datavideo

HD/SD 8/12-CHANNEL

OB VAN STUDIO

OBV-2850

Instruction Manual

www.datavideo.com

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Disclaimer of Product & Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:

a. When the power cord is damaged or frayed;
b. When liquid has spilled into the unit;
c. When the product has been exposed to rain or water;
d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
e. When the product has been dropped or the cabinet has been damaged;
f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment is guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period beings on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, batteries, metal parts, housing, cable reel and consumable parts are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 qualify for a free two years extension to the standard warranty, providing the product is registered with Datavideo **within 30** days of purchase.

- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Non-PCIe Card and third party provided PC components are covered for 1 year.

- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.

Disposal

For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CE Marking is the symbol as shown on the left of this page. The letters "**CE**" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.
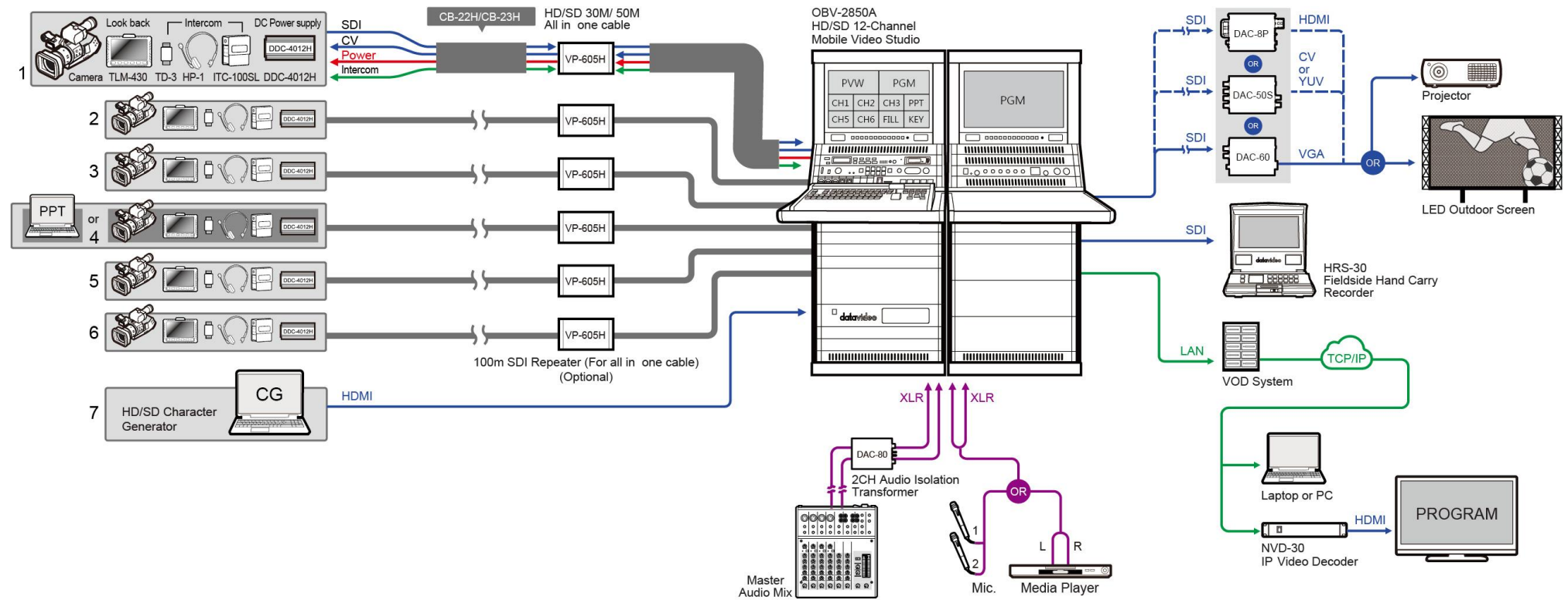
1.   Introduction

