



**NDI 5** 4x **4K** P30

## Reckeen 3DSPRO X8 technical specifications

### Video input

- |   |   |
|---|---|
| <b>SDI</b> <ul style="list-style-type: none"> <li>• SDI Video Input</li> <li>• 4 x 3G – 3G/HD/SD auto switching</li> <li>• 3G,12G – 4 x 3G SDI and 2 x 12G SDI</li> </ul> | <b>HDMI</b> <ul style="list-style-type: none"> <li>• HDMI</li> <li>• 2 x HDMI 2.0 type A connector with support for 1080p60 up to 4k 60p</li> </ul> |
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### Monitor output

- 3 x DP output for monitor
- 1 x HDMI output for monitor - - The number of HDMI/DP outputs depends on the graphics card

### I/O port

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| <ul style="list-style-type: none"> <li>• Tally Output</li> <li>• TL – DB26 – 4 channels</li> <li>• Reckeen External Keyboard port</li> <li>• RS – DB9 – RS 232 and RS422</li> <li>• Reckeen External Audio port</li> <li>• RJ45 – Audio Link</li> <li>• Ethernet</li> <li>• AQUANTIA® / Marvell 10G LAN</li> </ul> | <ul style="list-style-type: none"> <li>• Intel® Gigabit LAN</li> <li>• Intel® Wi-Fi 6 802.11ax (2.4Gbps) + BT 5.0</li> <li>• USB</li> <li>• 2 x USB 3.0 ( front panel)</li> <li>• 2 x USB 3.2 Gen2 Type-C</li> <li>• 6 x USB 3.2 Gen1</li> <li>• 2 Intel® Thunderbolt™ 3 Type-C</li> </ul> |
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### Reference input - (Genlock)

- Black Burst or Tri-Sync

### Audio output - ADB 100

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|--|---|
| <ul style="list-style-type: none"> <li>• Digital</li> <li>• embedded stereo on each SDI and HDMI</li> <li>• 2 x AES/EBU</li> </ul> | <ul style="list-style-type: none"> <li>• Analog</li> <li>• 4 x XLR two channels – professional balanced analogue audio stereo differential input (-10dBV, or 4dBu)</li> <li>• 1 x Jack 6.3mm – stereo Headphone output</li> </ul> |
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### Video standards

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| <b>SDI</b> <ul style="list-style-type: none"> <li>• SDI</li> <li>• SMPTE2082-1</li> <li>• 2160p (60/59.94/50/30/25)</li> <li>• SMPTE-425M</li> <li>• 1080p (60/59.94/50/30/25)</li> <li>• SMPTE-292M</li> <li>• 1080p (30/29.97/25)</li> <li>• 1080i (60/59.94/50)</li> <li>• SMPTE-296M</li> <li>• 720p (60/59.94/50)</li> <li>• SMPTE-259M</li> <li>• PAL, NTSC</li> </ul> | <b>HDMI</b> <ul style="list-style-type: none"> <li>• HDMI</li> <li>• Video standard – HDMI spec 1.4</li> <li>• Video standard – HDMI spec 2.0</li> </ul> |
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### NDI

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|---|--|
| <ul style="list-style-type: none"> <li>• NDI input:</li> <li>• 4 input interchangeably as cam 1 to cam 4 with supported stream key or Reckeen chroma key</li> <li>• 2 input interchangeably as media 1 and 2</li> </ul> | <ul style="list-style-type: none"> <li>• NDI output:</li> <li>• program out</li> </ul> |
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\* XR features (PTZ tracking Virtual Studio and AR) are fully available after purchasing an add-on software license - XR License. There are time-based as well as lifetime licenses available - ask your distributor or send an email to sales@reckeen.com for more information. Without purchasing the XR license, in the software version 1.9 or newer, the XR features are still available to test for free by 3D Studio users - testing mode results in a watermark being displayed on the Program Output only in XR Features.

