NDI

4K lite

reckeen EZ

PERFECT BROADCASTING SOLUTIONS

Reckeen SMARTKEY technical specifications

Video input

SDI

- **SDI Video Input**
  - 4 x 3G – 3G/HD/SD auto switching
  - 3G,12G – 4 x 3G SDI and 2 x 12G SDI

HDMI

- **HDMI**
  - 2 x HDMI 2,0 type A connector with support for 1080p60 up to 4k 60p

Monitor output

- **2 x DP output for monitor**
- **2 x HDMI output for monitor**

I/O port

- **Tally Output**
  - TL – DB9 – 4 channels
- **Reckeen External Keyboard port**
  - RS – DB9 – RS 232
- **Reckeen External Audio port**
  - LAN – Audio Link
- **Ethernet**
  - Gigabit Ethernet LAN
- **PC/2**
  - PC keyboard
- **USB**
  - 2 x USB 3.0 (front panel)
  - 4 x USB 3.0 (back panel)
  - 1 x USB 3.1 (back panel)

Reference input - (Genlock)

- Black Burst or Tri-Sync

Audio output - ADB 100

- **Digital**
  - embedded stereo on each SDI and HDMI
  - 2 x AES/EBU
- **Analog**
  - 4 x XLR two channels – professional balanced analogue audio stereo differential input (-10dBV, or 4dBu)
  - 1 x Jack 6,3mm – stereo Headphone output

Video standards

SDI

- **SDI**
  - SMPTE2082-1
    - 2160p (60/59.94/50/30/25)
  - SMPTE–425M
    - 1080p (60/59.94/50/30/25)
  - SMPTE–292M
    - 1080p (30/29.97/25)
    - 1080i (60/59.94/50)
  - SMPTE–296M
    - 720p (60/59.94/50)
  - SMPTE–259M
    - PAL, NTSC

HDMI

- **HDMI**
  - Video standard – HDMI spec 1.4
  - Video standard – HDMI spec 2.0

NDI

- **NDI input:**
  - 4 input interchangeably as cam 1 to cam 4 with supported stream key or Reckeen chroma key
  - 2 input interchangeably as media 1 and 2
- **NDI output:**
  - program out

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Video output

SDI

- **SDI Video Output**
  - 8 x SDI – 3G/HD
  - 3G,12G – 6x3G/HD and 2x12G - 4k 60p

HDMI

- **HDMI**
  - HDMI 1.4 type A connector with support for 1080p60

Audio input - ADB 100

- **Digital**
  - embedded stereo on each SDI and HDMI
  - 2 x AES/EBU
- **Analog**
  - 4 x XLR two channels – professional balanced analogue audio stereo differential input (-10dBV, or 4dBu)
  - Two types of microphones – dynamic and condenser with + 48V phantom

Video formats

SDI

- **Input -** auto switching
  - 2 x SDI 12G
    - 2160p 60/59.94/50/30/29.97/25
  - 6 x SDI 3G
    - 1080p 60/59.94/50/30/29.97/25
    - 1080i 60/59.94/50
    - 720p 60/59.94/50
  - PAL, NTSC
- **Output**
  - 2 x SDI 12G
    - 2160p 60/59.94/50/30/29.97/25
  - 6 x SDI 3G
    - 1080p 60/59.94/50/30/29.97/25
    - 1080i 60/59.94/50
    - 720p 60/59.94/50
  - PAL, NTSC
    - 720p 60/59.94/50

HDMI

- **Input -** auto switching
  - 2 x HDMI v2.0
    - 2160p 60/59.94/50/30/29.97/25
    - 1080p 60/59.94/50/30/29.97/25
    - 1080i 60/59.94/50
    - 720p 60/59.94/50
  - PAL, NTSC
- **Output**
  - HDMI v1.4
    - 1080p 60/59.94/50/30/29.97/25
    - 1080i 60/59.94/50
    - 720p 60/59.94/50

Features

- **Downstream Key –** x2
- **Media Format**
  - MPEG2, MPEG4 and H.264 containers: (avi, mpg, mpeg, mp4, mxf, mov)
  - Audio: WAV, MP3
- **Video Capture Format**
  - H.264 (.mp4) MPEG-2 (.mpg)
  - 1080p 60/59.94/50/30/29.97/25
  - 1080i 60/59.94/50
  - 720p 60/59.94/50
  - H.264 up to 4k 30p and 60p
- **Still Picture –** x2
- **Picture Format**
  - .png, .jpg, .bmp
- **Still Text –** x2
  - Still Editor included
- **Keyer –** x4
  - Chroma Key / Luminance Key
  - SMARTKEY with 4 SDI outputs
- **Streaming**
  - Facebook
  - YouTube
  - NicoNico
  - NDI
  - and custom profiles

Software

- **Reckeen SMARTKEY package:**
  - 4 chroma SMARTKEY keyers
  - Reckeen Lite
  - VSM Lite Editor (also as a standalone version)
  - Still Editor

Reckeen upgrade:
contains the trial version of the full package 3DSPRO with possibility of future software upgrade

3DSPRO 3D Studio PRO

Reckeen EZ Asia Distributor

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keen on record

Reckeen EZ is the series which dedicated for Asian market

SMARTKEY
Multi Chroma Keyer

Reckeen SMARTKEY and Reckeen Lite

Perfect broadcasting solution for professionals.

