

# sinaCAM

Tiniest big league player.



2D/3D HD at up to 60 FPS

## 13.5 f-stops

My camera of choice for all those jobs where a full size camera isn't possible.

Geoff Boyle - Cinematography.net

The image quality we got out of this was outstanding.

Peter Borig - Producer for ZDF

## Outstanding Mobility and Flexibility



sinaCAM remote heads are **tiny**, most image processing happens in the base unit. At just 1.5kg/3.3lbs **even a full 3D system is a featherweight**.

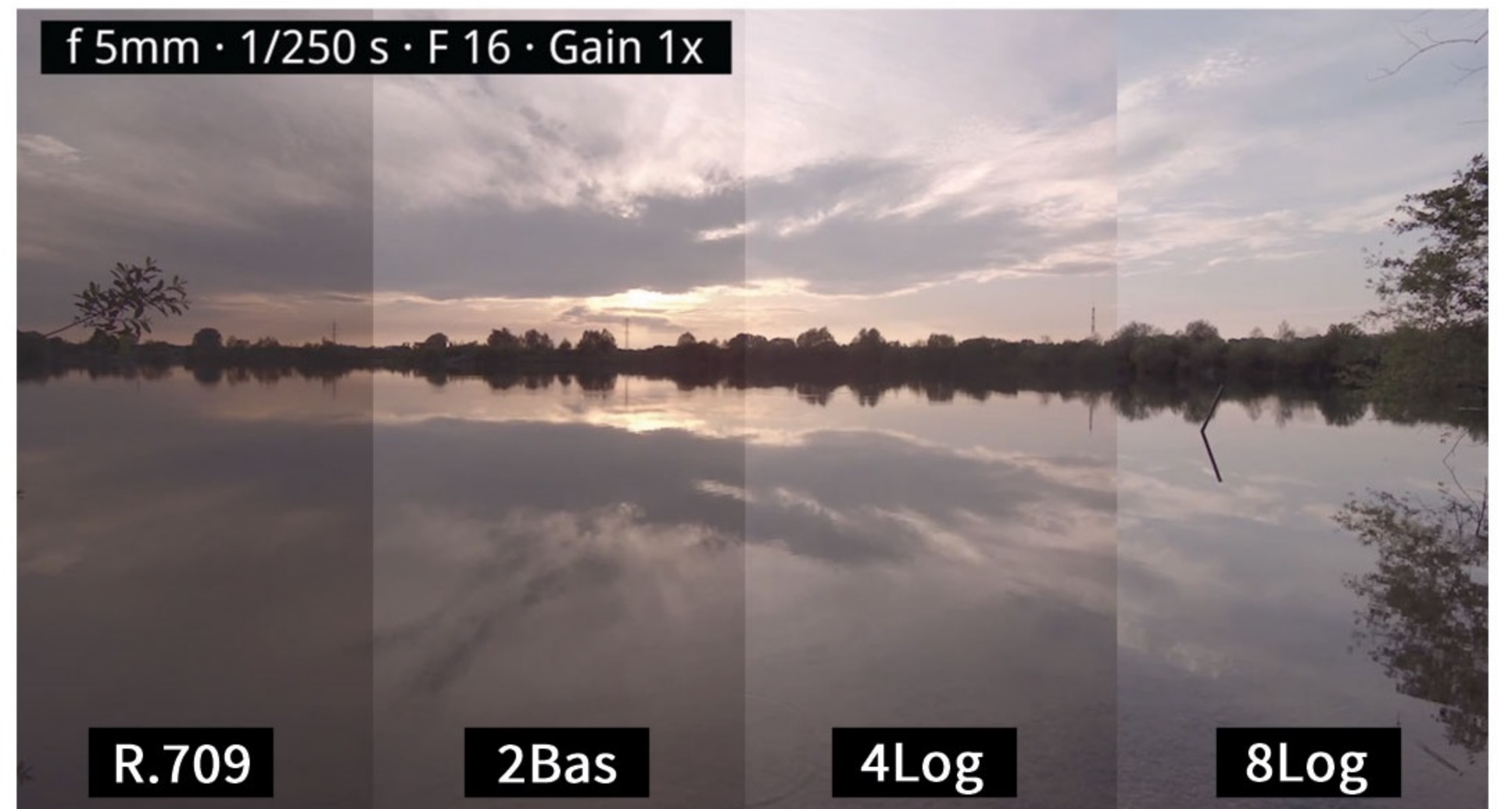


On **light cranes** only the the heads (160g/5.6oz each) need to be supported, making **panning and tilting easier than ever**.