### Video output

- |   |   |
|---|---|
| <b>SDI</b> <ul style="list-style-type: none"> <li>• SDI Video Output</li> <li>• 8 x SDI – 3G/HD</li> <li>• 3G,12G – 6x3G/HD and 2x12G / 4k 60p</li> </ul> | <b>HDMI</b> <ul style="list-style-type: none"> <li>• HDMI</li> <li>• 2 x HDMI 2.0 type A support for 2160p60</li> </ul> |
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### Audio input - ADB 100

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Digital</li> <li>• embedded stereo on each SDI and HDMI</li> <li>• 2 x AES/EBU</li> </ul> | <ul style="list-style-type: none"> <li>• Analog</li> <li>• 4 x XLR two channels – professional balanced analogue audio stereo differential input (-10dBV, or 4dBu)</li> <li>• Two types of microphones – dynamic and condenser with + 48V phantom</li> </ul> |
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### Video formats

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| <b>SDI</b> <ul style="list-style-type: none"> <li>• Input - auto switching</li> <li>• 2 x SDI 12G</li> <li>• 2160p 60/59.94/50/30/29.97/25</li> <li>• 6 x SDI 3G</li> <li>• 1080p 60/59.94/50/30/29.97/25</li> <li>• 1080i 60/59.94/50</li> <li>• 720p 60/59.94/50</li> <li>• PAL, NTSC</li> <li>• Output</li> <li>• 2 x SDI 12G</li> <li>• 2160p 60/59.94/50/30/29.97/25</li> <li>• 6 x SDI 3G</li> <li>• 1080p 60/59.94/50/30/29.97/25</li> <li>• 1080i 60/59.94/50</li> <li>• 720p 60/59.94/50</li> <li>• PAL, NTSC</li> </ul> | <b>HDMI</b> <ul style="list-style-type: none"> <li>• Input - auto switching</li> <li>• 2 x HDMI 2.0</li> <li>• 2160p 60/59.94/50/30/29.97/25</li> <li>• 1080p 60/59.94/50/30/29.97/25</li> <li>• 1080i 60/59.94/50</li> <li>• 720p 60/59.94/50</li> <li>• PAL, NTSC</li> <li>• Output</li> <li>• 2 x HDMI 2.0</li> <li>• 2160p 60/30/29.97/25</li> <li>• 1080p 60/59.94/50/30/29.97/25</li> <li>• 1080i 60/59.94/50</li> <li>• 720p 60/59.94/50</li> </ul> |
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### Features

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| <ul style="list-style-type: none"> <li>• Downstream Key – x2</li> <li>• Media Format</li> <li>• MPEG2, MPEG4 and H.264 containers: (avi, mpg, mpeg, mp4, mxf, mov)</li> <li>• Audio: WAV, MP3</li> <li>• Video Capture Format</li> <li>• H.264 (.mp4) MPEG-2 (.mpg)</li> <li>• 1080p 60/59.94/50/30/29.97/25</li> <li>• 1080i 60/59.94/50</li> <li>• 720p 60/59.94/50</li> <li>• H.264 up to 4k 30p and 60p</li> </ul> | <ul style="list-style-type: none"> <li>• Still Picture – x2</li> <li>• Picture Format</li> <li>• .png, .jpg, .bmp</li> <li>• Still Text – x2</li> <li>• Still Editor included</li> <li>• Keyer – x4</li> <li>• Chroma Key / Luminance Key</li> <li>• SmartKey with 4 SDI outputs</li> <li>• Streaming</li> <li>• Facebook</li> <li>• YouTube</li> <li>• NicoNico</li> <li>• NDI and Skype</li> <li>• and custom profiles</li> </ul> |
|--|---|

### Software\*

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|---|--|
| <ul style="list-style-type: none"> <li>• Reckeen 3D package :</li> <li>• 3D Production</li> <li>• 3D Studio Editor</li> <li>• 3D Wizard</li> <li>• MS 3D Paint</li> <li>• Still Editor</li> </ul> | <ul style="list-style-type: none"> <li>• Reckeen Lite package:</li> <li>• Lite Production</li> <li>• VSM Lite Editor (also as a standalone version)</li> <li>• Still Editor</li> </ul> |
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**ALL-IN-ONE BROADCASTING SOLUTION FOR REAL-TIME VIRTUAL 3D STUDIO AND AUGMENTED REALITY PRODUCTIONS WITH PTZ TRACKING**

**3DSPRO 8**  
3D Studio PRO

**reckeen**  
keen on record

MAKING HIGH-END INNOVATIONS MORE ACCESSIBLE

# RECKEEN 3DSPRO X8

## An advanced 3D virtual studio system with PTZ tracking and Augmented Reality functionality for real-time video productions

RECKEEN 3DPro X8 with optional XR License\* are all-rounded products that will cover your broadcasting needs – starting from creating and designing your virtual environment, through producing your video content, to mixing and broadcasting the material in real-time.

Dedicated to creative broadcasters who value versatility, high quality and costeffectiveness. Versatility of Reckeen XR allows to make trackless productions, as well as to utilise PTZ tracking\* and Augmented Reality in a single production session.

