



HITACHI

Broadcast and Professional Cameras

8K

*Presented by: John Humphrey
Vice President, Business Development
Hitachi Kokusai Electric America, Ltd.*



Reference Information

SK-UHD8060B

Super Hi-Vision / UHD-2



SK-UHD8060B 8K Camera

***33 MP Global Shutter, CMOS OPF Sensor
(Organic Photoconductive Film)***

- Studio, EFP/ECC, Multi-format, UHD-2 Production Camera
- 3,000' SMPTE fiber cable @ 40Gbps data rate
- Standard 4K studio viewfinder

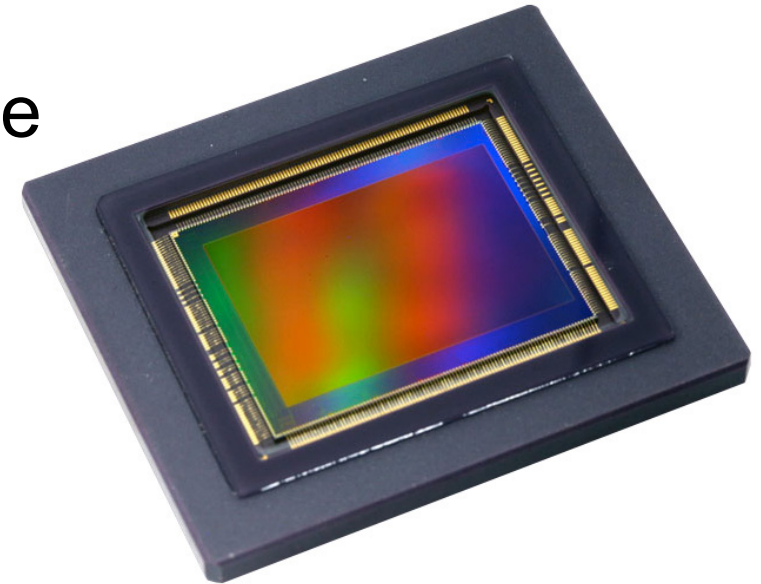


8K CMOS OPF Sensor

Organic **P**hotoconductive **F**ilm

8K camera sensors have been limited in dynamic range by the extremely small size of the pixels.

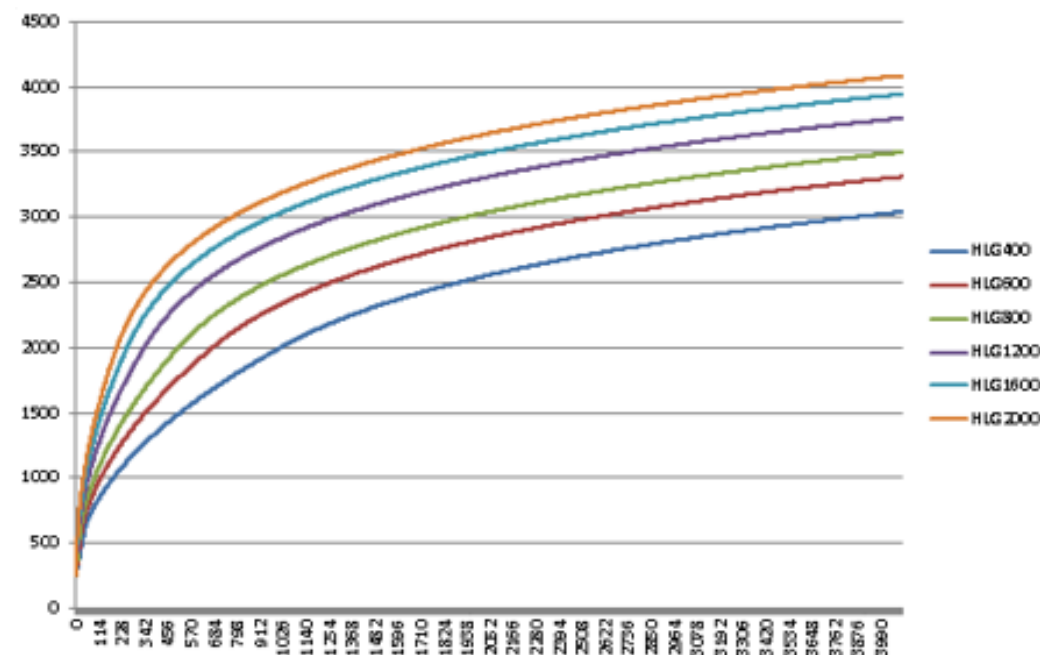
Using OPF enables a higher saturation charge, allowing improved High Dynamic Range.



