Introduction

miniCam
X5A System/X5C
Introduction for **MINICAM X5A** system & **X5C** standalone camera

1. **MINICAM X5A**
   - 1/3” Sony CMOS Sensor
     2.2M Pixels (Total) / 2.1M Pixels (Active)
   - HD-SDI/3G-SDI Output
   - 1080/720@25p/30p/50i/60i/50p/60p
   - **WDR / DNR / AGC / Sens-Up**
     WDR (Wide Dynamic Range)
     WDR allows a camera to filter the intense back light surrounding a subject and thus enhances the ability to distinguish features and shapes on the subject.
     DNR (Digital Noise Reduction, 2D/3D-NR)
     DNR technology will supply you with outstanding clear images by reducing noise of picture. DNR technology has excellent disk-saving effect. X5A supports brilliant DNR technologies like DNR, 3D-NR and 2D+3D.
   - 2 Auto (AE/AWB) Control
     Slow Shutter control (Sens-Up), Color temperature Range (1800K ~ 10500K).
   - DC12V Internal

2. **VARIFOCAL LENS**
   - Resolution: 3 megapixel, Exceeds 1920x1080 HD cameras
   - Focal Lenght (mm): 2.2 - 6 (2.7x)
   - Iris Range: F1.3 – Close
   - Iris control w/ X5A System: Motorized
   - Angle Of View (HxV) 16:9 - 1/3”:
     - WIDE: 129°43’x75°23’
     - TELE: 50°30’x28°38’
   - Focusing Range (From Front Of The Lens) (m): ∞ - 0.3
   - Object Dimensions at M.O.D. 16 : 9 - 1/3”:
     - WIDE: 1324x479
     - TELE: 293x158

  Note that the this lens has full in-focus wide angle/fisheye, including picture corners
3. MINICAM BOX

- 1 SMPTE hybrid Cable connector LEMO 3K®

- 1 Channel Video HD-SDI
  - Transmitter with 2 channel loop output

- 1 Port Network
  - Ethernet: IEEE Protocol
  - Rate: 10M/100M
  - Interface: RJ45

- 1 Data 3
  - Signals: RS232 (2Ch/Bidirecional)
  - Interface: Phoenix Connector 5P/MC 1,5/12-ST-3,81
  - Bit rate: 0-256Kbps
  - Error rate: ≤10⁻⁹

- 1 Channel Video COMPOSITE
  - Receiver

- 1 Optical Fiber
  - Interface: ST Connector
  - Mode: Single-Mode
  - Optical power LD: (-11 to -4)dBm
  - Receiving sensitivity: ≥-26dBm

- Output 110-220VAC
  - Chassis Female 3PIN AC IEC C13 Socket Plug

- Input 110-220VAC
  - Chassis Male 3PIN AC IEC C14 Socket Plug
4. MINICAM CCU (Camera Control Unit)

- 1 SMPTE hybrid Cable connector LEMO 3K®

- 1 Channel Video HD-SDI
  Receiver with 2 channel

- 1 Port Network
  - Ethernet: IEEE Protocol
  - Rate: 10M/100M
  - Interface: RJ45

- 1 Data 3
  - Signals: RS232 (2Ch/Bidirecional)
  - Interface: Phoenix Connector 5P/MC 1,5/12-ST-3,81
  - Bit rate: 0-256Kbps
  - Error rate: ≤10⁻⁹

- 1 Channel Video COMPOSITE
  - Transmitter

- 1 Optical Fiber
  - Interface: ST Connector
  - Mode: Single-Mode
  - Optical power L: (-11 to -4)dBm
  - Receiving sensitivity: ≥-26dBm

- Input 110-220VAC
  - Chassis Male 3PIN AC IEC C14 Socket Plug

- Chassis rack dimension
  - 1.5U Rack mount
5. RCP 002 (Remote Control Panel)

Features:

- RCP 002 is a universal remote control panel for various modes of cameras. The user interface is designed for convenience, with a menu with accessible functions on the touch screen for a detailed view and clear functions and values.

- Operates based on Ethernet using TCP/IP or Serial communication protocol.

- Can control 8 different type of cameras, directly from different manufacturers at the same time.

- Provides a remote diagnosis of camera and the operation of the transmission.

- Comfortable and ergonomic, with great flexibility and programmable buttons.

- Touch screen LCD with backlight and adjustable tilt to facilitate to the maximum reading.

- Easy configuration and selection of the camera number.