Datavideo OBV-2850 is designed to fit into the back of a small van to provide complete mobile production facilities. It's a transportable solution for broadcasters and professionals for both in-studio and on-location productions. Built around the latest HD/SD switcher, it supports up to 12 channels of HD/SD-SDI, HDMI or composite video signals. The system is integrated, compact and sturdy with a metal framework for great stability and protection yet provides room for future expansion. The system is small but fully equipped with functions such as intercom, video transmission, video recording, video streaming etc. Datavideo offers a complete product line for all broadcast tasks.
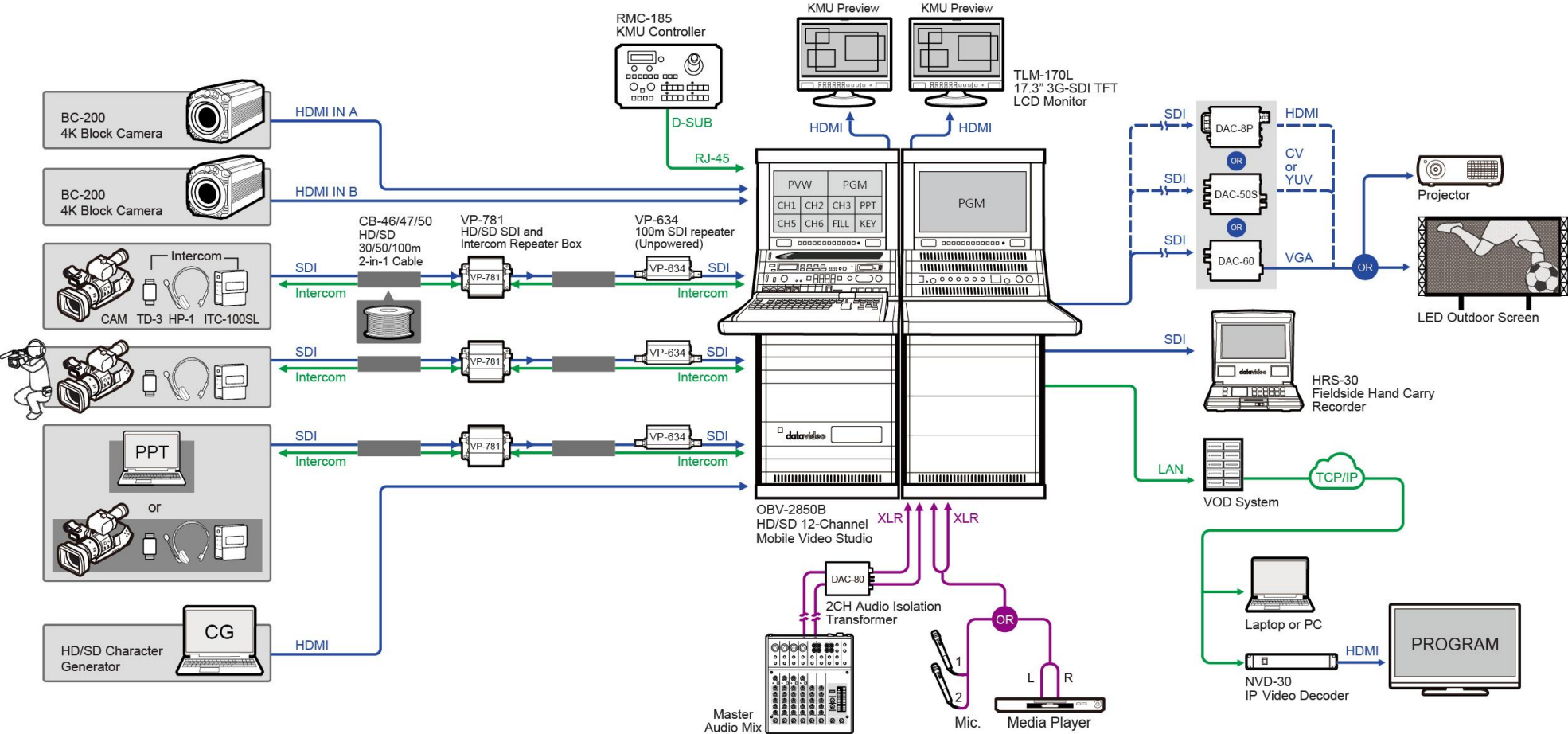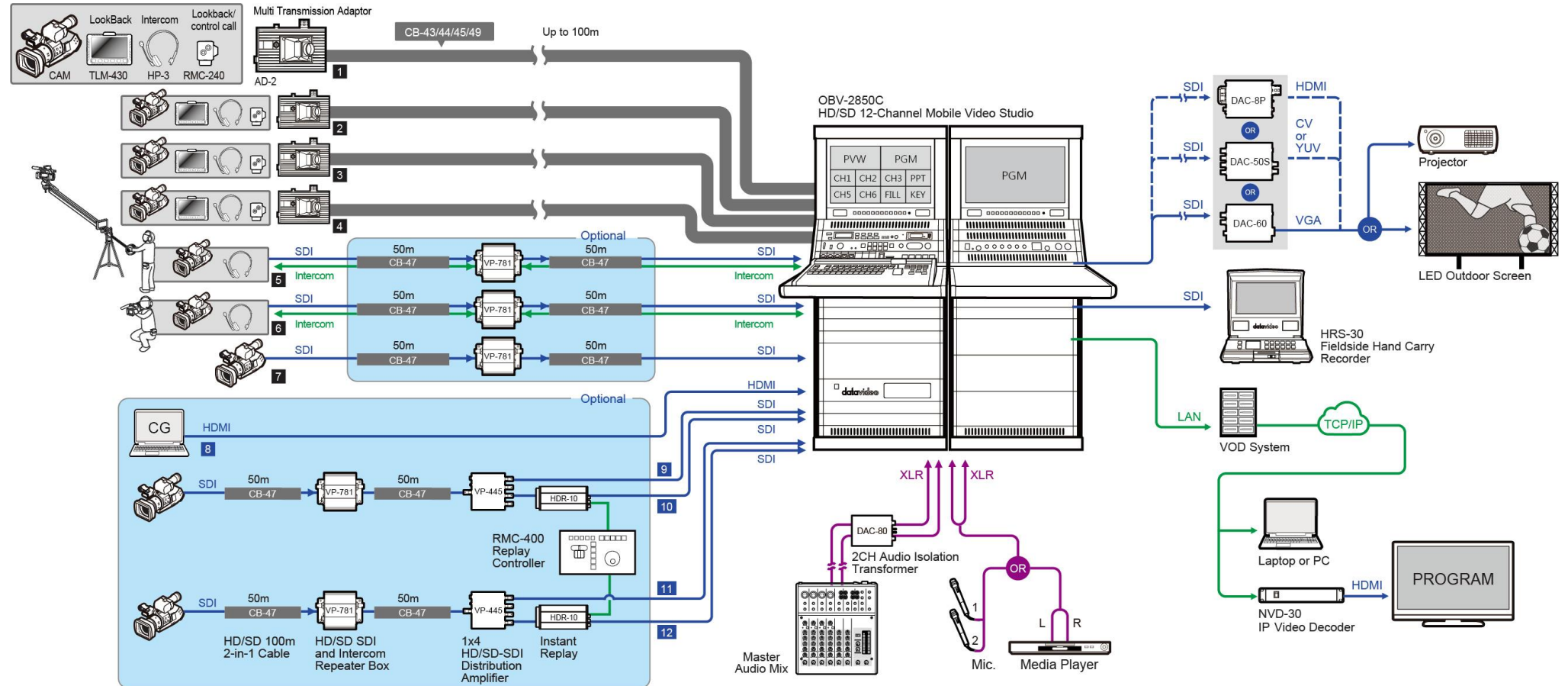
2.   System Diagram

OBV-2850A

OBV-2850B

RMC-185
KMU Controller

KMU Preview   KMU Preview

TLM-170L
17.3" 3G-SDI TFT
LCD Monitor

BC-200
4K Block Camera

HDMI IN A

BC-200
4K Block Camera

HDMI IN B

D-SUB

RJ-45

HDMI   HDMI

PVW   PGM
CH1 CH2 CH3 PPT
CH5 CH6 FILL KEY

PGM

SDI   DAC-8P   HDMI
OR
SDI   DAC-50S   CV or YUV
OR
SDI   DAC-60   VGA

OR

Projector

LED Outdoor Screen

CB-46/47/50
HD/SD
30/50/100m
2-in-1 Cable

VP-781
HD/SD SDI and
Intercom Repeater Box

VP-634
100m SDI repeater
(Unpowered)

CAM TD-3 HP-1 ITC-100SL

Intercom

SDI   VP-781   VP-634   SDI

Intercom   Intercom

SDI   VP-781   VP-634   SDI
Intercom   Intercom

SDI   VP-781   VP-634   SDI
Intercom   Intercom

SDI

HRS-30
Fieldside Hand Carry
Recorder

PPT

or

datavideo

OBV-2850B
HD/SD 12-Channel
Mobile Video Studio

XLR   XLR

LAN

VOD System

TCP/IP

Laptop or PC

HD/SD Character
Generator

CG

HDMI

DAC-80
2CH Audio Isolation
Transformer

OR

Master
Audio Mix

Mic.   Media Player

1

2

L   R

NVD-30
IP Video Decoder

HDMI

PROGRAM

8

OBV-2850C

OBV-2850C
HD/SD 12-Channel Mobile Video Studio

Multi Transmission Adaptor

Up to 100m

CB-43/44/45/49

LookBack Intercom Lookback/
                    control call

CAM TLM-430 HP-3 RMC-240

AD-2

50m CB-47   Optional   50m CB-47
VP-781

SDI   SDI
Intercom   Intercom

SDI   SDI
Intercom   Intercom

SDI   SDI

Optional

HDMI
SDI
SDI

CG
HDMI

SDI 50m   50m   VP-445   HDR-10
CB-47 CB-47

RMC-400
Replay
Controller

SDI 50m   50m   VP-445   HDR-10
CB-47 CB-47

HD/SD 100m   HD/SD SDI   1x4   Instant
2-in-1 Cable   and Intercom   HD/SD-SDI   Replay
                Repeater Box   Distribution
                                 Amplifier