SK-UHD8060B 8K Camera system

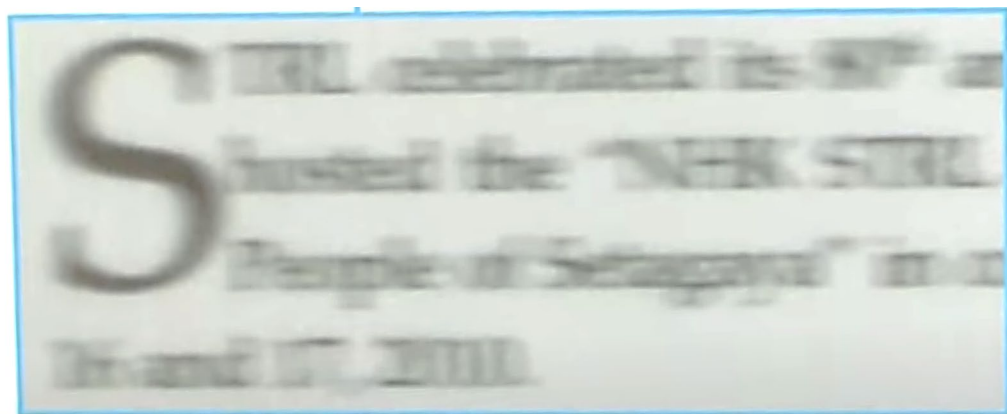
HITACHI's 5th generation 8K camera

- **High Dynamic Range**
 - Switchable HLG curves
- **Wide Color Gamut**
 - ITU.R.BT 2020
- **HFR at 120 fps**
 - Reduces Motion Blur

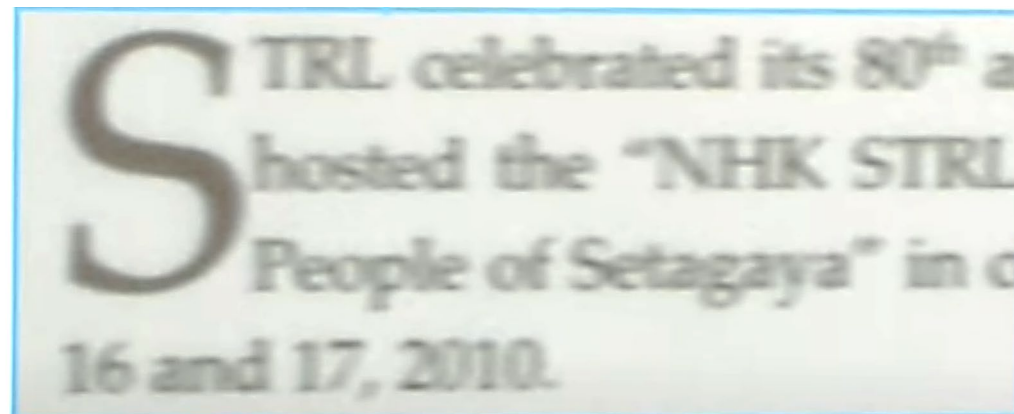


HFR @ 120 Frames Per Second

- Early tests showed Motion Blur at 8K Resolution.
- SK-UHD8060B Camera acquisition frame rate is 120 fps



