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3D Tracking/Trackless Virtual Studio System

TVS-2000A

- Corporate online course
- Corporate news broadcast
- Lecture recording
- Campus TV

www.datavideo.com

3D Tracking/Trackless Virtual Studio System **TVS-2000A**

TVS-2000A is a true 3D tracking/trackless virtual studio system that uses two cameras to achieve a high price performance ratio. The system is easy to use and offers a stable performance with editable virtualsets. The system allows the user to create a professional video, using the virtual background without any knowledege of 3ds Max.

- Multiple true 3D virtual cameras with easy pan, tilt, zoom and crane movements between images at different angles using one camera.
- 3D Virtualset wizard gives you the ability to add objects such as the desk, chairs, lights, logo, etc without prior knowledge of 3D design.
- 3D Virtual editor has a powerful virtualset design capability, covering from placement of lights, virtual cameras, company and school logos to change of window scenes, object positions and materials.
- 3D engine for implementing physically based rendering in order to render the virtualset and objects to model light reflections in the real world and accurately represent real-world materials.
- A specially designed physical control panel perfectly integrated into the virtual studio system provides several custom function keys and is convenient and easy to use.

TVS-2000A Online course recording

Empty virtualset

Case 1

Lecture recording

Insert 3D objects such as a robotic arm and a computer desk to set up a scene for recording an AI class.

Case 2

Corporate training session recording

An elegant and professional corporate training scene should be equipped with a bookshelf, a world map, a carpet and a window looking out to a peaceful view. Simply visit our virtualset website where you will find an abundant supply.

3D Virtualset wizard

Build your own custom virtualset with a few mouse clicks without prior experience in 3D drawing.

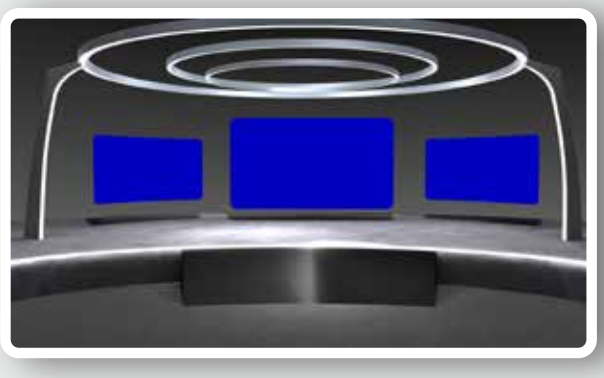
In the 3D virtualset editor, you can adjust the light reflections, shift camera position and change the window scene to refine your virtualset.

Add your company logo or personalize your design

Well position the objects, then open the 3D virtualset editor to select the materials and add a company logo to complete a custom virtualset for lecture recording.

3D Virtualset editor With a complete set of parameters for the virtualset, we have everything for all your applications.

TVS-2000A Product launch event



Choose an empty virtualset for your product launch event

Case 1

Product launch event

Use the 3D virtualset wizard to add a main big screen with two auxiliary screens on two sides and a lectern. As shown in the diagram, it is a basic virtualset for any product launch events.

3D Virtualset wizard

Build your own custom virtualset with a few mouse clicks without prior experience in 3D drawing.

3D Virtualset editor

With a complete set of parameters for the virtualset, we have everything for all your applications.

Add your company logo or personalize your design

Now open the 3D virtualset editor, change the material of the stage floor, then place the company logo at the front rim of the stage as well as the front of the lectern. As shown in the diagram, it is a magnificent virtualset for a corporate's product launch events.

TVS-2000A Features

1.True 3D virtual cameras with easy pan, tilt, zoom and crane movements between images

You only need one camera to create varieties of image views using pan, tilt, zoom and crane movements.

With the true 3D simulation algorithm, the user only needs one stationary camera to easily mimic pan, tilt, zoom and crane movements between images at all angles. The system allows up to 15 presets of virtual camera views, giving you the versatilities that you need to generate varieties of video effects.

Scan the QR code to view our course "positioning virtual cameras on your virtualset" on Datavideo Academy

2.True 3D engine for implementing physically based rendering

Physically based rendering to model real-world light reflections and materials.

Without PBR

With PBR

Thanks to physically based rendering technique, every virtualset selected on your TVS-2000A system accurately represents real-world materials. Physically Based Rendering gives you a more realistic sensory experience by transforming all the real word colors, light and shadows of the objects into realistic graphics.

