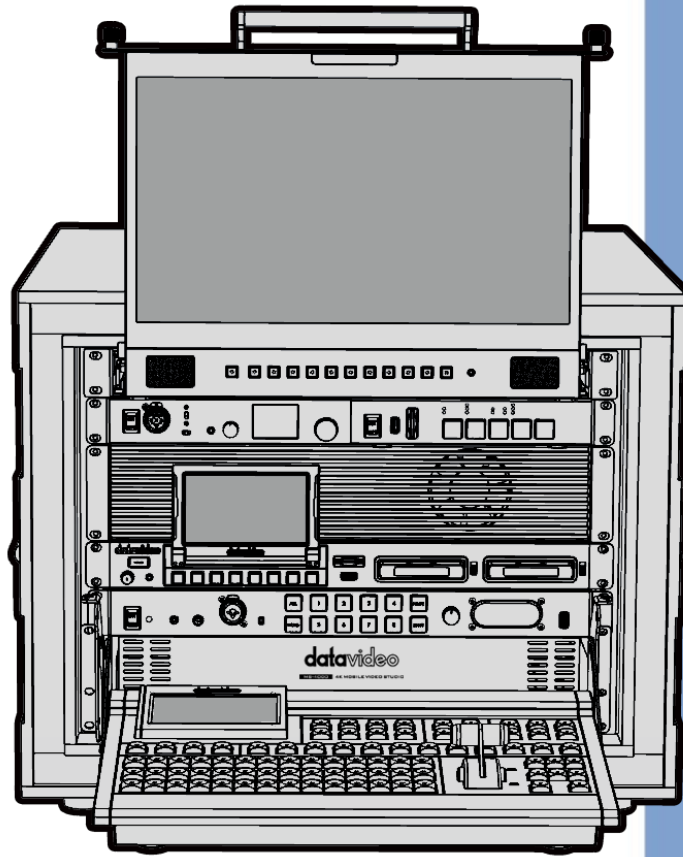


datavideo



4K 8-Channel
Mobile Video Studio
MS-4000
Instruction Manual

www.datavideo.com

Contents

FCC COMPLIANCE STATEMENT	3
WARNINGS AND PRECAUTIONS	3
WARRANTY	4
DISPOSAL	4
INTRODUCTION	5
FEATURES	5
COMPATIBLE VIDEO STANDARDS	5
SYSTEM DIAGRAM	6
INSTALLATION	7
TRANSPORT & PLACEMENT	7
OPENING THE CASE	7
UNPACKING THE SE-4000 CONTROL PANEL KEYBOARD	7
SETTING UP THE TLM-170KM – 17” LCD MONITOR	8
MS-4000	9
POWERING ON	10
POWERING OFF	10
PACKING AWAY	10
DIMENSIONS	11
WEIGHTS	11
SPECIFICATIONS	11
SERVICE & SUPPORT	12

Disclaimer of Product and 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

The MS-4000 is HEAVY – approximately 65 Kg. Two or more people are required to move this unit.

The MS-4000 should be always moved and placed in an upright position; do not place or try to move the unit in any other position as damage or injury could result. There are two sets of carry handles on either side of the case, please use these handles to safely share the weight between the people lifting the unit.

Always use a trolley to safely transport the unit over distances of 2 metres or more.

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

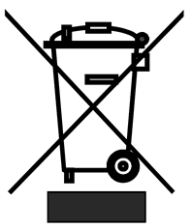
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. 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, and batteries 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 are qualified 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, Camera module, PCIe Card 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.

Introduction

Datavideo MS-4000 4K mobile video studio series is a ready to go solution. It is designed around the SE-4000 8-channel broadcast-quality video switcher. It is perfect for outdoor events, conferences, education, places of worship and many more applications. Producing superb quality pictures with versatile input/output configurations, the SE-4000 also has powerful, easy-to-use effects, such as dual picture in picture, downstream keyer (DSK), CG and logo insertion.