- 12V Power Supply
6. CONNECTION DIAGRAM X5C

Field Box

- 10m
- 6. CONNECTION DIAGRAM X5C
- Up to 2Km
- CCU

Wide 129°
Tele 50°
Remote Iris

RCP-002

7. CONNECTION DIAGRAM X5A

Focus

- Wide 129°
Tele 50°

RJ45 Power + Control
Optional

Iris

OSD

BNC - HDSDI/3GSDI

12V - 24V

Optional

Optional

BreakOut Box
up to 8 X5C

up to 300m

miniCam X5A System/X5C
8. CONNECTION DETAIL X5A SYSTEM

- **CAM**
- **HPRC**
- **CCU F-B**
- **RCP-002**
- **OB VAN**

**Multicore Cable**
- **Data + Video**

**Video Out**
- **VIDEO OUT**

**Power Selector**
- **LEMO POWER SUPPLY**
- **Power Off**
- **External Power Supply**

**Power Supply**
- **220VAC Out**

**Reference Monitor**
- **LEMO SERIE 3K.93C CONNECTOR**
  - 2x Optical Fiber + 220VAC

**Ethernet**
- **Ethernet**

**Switch**
- **Power Supply 220VAC**

**MiniCam X5A System/X5C**
### 10. X5A / X5C Full Specs

<table>
<thead>
<tr>
<th></th>
<th>X5A</th>
<th>X5C</th>
</tr>
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<tbody>
<tr>
<td><strong>Image Sensor</strong></td>
<td>1/2.8” Megapixel Sony Exmor CMOS Sensor</td>
<td></td>
</tr>
<tr>
<td><strong>Scanning System</strong></td>
<td>Progressive, Interlace</td>
<td></td>
</tr>
<tr>
<td><strong>Total number of pixels</strong></td>
<td>1952 (H) x 1116 (V)</td>
<td></td>
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<tr>
<td><strong>Lens Mount</strong></td>
<td>-</td>
<td>C/CS Mount</td>
</tr>
<tr>
<td><strong>Video Output Mode</strong></td>
<td>HD-SDI: 1920X1080p (30/25fps), 1920x1080i (60/50fps), 1920x1280x750p (60/50fps) 3G-SDI: 1920X1080p (60/50fps)</td>
<td></td>
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<tr>
<td><strong>Sync. System</strong></td>
<td>Internal</td>
<td></td>
</tr>
<tr>
<td><strong>Genlock</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Video Output Level</strong></td>
<td>HD-SDI, 3G-SDI (Level A)</td>
<td></td>
</tr>
<tr>
<td><strong>Min. Illumination</strong></td>
<td>Color: 0.2Lux @ F1.2 / B/W: 0.01@F1.2</td>
<td></td>
</tr>
<tr>
<td><strong>Shutter</strong></td>
<td>Auto / Manual (1/30<del>1/50,000 &amp; x2</del>x30)</td>
<td></td>
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<tr>
<td><strong>White Balance</strong></td>
<td>ATW/AMC – Set/ Indoor/ Outdoor/ Manual</td>
<td></td>
</tr>
<tr>
<td><strong>Gain Setting</strong></td>
<td>AGC 1-15 Level, MANUAL 0-100 Level (Default 40)</td>
<td></td>
</tr>
<tr>
<td><strong>Auto Exposure Detection</strong></td>
<td>4 Areas, 4 modes: Off / WDR / BLC / HSBLC</td>
<td></td>
</tr>
<tr>
<td><strong>Flicker Cancellation</strong></td>
<td>FLK – Shutter mode</td>
<td></td>
</tr>
<tr>
<td><strong>Detail</strong></td>
<td>0~15 Level</td>
<td></td>
</tr>
<tr>
<td><strong>Color Correction</strong></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td><strong>Color Saturation Adjustment</strong></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td><strong>Noise reduction</strong></td>
<td>2D, 3D</td>
<td></td>
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<tr>
<td><strong>Gamma Correction</strong></td>
<td>YES</td>
<td></td>
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<tr>
<td><strong>Master Pedestal</strong></td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td><strong>Pedestal (R,G,B)</strong></td>
<td>R, B</td>
<td></td>
</tr>
<tr>
<td><strong>Color Balance</strong></td>
<td>R, B</td>
<td></td>
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<tr>
<td><strong>Pixel Defect (dead pixel compensation)</strong></td>
<td>3 modes: real time, static point, black points</td>
<td></td>
</tr>
<tr>
<td><strong>D-WDR/ACCE wide Dynamic Range</strong></td>
<td>Low / Middle / High / Off, 0~15 steps</td>
<td></td>
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<tr>
<td><strong>Image Flip</strong></td>
<td>Up/ Upside down / Mirror / V-flip / Rotate / D-Zoom / NEG.IMAGE</td>
<td></td>
</tr>
<tr>
<td><strong>Camera Control Options</strong></td>
<td>Remote RCP</td>
<td>Remote RCP / Local OSD</td>
</tr>
<tr>
<td><strong>Varifocal Lens</strong></td>
<td>2.2mm – 6mm (2.7x)</td>
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<tr>
<td><strong>Iris Range</strong></td>
<td>F1.3 – Close</td>
<td></td>
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<tr>
<td><strong>Operation</strong></td>
<td>Zoom Manual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focus Manual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iris Motorized remotely (RCP002) Manual</td>
<td></td>
</tr>
<tr>
<td><strong>Angle Of View</strong></td>
<td>WIDE 129°43’ x 75°23’</td>
<td></td>
</tr>
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<td>(HXV) 16:9</td>
<td>TELE 50°30’ x 28°38’</td>
<td></td>
</tr>
<tr>
<td><strong>Focusing Range</strong></td>
<td>Tele: ∞ - 0.3m (wide: ∞ - from Front of Lens)</td>
<td></td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>3 Megapixel, Exceeds 1920 x 1080 HD Cameras</td>
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<td><strong>Object Dimension</strong></td>
<td>WIDE 1324 x 479</td>
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<tr>
<td>At M.O.D. 16:9</td>
<td>TELE 293 x 158</td>
<td></td>
</tr>
<tr>
<td><strong>Operating / Storage – Temperature</strong></td>
<td>-5°C~+ 50°C (Humidity: 0%RH <del>80%RH) -20%</del>+ 60°C (Humidity: 0%RH~90%RH)</td>
<td></td>
</tr>
<tr>
<td><strong>Power – Consumption</strong></td>
<td>DC12V @ 4W</td>
<td>DC12V – 24V @ 3.3W</td>
</tr>
<tr>
<td><strong>Dimension (LxWxH)</strong></td>
<td>142mm X 63mm X 52mm</td>
<td>114mm x 59mm x 48mm</td>
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<tr>
<td><strong>Weight</strong></td>
<td>320g</td>
<td>210g</td>
</tr>
</tbody>
</table>

*miniCam X5A System/X5C*
11. Suspension systems for InGoal

These systems are used because they don’t depend on local conditions and can be used regardless the goal net and set up.

Spain Stadiums:
Other Stadiums: