

# SENTECH

## Sentech Color Board CCD Cameras

New  
Product

### STC-DN64 & STC-DP64

The STC-N64 (NTSC) and the STC-D64(PAL) are super small color cameras with the CCD located on a flexible ribbon cable. The CCU for these units is only 10mm wide by 48.5mm long. This camera was designed to fit inside of an instrument the size of a fat ball point pen.



<b>Image Sensor:</b>	1/4" Color IT CCD
<b>Signal Format:</b>	NTSC, PAL
<b>Effective Picture Element:</b>	NTSC: 768 (H) x 494 (V) PAL: 752 (H) x 582 (V)
<b>Chip Size:</b>	4.34 (H) x 3.69 (V) mm
<b>Cell Size:</b>	NTSC: 4.75 (H) x 5.55 (V) $\mu$ m PAL: 4.85 (H) x 4.65 (V) mm
<b>Horizontal Frequency:</b>	NTSC: 15.734kHz PAL: 15.625kHz
<b>Vertical Frequency:</b>	NTSC: 59.94Hz PAL: 50.00Hz
<b>Minimum Illumination:</b>	Minimum Illumination: 0.5 Lux @ F1.2
<b>Sync System:</b>	Internal
<b>Scanning Method:</b>	2:1 Interlace
<b>S/N Ratio:</b>	> 48dB
<b>Gamma:</b>	0.45
<b>Gain:</b>	On/Off (User Selectable)
<b>Mirror Image:</b>	On/Off (User Selectable)
<b>Aperture Correction:</b>	On/Off (User Selectable)
<b>Electronic Iris:</b>	NTSC: 1/60 ~ 1/100,000 Second PAL: 1/50 ~ 1/100,000 Second
<b>White Balance:</b>	Auto White Balance (Manual Via DSP)
<b>DSP Communication:</b>	12C
<b>Power Supply:</b>	+4.8 ~ 11V
<b>Power Consumption:</b>	130mA (TYP at +5V)
<b>Operation Temperature:</b>	-10°C ~ 45°C ( 23°F ~ 113°F)
<b>Dimensions:</b>	CCU Board: 48.5 (W) x 10 (H) mm (1.94" x .4") CCD Head: 13.8 (W) x 10 (H) mm (.55" x .4")
<b>Weight:</b>	3 gm

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## Sentech Color Board CCD Cameras

### STC-N631L & STC-P631L



STC-N631L4  
Approximate Size

The STC-N631 (NTSC) and STC-P631(PAL) cameras were especially designed providing good reliable color video output in rugged environments. The cameras are extremely small 26 x 26 mm. They were specifically designed for applications, where temperatures vary and the vibration level is high.

<b>Image Sensor:</b>	1/3" Color IT CCD
<b>Signal Format:</b>	NTSC/PAL
<b>Effective Picture Element:</b>	NTSC: 768 (H) x 494 (V) m PAL: 752 (H) x 582 (V) m
<b>Chip Size:</b>	5.59 (H) x 4.68 (V) mm
<b>Cell Size:</b>	NTSC: 6.35 (H) x 7.40 (V) $\mu$ m PAL: 6.50 (H) x 6.25 (V) $\mu$ m
<b>Horizontal Frequency:</b>	NTSC: 15.734kHz PAL: 15.625kHz
<b>Vertical Frequency:</b>	NTSC: 59.94Hz PAL: 50.00Hz
<b>Minimum Illumination:</b>	0.3 Lux @ F1.2
<b>Lens Mount:</b>	Fixed Lens, CS Mount
<b>Sync System:</b>	Internal
<b>Scanning Method:</b>	2:1 Interlace
<b>S/N Ratio:</b>	>48dB
<b>Gamma:</b>	0.45/1.0 (User Selectable)
<b>Gain:</b>	Auto/Manual (User Selectable)
<b>Electronic Iris:</b>	NTSC: 1/60 ~ 1/100,000 Second (8 Steps) PAL: 1/50 ~ 1/100,000 Second (10 Steps)
<b>Power Supply:</b>	+7 ~ +13.2V DC
<b>Operation Temperature:</b>	-10°C ~ 45°C ( 23°F ~ 113°F)
<b>Dimensions:</b>	26 (H) x 26 (W) mm (1.04" x 1.04")
<b>Weight:</b>	26 (H) x 26 (W) mm (1.04" x 1.04")

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## Sentech Color Board CCD Cameras

### STC-N54/64 Series



STC-N54  
Approximate Size



STC-N64L2.3  
Approximate Size



STC-N64CS  
Approximate Size

The STC-N54/N64 series is a low cost, high performance, color board camera. The size is only 26 X 22mm. Targeted for low cost, high performance color applications where size is critical.