## Cinema-Level Image Quality



sinaCAM's **dynamic range of 13.5 f-stops** is made possible by our **16-Bit signal and gamma processing**. The employed **custom sharpening method** ensures optimal luminance and color resolution.



Choosing from **7+ gamma presets** with different curves but **consistent white-level**, you can always make best use of the dynamic resolution and **quickly adapt** to every situation.



## Easy Connectivity and RC

Viewfinders and HD monitors receive 2D or combined 3D signal over DVI and **full quality 3D/2x2D signals** over a **dedicated pair of HD-SDI ports**.

sinaCAM can be completely **remote controlled** using **Sony RCPs** or a **web interface**. Genlock sync is supported.

Each head is connected to the base unit with a **single cable** (inc. power) over **distances of up to 80m/260ft** using **regular HD-SDI coax cable**.

## sinaCAM LT: Best Value for 2D



The sinaCAM LT is a remote controlled alternative base unit. It offers **full 2D functionality at just half the price**, making it ideal for traditional broadcast applications.

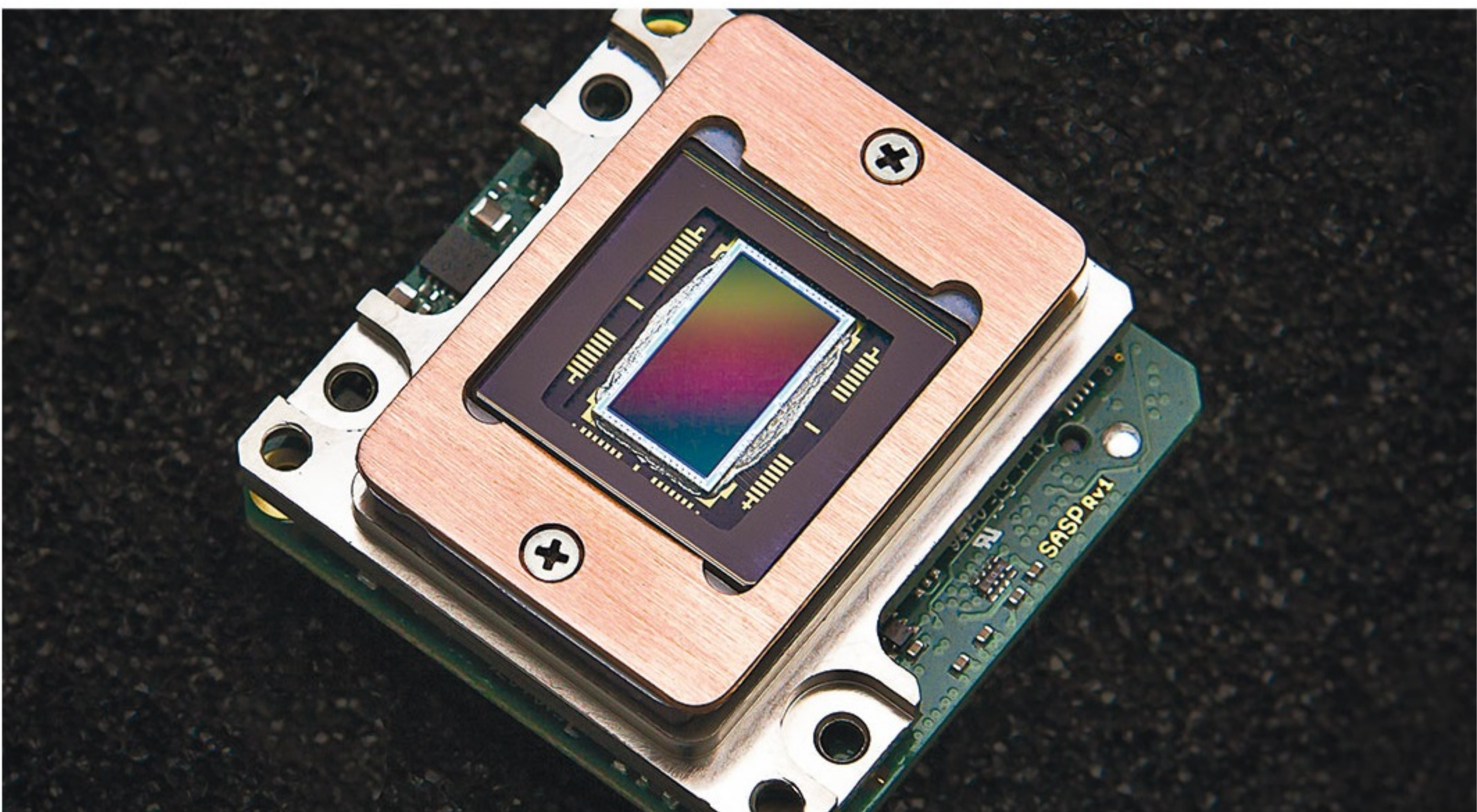


On **vehicles**, the heads can be mounted in many new places. They gain **very little momentum** and follow all movements directly, resulting in **very steady video**.



**Shoulder and steadycam rigs** become **much easier to balance**. This heavily reduces strain for the operator and makes usage in extreme situations possible.

## Cutting-Edge Sensor Technology



Our 2/3" Kodak CCD is **very light sensitive** (200-800 ASA) at **exceptionally low noise levels**. Colors and black level are **completely temperature stable**. The sensor is **shuttered globally** and has no fixed-pattern noise.

## Hassle-free 3D



In 3D operation, left and right camera images always have **identical picture properties** and stay in **perfect sync**, because a single chip in the base unit processes the signals of both heads at the same time.

## Codex Action Cam: RAW 3D Recording



The Codex Action Cam consists of a **RAW recorder** and **two special sinaCAM heads**. It offers **RGB, ProRes and Avid DNxHD** output and additional sync compatibility.