The switcher is integrated with the essential elements required for live production including a recorder, a multi-view monitor and an intercom system.

That's Datavideo; sharing the value!

To get more value out of your equipment, please take a few minutes to read through this overview manual, and the other associated user manuals supplied within the product Manual Binder. This will help you familiarize yourself with all aspects of the MS-4000 portable production unit.

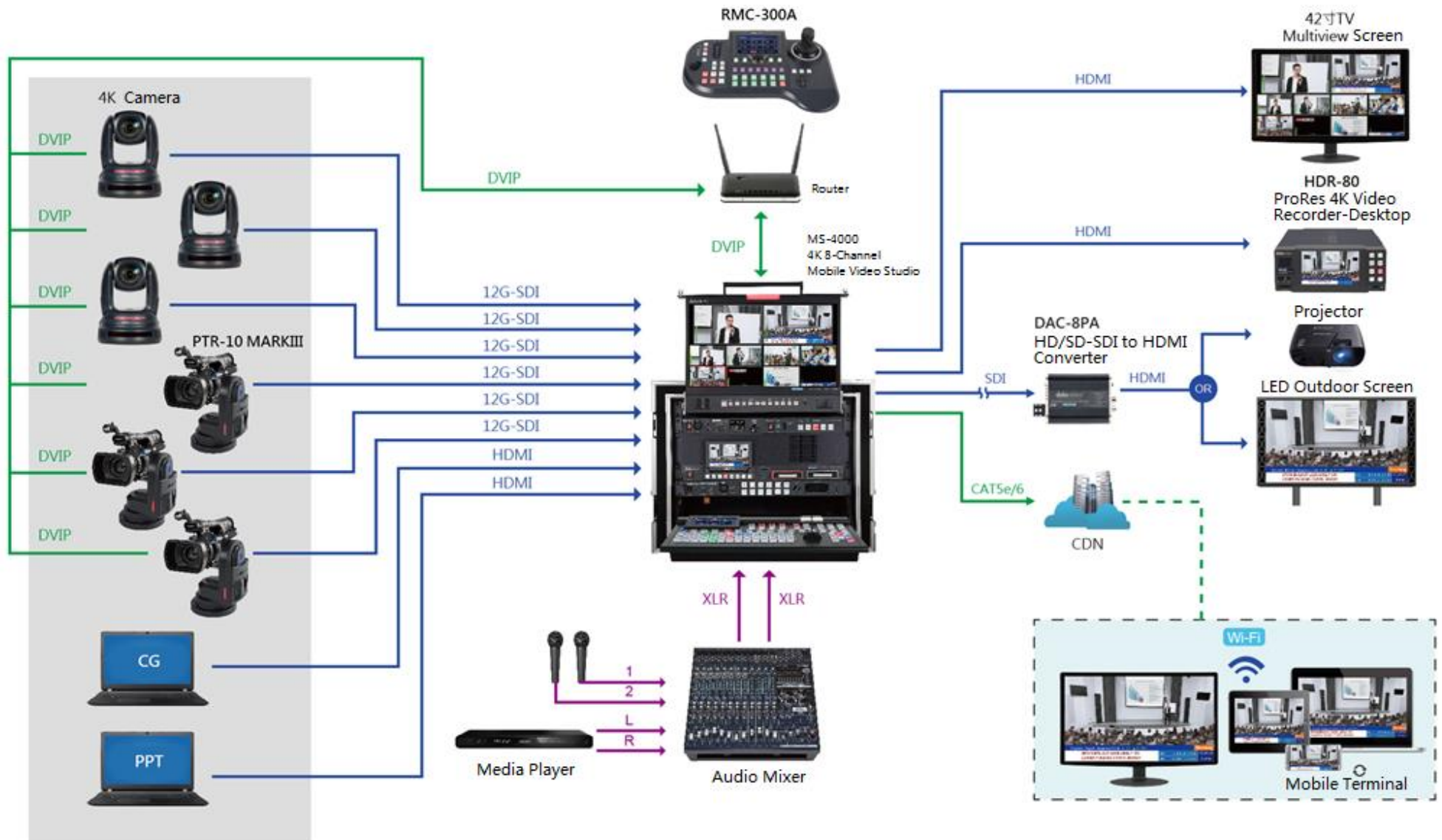
Features

- SE-4000 – 4K 8 Channel Digital Video Switcher
- TLM-170KM: 17.3" 1U Rackmount 4K ScopeView Monitor
- HDR-90 – 4K ProRes Video Recorder with Removable Drive Enclosure.
- ITC-300 – 8 Channel Talkback Digital Intercom System with integrated bi-colour tally system.
- NVS-36 – 4K Dual Streaming Encoder
- AD-300 – Audio Delay Unit allows delay of program audio by up to 3 seconds.
- PD-2A – Power Distribution Center with automatic AC to DC failover switch.
- PD-4A – Redundant Power Center
- 8U flight case – Foam filled, impact protective, for secure and safe transport.

Compatible Video Standards

TLM-170K Interface	
Resolutions and Formats	
HDMI	SDI
4096x2160p (23.98/24/25/29.97/30/50/59.94/60)	4096x2160p (23.98/24/25/29.97/30/50/59.94/60)