- Color 1/4" STC-N54: NTSC - 330 TVL, 512 (H) x 492 (V) IT CCD  
STC-P54: PAL - 330 TVL, 512 (H) x 582 (V) ITCCD  
STC-N64: NTSC - 480 TVL, 768 (H) x 494 (V) IT CCD  
STC-P64: PAL - 480 TVL, 752 (H) x 582 (V) IT CCD

- Available in NTSC & PAL Formats
- 9-Bit (Digital Signal Processing) - User Programmable
- Normal/ Mirror Image (Selectable)
- Gamma 0.45
- Internal Sync System
- Minimum Illumination: STC-N/P54 - 0.7 Lux @ F1.4  
STC-N/P64 - 2 Lux @ F1.4
- Electronic Fixed Shutter - Available via DSP
- Electronic Iris 1/60 NTSC (1/50 PAL) to 1/100,000 sec.
- >48dB S/N Ratio
- Five Lens Options Available - as well as CS/C Mount
- Dimensions: 26 (W) x 22 (H) x variable (D) mm (1.04" x .88" x variable)
- 5V - 12V DC Power

### Micro Color Board Camera Lenses

The following lenses are available for the STC-N54/N64  
Micro Color Board Cameras.

\*Lenses for STC-N64/P64 & STC-N54/P54

<u>Model No.</u>	<u>Focal Length</u>
LEN-N64L2.0	2mm
LEN-N64P2.3	2.3mm
LEN-N64P3.0	3mm

\*Lenses for STC-N54/P54

<u>Model No.</u>	<u>Focal Length</u>
LEN-N54P2.9	2.9mm
LEN-N54P3.7	3.7mm

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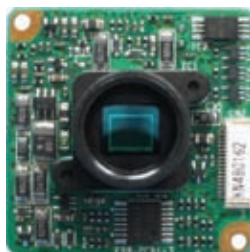
## Sentech Color Board CCD Cameras

### STC-N63/P63 Series

All Sentech Color Board CCD Cameras employ Digital Signal Processing (DSP) technology. DSP Software is available for all Sentech color board cameras. All board cameras are available with CS Mount or various lens options.



STC-N63  
Approximate Size



STC-N63L4  
Approximate Size

### STC-N63/P63 Series Color CCD Cameras

The STC-N63 (NTSC version) /P63 (PAL version) series offers high-resolution, 1/3" color CCD (480 TV lines) in a very compact Board configuration (32 x 32 mm). These low-cost cameras offer, as an option, user programmable DSP and setup.

- Color 1/3" 768 (H) x 494 (V) IT CCD
- Available in NTSC & PAL Formats
- 480 TV Lines Horizontal Resolution
- 10-Bit digital signal processing
- White Balance - AWB or Push to Set
- Gamma 0.45
- AGC: On (Off via DSP)
- Minimum Illumination 0.19 Lux @ F1.2, 50 IRE
- Electronic Shutter 1/60 NTSC (1/50 PAL) to 1/100,000 via DSP Setup
- Electronic Iris 1/60 NTSC (1/50 PAL) to 1/100,000 second
- >48dB S/N Ratio (AGC Off)
- Seven lens Options available including CS and C Mount (see page 43)
- Dimensions: 32 (W) x 32 (H) x variable (D) mm (1.28" x 1.28" x variable)
- Includes all wire harnesses
- 12V DC Power

**Note:** Y/C Video Output, External Sync Input, Auto Iris Lens Driver are Available Options.

*All cameras on this page are available in NTSC and PAL formats*

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## Sentech Color Board CCD Cameras



**STC-530CS**  
Available with board lenses

### STC-500 Series Color CCD Cameras

The STC-500 series board-level cameras offer two standard resolution CCD options: 1/4" and 1/3". These DSP cameras are available with micro lenses or CS lens mount (C-mount with an adapter).

