable)	
DSP:	10 bit DSP	
Video Output:	1.0 vpp, 75 Ω	
Connections:	10-pin wire harness (Power, Syn, Video)	
Power Supply:	DC + 12V ± 10%	
Power Consumption:	1.76W, 147mA	
Operating Temperature:	-10° C ~ 45° C (14°F ~ 113°F)	
Storage Temperature:	-30° C ~ 60° C (-22°F ~ 140°F)	
Dimensions:	Main Board: 50(W) x 12.2(H) x 75(D) mm CCD Board: 25(W) x 20(H) x 9(D) mm (not including connectors)	
Weight:	23g (0.81 oz.)	

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LEN-C2.7

Accessories

Cables

CAB-3BNC
CAB-6BNC
CAB-6Y/C
12W-3.6PS

Power Supplies

45-601
45-752A

Lenses (No mount provided)

Model No.	Focal Length
LEN-C2.3	2.3mm
LEN-C2.7	2.7mm
LEN-C4	4mm
LEN-C8	8mm
LEN-P3.2	3.2mm
LEN-P3.7	3.7mm

Lens Mount

C-Mount Adapter

Programming Jig

Jig-ColorUSB
Jig-630

EGE-F22/32/42 Series

OEM Board Cameras



EGE-F22N/P (1/2")
EGE-F32N/P (1/3")
EGE-F42N/P (1/4")

The EGE-F series is based on high-resolution 1/4", 1/3" and 1/2" CCDs. With a flexible printed circuit cable (FPC) connecting the main camera boards and the CCD board, the EGE-F offers very flexible integration to almost any application. Sentech also offers a two-headed version of this camera for very special applications.

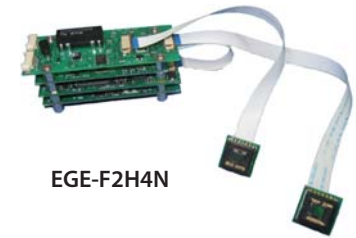
FEATURES

- 1/4", 1/3" & 1/2" COLOR IT CCDs
- NTSC & PAL FORMATS
- PROGRAMMABLE 10BIT DSP
- 480 TV LINES
- EXTENDED INTEGRATION
- 2 BIT STATUS OUTPUT
- AVAILABLE IN A TWO-HEADED CCD CONFIGURATION
- AUTO, MANUAL, PUSH TO SET WHITE BALANCE
- 6 - 8V DC POWER
- COMPACT SIZE:
CCU: 26 (W) x 19 (H) x 60 (D) mm
HEAD: 12 (W) x 12 (H) x VAR. (D) mm

OEM CAMERAS

COLOR

NTSC & PAL



EGE-F2H4N

Models	EGE-F22N EGE-F22P	EGE-F32N EGE-F32P	EGE-F42N EGE-F42P
Image Sensor:	1/2" Color IT CCD	1/3" Color IT CCD	1/4" Color IT CCD
Signal Formats:	Available in NTSC & PAL formats		
Effective Picture Elements:	NTSC: 768 (H) x 494 (V) PAL: 752 (H) x 582 (V)		
Connection to CCU:	Flex Ribbon Cable (length can vary 1 to 6 inches)		
Special Configuration:	Available in a two-headed CCD configuration		
Vertical Frequency:	NTSC: 59.94Hz PAL: 50.00Hz		
Horizontal Frequency:	15.734kHz		
Horizontal Resolution:	480 TV Lines		
Sync System:	Internal		
Electronic Iris:	1/60 to 1/10,000 second		
Shutter Speed:	Extended Integration: 2FLD to 16 FLD (8 Steps)		
High Speed:	1/60 (1/50) to 1/10,000 second (8 Steps)		
Negative/Positive:	DSP Selectable		
Minimum Illumination:	- NTSC 0.42 Lux @ F1.2, 20 IRE - PAL 0.24 Lux @ F1.2, 20 IRE	0.43 Lux @ F1.2, 20 IRE 0.26 Lux @ F1.2, 20 IRE	0.41 Lux @ F1.2, 20 IRE 0.7 Lux @ F1.2, 20 IRE
S/N Ratio:	< 48dB (AGC Off)		
Gamma:	0.45 (DSP Adjustable)		
AGC:	On/Off (0 to 18 dB)		
Video Out:	1.0 Vp-p, 75 Ω		
Y/C Out:	0.7 Vp-p, 75 Ω		
White Balance:	Auto / Manual / Push-to-Set		
Aperture Gain:	Off / On (On has 2 levels - user definable)		
Status Feedback:	2-Bit status output		
Back Light:	Back light compensation at electronic shutter		
Power Required:	6 - 8 V DC		
Power Consumption:	1.89W, Approximately 240 mA, variation is CCD dependent		
CCU Dimensions:	26 (W) x 19 (H) x 60 (D) mm (1.04" x 0.8" x 2.4")		
CCD Head Dimensions:	12 (W) x 12 (H) mm (0.48" x 0.48")		
Weight:	26 g (0.91 oz.)		