PVW   PGM
CH1 CH2 CH3 PPT
CH5 CH6 FILL KEY

PGM

SDI   DAC-8P   HDMI
OR
SDI   DAC-50S   CV
                 or
OR   YUV
SDI   DAC-60   VGA
                 OR

Projector

LED Outdoor Screen

SDI

HRS-30
Fieldside Hand Carry
Recorder

LAN

VOD System

TCP/IP

Laptop or PC

HDMI

NVD-30
IP Video Decoder

PROGRAM

XLR   XLR

DAC-80

2CH Audio Isolation
Transformer

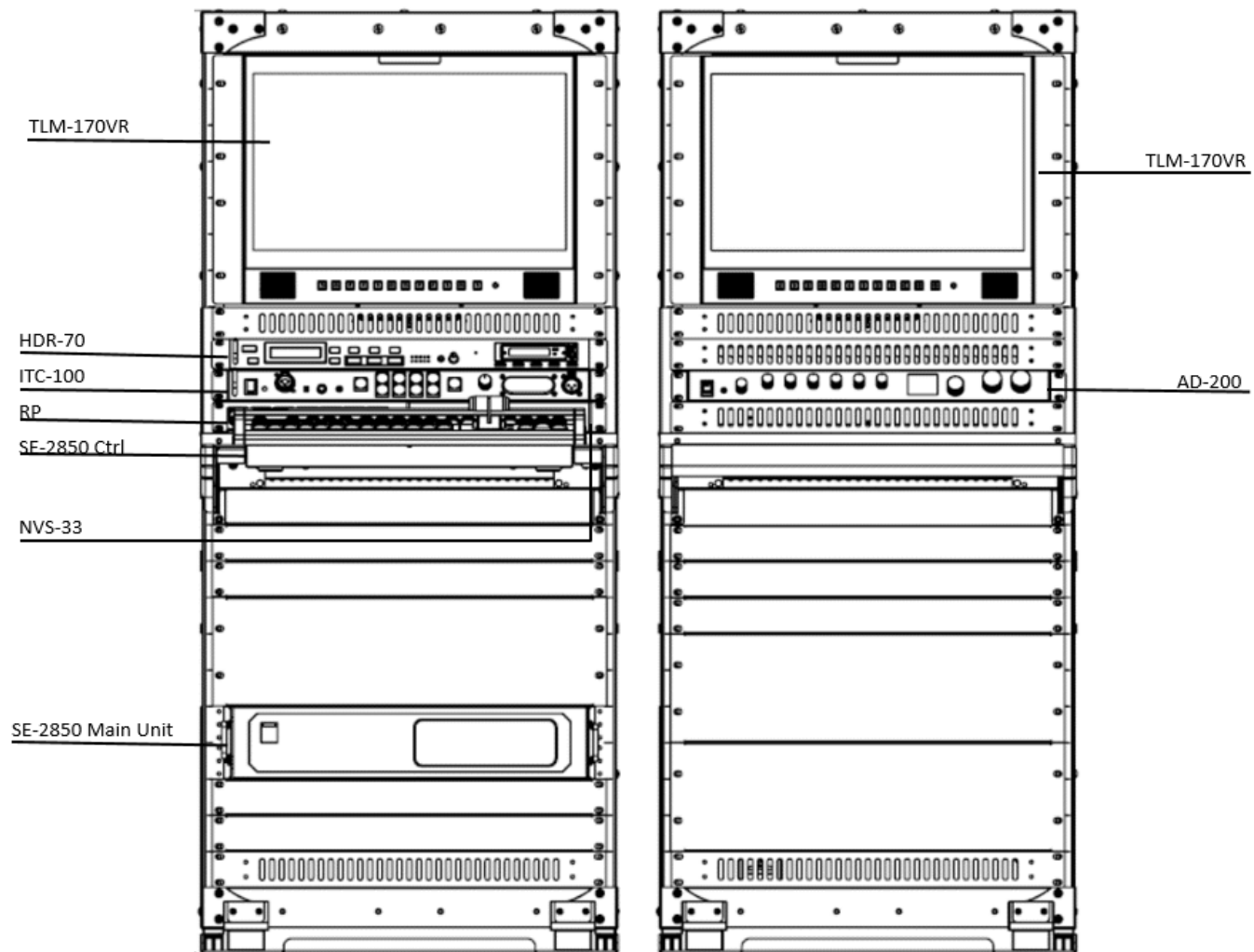Master
Audio Mix

OR

Mic.   Media Player

L   R

1
2

9

3. Front View

For the operation descriptions, please refer to individual manual of each model.
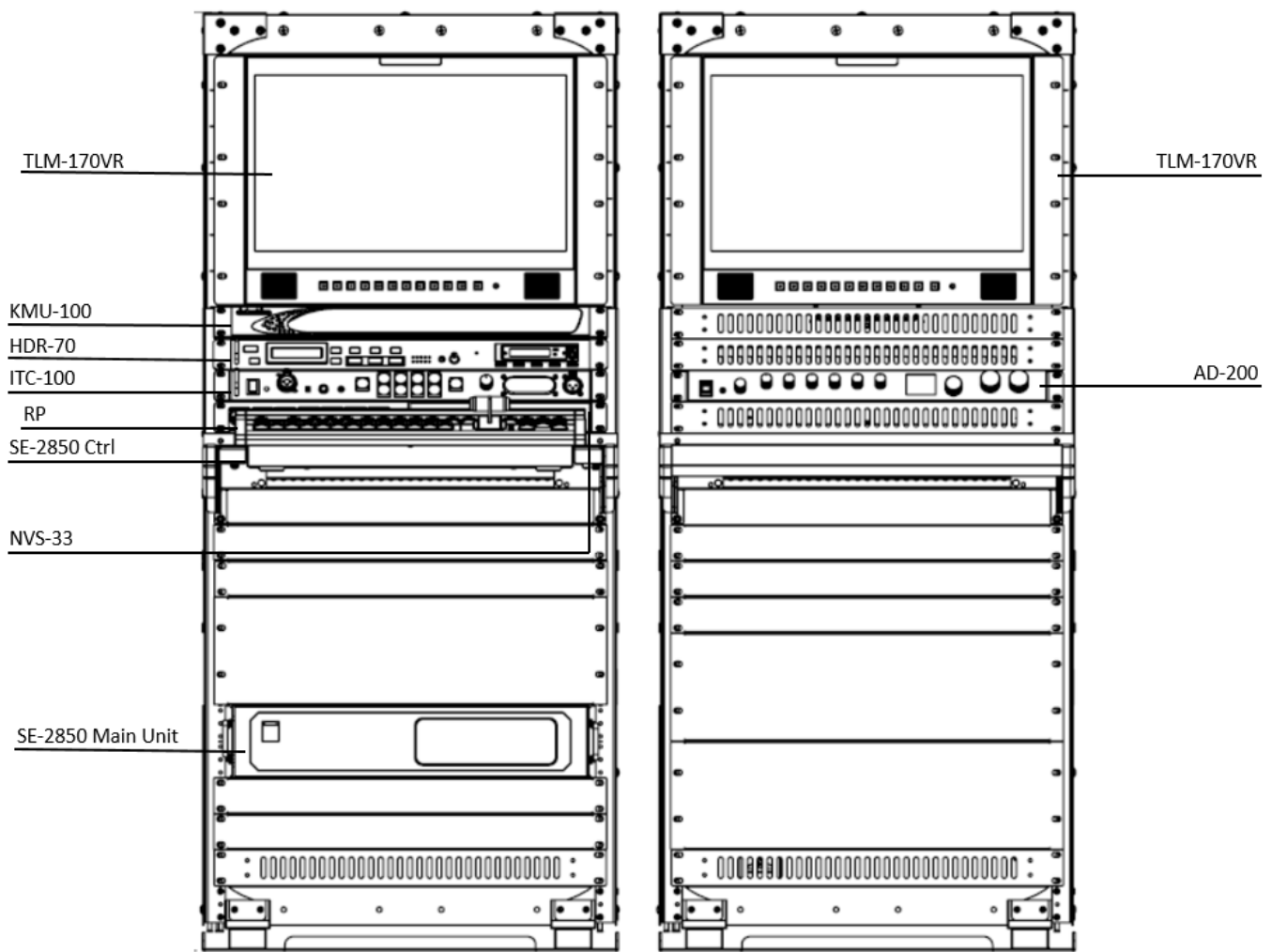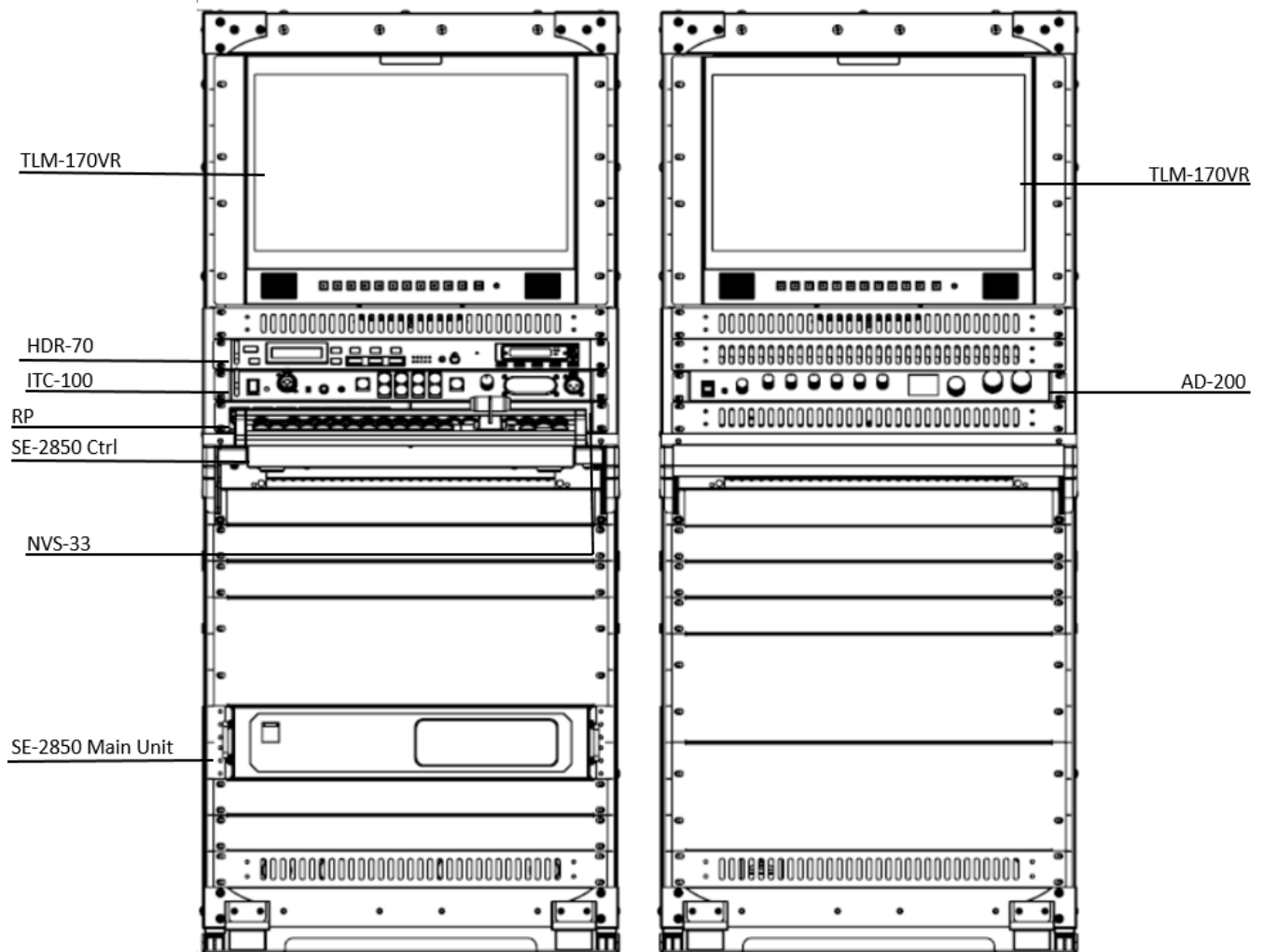
OBV-2850A