STC-530 (NTSC):	Color 1/3" CCD, 330 TVL, 510 (H) x 494 (V) pixels
STC-535 (PAL):	Color 1/3" CCD, 330 TVL, 512 (H) x 582 (V) pixels
STC-540 (NTSC):	Color 1/4" CCD, 330 TVL, 510 (H) x 494 (V) pixels
STC-545 (PAL):	Color 1/4" CCD, 330 TVL, 512 (H) x 582 (V) pixels

- 10 bit DSP, 3rd Generation, User Accessible
- Gamma 0.45, 1.0 or other values via DSP Adjustments
- Sync Internal
- Y/C out available
- Gain: Manual / AGC (0 - 30dB)
- Negative / Positive Image
- Minimum Illumination
  - 530 Series: 0.17 Lux @ F1.2, Gain ON, 50 IRE
  - 540 Series: 0.23 Lux @ F1.2, Gain ON, 50 IRE
- White Balance - Auto or Manual
- >48 dB S/N Ratio (AGC Off)
- Electronic Iris 1/60 (1/50) to 1/10,000 second
- Electronic Shutter:
  - Extended Integration: 2, 4, 6, 8, 10, 12, 14, 16 fields,
  - High Speed: 1/60 (1/50), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000
- Seven lens Options available including CS & C mount. See page 43.
- Dimensions: 45 (W) x 45 (H) x variable (D) mm (1.8" x 1.8" x Variable)
- Includes all wire harnesses
- 250 mA
- 12V DC Power

### STC-600 Series Color CCD Cameras

Sentech's most popular cased cameras are also available in board-level in the STC-600 series CCD cameras. Available in high-resolution 1/4", 1/3", and 1/2" CCD, these DSP cameras offer complete user programmability.

STC-620 (NTSC):	Color 1/2" CCD, 480 TVL, 768 (H) x 494 (V) pixels
STC-625 (PAL):	Color 1/2" CCD, 480 TVL, 752 (H) x 582 (V) pixels
STC-630 (NTSC):	Color 1/3" CCD, 480 TVL, 768 (H) x 494 (V) pixels
STC-635 (PAL):	Color 1/3" CCD, 480 TVL, 752 (H) x 582 (V) pixels
STC-640 (NTSC):	Color 1/4" CCD, 480TVL, 768 (H) x 494 (V) pixels
STC-645 (PAL):	Color 1/4" CCD, 480 TVL, 752 (H) x 582 (V) pixels

- 10 bit DSP, 3rd Generation, User Accessible
- Gamma 0.45, 1.0 or other values via DSP Adjustments
- Sync Internal
- Y/C out available
- Gain: Manual / AGC (0 - 30dB)
- Negative / Positive Image
- Minimum Illumination:
  - 620 Series: 0.3 Lux @ F1.2, Gain ON, 50 IRE
  - 630 Series: 0.37 Lux @ F1.2, Gain ON, 50 IRE
  - 640 Series: 0.58 Lux @ F1.2, Gain ON, 50 IRE
- White Balance - Auto or Manual
- >48 dB S/N Ratio (AGC Off)
- Electronic Iris 1/60 to 1/10,000 second
- Electronic Shutter:
  - Extended Integration: 2, 4, 6, 8, 10, 12, 14, 16 fields,
  - High Speed: 1/60 (1/50), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000
- Seven lens Options available including CS & C mount. See page 43.
- Dimensions: 45(W) x 45(H) x variable (D) mm
- Includes all wire harnesses
- 250 mA
- 12V DC Power



**STC-630L4**  
Available with CS or C (w/ adapter) Mount

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## Sentech Color Board CCD Cameras



### Lenses - Color Board Cameras

The following lenses are available for color board cameras. Custom Lenses can also be built. All board cameras are also available with CS or C-Mounts.

#### Color Board Camera Lenses for STC-500, 600, N/P63, N/P631

	Model Number	Focal Length	F-Stop
<b>Micro Lenses:</b>	LEN-C2.3	2.3 mm	F3.5
	LEN-C2.7	2.7 mm	F2.0
	LEN-C4	4.0 mm	F3.5
	LEN-C8	8.0 mm	F2.0
<b>Pinhole Lenses:</b>	LEN-PL3.2	3.2 mm	F4.5
	LEN-PL3.7	3.7 mm	F4.5

#### Color Board Camera Lenses for STC-N64/P64 & STC-N54/P54

	Model Number	Focal Length	F-Stop
	LEN-N64L2.0	2.0 mm	F2.7
	LEN-N64L2.3	2.3 mm	F2.7
	LEN-N64P2.9	2.9 mm	F4.5
	LEN-N64L3.0	3.0 mm	F2.0
	LEN-N64P3.7	3.7 mm	F4.5

