



**Ncam Live real-time camera tracking enables live virtual or augmented broadcast graphics in a studio or on location, even on handheld and Steadicam.** The Ncam Live camera tracking system features a multi-sensor bar that is unobtrusively mounted on the camera and provides real-time data to the Ncam tracking server. Ncam Live provides complete position and rotation information, plus focal length and focus, via industry-standard protocols compatible with any VR/AR graphics system.

### Fast

- Instant real-time tracking without the need for time-consuming system calibration, learning of environment or surveys.
- User friendly interface enables super quick automated origin and axis alignment, or speedy and interactive manual placement via its image-based modelling module.
- Highly mobile 'plug and play' system relocates rapidly both indoors and outdoors.

### Flexible

- Track any kind of camera, anywhere
- Works in studio and on location, green screen or natural settings
- Works with all camera rigs including handheld, Steadicam, Spidercam and cranes
- Ncam Live combines patent-pending multi-sensor technology instead of relying on simple optical-only solutions, making it robust in mission critical situations.
- Scalable product option allows future upgrade from PTZ to the full 7D model

### Creative

- Immerse dynamic, movie-style graphics in to any live action
- Ncam Live enables the camera and the talent to move around the graphics
- Freedom of movement highlights 3D graphics and provides new, innovative creative shots

### Compatible

- Ncam supports all popular industry-standard broadcast graphics engines, either via the Free-D protocol or Ncam's SDK
- The revolutionary new SDK v2.0 enables a rich real-time data stream including timecode, optical parameters, distortion maps and parametric camera models.
- All data is sent down a single Cat6 Gigabit Ethernet cable, which can easily be converted into fibre via standard media converters if necessary.
- Can be combined with existing encoded products



"We've had the great fortune to work with Ncam for almost a year now. In that time we've been able to do things with virtual graphics that we've never been able to do before. They have an incredible team that continues to innovate. We look forward to pushing their technology even further in the years to come."

#### Zac Fields

Vice President Graphics & Technology  
FOX Sports Media Group



## MAIN CAMERA INFORMATION

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| <p><b>Supported cameras:</b></p> <ul style="list-style-type: none"> <li>• Digital broadcast cameras with HD SDI monitoring</li> </ul> <p><b>Supported lenses:</b></p> <ul style="list-style-type: none"> <li>• Prime varifocal or parfocal</li> <li>• Zoom varifocal or parfocal</li> </ul> <p><b>Lens metadata</b></p> <ul style="list-style-type: none"> <li>• Canon/Fujinon lens data from virtual port – Ncam smart cable</li> <li>• Direct encoding from proprietary Ncam encoders</li> </ul> <p><b>Lens calibration:</b></p> <ul style="list-style-type: none"> <li>• Ncam proprietary – measured and calibrated in prep</li> <li>• Stored and selectable from database and exported to graphics engine</li> </ul> | <p><b>Ncam line-up:</b></p> <ul style="list-style-type: none"> <li>• &lt; 1 minute on lens change</li> </ul> <p><b>Camera configurations:</b></p> <ul style="list-style-type: none"> <li>• Handheld, Steadicam, tripod, dolly, pedestal, jib/crane</li> </ul> <p><b>Composite preview feed to camera:</b></p> <ul style="list-style-type: none"> <li>• 1920/1080 HD SDI (wired or wireless)</li> <li>• Frame rate (based on camera monitor output)</li> <li>• Progressive or PsF (based on camera monitor output)</li> <li>• To electronic viewfinder or field monitor</li> </ul> |
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The Ncam Live system comprises of a Camera Bar, Connection Box and Server and is offered as two versions:

### NCAM<sup>®</sup> LIVE PTZ

Pan, tilt, zoom (focus, roll) only [license upgradeable to 7D]

### NCAM<sup>®</sup> LIVE 7D

Pan, tilt, zoom, focus, roll, xyz – full axis flexibility

### NCAM<sup>®</sup> SERVER

- Configuration:**
- One Server per broadcast camera
- Device:**
- Silent-running bespoke workstation
  - Server interface: monitor, keyboard, mouse
- Operating system:**
- Bespoke Linux
- Application software:**
- Ncam Live
- Location:**
- Studio – rack-mounted – controlled over KVM
  - Mobile – OB Truck

### NCAM<sup>®</sup> CAMERA BAR

- Configuration:**
- Multi-sensor tracking technology; 1 bar per camera
- Mounting:**
- Fixed to front camera rods or custom mount
- Operation:**
- Tether cable to Ncam Server workstation: Copper (Ethernet) – up to 100m or Fibre – 2km+

Ncam Live is exclusively distributed by Vitec Videocom  
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