The system is equipped with virtual cameras, which give you freedom to move around the whole virtual set at any angle without limitations, imitating a camera crane and cameraman's natural movements.

**RECKEEN can work as a stand-alone workstation, but also as a supplementary module to other equipment** – the system is **compatible** with other devices such as: switchers, production systems and software, and more. Expand your working environment with possibilities of a 3D system! Greater immersion into a virtual world means more incredible and extraordinary outcome. Wow your audience with real-time Augmented Reality and Tracking 3D Virtual Studio productions.

### Virtual Studio PTZ Tracking

Create even more advanced and dynamic productions thanks to PTZ tracking. Pan-tilt-zoom functionalities gives a presenter the ability to move around a green screen more freely, whilst the image maintains its highest quality by using the camera's optical zoom.

The advanced shadow processor not only generates real-time shadows and reflections of an on-screen talent, but also analyses the depth of the talent in a green studio space, which makes it possible to walk around 3D objects located in the virtual set.

### Augmented Reality

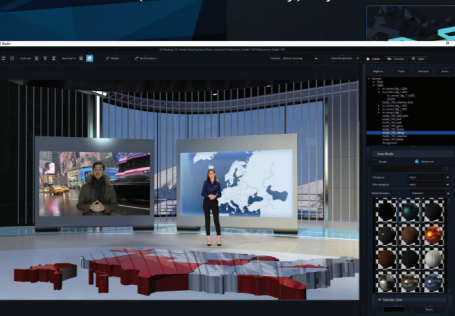
Transform a plain view from a camera into a truly immersive space. Improve your viewers' watching experience by adding three-dimensional elements and animations to the physical surrounding. Blend the real and the virtual worlds together to create live AR productions.

### Default content:

- Over 50 ready-to-use sets and scenographies of different styles
- Library of over 700 3D objects
- Library of textures & materials – wood, metal, plastic, stone, fabrics, etc. in various colours – to customise any object, wall or floor inside a 3D studio.

### System's features:

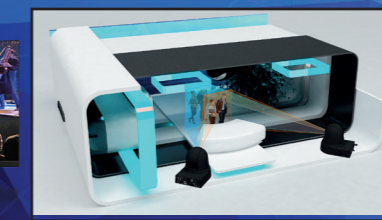
- Up to 4Kp60 resolution input and output (using provided HDMI and SDI inputs a user can connect: 2x 4Kp60 signal, OR 4x 4Kp30 signal, or 4x FullHD signal.
- 6 NDI inputs and 1 output
- Integration with communicators such as Skype, Zoom (through NDI 5) allowing two-way communication
- Paint 3D
- 4 virtual cameras allowing movements all around a 3D set,
- Preview and Program switcher
- Premium chroma key – 4 independent channel
- Source switcher for media and inputs
- Audio mixer & Recorder & Streamer
- 2x DSK (downstream key) layers



## CONNECT UP TO 4 INDEPENDENT PTZ



RECKEEN Studio system has 4 PTZ with FreeD tracking camera inputs. It allows you to have up to two 4K or up to four Full HD camcorders connected to the RECKEEN's workstation. Their signals are keyed independently in a high quality, thanks to four independent high-end chroma key channels.



Multiple inputs allow a user to make more complex productions with numerous talents filmed on different greenscreens, and also in different locations – if using an NDI connection.

## RECKEEN VKey-200 CONTROL PANEL

Control the movements of the PTZ cameras directly from the RECKEEN's application and Reckeen VKey-200 control panel. Program PTZ presets in RECKEEN's Editor or use the joystick on the VKey-200 to smoothly change a camera's position. Everything under your fingertips - one application, one controller, one place to manage the whole production from.

## Studio Editor Wizard

With RECKEEN 3DStudio you get a package of over 50 ready-to-use virtual 3D studio designs, that can be used straight away. However, thanks to 3D Studio Editor and Wizard all of them can be customized to your own preference, by modifying the existing designs using supplied materials. You can also create your very own designs by starting the project entirely from scratch to create a completely unique sets. The Wizard allows you to create stage designs easily and quickly on the basis of ready-made elements in a few steps, while in the 3D Studio Editor you can personalize every detail you want including lights, virtual cameras' setup and talent's position.

the existing designs using supplied materials. You can also create your very own designs by starting the project entirely from scratch to create a completely unique sets. The Wizard allows you to create stage designs easily and quickly on the basis of ready-made elements in a few steps, while in the 3D Studio Editor you can personalize every detail you want including lights, virtual cameras' setup and talent's position.