Device Model and Name	Product Description
TLM-170VR 17" ScopeView Production Monitor-Rack Mount x 2	The TLM-170VR is a 1920 x 1080 Full HD monitor which integrates functions including built-in vectorscope and SDI/HDMI signal converter.
HDR-70 HD/SD Digital Video Recorder-1U Rackmountable	The HDR-70 is a hard drive based video recorder with removable hard drive enclosure. The HDR-70 can be used as a desktop stand-alone recorder in the studio or on location.
ITC-100 Intercom System	Rackmountable 8 channels Intercom System for connecting up to 8 belt-packs.
AD-200 Audio Delay Box with Level Adjustment	The knobs allows users to adjust the input, output and headphone volumes.
NVS-33 H.264 Video Streaming Server	This device allows users to stream the SDI or HDMI videos to streaming platforms by the Ethernet

Rack Panel	This Rack Panel provides three HDMI ports and two RJ-45 Ethernet ports for users.
SE-2850 Main Unit	SE-2850 is a multi-definition switcher designed for productions requiring 8 to 12 channels of HD or SD inputs.
SE-2850 Ctrl	SE-2850 Ctrl is the control keyboard for the SE-2850.

OBV-2850B

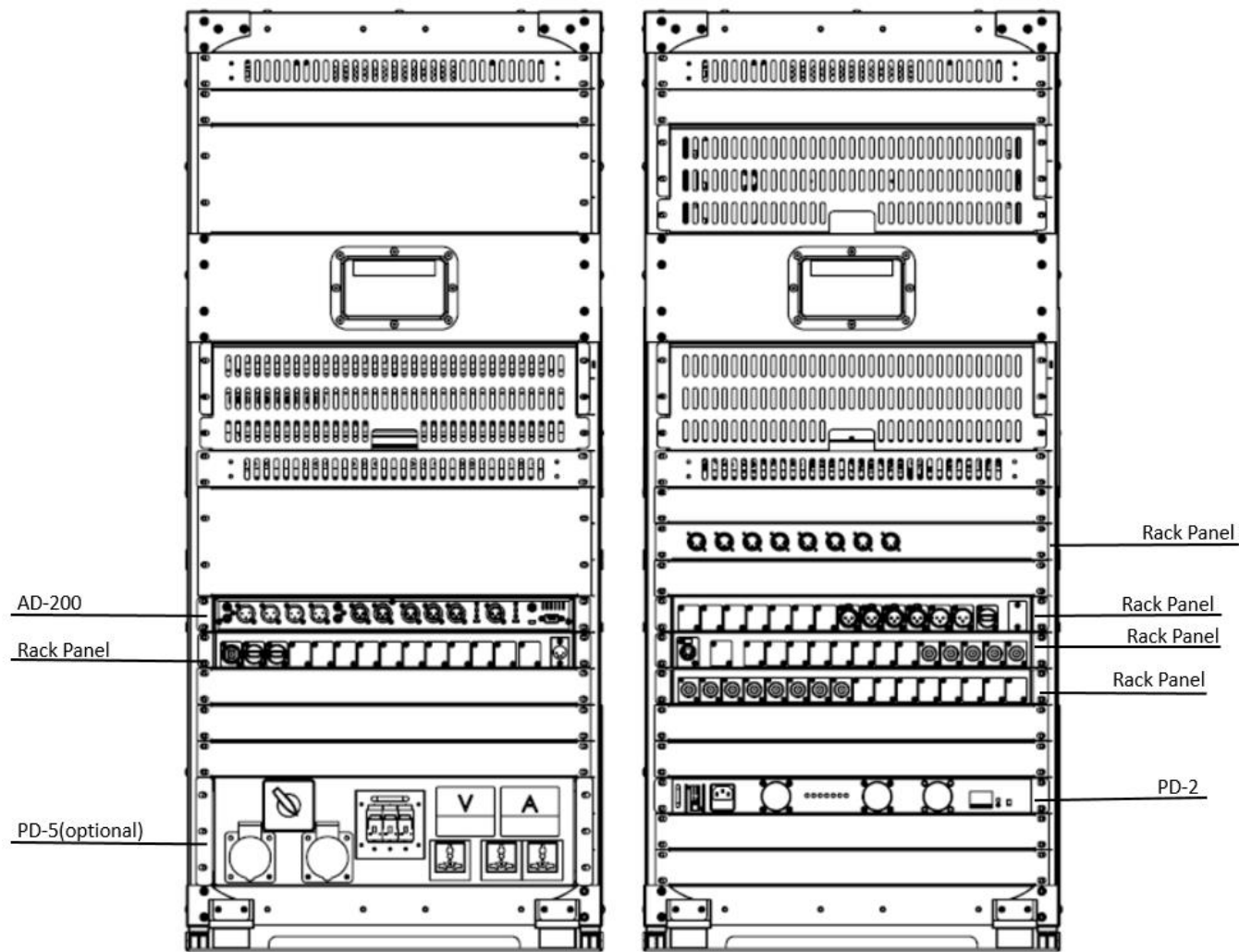| Device Model and Name	Product Description
TLM-170VR 17" ScopeView Production Monitor-Rack Mount x 2	The TLM-170VR is a 1920 x 1080 Full HD monitor which integrates functions including built-in vectorscope and SDI/HDMI signal converter.
KMU-100 2-channel 4K to 8-channel HD Portable Video Production Studio	**KMU-100** is an advanced video converter allowing conversion of **UHD** input signals into 4 different streams with resolution up to **Full HD**.
HDR-70 HD/SD Digital Video Recorder-1U Rackmountable	The HDR-70 is a hard drive based video recorder with removable hard drive enclosure. The HDR-70 can be used as a desktop stand-alone recorder in the studio or on location.
ITC-100 Intercom System	Rackmountable 8 channels Intercom System for connecting up to 8 belt-packs.
AD-200 Audio Delay Box with Level Adjustment	The knobs allows users to adjust the input, output and headphone volumes.
NVS-33 H.264 Video Streaming Server	This device allows users to stream the SDI or HDMI videos to streaming platforms by the Ethernet
Rack Panel	This Rack Panel provides three HDMI ports and two RJ-45 Ethernet ports for users.
SE-2850 Ctrl	SE-2850 Ctrl is the control keyboard for the SE-2850.
SE-2850 Main Unit	SE-2850 is a multi-definition switcher designed for productions requiring 8 to 12 channels of HD or SD inputs.

OBV-2850C

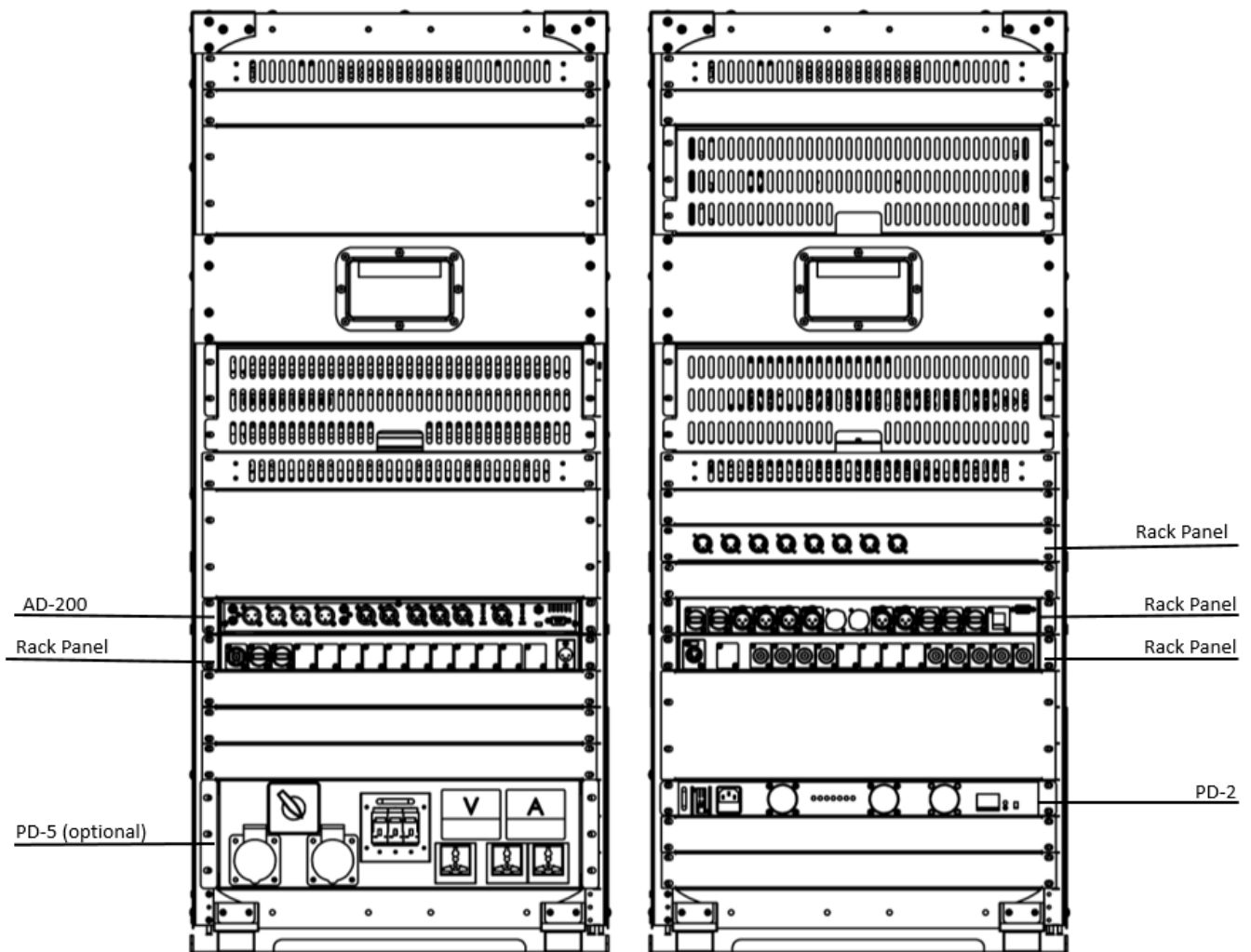| Device Model and Name	Product Description
TLM-170VR 17" ScopeView Production Monitor-Rack Mount x 2	The TLM-170VR is a 1920 x 1080 Full HD monitor which integrates functions including built-in vectorscope and SDI/HDMI signal converter.
HDR-70 HD/SD Digital Video Recorder-1U Rackmountable	The HDR-70 is a hard drive based video recorder with removable hard drive enclosure. The HDR-70 can be used as a desktop stand alone recorder in the studio or on location.
ITC-100 Intercom System	Rackmountable 8 channels Intercom System for connecting up to 8 belt-packs.
AD-200 Audio Delay Box with Level Adjustment	The knobs allows users to adjust the input, output and headphone volumes.
NVS-33 H.264 Video Streaming Server	This device allows users to stream the SDI or HDMI videos to streaming platforms by the Ethernet
Rack Panel	This Rack Panel provides three HDMI ports and two RJ-45 Ethernet ports for users.