60 frames per second



120 frames per second

SK-UHD8060B Camera Design

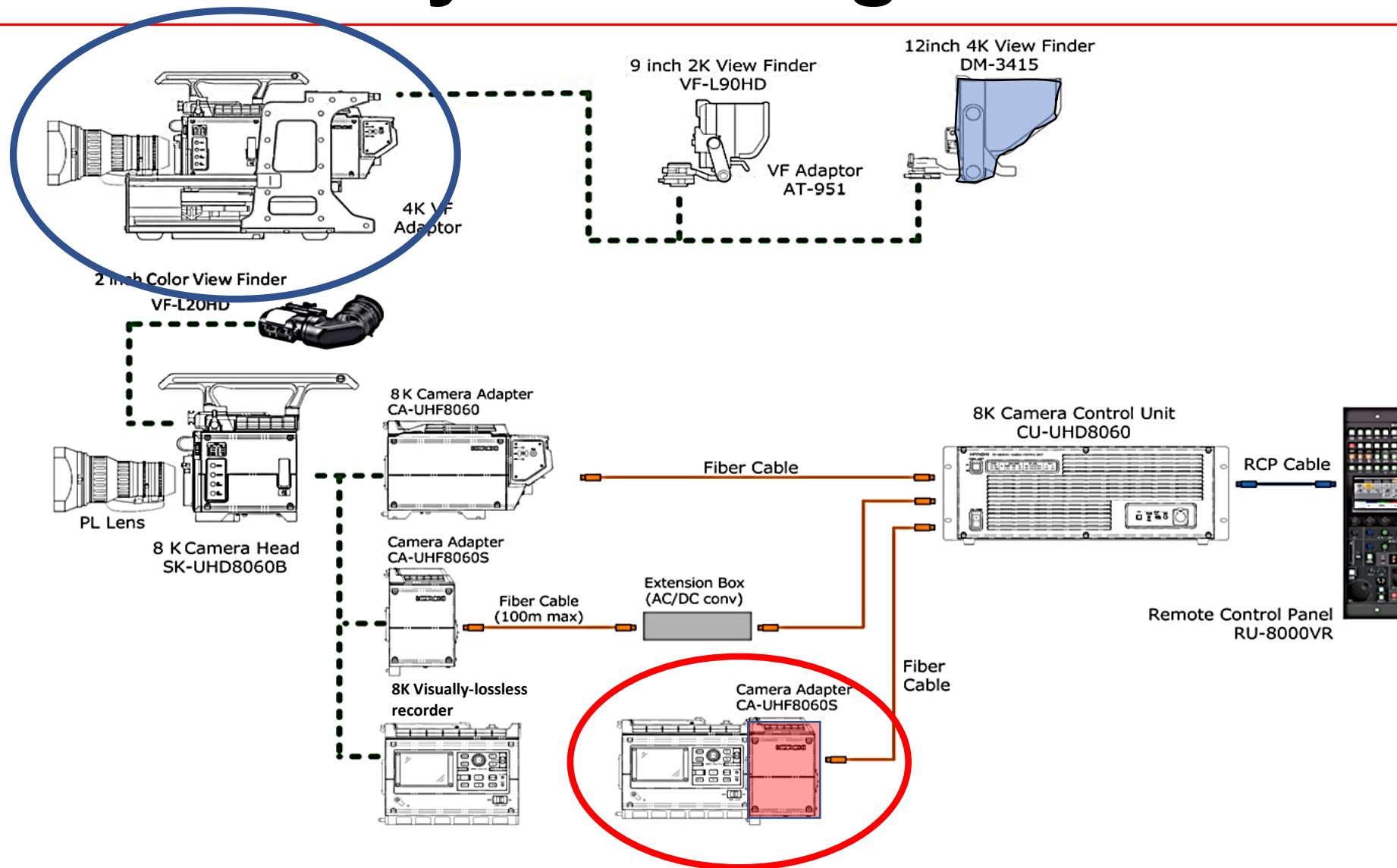
- Operation similar to SK cameras
- 2 piece camera system
- CA w/ SMPTE fiber to CCU



- Camera and 8K recorder
- Store and Forward
- *Recorder to CCU w/ fiber*



8K Camera System Diagram





VF Adapter w/ 12" 4K OLED Viewfinder





SK-UHD8060B w/ SMPTE Fiber





SK-UHD8060B and 8K camcorder





Camera Head Adaptor Specifications

CA-UHF8060 Connections:

