71.98.1305

# T-CAM Package CM70

## Description

The T-CAM Package CM70 is a complete and out-of-the-box solution for conference camera tracking.

It allows straight-forward installation, fast configuration and integration of a camera tracking system with any Televic Conference system. The T-CAM solution controls up to 4 IP-CAM CM70[1], using the 3G-SDI connectivity.

By combining hardware and software, the T-CAM solution makes it easy to use and control cameras. Installers can quickly set up cameras, create talking heads, automatically switch the camera between participants, and even add a participant's name as an overlay[2] on top of the image. The end result is a package that makes camera integration plug and play.

The T-CAM Package CM70 solution comes in 3 different packages.

1. The basic package includes 2 cameras by default. One additional license required for each additional camera. (for a maximum of 4 cameras)
2. Available as an add-on in the T-CAM Name Overlay package.

## Packages

### Basic T-CAM Package CM70 [71.98.1305]

The basic package contains everything you need for a basic camera tracking set-up:

- 2 IP-CAM CM70 cameras
- Preview capture card: Blackmagic DeckLink Mini Recorder
- Video switcher: Blackmagic ATEM 1M/E Constellation HD
- T-CAM Software: PC software with a license for control of 2 cameras
- BlackMagic Micro Converter SDI to HDMI

### IP-CAM CM70 Camera & License [71.98.1306]

Adds another camera and a camera license. Up to 2 packages may be ordered for a maximum of 4 cameras.

- 1 IP-CAM CM70 Camera
- Camera interconnection cables
- 1 license for one additional camera

### T-CAM Name Overlay [71.98.1302]

This add-on allows an overlay to be added onto the video output by using an additional capture card.

- 1 license for name overlay
- Capture card: Blackmagic DeckLink Mini Recorder

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## Global Features

T-CAM is built for seamless integration with Televic Conference systems and allows a number of features out of the box.

- Integrates perfectly with D-Cerno, Plixus engine, CoCon, Confidea G3 and Confidea G4.
- Creation of a synoptic for easy configuration of camera positions
- 2 shots per seat
- 2 shots for the wide shot
- Multiple seat configurations immediately available for flexible seating arrangements
- Configuration of camera positions can be done with the software or with a USB-joystick (not included in any of the packages)
- Camera control over serial connection and IP connection
- 20× Optical zoom on cameras
- Software may be upgraded to webcasting software

## Product Features

### Full HD PTZ Camera

- Camera

The T-CAM solution is a dynamic PTZ camera tracking solution ideally suited for conference room settings. With Full HD 1080p output at 60 fps, the camera provides excellent images. Additionally, the 20× zoom, outstanding white balance and exposure mode, bring even the smallest details into focus, especially in darker conference rooms where lighting conditions may be poor.

With a wide viewing angle (horizontal -170° to +170°, tilting up to 90° and down to -30°), fast response and smooth operation, the camera captures every move securely.

Finally, the 3G-SDI interface allows for crystal-clear and uncompressed video without delays. Combined with Televic Conference's Plixus network, working with high-quality, lip-synced video becomes a joy.

### Blackmagic DeckLink Mini Recorder

- Capture Card

### Blackmagic ATEM 1/M Constellation HD

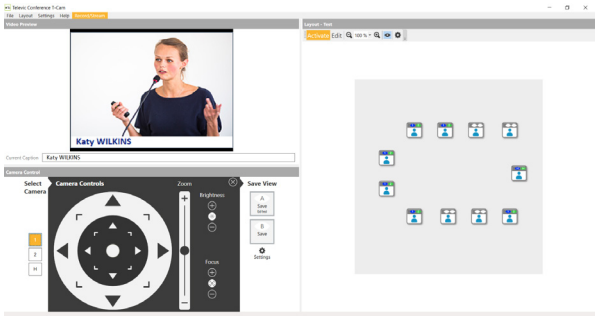
- Video Switcher

The Blackmagic ATEM video switcher puts a host of video switching options easily at your fingertips. It includes 10 3G-SDI video inputs to convert any 1080p input source, making it ideal to use with the T-Cam cameras. It includes a large LCD front panel to see program output and change the switcher settings via the on-screen menu.

### T-CAM Camera Control

- Software

Configure camera positions, assign name overlays (separate license required), set up 2 shots per seat, wide shots, etc. Manual override is available.




### BlackMagic Micro Converter SDI to HDMI

- HDMI converter

## System Requirements

Recommended PC requirements:

- Desktop PC with at least 1 PCI slot. 2 PCI slots, if both preview and overlay are required.
- Windows 7, 8, 10 and 11 supported
- Serial COM port (USB to Serial converter can be used as well) when not used with IP connection
- PoE switch when used with IP connection

Standard USB joystick can be connected for camera control. Recommended joystick: Axis T8310.