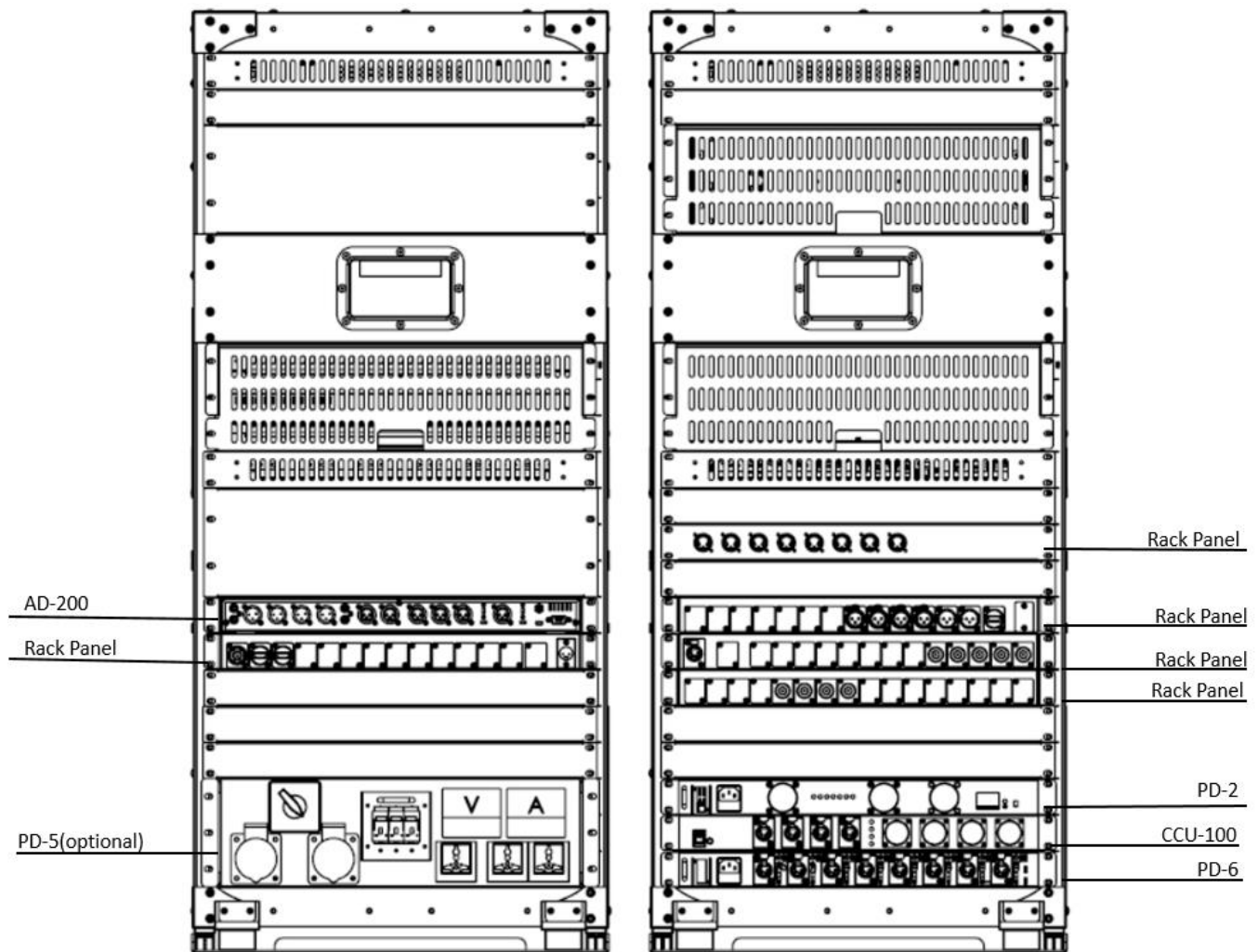|	
SE-2850 Ctrl	SE-2850 Ctrl is the control keyboard for the SE-2850.
SE-2850 Main Unit	SE-2850 is a multi-definition switcher designed for productions requiring 8 to 12 channels of HD or SD inputs.

4.   Rear View

OBV-2850A

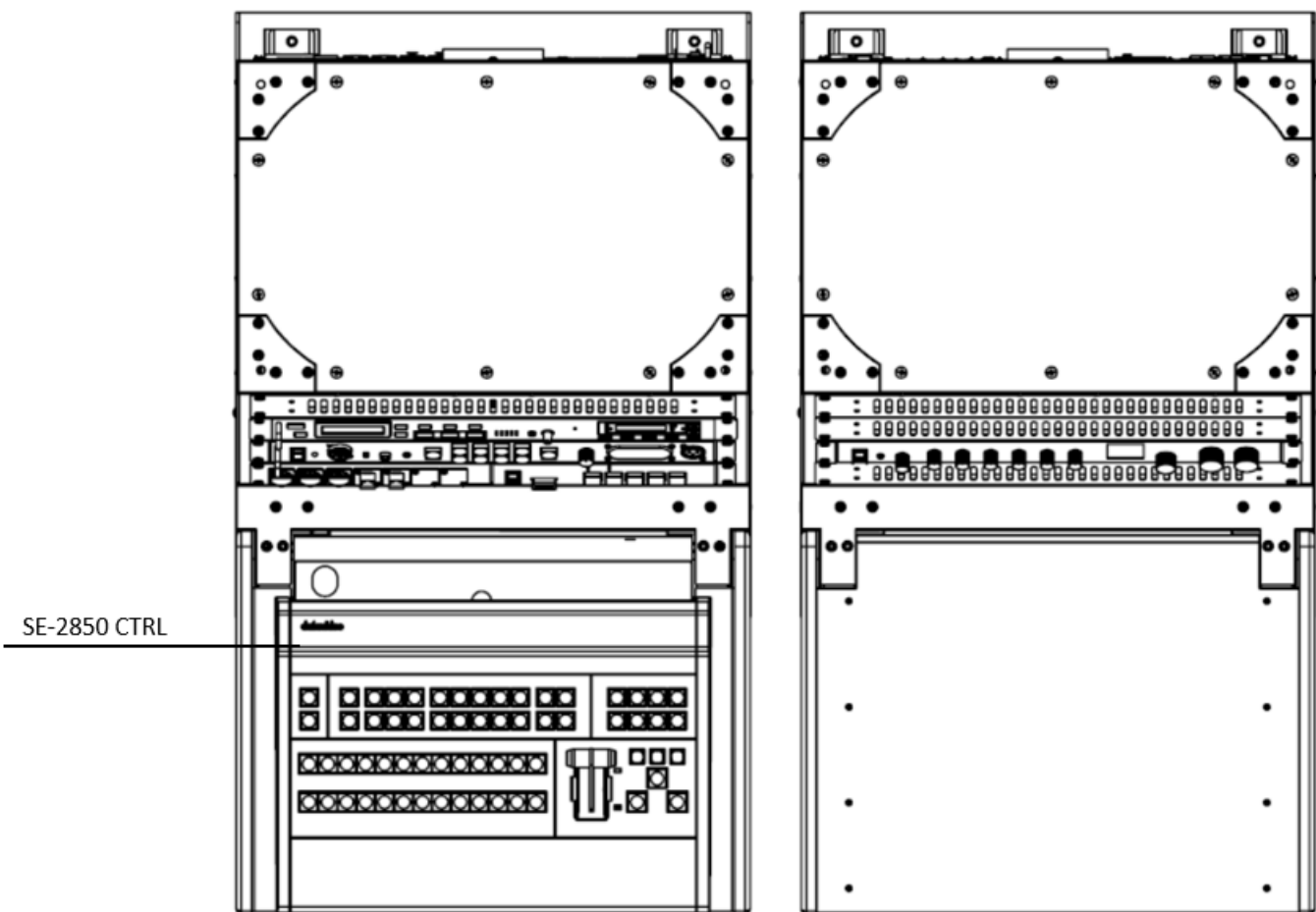| Device Model and Name	Product Description
Rack Panels	Those Rack Panels allows for connecting for HDMI/BNC/XLR ports.
PD-5 AC Power Distributor(Optional)	This is an optional AC power distributor.
AD-200 Audio Delay Box with Level Adjustment – Main Unit	Audio input/output interfaces for the RCA audio and XLR balanced audio.
PD-2 Power Center	One AC power and One DC power with 8 standard DC 12V output voltage.

