

# HITACHI

## Preliminary Specifications

For

## SK-31C

Fully-Digital, Application-Specific, HDTV Compact Color  
Camera



**Hitachi Kokusai Electric, Inc.**

## Description:

The new Hitachi model SK- 31C is a self-contained HDTV camera designed for the increasingly expanding applications in industrial, government and military markets.

In response to user demands, Hitachi now makes available the choice of NATIVE-SCAN 1080i or 720p image pickup devices for the SK-31B. Both choices of image pickup devices are high-performance 2/3-inch, Inter-line, CCDs.

The SK-31C employs high-efficiency 0.18 $\mu$ m gate pitch digital signal processing (DSP-VLSIC) with the latest generation of 12-bit analog to digital converters (ADC) available on the market. These are the main constituents of the system's HDTV resolution, wide dynamic range, excellent signal-to-noise ratio and faithful color reproduction. Expert implementation of the latest generation of Hitachi DSP designs is the basis for the camera's low-heat dissipation and efficient power use.

This newly designed compact camera head weights approximately only 2.2 kg. It has no externally mounted heat sinks or protrusions and is generally square in exterior shape.

## Technical Features

### Camera Head:

- ❖ Compact, lightweight, box-style camera head.
- ❖ Self-contained.
- ❖ HD-SDI output available.
- ❖ Bayonet (B4) standard lens mount.
- ❖ Motorized 2 turret optical filter wheel with 4 filters each, remotely controlled.
- ❖ 12-VDC-power input.
- ❖ Genlock input BNC (Tri-level analog composite sync).
- ❖ Choice of: Native 1080/60i 2.2 million pixels, 2/3-inch, IT- CCD or 720/60p 1 million pixels, 2/3-inch, IT-CCD.
- ❖ High Sensitivity: F8@ 2,000 lux.
- ❖ High Resolution: Greater than 1,000 TV lines.
- ❖ High Signal to Noise Ratio: Greater than 54 dB (56 dB Typical).
- ❖ Advanced Hitachi 0.18 $\mu$ m lithography process, 3-million gate, 1.5V logic DSPs employed.
- ❖ High bandwidth 12-bit Analog to Digital converters used in each of the RGB channels.