- HD-SDI Out
- 4K-VF Out
- 2 Ch. Intercom
- 2 MIC inputs
- Prompter power and Tally



SMPTE Fiber Transmission

- **The camera signals are transmitted @ 40Gbps to the CCU.**
- CCU processes 8 channels of 3G HD-SDI in parallel for 8K out.
- Multi format, simultaneous outputs
 - 2K Output HD-SDI (1080p60, 1080i)
 - 4K Output (Quad link SDI)
 - 8K Output (8X 3G SDI)
- Returns of 2K/4K



Camera Control Unit (Rear)

8K SDI OUT
via
3G-SDI x8 ch
or
HD-SDI x16 ch

4K 3G-SDI
Quad-Link
OUT X2

2K SDI OUT X2

4K RET IN 2ch

2K RET IN 1~4

2K SDI WFM/PIX

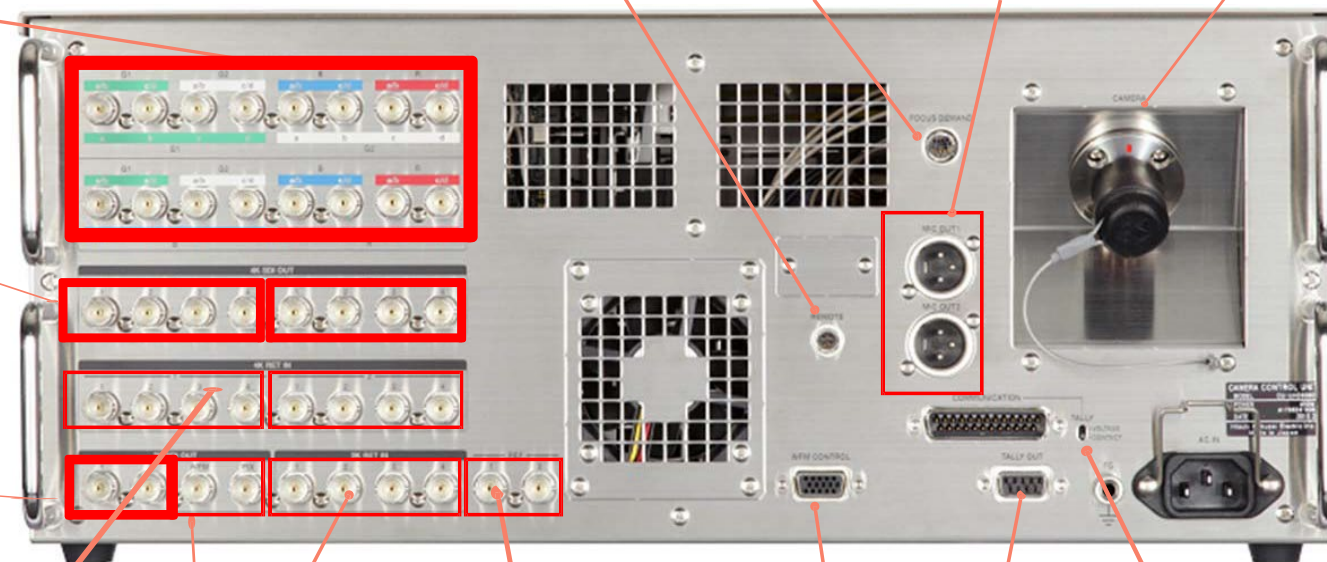
REF1 (TRI-level sync)/ 2 (Black burst)

REMOTE

FOCUS
DEMAND

MIC OUT
1&2

SMPTE311 fiber connector or
SM Fiber Cable operation
(Switchable Hybrid/SM Fiber)



WFM CONTROL

TALLY OUT

TALLY
Contact/Voltage SW



HITACHI

Broadcast and Professional Cameras
Hitachi Kokusai Electric America

Hitachi website Video Gallery

<https://www.hitachikokusai.com/AboutHitachiKokusai/VideoGallery/>

Email Address

John.Humphrey@HitachiKokusai.us