3.True 3D engine for shadow computation to model light reflections and shadow

Tutorial video is included to guide you to create a smooth and natural effect

TVS-2000A's true 3D engine for shadow computation renders real-world light reflections and shadow between objects and the virtualset. With virtualsets customized for the system, you will then be able to create a smooth and natural video effect. TVS-2000A's true 3D engine for shadow computation ensures that light reflections and the shadow closely follow the real-world talent or object against the virtualset. For more information about customizing your virtualset, see the tutorial videos on https://datavideoacademy.cn. The tutorial videos will guide you step-by-step to creating professional program effects.

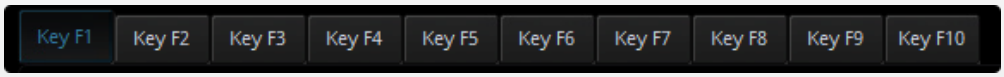
Scan the QR code to view our course "configuring object shadow" on Datavideo Academy

4.An easy-to-use physical control panel designed specifically for TVS-2000A seamlessly interfacing the software UI

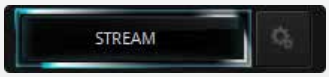
F1 to F10 custom keys can be configured for quick access to frequently used functions thus enhancing your system performance.

Datavideo RMC-280 is a physical control panel designed and customized for TVS-2000A. The panel layout mimics the system UI, giving you the ability to easily operate the system with minimal errors and in a professional way. The control panel is a one-stop operation for switching between virtual cameras, selection of multimedia materials, access to DSK and shortcut keys, etc.

TVS-2000A Control Panel RMC-280



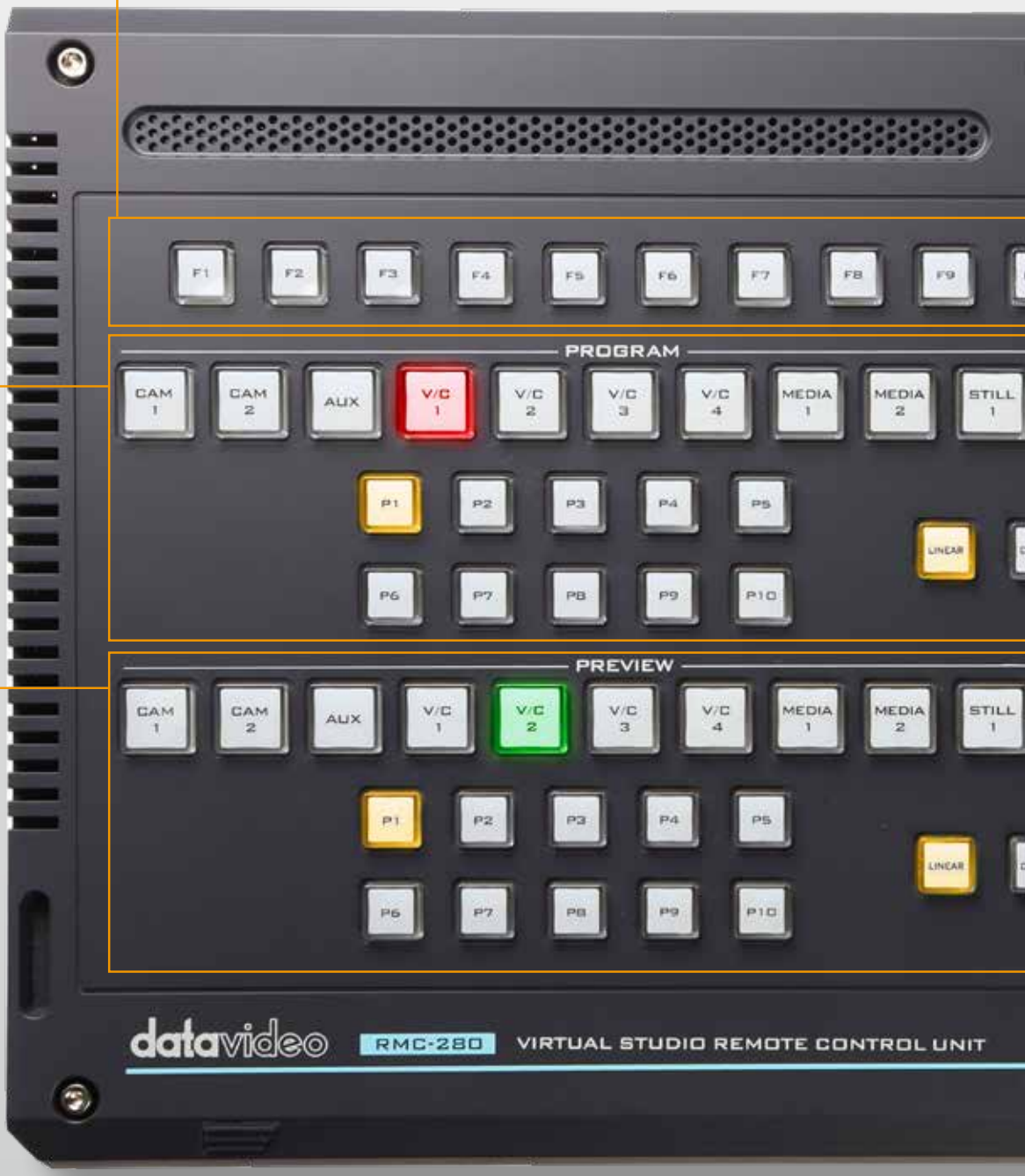
Custom Function Keys
For quick access to certain features, these 10 function keys can be assigned to frequently used functions such as activation of audio, transition, input selection, etc.