Reckeen SMARTKEY system enables you to produce professional TV programs in real-time. It is a multi-channel mixer that combines 4 video sources with computer graphics and media. Each of these video sources can be preprocessed using 4 built-in chromatic keys with Smartkey function, thus creating a virtual studio or an advanced composition combining computer graphics and video.

SMARTKEY technologies can be used:

• As 4 independent Full HD, High Quality Chroma keys with video background, the Keys' outputs can be processed in an external mixer.

• To make quick transitions of Smartkey channels to the main mixer (switcher) on PRV, PGM outputs in Reckeen LITE systems.

• As a PIP composition in LITE SMARTKEY app, that can be created using VSM - Virtual Space Maker Editor.

RECKEEN SMARTKEY Studio is actually 9 in 1!

RECKEEN SMARTKEY is a complete set of tools and functionalities to create, record and broadcast high-quality video content.

These functionalities include:

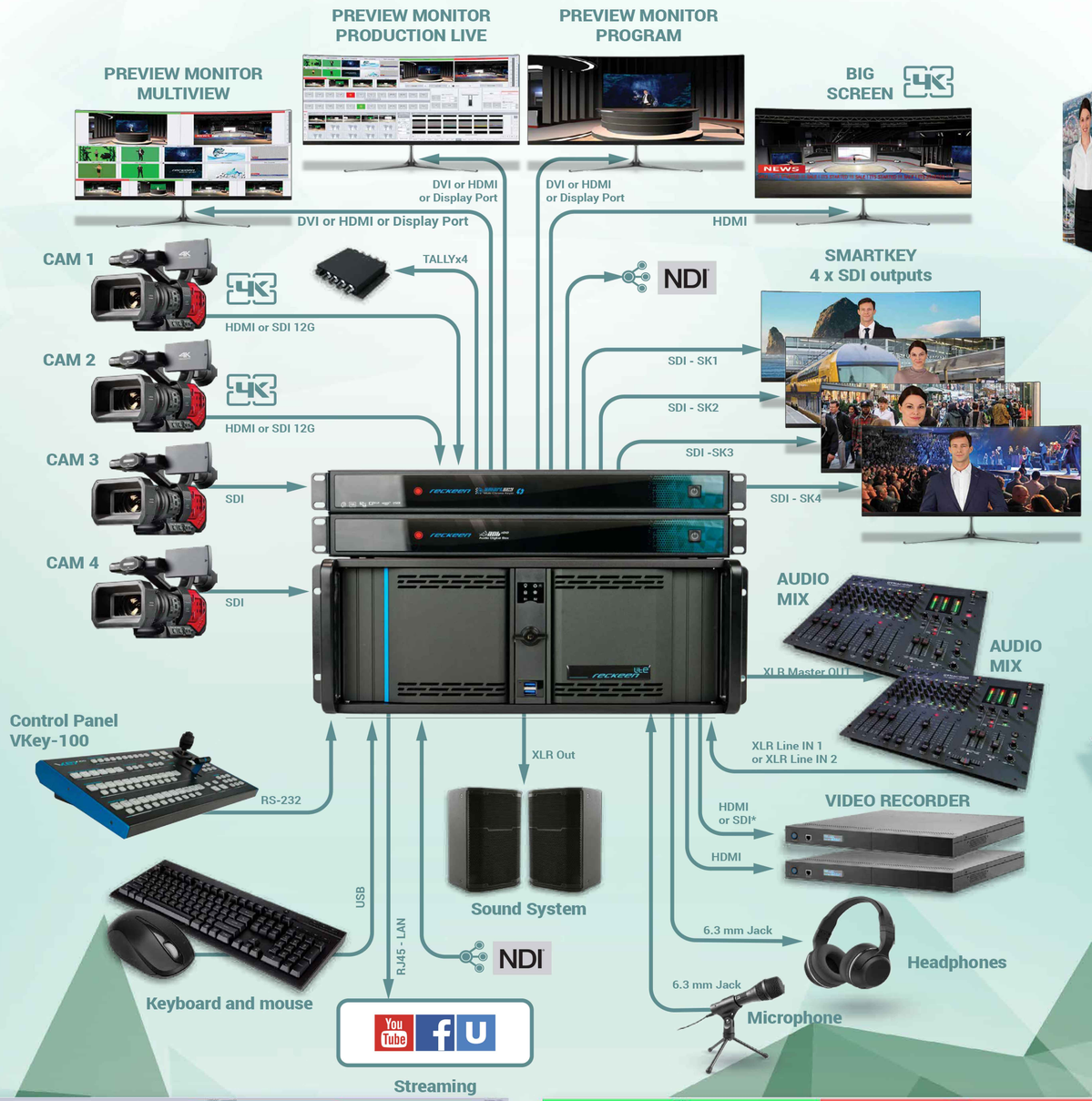
- **Reckeen Lite virtual studio**
- **4 Chroma key channels with SMARTKEY function**
- **Production switcher**
- **Audio Mixer**
- **Still Editor - captions and graphic boards generator**
- **VSM Lite Editor – virtual and PIP scenery editor**
- **MS 3D Paint Editor**
- **Recorder**
- **Streamer**