## Progressive C-Mount for HD



For the sinaCAM heads we **evolved the C-Mount**, since **correct back-focus is vital for sharp HD**. Our simple mechanism makes this adjustment **quick and precise**.

# Specifications

## HDC1-100 Camera Head

Image Sensor	2/3" Single Chip Kodak CCD Sensor (RGB) 2004x1144 Pixels, Progressive Scan
Sensitivity	2000 Lux @ f 8.0 / 0dB Gain (100% video out) 160 Lux @ f 2.2 / 0dB Gain (100% video out)
Resolution	1920x1080 Pixels
Dynamic Range	13.5 f-stops @ Extended Range
Signal/Noise Ratio	64dB @ 0dB Gain
Interface	CoaxPress 75Ohm BNC Cable
Cable Length	80m/260ft <sup>1</sup> (180m/590ft) <sup>2</sup>
Lens Mount	C-Mount with adjustable Flange Back Distance B4-Mount, PL-Mount via adaptors
Power Consumption	4.6 W max.
Temperature Operating Range	0 - 45°C (32 - 113°F)
Conformity	EMV: 2004/108/EG; CE: 93/68/EWG; Low Voltage Standard 73/23/EWG; RoHS

## HDC1-200 Base Unit

Digital Signal Processing	Single Chip DSP (dual 14-Bit)
White Balance	AWB (Push to set White Balance) 3200K, 4300K, 5600K, 6800K, MAN (red, blue)
Black Balance	adjustable
Gain Control	200, 400, 800 ASA (except 4Log, 6Log, 8Log)
Gamma	R. 709, 2Bas, 4Log, 6Log, 8Log, sina, Custom LUT
Electronic Shutter	Full Frame, 1/50s to 1/5000s
Remote Head Connections	CoaxPress (via single 75R Coax Cable)
Output Signals	up to 4x HD-SDI (SMPTE 292M, 372M) DVI (Digital Monitor Output 1920x1080 @ 60Hz)
HD-SDI Video Formats	YCbCr 4:2:2; 10 bit; 1280x720, 1920x1080 Frame rates: 24p, 24psf, 25p, 25psf, 50i, 30p, 30psf, 60i, 48p, 50p, 60p, 23.9p, 23.9psf, 29.9p, 29.9psf, 59.9i, 59.9p (also with dual-link HD-SDI)
3D Monitoring	Alternate Frame/Line, Difference, Anaglyph
Synchronisation	internal, Genlock to Tri-Level Sync, Black Burst
Communication Ports	100MBit Ethernet; RS232 / 485 USB 2.0 for Frame Grab to Memory Stick Option: WLAN I802.11 a/b/g Dual Band 2.4/5GHz AUX terminal for RCPs <sup>3,4</sup>
User Interface	Web interface Menu control with 2 user-programmable profiles Standard Sony RCPs <sup>3,4</sup>
10-Pin ODU/LEMO (AUX)	RS232 / 485, Exposure Trigger I/O, Time Code I/O
2-Pin ODU/LEMO (POWER)	12 - 24V DC
Power Consumption	30W max. (inc. two Camera Heads)
Temperature Operating Range	0 - 45°C (32 - 113°F)
Conformity	CE: 93/68/EWG; EN 55103-1,2; EN 55022 B EMV: 2004/108/EG; FCC 47 CFR 15 B Class B Low Voltage Standard 73/23/EWG; RoHS