3840x2160p (23.98/24/25/29.97/30/50/59.94/60)	3840x2160p (23.98/24/25/29.97/30/50/59.94/60)
1920x1080p (23.98/24/25/29.97/30/50/59.94/60)	4096x2160Psf (23.98/24/25/29.97/30) 3840x2160Psf (23.98/24/25/29.97/30)
1920x1080i (50/59.94/60)	1920x1080p (23.98/24/25/29.97/30/50/59.94/60)
1280x720p (23.98/24/25/29.97/30/50/59.94/60)	1920x1080i (50/59.94/60)
720 x480i (NTSC), 720 x576i (PAL)	1920x1080Psf (23.98/24/25/29.97/30)
640 x800, 800 x600, 1024 x768, 1280 x800	1280x720p (23.98/24/25/29.97/30/50/59.94/60)
	525i, 625i

System Diagram



Installation

Transport & Placement

The MS-4000 is heavy – approximately 70Kg – Do not attempt to lift or move it on your own.

A minimum of two people are required to lift or move this product. There are two carry handles on either side of the product, please use these handles to safely share the weight between the people lifting the unit.

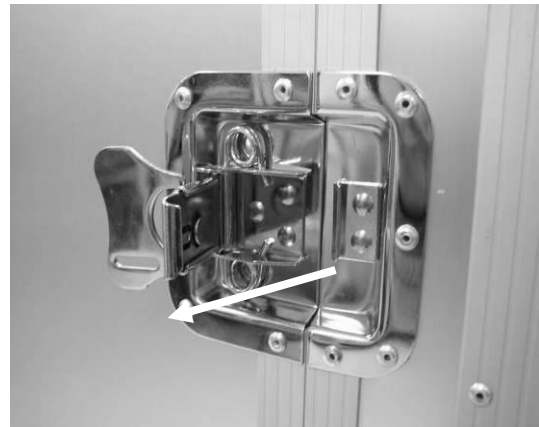
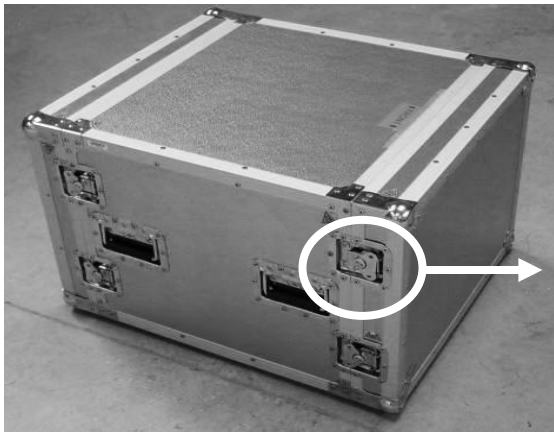
Always use a trolley to safely transport the MS-4000 over distances of 2 Metres or more. The unit should be always moved and placed in an upright position; do not place or try to move the unit in any other way as damage or injury could result.