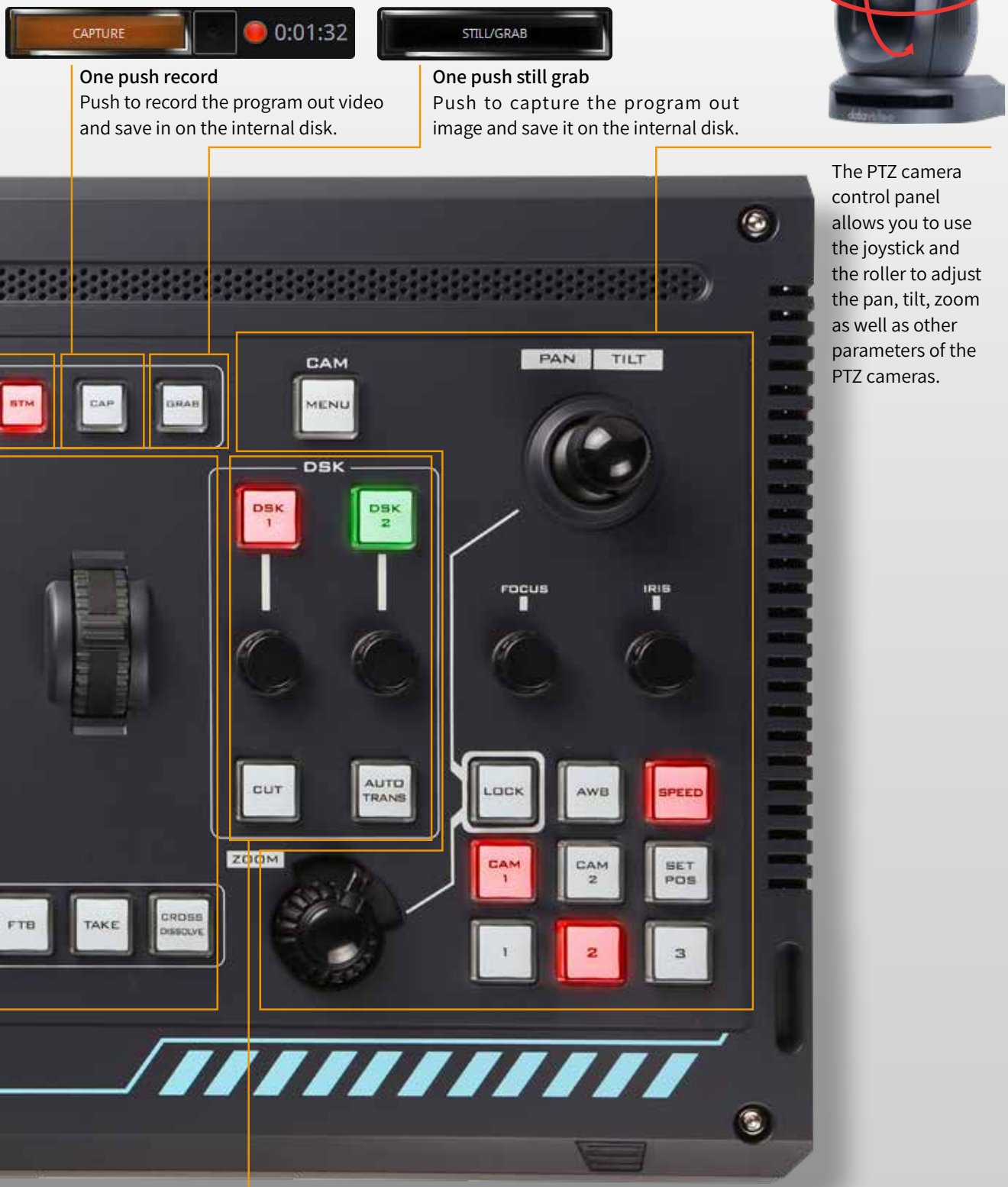


One push streaming
Push to start streaming your program video live.