OBV-2850B

Device Model and Name	Product Description
Rack Panels	Those Rack Panels allows for connecting for HDMI/BNC/XLR ports.
PD-5 AC Power Distributor(Optional)	This is an optional AC power distributor.
AD-200 Audio Delay Box with Level Adjustment – Main Unit	Audio input/output interfaces for the RCA audio and XLR balanced audio.
PD-2 Power Center	One AC power and One DC power with 8 standard DC 12V output voltage.

OBV-2850C

Device Model and Name	Product Description
Rack Panels	Those Rack Panels allows for connecting for HDMI/BNC/XLR input/output ports.
PD-5 AC Power Distributor(Optional)	This is the optional AC power distributor.
AD-200 Audio Delay Box with Level Adjustment – Main Unit	Audio input/output interfaces for the RCA audio and XLR balanced audio.
PD-2A Power Center	One AC power and One DC power with 8 standard DC 12V output voltage.
CCU-100 Camera Control Unit	Control up to 4 cameras from one CCU-100 Camera Control Unit using the supplied AD-2 (S/P/J) Units.
PD-6 Camera Power Center	One AC Power and 1 DC power with 8 DC outputs, each DC output provides 48V output voltage.

5. Desktop

SE-2850 CTRL

Device Model and Name	Product Description
SE-2850 HD/SD 8/12-Channel Digital Video Switcher – Control Keyboard	The control keyboard allows video switching and video effect application.

6.   How to Download User Manual for Each Device

There are several devices which are integrated in the OBV-2850 including TLM-170VR, HDR-70, ITC-100, SE-2850, NVS-33, AD-200 and KMU-100. For the details about operating those devices, please refer to the manual of each device respectively. Please go to following web pages to download the latest user manuals of those devices.

TLM-170VR: https://www.datavideo.com/product/TLM-170VR
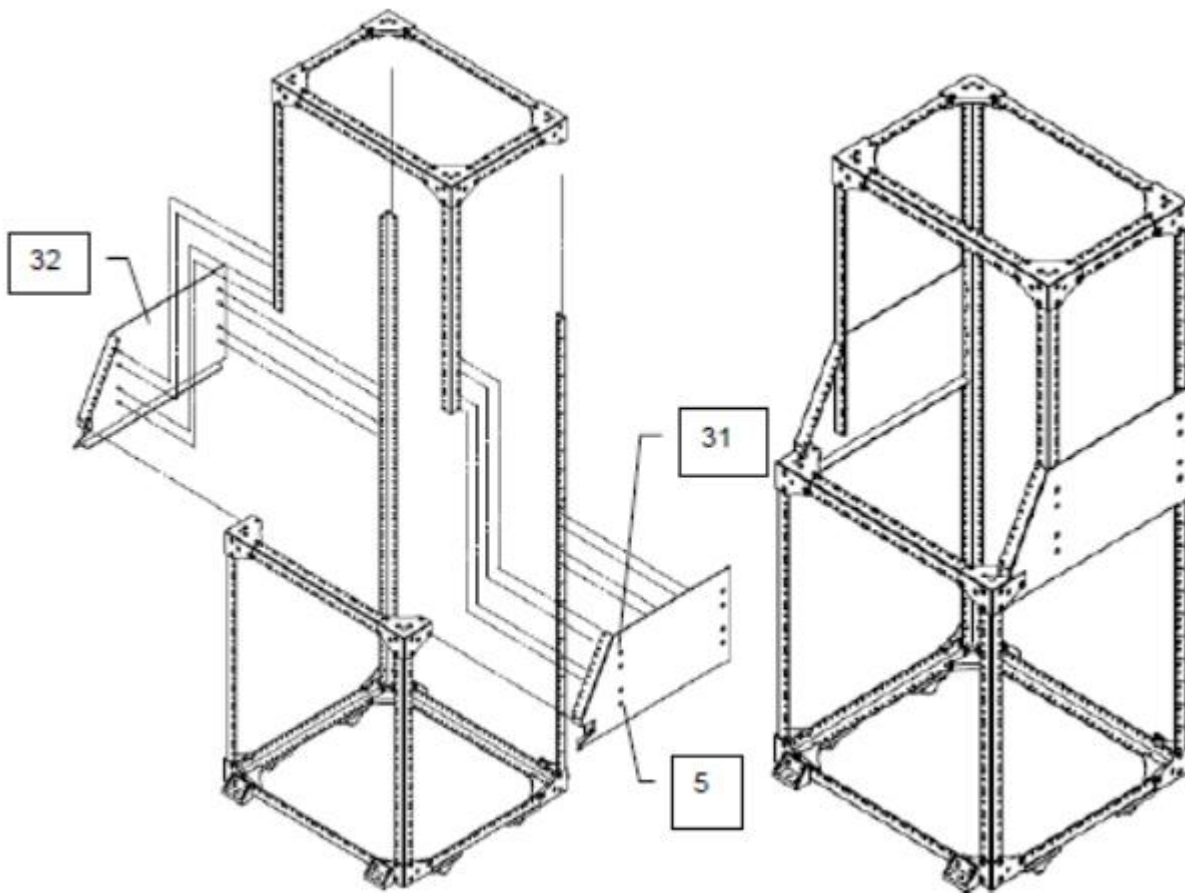
HDR-70: https://www.datavideo.com/product/HDR-70
ITC-100: https://www.datavideo.com/product/ITC-100
SE-2850: https://www.datavideo.com/product/SE-2850
NVS-33: https://www.datavideo.com/product/NVS-33
AD-200: https://www.datavideo.com/product/AD-200
KMU-100: https://www.datavideo.com/product/KMU-100