Place the MS-4000 on a strong, stable, flat surface that is capable of supporting the weight.

Do not use a folding or single leg table to support the MS-4000.

Opening the case

On each side of the MS-4000 case there are wing nut clasps securing the front and rear covers.



Undo each clasp by folding the wing nut out and then rotating it. The clasp can then swing free of the catch. Once undone you can then remove the front and rear covers.

Unpacking the SE-4000 Control Panel Keyboard

The SE-4000 Control Panel Keyboard is held in its shipping position by a securing bolt on either side. To lower the Control Panel first remove the securing bolts as indicated below.



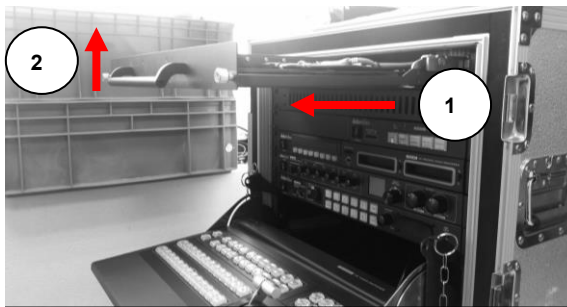
The bolts can then be stored on each hinge bracket before lowering the Control Panel Keyboard.



Setting up the TLM-170KM – 17” LCD monitor

Follow the steps below to set up the LCD monitor:

- Unfasten the two silver screws on the Left and Right of the TLM-170KM drawer handle.
- Using the handle pull out the TLM-170KM monitor until it clicks into place at the end of its rail.
- Now bring the LCD panel into an upright viewing position.



Front Panel

TLM-170KM: 17" 4K monitor which slides out from the topmost 1 RU slot. Features include Connections for 12G-SDI and HDMI video sources, Screen Markers (Center Marker, Aspect Marker and Safety Marker), Timecode Display Overlay, Scan Mode, Aspect Ratio Selection, Check Field, Waveform Overlay, Peaking Filter, Image Flip, HDMI/SDI Cross Conversion, False Color, and Embedded Audio Level Meter.

AD-300: Control Panel for Audio Delay Unit.

NVS-36: Video streaming server

HDR-90: 4K ProRes video recorder with removable drive enclosure.

ITC-300: 8 channel wired talkback system with integrated dual color tally interface. Supplied with cables, belt packs, headsets and tally lights.