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LEN-R640-L16

Accessories

Cables

CAB-3BNC
CAB-6BNC
CAB-6Y/C
12W-3.6PS

Power Supplies

45-601
45-752A

Lenses

Model No.	Focal Length
LENPT47M1	4.7mm
LEN-R640-L2.7	2.7mm
LEN-R640-L4	4mm
LEN-R640-L8	8mm
LEN-R640-L16	16mm
LEN-R640-L611	16mm
LEN-R640-L2511	25mm

Lens Mount

LEN-R640-LC

Programming Jig

Jig-ColorUSB
Jig-630

EGE-W45 Series

OEM Board Cameras



EGE-W45N

EGE-W45N (NTSC, 480 TVL)
EGE-W45P (PAL, 480 TVL)

The EGE-W series utilizes a 1/4" high resolution, micro-package CCD. The CCD is connected to the processing boards with a wire harness. This provides better reliability in applications requiring frequent flexing or repositioning of the CCD head.

FEATURES

- 1/4" COLOR CCD FORMAT
- NTSC & PAL FORMATS
- PROGRAMMABLE 10BIT DSP
- 480 TV LINES
- EXTENDED INTEGRATION
- 2 BIT STATUS OUTPUT
- AUTO, MANUAL, PUSH TO SET WHITE BALANCE
- 6 - 8V DC POWER
- COMPACT SIZE
CCU: 26 (W) x 19 (H) x 60 (D) mm
CCD: 8 mm Ø

OEM CAMERAS COLOR NTSC & PAL



Models	EGE-W45N	EGE-W45P
Image Sensor:	1/4" Color IT CCD	
Horizontal Resolution:	480 TV Lines	
Signal Format:	NTSC	PAL
Effective Picture Element:	768 (H) x 494 (V)	752 (H) x 494 (V)
Vertical Frequency:	59.94Hz	50.00Hz
Horizontal Frequency:	15.734kHz	
Connection to CCU:	Wiring harness (length can vary 1 to 6 inches)	
Sync System:	Internal	
Electronic Shutter:	1/60 to 1/10,000 second	
Fixed Shutter:	Low Speed: 2FLD to 16FLD (8 steps) High Speed: 1/60 to 1/10,000 (8 Steps)	
Minimum Illumination:	0.46 Lux @ F1.2, 20 IRE	
S/N Ratio:	< 48dB (AGC Off)	
Gamma:	0.45 (DSP Adjustable)	
AGC:	On/Off (0 to 18 dB)	
Video Out:	1.0 Vp-p, 75 Ω	
Y/C Out:	0.7 Vp-p, 75 Ω	
White Balance:	Auto / Manual / Push-to-Set	
Aperture Gain:	Off / On (On has 2 levels - user definable)	
Status Feedback:	2-Bit status output	
Negative/Positive:	DSP Selectable	
Back Light:	Back light compensation at electronic shutter	
Power Required:	6 - 8 V DC	
Power Consumption:	1.89W, 270 mA, variation is CCD Dependent	
CCU Dimensions:	26 (W) x 19 (H) x 60 (D) mm (1.04" x 0.8" x 2.4")	
CCD Head Dimensions:	8mm Ø	
Weight:	35g (1.23 oz.)	