7. Assembly

7.1 Assembly of 4U Trapezoidal Steel Frame and Upper and Lower Steel Frames

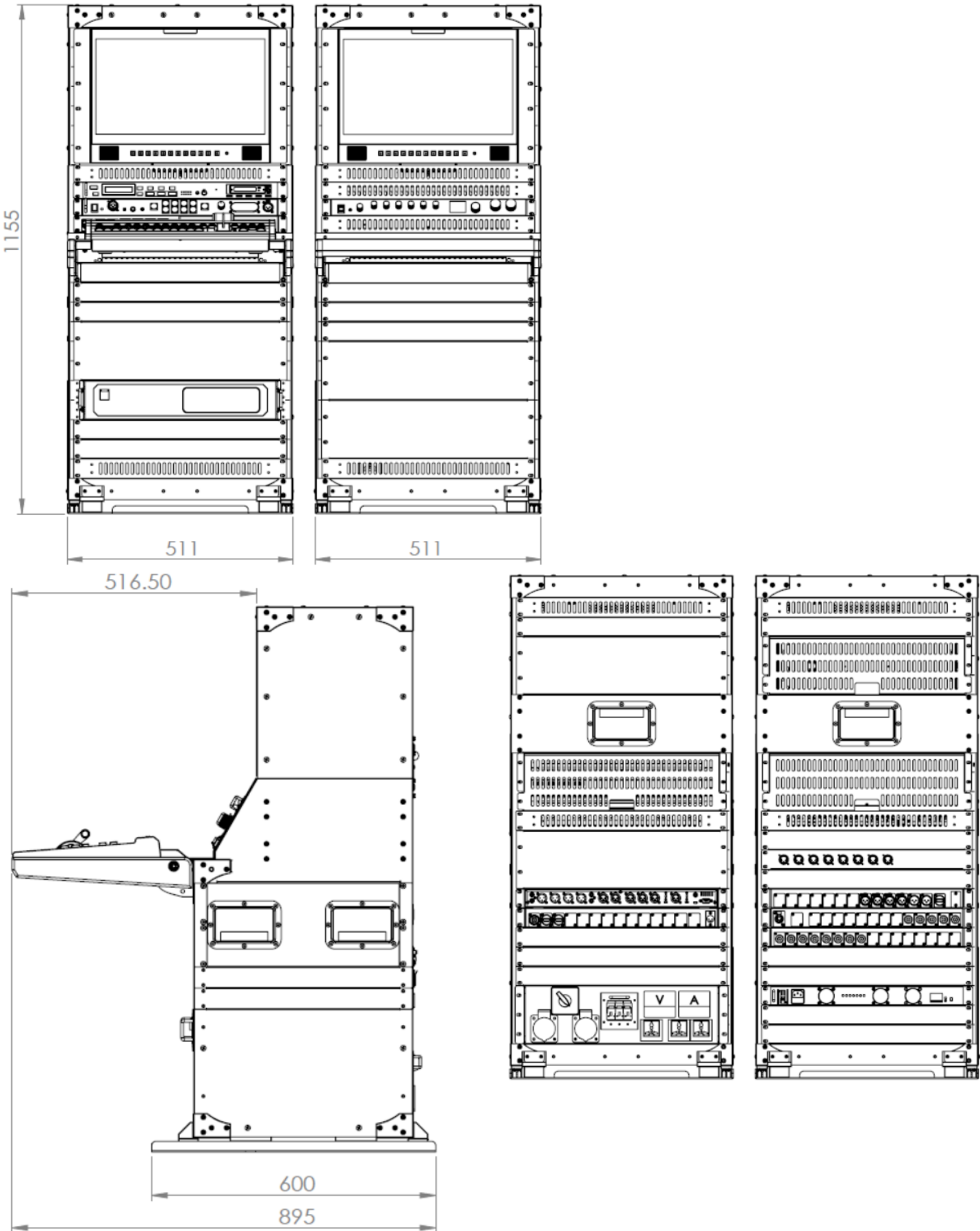| No	Part No.	Descriptions	Q'ty
31	G09220588171	4U Trapezoidal Steel Frame (Right) SPCC 2.5t VP-588 Painted Weave Pattern Black	1
32	G09220588181	4U Trapezoidal Steel Frame (Left) SPCC 2.5t VP-588 Painted Weave Pattern Black	1
5	G0911D501001	Countersunk Head Nylok Screw φ5.0*10m/m Black (RoHS)	24

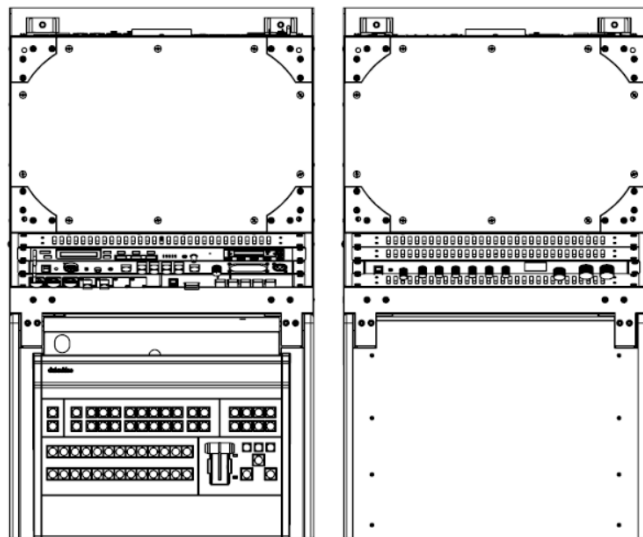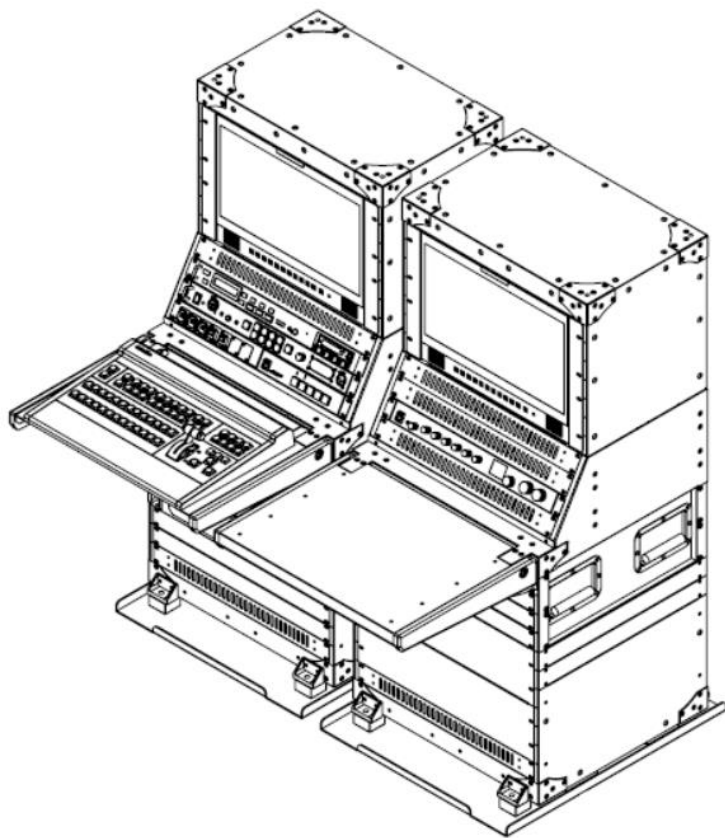## 7.2 Assembly of Diaphragm Panels (Front/Rear/Left/Right)

No	Part No.	Descriptions	Q'ty
26	G09220588101	Front Upper Diaphragm Panel SPCC 1.2t VP-588 Painted Weave Pattern Black	4
27	G09220588131	Top Side Panel AL 1.2t VP-588 Painted Weave Pattern Black	1
28	G09220588141	Top Side Panel AL 1.2t VP-588 Painted Weave Pattern Black	2
29	G09220588152	Middle Side Panel AL 1.0t VP-588 Painted Black 2-Platen Mold	4
25	G09220588091	Iron Handle 2 SPCC 1.2t VP-588 Painted	2

		Weave Pattern Black	
30	G09220588162	Bottom Side Panel AL 1.0t VP-588 Painted Black 2-Platen Mold	2
24	G09220588081	Iron Handle 1 SPCC 1.2t VP-588 Painted Weave Pattern Black	1
4	G0911D500611	Nylok Screw Flat Head ISO M5*6 Black	86
6	G0911D501011	Nylok Screw, Round Head with Spring Washer + Washer, M5*10mm Black	8

8.   Dimensions

All measurements in millimeters (mm)

Note

Note

Note

Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit www.datavideo.com to access our FAQ section.

Please visit our website for latest manual update.

https://www.datavideo.com/product/OBV-2850

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