<sup>1</sup> with standard HD-SDI video cable, for example: Belden 1505F Flexible or Gepco VHD200M Flexible.

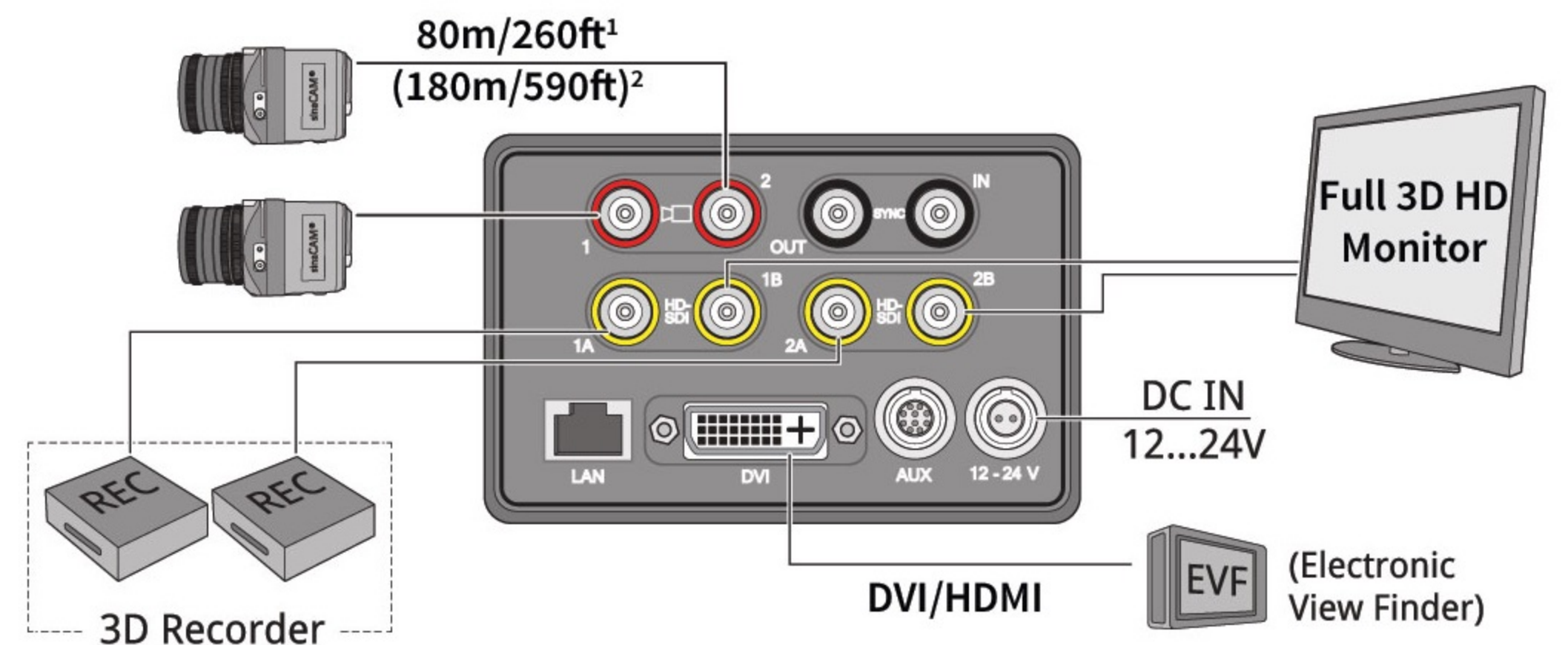
<sup>2</sup> with industrial HD-SDI video cable, for example the Gepco VHD1100