Switcher Pane Program Out

(Preview)
The switcher pane allows selection of program and preview videos. In addition, there are 10 virtual camera presets. You can also move the virtual camera in different ways, either linearly or in curve mode. The roller T-bar further facilitates the operation.





One push record
Push to record the program out video and save in on the internal disk.

One push still grab
Push to capture the program out image and save it on the internal disk.

The PTZ camera control panel allows you to use the joystick and the roller to adjust the pan, tilt, zoom as well as other parameters of the PTZ cameras.

Transition effects
The switcher provides the user with hard cut, cross-dissolve (a standard fade-in-fade-out effect) and fade-to-black transition effects. These are three frequently used effects and can be activated with one button push.

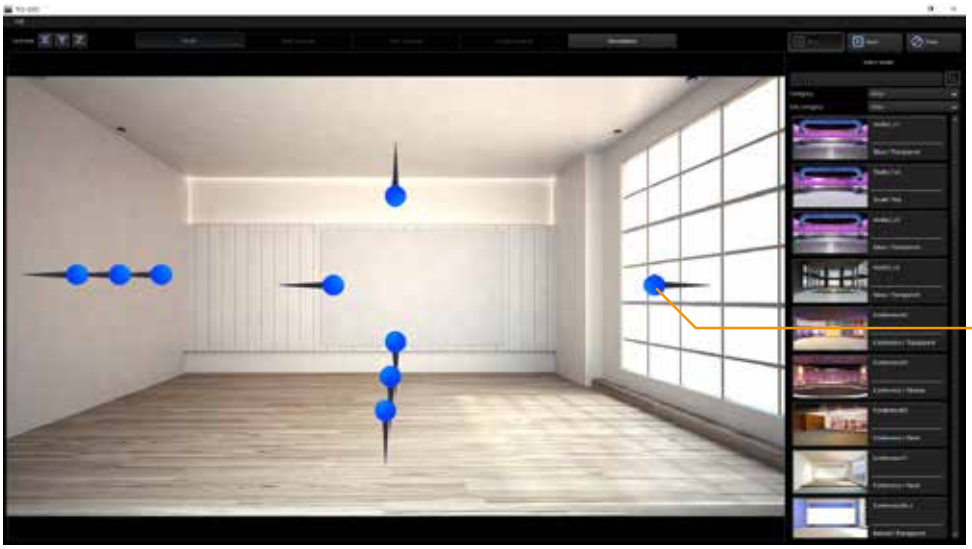
DSK pane provides two DSK buttons which activate still images, texts or animations on live programs.