#### R640 Microhead Camera Lenses

	Model Number	Focal Length	F-Stop
<b>R640 Lenses:</b>	LEN-R640L2.7	2.7 mm	F2
	LEN-R640L4	4.0 mm	F2.5
	LEN-R640L8	8.0 mm	F2.5
	LEN-R640M6.8	6.8 mm Macro Lens	F15.2
	LEN-R640L16	16mm	F2.5
	LEN-R640L611	16mm	F11
	LEN-R640LC	C-Mt Adapter	
<b>Special Miniature Lens:</b>	LEN-PT47M1	4.7 mm (w/manual iris)	

#### Cable Harness for Board Cameras:

Cable Harnesses for power and other input and output signals are provided with each Sentech board camera.

# SENTECH

## Sentech Color Cased CCD Cameras

Sentech color cameras feature programmable 10 bit digital signal processing (DSP) for camera setup and configuration. These products offer excellent color reproduction, crisp video images, and are housed in a very compact case.

### STC-N63/P63 Series Cameras

In a very compact housing, the STC-N63/P63 cameras employ a high resolution, 1/3" color CCD that produces 480 TV lines of horizontal resolution. The STC-N63/P63 series cameras are available in cased (with the option of five back panels – BJ, BT, CJ, CC or CT) and board level configuration.

Color Cameras



STC-N63CJ  
Actual Size

*All cameras on this page are available in NTSC and PAL formats.*

## Sentech Color Cased CCD Cameras

### STC-N63/P63 Basic Specifications

- Color 1/3" - STC-N63 (NTSC) 768 (H) x 494 (V) IT CCD  
STC-P63 (PAL) 752 (H) x 582 (V) IT CCD
- Available in Five Different Back Panels (see below)
- 480 TV Lines Horizontal Resolution
- Composite Video and Y/C Video Out (On Select Models)
- 10-Bit Digital Signal Processing
- RS-232C Serial I/O Port (On Select Models)
- Push-to-Set White Balance Switch (On Select Models)
- Gamma 0.45
- AGC: On
- Minimum Illumination 0.19 Lux @ F1.2, 50 IRE
- Electronic Shutter 1/60 (NTSC) / 1/50 (PAL)
- Electronic Iris 1/60 (NTSC) 1/50 (PAL) to 1/100,000 second
- >48dB S/N Ratio (AGC Off)
- CS Lens Mount (C-Mount with an adapter)
- Dimensions: 36 (W) x 36 (H) x 37.35 (D) mm (1.44" x 1.44" x 1.49")
- 12V DC Power

### STC-N63/P63 Series Back Panels



#### CJ Model

- Power Jack for Power In
- BNC Connector (Video Out)
- Y/C Connector (Y/C Video Out)
- Push-to-Set / Auto White Balance
- RS-232C Serial I/O for User DSP Programming



#### CT Model

- Terminal Block (Spring Loaded) for Power In
- BNC Connector (Video Out)
- Y/C Connector (Y/C Video Out)
- Push-to-Set / Auto White Balance
- RS-232C Serial I/O for User DSP Programming



#### CC Model

- 12 Pin Hirose
  - Power
  - Video Out
  - Y/C Out
  - EXT HD/VD Sync
- BNC Connector (Video Out)
- Push-to-Set / Auto White Balance
- RS-232C Serial I/O for User DSP Programming



#### BJ Model

- Power Jack for Power In
- BNC Connector (Video Out)
- Auto Iris Lens Connection (DC Driven)
- Auto Iris Level Adjustment



#### BT Model

- Terminal Block (Spring Loaded) for Power In
- BNC Connector (Video Out)
- Auto Iris Lens Connection (DC Driven)
- Auto Iris Level Adjustment