Reckeen Lite Production

The production module within Reckeen Lite system is a typical production application that provides all necessary tools needed for live program production. This type of realizations require simultaneous operation on multiple video sources. To make this possible, RECKEEN LITE system allows you to receive external signal sources connected to the input card.

To control the players a simple interface is used – Media Tray.

RECKEEN LITE system, depending on its configuration, enables operating on up to four sources (CAM1 – CAM4). CAM sources are streamed live, for example from a camera connected to the input card. Reckeen Lite is also equipped with NDI signal sources. Remaining signal sources are played by virtual TV players. The players support the following sources: MEDIA1, MEDIA2 for videos, STILL1, STILL2 for static graphics, and Text1, Text2 for text boards. Controlling virtual cameras is easy and convenient thanks to the specially designed VKey-100 keyboard with joystick.



SMARTKEY - Mutli Chroma Keyer

SMARTKEY is a new solution integrating chroma key function with media and graphics.

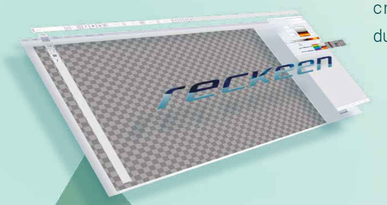
How does SmartKey work? Input signals from the cameras, from up to 4 chosen video inputs in Reckeen 3DSPRO Studio & Reckeen SMARTKEY, are sent to chroma keying function.

The purpose of chroma keying is to remove green or blue background, and be able to place a talent in a virtual studio. SMARTKEY function integrates a result from chroma keying with chosen video clip or still graphics. Chosen video clip or graphics is placed as a background layer, instead of green or blue colour.

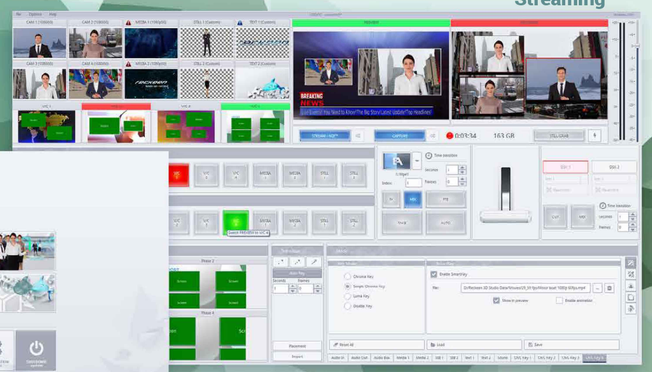
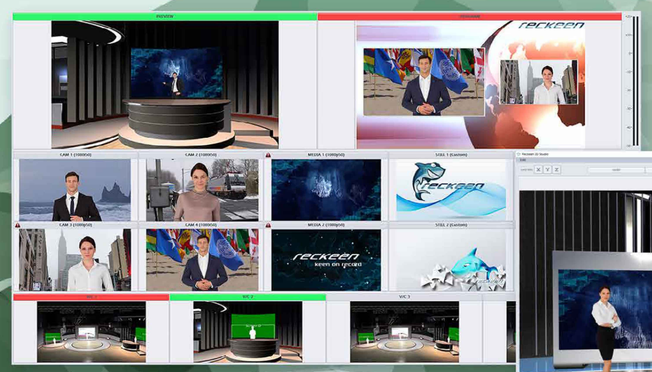
Additional feature includes automatic movement of background media to intensify visual dynamic of a created scene. On such background, a layer with a talent, generated by a chroma key, can be placed. In that way, we can obtain four new media streams – SMARTKEY channels (SK 1 to 4), which can be placed directly inside our Reckeen virtual studio systems space, or sent to additional SDI outputs.

Still Editor

The Still Editor module allows you to create captions, text boards and news tickers. With an easy-to-use panel, suitable components can be downloaded from external files, or created from scratch – even during production and live editing.



MS Paint 3D

By using Microsoft 3D Paint editor, which is preinstalled with Reckeen 3D studio, you can create 3D objects that later can be placed in a virtual studio scenography.

This application allows you to implement all sorts of ideas - from simple ones, like three-dimensional subtitles, to the most original 3D objects' designs. Anything created using this application can be easily and intuitively transferred to our virtual studio, even during live production.