## Operational Features

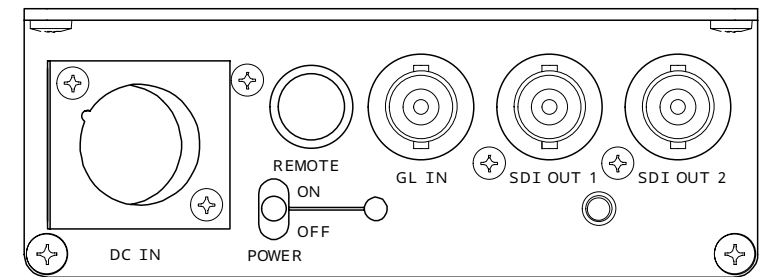
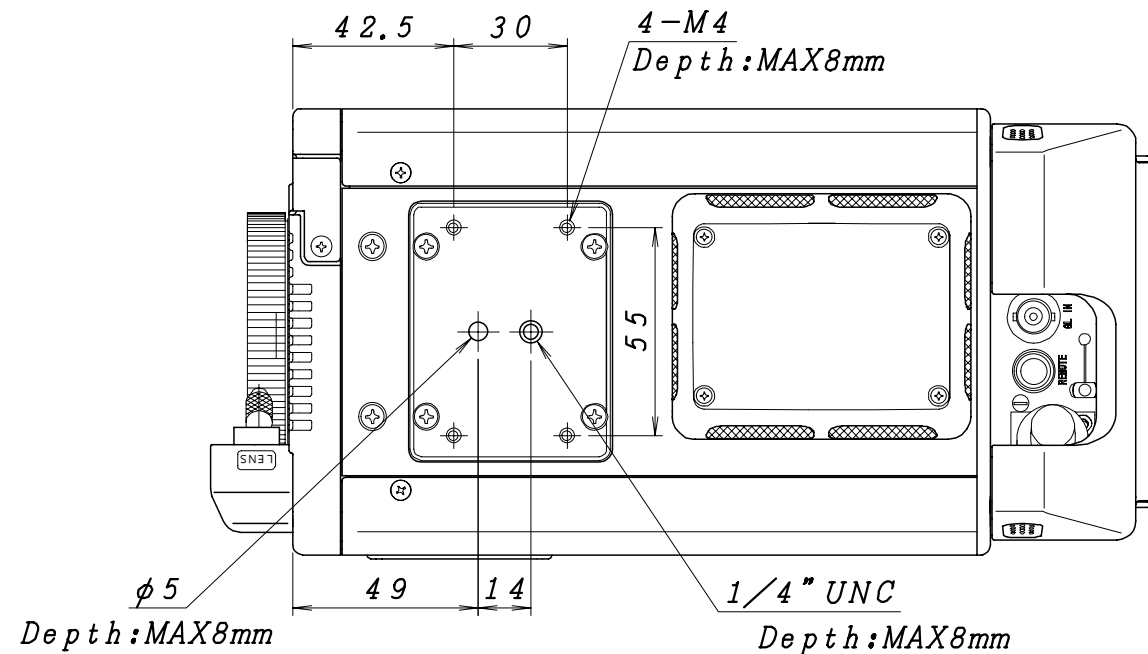
- ❖ 6-color vector Hue and Saturation controls.
- ❖ Master (overall) saturation adjustment.
- ❖ 6-color difference linear masking level controls.
- ❖ Flesh-tone masking Hue, Saturation adjustment, On/ Off control.
- ❖ Independently adjustable RGB gamma tables.
- ❖ Master (overall) gamma level adjustment.
- ❖ Full parameter lens white shading controls. (HS, VS, HP, VP). White shading adjustment memory for lens 2X extender position.
- ❖ RGB Lens Flare adjustment.
- ❖ Independent H & V Detail level control.
- ❖ Independent H & V Detail Crisping control.
- ❖ Adjustable detail center frequency between 13 and 20MHz.
- ❖ High Chroma Detail on/off control
- ❖ Detail level dependence and slope adjustment.
- ❖ White suppression; Knee Slope and Clip adjustments.