3D Virtualset Wizard

Easily create your virtualset with no prior professional experience

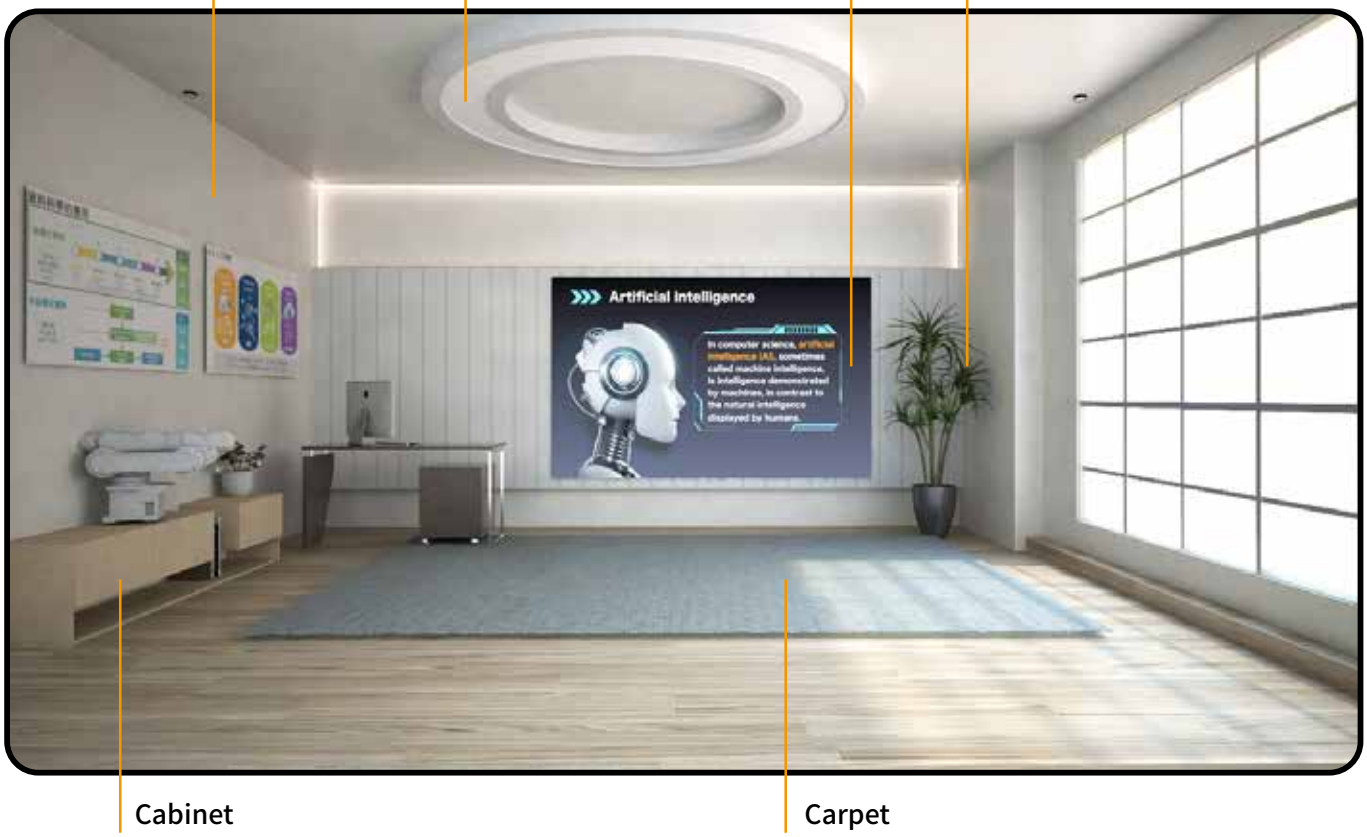
The TVS-2000A's built-in 3D virtualset wizard places blue thumbtacks on empty virtualsets to indicate default points for inserting objects. On the floor, you can place desks, pot plants or carpets. You can hang lights from the ceiling and decorate walls with posters and other accessories. This allows you to quickly customize the empty virtualset for your application. With just a few simple button clicks, you can easily create a professional broadcast quality program.

The 3D virtualset wizard with a well-designed UI



The blue thumbtacks indicate default points for inserting objects.