All cameras on this page are available in NTSC and PAL formats

# SENTECH

## Sentech Color Cased CCD Cameras

### STC-500 / STC-600 Series



**Available in High Resolution  
and Standard Resolution Models**

#### High Resolution Models:

STC-620 (NTSC): 1/2" CCD, 480 TVL, 768 (H) x 494 (V) pixels

STC-625 (PAL): 1/2" CCD, 480 TVL, 752 (H) x 582 (V) pixels

STC-630 (NTSC): 1/3" CCD, 480 TVL, 768 (H) x 494 (V) pixels

STC-635 (PAL): 1/3" CCD, 480 TVL, 752 (H) x 582 (V) pixels

STC-640 (NTSC): 1/4" CCD, 480 TVL, 768 (H) x 494 (V) pixels

STC-645 (PAL): 1/4" CCD, 480 TVL, 752 (H) x 582 (V) pixels

#### Standard Resolution Models:

STC-530 (NTSC): 1/3" CCD, 330 TVL, 510 (H) x 494 (V) pixels

STC-535 (PAL): 1/3" CCD, 330 TVL, 512 (H) x 582 (V) pixels

STC-540 (NTSC): 1/4" CCD, 330 TVL, 510 (H) x 494 (V) pixels

STC-545 (PAL): 1/4" CCD, 330 TVL, 512 (H) x 582 (V) pixels



STC-630CC

#### Color Camera General Specifications:

<b>Image Sensor:</b>	Interline CCD
<b>Signal Format:</b>	NTSC or PAL Available
<b>Processing:</b>	10 bit DSP (User Programmable)
<b>Horizontal Frequency:</b>	15.734kHz
<b>Vertical Frequency:</b>	59.94 Hz
<b>Sync System:</b>	Internal or External (Model Dependent)
<b>Minimum Illumination:</b>	- STC-530 Series: 0.17 Lux at F1.2 (AGC-ON) (50 IRE) - STC-540 Series: 0.23 Lux at F1.2 (AGC-ON) (50 IRE) - STC-620 Series: 0.3 Lux at F1.2 (AGC-ON) (50 IRE) - STC-630 Series: 0.37 Lux at F1.2 (AGC-ON) (50 IRE) - STC-640 Series: 0.58 Lux at F1.2 (AGC-ON) (50 IRE)
<b>S/N Ratio:</b>	> 48dB (AGC:OFF)
<b>Gamma:</b>	0.45 or 1.0 (DSP Adjustable)
<b>White Balance:</b>	Auto/ Manual
<b>AGC:</b>	ON/OFF Selectable, 0dB to 12dB Range
<b>Electronic Iris:</b>	1/60 - 1/10,000 (Except A & AS models)
<b>Electronic Shutter:</b>	Low Speed: 2, 4, 6, 8, 10, 12, 14, 16 Fields High Speed: 1/60 (1/50), 1/125, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000
<b>Video Out:</b>	1.0Vp-p 75 Ω
<b>Y/C Out:</b>	Y/C Output 0.7Vp-p 75 Ω (On Select Models)
<b>Back Light:</b>	Back Light Compensation at Electronic Iris
<b>Negative / Positive:</b>	Selectable
<b>Power Supply:</b>	DC12V
<b>Power Consumption:</b>	150mA
<b>Operating Temperature:</b>	-10° C ~ 45° C (14° F ~ 113° F)
<b>Dimensions:</b>	51 (W) x 51 (H) x 55.5 (D) mm (2.04" x 2.04" x 2.2")

*All cameras on this page are available in NTSC and PAL formats*

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## Sentech Color Cased CCD Cameras

The Sentech high resolution 600 series, as well as the standard resolution series of the 500 series color cameras, are all available in the following six standard configurations.

For example: To order the 620 series with the CC configuration, the model name would be STC-620CC. To order the 630 Series with the CC Configuration, the model name would be STC-630CC etc.



**CC Model**

- 12 Pin Hirose Power
- Y/C Out
- HD/VD In
- BNC Connector Video Out
- Y/C Connector Y/C Out
- RS-232 Mini Jack DSP Set Up Camera Control



**CT Model**

- Power Terminal
- BNC Connector Video Out
- Y/C Connector Y/C Out
- RS-232 Mini Jack DSP Set Up Camera Control
- DC Auto Iris Lens Connector
- Auto Iris Level Control



**AS Model**

- 12 Pin Hirose Power
- Y/C Out
- BNC Connector Video Out
- Manual Controls Color Brightness Sharpness Gamma



**A Model \***

- Power Jack
- RCA Connector Video Out
- Manual Controls Color Brightness Sharpness Gamma



**BJ Model \***

- Power Jack
- BNC Connector Video Out
- DC Auto Iris Lens Connector



**BT Model**

- Power Terminal
- BNC Connector Video Out
- Auto Iris Level Control
- DC Auto Iris Lens Connector

\* STC-620 camera not available with this back panel, except on OEM basis.