## Specifications:

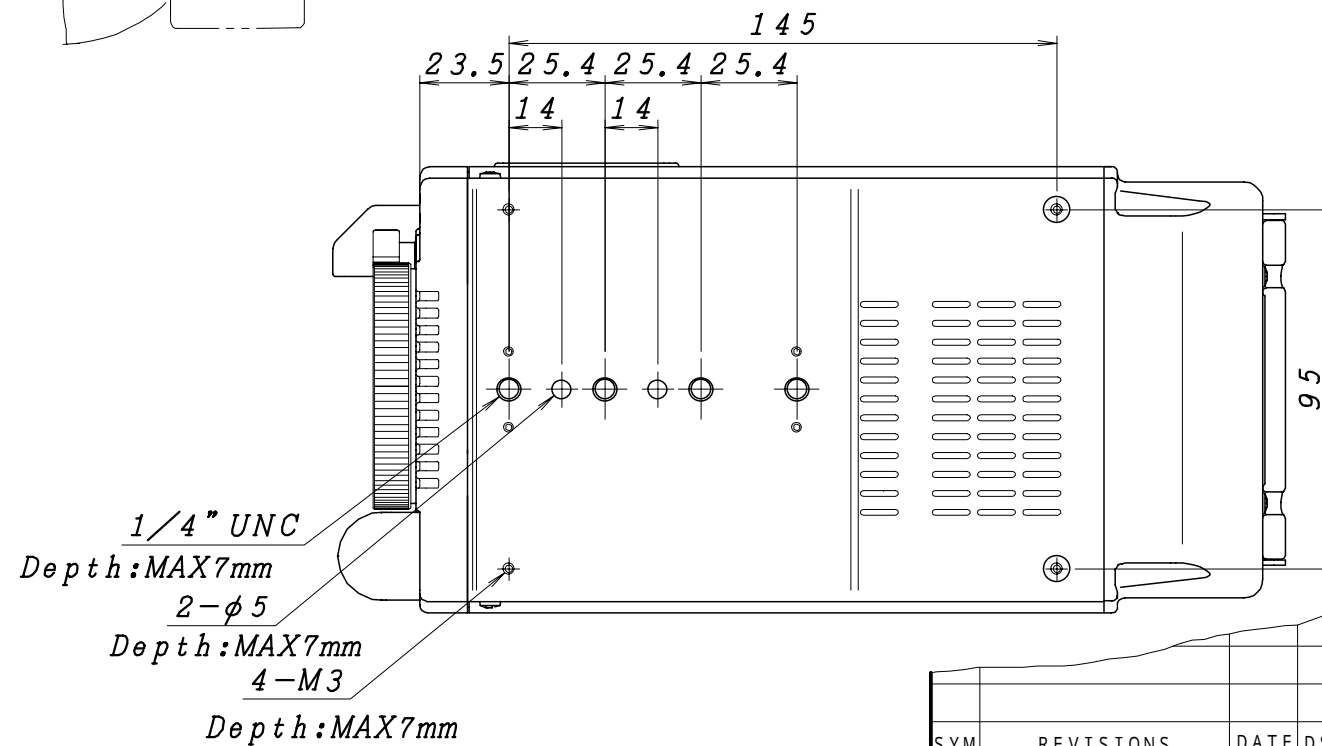
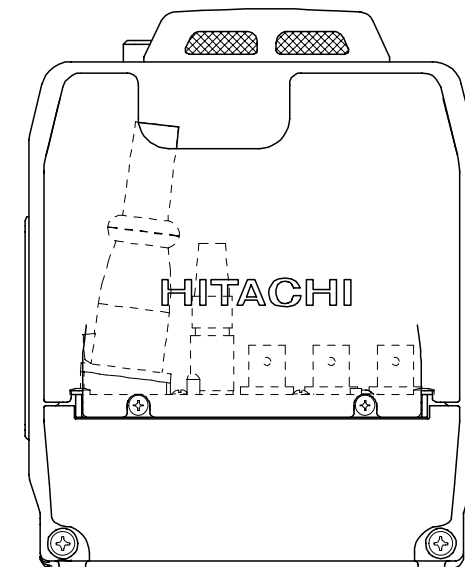
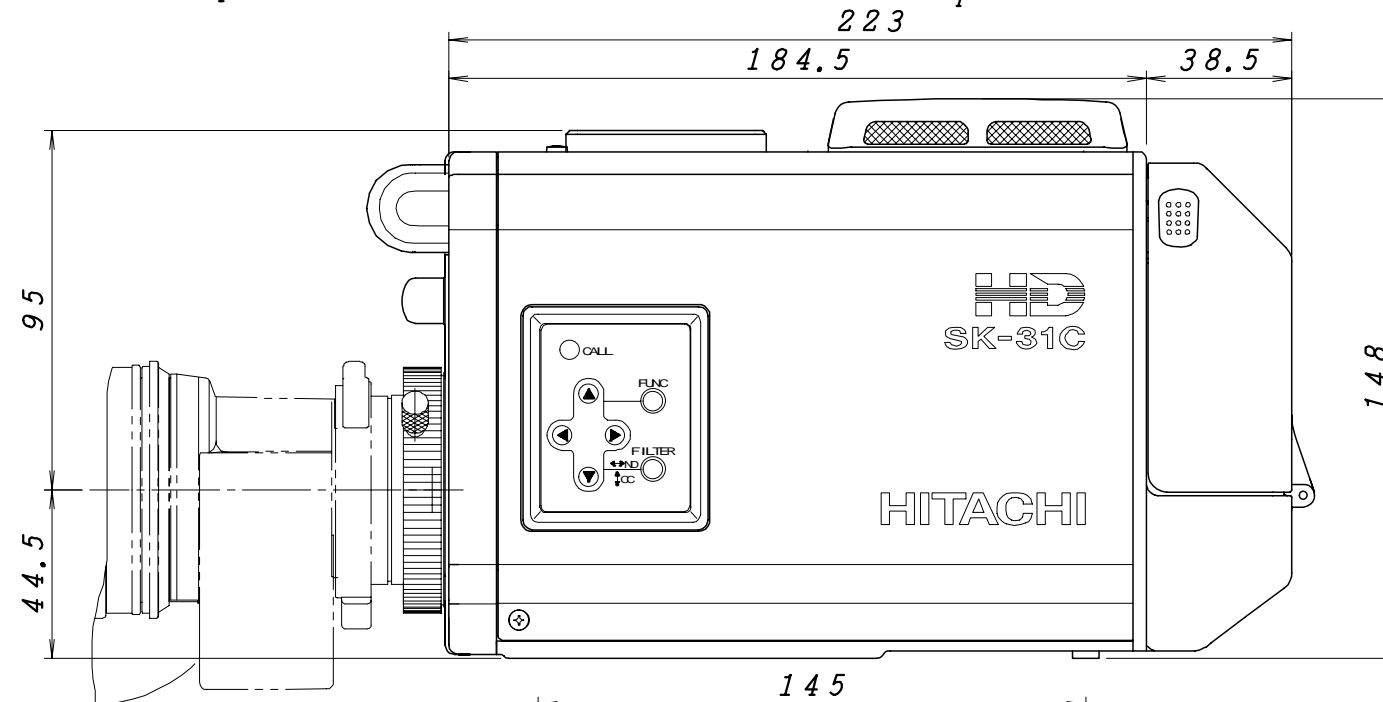
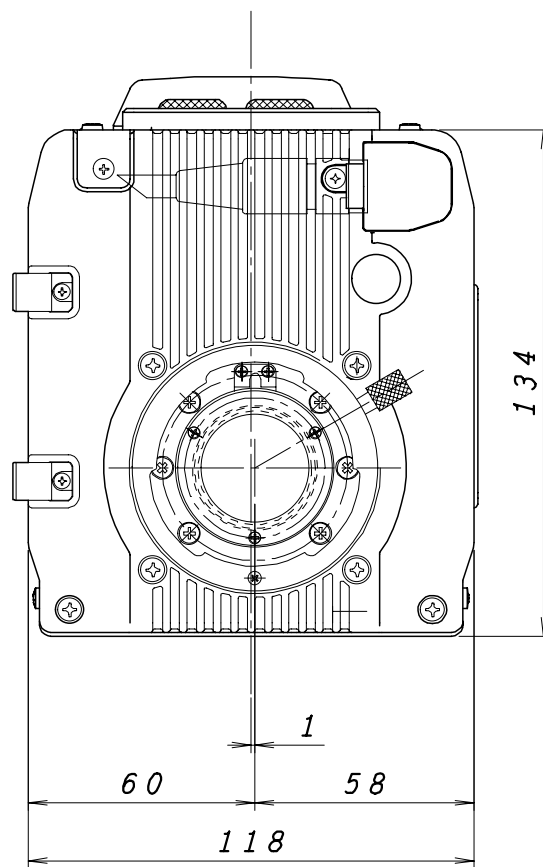
Camera Head	
Imaging device	2/3-inch 2.2M pixel IT-CCD sensor or 1 Mpixel IT CCD sensor
Pixel array	720p: 1370(H) X 744(V) 1080i: 2010(H) X 1086(V)
Sensitivity	F8.0 @ 2000lux, 3200K, 89.9%
Prism	RGB beamsplit, F1.4
Signal-to-noise ratio	56 dB typical, >54 dB (HD-SDI decoded Y : 27.6MHz), 64dB SDTV typical
Horizontal resolution	HD >1000 TV Lines typical, SD >900 TV Lines typical
Power consumption	Camera Head 35W approx.
Lens Mount	Bayonet B4
Dimensions & Mass	Camera Head: 118(W) x 143(H) x 224(D) mm 2.2 kg approx.
Storage Temp.	-20°C ~ 80°C
Operational Temp.	0°C ~ +40°C
Outputs	
Line	HD-SDI x1
Tally	Red, Green, Ext Tally drive, Call

Specifications subject to change without notice. Please contact a Hitachi Denshi America Sales or Technical representative for updates.

## Product CAD Drawings:



CN-PANEL VIEW



UNIT : mm

	DWN	J. SATO	04-03-26	<b>SK-31C TYPE II COLOR CAMERA EXTERNAL VIEW</b>
	DSGN	J. SATO	..	
	SCALE	CHKD	H. MATSUNAGA	
1:2	APPD	M. ICHIKAWA	04-03-26	
Hitachi Kokusai Electric Inc. Tokyo, Japan				<b>7379741</b>

SYM	REVISIONS	DATE	DSGN	CHKD

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