Virtualset with objects positioned



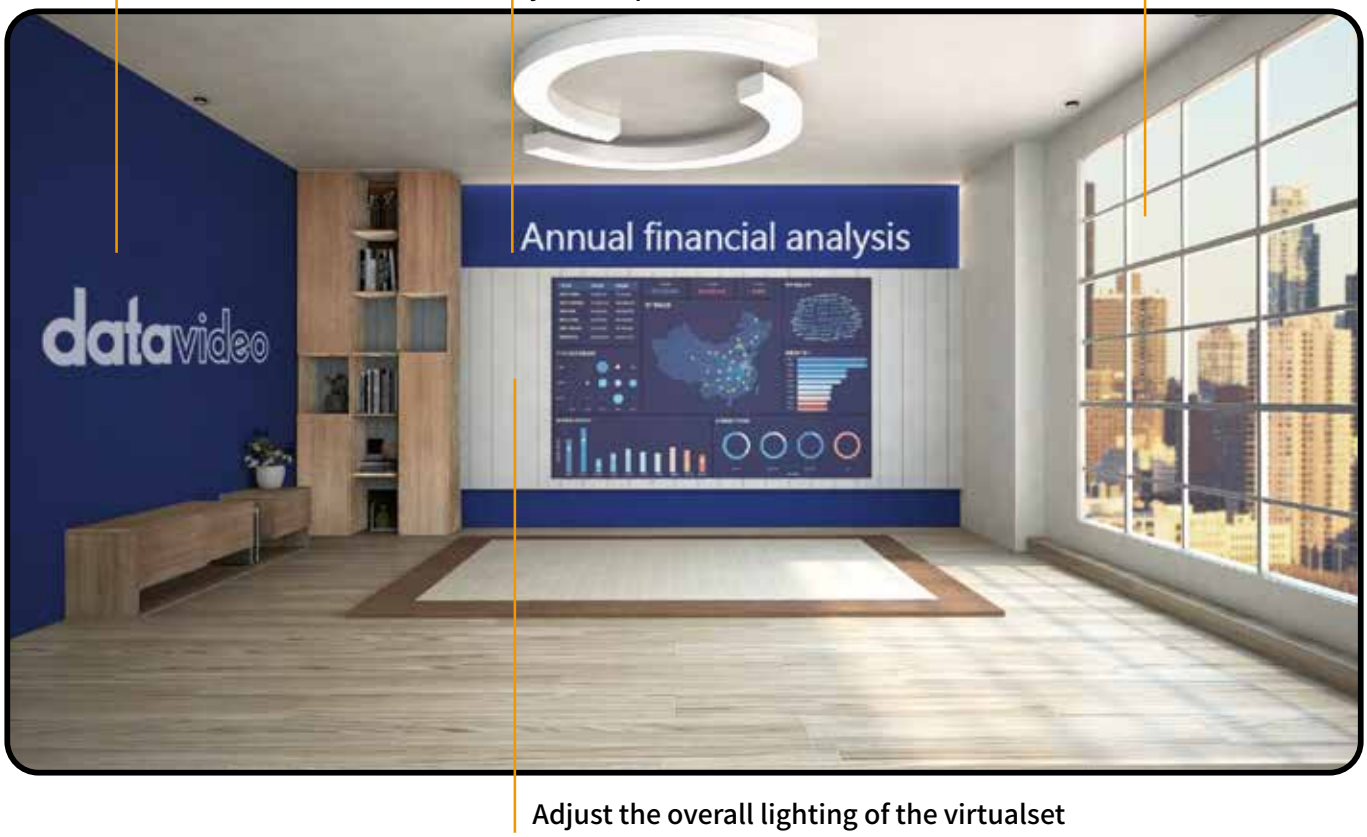
3D Virtualset Editor

Customize your virtualset with different styles of objects and materials.

After you've customized your virtualset, next is to adjust the lights using the 3D virtualset editor and configure up to 15 virtual cameras. You can change camera positions, rotate the camera, and adjust the camera zoom. Moreover, you can change materials of all objects to styles of your preference in the 3D virtualset editor in order to meet requirements of different applications. Personalized logos and virtualset themes will no longer be a challenge. You can even change the window scene to create a unique virtual real-world space.