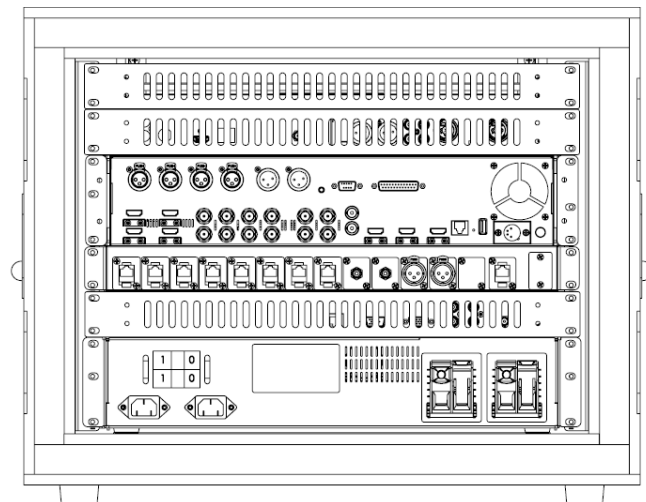
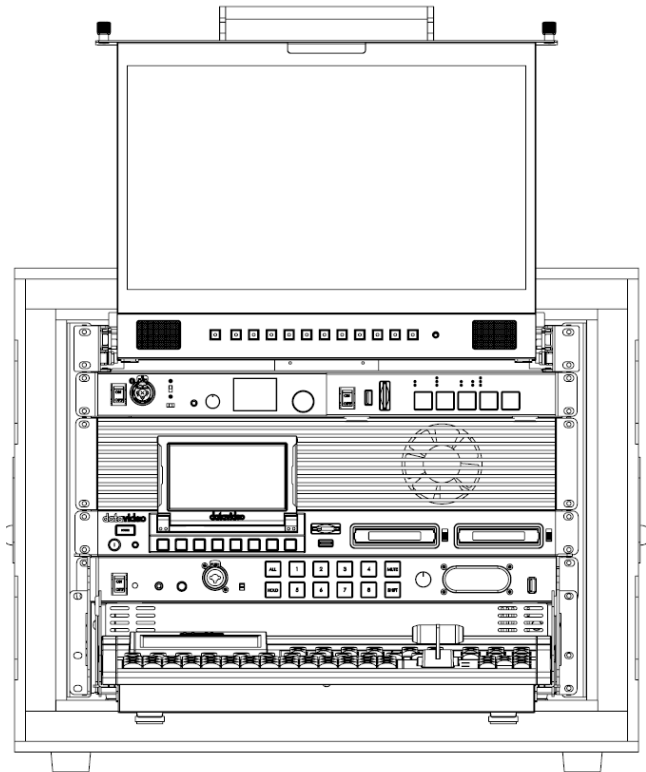
SE-4000 CTL: 4K Digital Video Switcher (Control Panel) provides 10 bit 4:2:2 broadcast quality pictures.

Rear Panel

SE-4000 Main Unit: Main unit with power, control panel and multi-view monitor already connected for your convenience.

RP: Rack panel for connecting ITC-300 belt pack via Ethernet cables, audio sources for AD-300 and NVS-36 to the Internet.

PD-2A/PD-4A: Power Distribution unit with automatic failover from AC to DC input.



Powering On

Each product built into this Mobile Video Studio receives DC power from PD-2A/4A on the rear of the MS-4000.

Please ensure PD-2A/4A is fed with either an AC or DC feed before attempting to switch on the MS-4000. To start the MS-4000, simply push the blue switch to the right.

Note: When the two AC sockets are connected of the AC power, the buzzer will not sound. The buzzer will sound when one is disconnected. However, when the buzzer sounds while the two AC sockets are connected of the AC power, check the PD-4A for errors.



For more information about the PD-2A/4A please refer to its manual in the binder.

If a product within the MS-4000 fails to start after the PD-2A/4A is switched on please locate the on/off switch for that product which has not yet started.

For further advice on using a product within the MS-4000 please refer to its manual on the respective product page.

Powering Off

Before powering off the MS-4000 via the PD-2A/4A on/off switch please ensure the HDR-90 has been stopped.

Packing Away

Once the external source and camera cabling have been removed from the rear connection plates replace and secure the rear case cover.