<sup>3</sup> 700 Protocol RCPs are supported, for example:  
Sony MSU-700/700A/750/900/1000/1500  
Sony RCP-700/701/720/721/730/731/740/741/750/751/  
Sony RCP-920/921/1000/1001/1500/1501/1530  
Sony RM-B150/B750

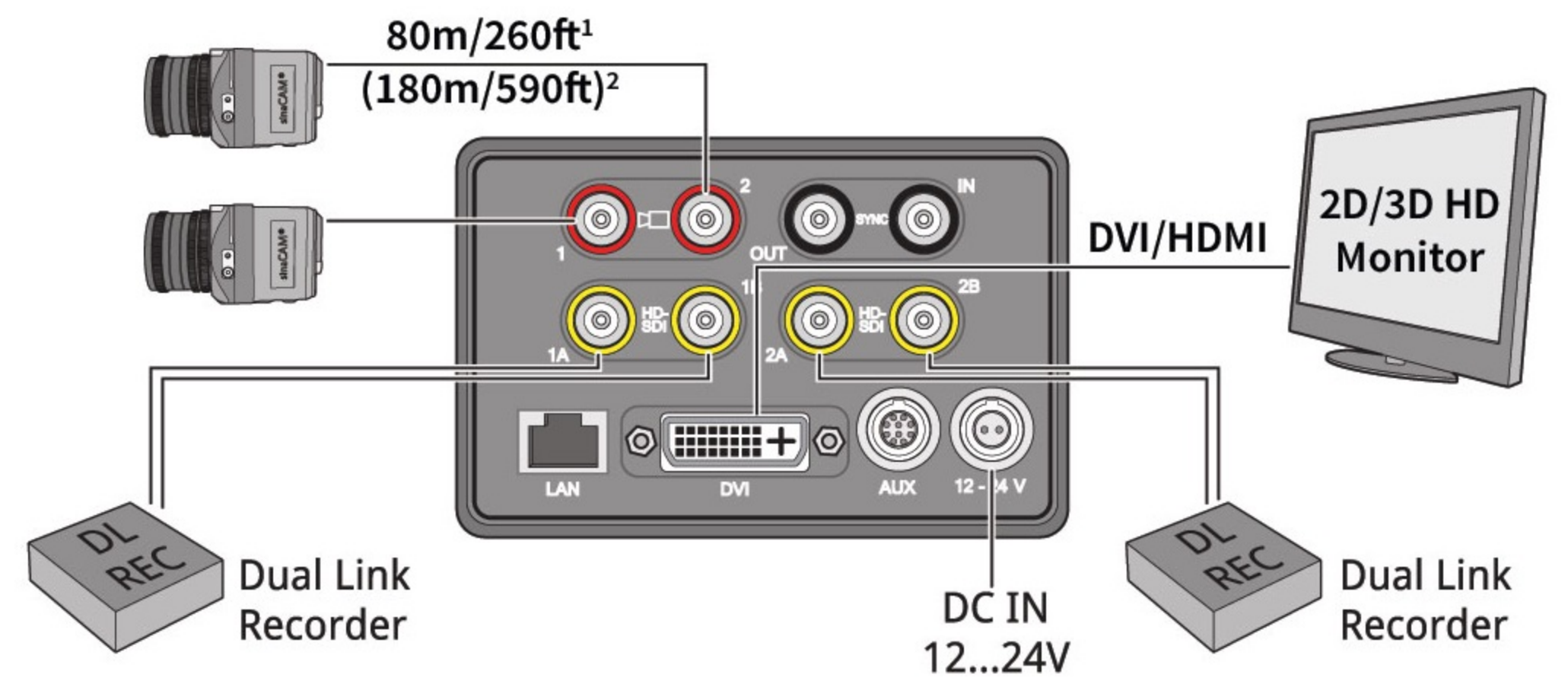
<sup>4</sup> Supported RCP features:  
Master Black (RGB), Master White (RGB), Master Gain (-6 to +12dB), Shutter, 5600K Conversion On/Off, PsF On/Off, AWB, Gamma (RGB), Step Gamma: 0.40 (BBC) - 0.45 (Rec. 709), Knee Point (RGB), Knee Slope (RGB), Black Gamma (RGB), White Clip (RGB), Detail 1 Level, Test Pattern, Color Bars