3D virtualset editor with a user-friendly UI

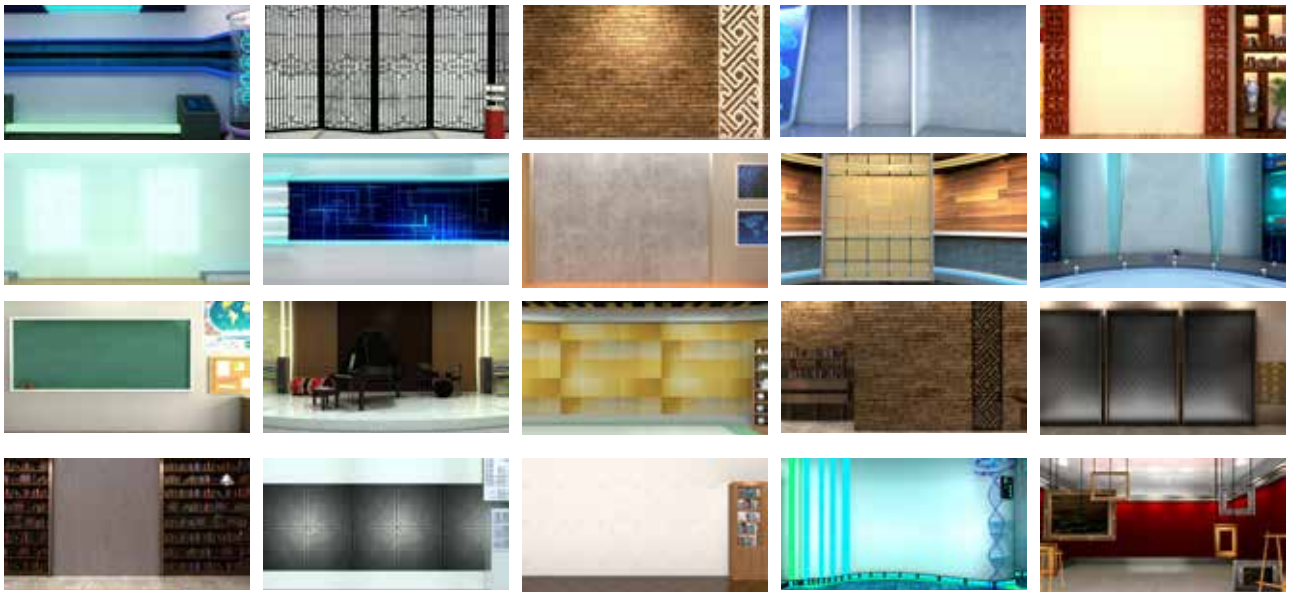
Virtualset with objects positioned



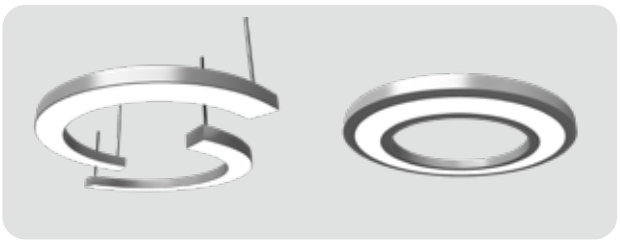
datavideovirtualset.com

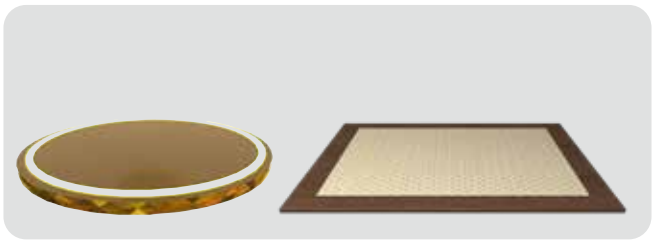
Five-year unlimited free downloads of virtualsets from Datavideo's TVS virtualset website for different program requirements

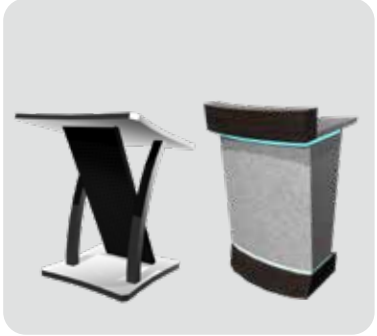
The TVS-2000A includes 80 free virtualsets with different styles for educational video, news broadcast, interview and finance shows, etc. The TVS-2000A is an ideal system for schools, home and corporate video studio, etc. Each virtualset comes with four different camera angle views which provide a diversity of choices for your virtual studio. Moreover, the TVS-2000A users will enjoy unlimited five-year free downloads of virtualsets, decorative objects and 3D animations from Datavideo's TVS virtualset website (https://www.datavideo.com/TVS-Virtualsetmaker), thus adding more dynamics to your program production.



Free objects and animations







datavideoacademy.com

A complete video production workflow in a virtual studio at Datavideo Academy

Datavideo Academy aims to provide online courses for our customers. These courses provide complete, step-by-step instructions for operating the TVS-2000A. If you want to quickly learn how you can create professional course videos as well as other types of program videos, please visit www.datavideoacademy.com

Scan the QR code to view our course "operating TVS-2000A tracking/ trackless virtual studio system" on Datavideo Academy