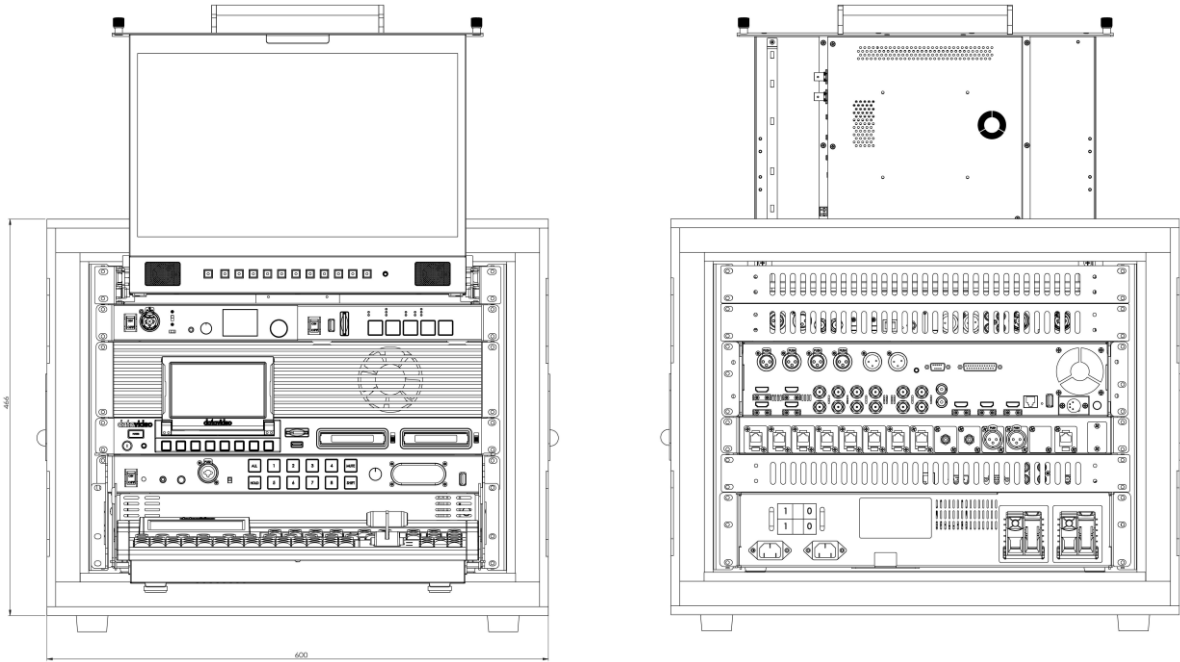
Return the ITC-300 gooseneck mic, any ITC-300 cabling, tally lights and headsets etc to your accessory kit bag/box.

Carefully lower the 17" TLM-170KM monitor and slide it back into its horizontal 1U shipping position. Please remember to secure the silver screws so it cannot slide/move when in transit.

Now raise/tilt upwards the SE-4000 Control Panel Keyboard and secure it in its shipping position with the chained securing bolts.

Now return and secure the front cover and the MS-4000 is ready to be moved.

Dimensions



Height	800
Width	670
Depth	620
All dimensions in mm	

Weights

The MS-4000 is heavy – approximately 65 Kg – Do not attempt to lift or move it on your own.

A minimum of two people are required to lift or move this product. There are two carry handles on either side of the product, please use these handles to safely share the weight between the people lifting the unit.

Always use a trolley to safely transport the MS-4000 over distances of 2 Metres or more.

The unit should be always moved and placed in an upright position; do not place or try to move the unit in any other way as damage or injury could result.

Place the MS-4000 on a strong, stable, flat surface that is capable of supporting the weight. Do not use a folding or single leg table to support the MS-4000.

Specifications

The MS-4000 is a combination of Datavideo products, for the specifications of a particular product please refer to its manual on the respective product page.

SE-4000	4K 8 Channel Digital Video Switcher
TLM-170KM	4K 17" ScopeView Production Monitor
AD-300	Pro Audio Delay Box
NVS-36	4K Dual Streaming Encoder
HDR-90	ProRes 4K Video Recorder – 1U Rackmountable
ITC-300	Digital Intercom System
PD-2A	Power Center
PD-4A	Redundant Power Center

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

Please visit our website for latest manual update.

www.datavideo.com/product/MS-4000

datavideo
www.datavideo.com



@DatavideoUSA @DatavideoIndia2016
@DatavideoEMEA @Datavideojapan
@DatavideoTaiwan @DatavideoLatam
@DatavideoAsia @DatavideoBrasil



@Datavideo
@Datavideo_EMEA
@Datavideo_Taiwan



@DatavideoUSA
@DVTWDVCN



@DatavideoUSA
@DatavideoEurope

All the trademarks are the properties of their respective owners.

Datavideo Technologies Co., Ltd. All rights reserved 2020

Jul-03.2024 Ver.: E1