# Connection Examples

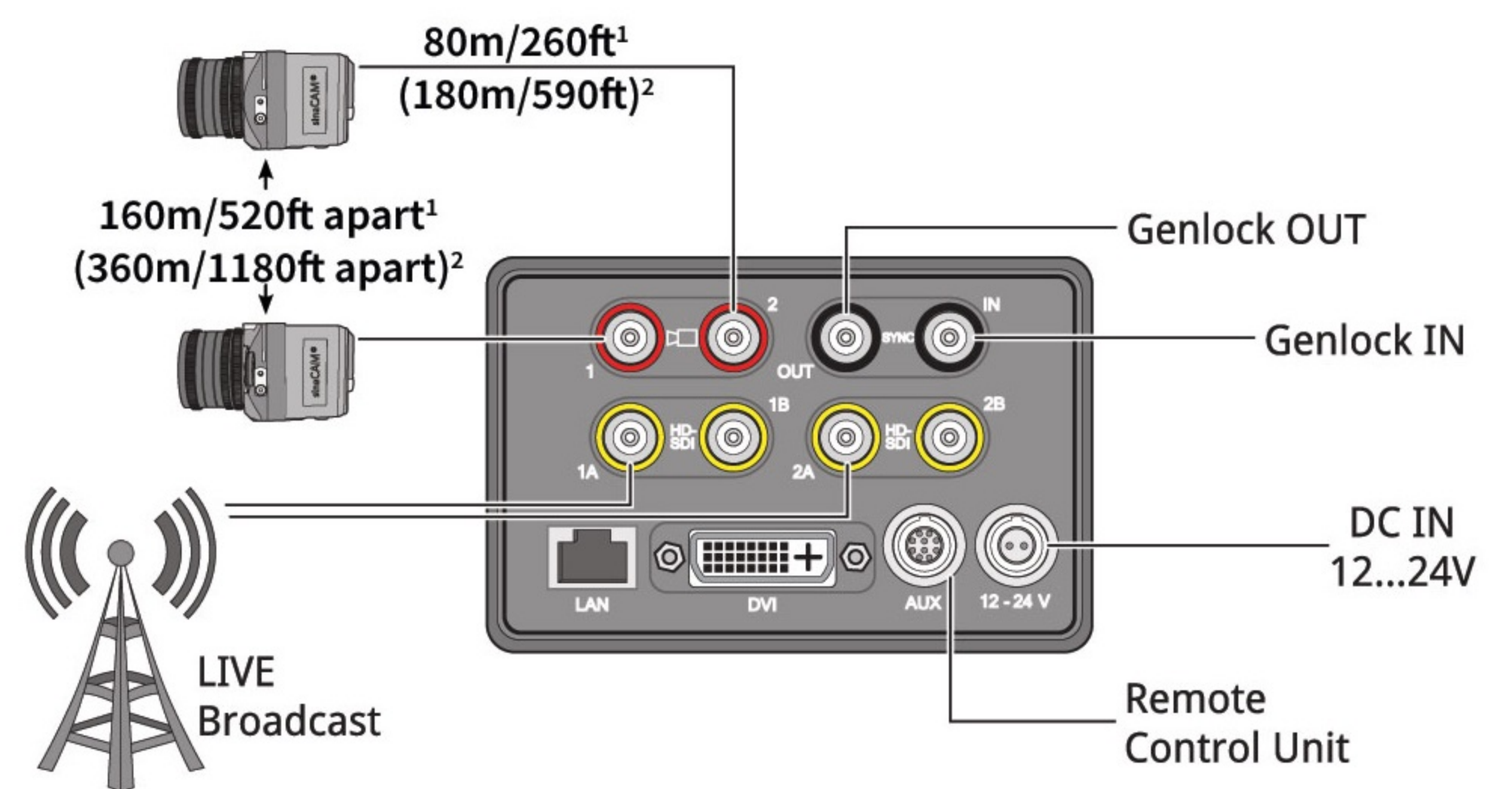
## Standard Single Link



## Professional Dual Link



## Broadcast 3D



## Broadcast 2D with sinaCAM LT