## Specifications

### T-CAM Package CM70

| Mechanical | |
|---|---|
| Weight | 1.5 kg |
| Size packed | 26 x 24 x 24 cm |
| Weight packed | 2.4 kg |

### IP-CAM CM70

| Technical & Electrical | |
|---|---|
| Sensor | 1/3" CMOS, 2.12 mp, 16:9 |
| Video output | 1080p 60 / 59.94 / 50 fps, 1080p 30 / 29.97 / 25 fps, 720p 60 / 59.94 / 50 fps |
| Optical zoom | 20× |
| Horizontal FOV wide ~ tele | 60.38° ~ 3.72° |
| Vertical FOV wide ~tele | 35.80° ~ 2.14° |
| Panning angle | -170° ~ +170° |
| Tilting angle | -30° ~ +90° |
| Video output (HD) interface | 3G-SDI |
| PoE | PoE 12 W (802.3af) |
| Camera control interface | RS-232 / RS-422 / Ethernet |
| Camera control protocol | VISCA / PELCO-P / PELCO-D |
| Video S/N ratio | > 55 dB |
| Focal length | 4.4-88.8 mm |
| Digital noise reduction | 2D & 3D DNR |
| Horizontal viewing angle | 55.2° ~ |
| Vertical viewing angle | 3.2° to 42.1° ~ |

| | |
|---|---|
| Aperture | F1.8-F11 |
| Minimum illumination | 0.05 LUX |
| Gain control | Auto, manual |
| White balance | Auto, manual, OnePush, 2,400 K - 7,100K in steps of 100K |
| H&V image flip | Supported |
| Audio input | Balanced Line In via 5-way Phoenix connector |
| Audio output | Ethernet, SDI and HDMI |
| **Environmental** | |
| Operating Temperature | -5° C to 40° C (23° - 104°F) |
| Storage Temperature | -20° to 60° C (-4° to 140° F) |
| Relative Humidity | 20% to 95% non-condensing |

**Blackmagic ATEM 1/M Constellation HD**

| | |
|---|---|
| **Technical & Electrical** | |
| Power Supply | 1 x Internal 100 - 240 AC |
| Power Usage | 36 W |
| Dimensions | 28 x 4.4 x 17.6 cm |
| **Connections** | |
| Total Video Inputs | 10 |
| Total Video Outputs | 6 |
| SDI Rates | 1.5G, 3G |
| Total Audio Inputs | 2 x balanced 1/4 inch Jack<br>1 x 5 pin XLR Talkback |
| Total Audio Outputs | 1 x 5 pin XLR Talkback |
| SDI Audio Inputs | 4 x 10-bit SD/HD switchable. 2 channel embedded audio. |
| SDI Audio Inputs | 2 Ch embedded audio on all SDI inputs |
| SDI Audio Outputs | 2 Ch embedded audio on all SDI outputs |
| Reference Input | Tri-Sync or Black Burst |
| Video Input Re-Sync | On all 10 inputs |
| Frame Rate and Format Converters | On all 10 inputs |
| SDI Aux Outputs | Any of the 6 SDI outputs |
| SDI Preview Outputs | Any of the 6 SDI outputs. |
| SDI Program Output | Any of the 6 SDI outputs |
| Webcam Output | 1 x USB-C supporting 720p or 1080p at PGM frame rate |
| Total Multi Views | 1 x 3G-SDI |
| Control Panel Connection | Ethernet. Direct connection between panel and chassis, or via network. |
| Internal Timecode Generator | Yes |
| Talkback | RJ45 for 3rd party talkback systems |
| Ethernet | 10/100/1000 BASE-T |
| Computer Interface | 1 x USB-C supports USB 3.1 Gen 1 (5Gb/s) |
| **Standards** | |
| SD Video Standards | None |
| HD Video Standards | 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60 |
| SDI Compliance | SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M level A and B |
| Video Sampling | 4:2:2 |
| Color Precision | 10-bit |
| Color Space | REC 709 |
| SDI Auto Switching | Automatically detects between 1.5G-SDI and level A or level B 3G-SDI |
| **Display** | |
| Front panel | Built in 2.2"LCD monitor for video, 10 LED buttons for setup and emergency switching, 4 source buttons, 6 talkback selection and mix buttons, menu control knob and set button, front panel lock button. |
| **Environmental** | |
| Operating Temperature | 0° to 40°C (32° to 104°F) |
| Storage Temperature | -20° to 60°C (-4° to 140° F) |
| Relative Humidity | 0% to 90% non-condensing |

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