Production Flow

1. Setup

2. Select a virtualset

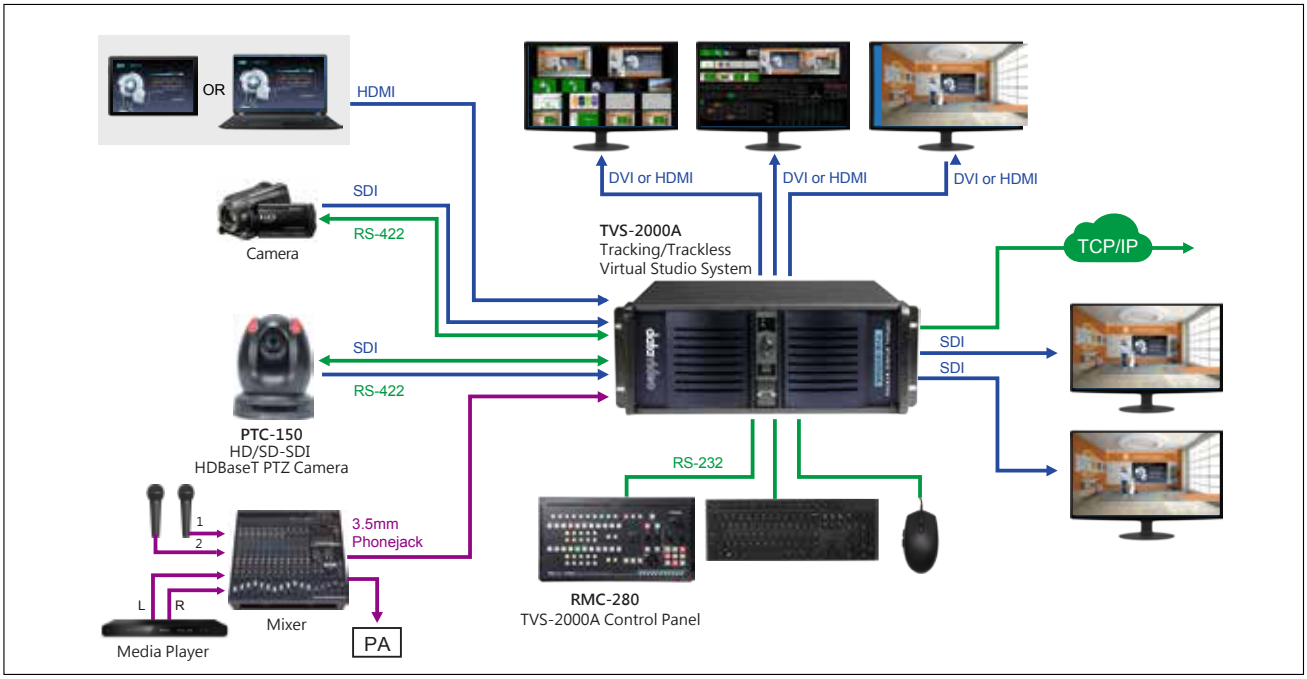
3. Position objects and select the styles

4. Recording

5. Live streaming

TVS-2000A's rear view and the system configuration

Three video input ports:
The TVS-2000A is equipped with two camera input channels (SDI IN 1 and 2) accepting videos of up to 1080p50 3G-SDI, which can be played on the notebook computer and any off-the-shelf multimedia players. The TVS-2000A is easy to use with an intuitive UI.



Specification

TVS-2000A

- Video input:
  HD-SDI x 2
  AUX-HDMI x 1
- Video output:
  SDI x 2
  HDMI x 1
- Operation monitor:
  DP x 2 , HDMI x 1 , DVI×2
  (5out of 3)
- Supported video format:
  - 1920x1080_60p/59.94p/50p/30p /29.97p/25p
  - 1920x1080_60i/59.94i/50i
  - 1280x720_60p/59.94p/50p
- Audio input:
  Mini Phone Jack x 2
  HDMI audio embedded x 1
  SDI audio embedded x 2
- DSK: 2
- Supported media: 2 (DDR)
- Virtual Studio：80sets
- Still Picture: 2
- Still Text: 2
- Keyer: Chroma key/Luminance key
- Recording format：H.264/ MPEG2
- Live streaming protocols: TS HTTP, TS RTP, TS UDP, TS RTSP, FLV HTTP, FLV RTMP
- Hard disk capacity：1TB + 240G SSD
- Preview monitor：3

Accessories

Datavideo also provides a total solution for your virtual studio. A good virtual studio and an excellent chroma key effect also require various professional tools.

Green backdrop

Datavideo provides different green backdrop materials for all your applications.

Green Color Plastic MAT

● MAT-2/ 5

The MAT-Series plastic clothes for chromakey are coated with water and stain repellent. Its non-reflective coating serves to provide great chromakey quality in different surrounding. MAT-2 is thicker so it should be laid on the floor. MAT-5 and MAT-7 are less thick so they should be used for walls.

Plastic MAT	Color	Size (m x m)	Thickness
MAT-2	Green	1.8x27	0.6 mm
MAT-5	Green	1.8x54	0.35 mm
MAT-7	Blue	1.8x54	0.35mm

Green Color Tape

● TA-1/ 2
● TA-3

TA-1/2/3 enhance the green and blue backdrops. The tapes come in different sizes for all kinds of programs.

Tape	Color	Size (mm x m)
TA-1	Green	48x25
TA-2	Green	96x25
TA-3	Blue	50x18.3

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