

# **Introducing VV08**









#### The Concept

We have created a hireable mobile production facility, capable of delivering some of the most technically challenging Outside Broadcasts possible from a 3.5 Tonne Mercedes Sprinter, presented in metallic graphite grey with Wolfrace Eurosport Alloy Wheels.

By carefully crafting a professional and luxurious environment, our aim is to provide a comfortable environment that wows your clients and crew and make those long working days on location, hopefully not feel so long at all.

Operationally, the vehicle can deliver an incredible 40 camera channels or inputs from interlaced or progressive HD resolutions up to 12G UHD or DCI formats at 2160p50/60 as standard.

Utilising the Blackmagic Design ecosystem via an ATEM Constellation 8K, it features 4 customisable Multiviews, 4 Mix Effect banks, 24 Auxiliary Feeds and built in standards conversion on every input.

We can provide a ATEM 2 M/E Advanced Panel 20 to allow full vision control of the mixer. You can select any of the 4 ME banks across the two Mix Effect Rows or use the shift function on one row to allow for control of all 40 inputs to allow the user to "Hot Cut" between all cameras in a fast paced large scale production.

#### The Vehicle

Our van is based on a long wheel base Euro 5 Mercedes Sprinter with 2 separate work areas. It is 7m long, 3M high with essentially engineering via the side door and gallery via the rear door.

Built on a 3.5T race van design, it has Wolfrace Eurosport Alloy wheels, tinted Dualliner side windows, Thule Omnistor Electric Awning, Thule electric Fold Down step and load lights and awning lights in metallic Graphite Grey.

Vehicle	Mercedes Sprinter 313 20th Anniversary Edition
Weight	3.5T plate
Engine	Diesel Euro 5
Colour	Metallic Grey
Features	<ul> <li>Right hand drive, with driver swivel seat</li> <li>Passenger swivel bench seat</li> <li>"Dualiner" Rear Cab Windows</li> <li>Blinds (future upgrade)</li> <li>Wolfrace Eurosport 19" alloy wheels</li> <li>Central locking</li> <li>Door dead locks</li> <li>Immobiliser system</li> <li>Run Lock system</li> <li>Tracker</li> </ul>
Dimensions	Vehicle Only 7.00m (L) x 2.50m (W) x 3.83m (H) Rear Step/Door & Awning Expanded 7.80m (L) x 3.40m (W) x 3.83m (H)



#### **The Environment**

We believe there is simply, not another Outside Broadcast vehicle like it, with its unique considered design, styling and facilities so elegantly presented.

We advise a maximum of 5 people working comfortably onboard the vehicle. Typically one of these people would be our Guarantee Engineer. 2 people can work comfortably in the rear cab "Engineering" area and three in the "Gallery" area.

All areas provided with comfortable high quality fully reclining Corsair T1 gaming chairs with lumbar support. Crew can keep warm or cool with a powerful Dometic Freshjet 1200 air conditioning unit and control the atmosphere of the van with adjustable LED spot and RGB mood lighting throughout.

3x additional "monitoring" positions can also be made available utilising the vehicle swivel seat mechanisms in the front cab, though these positions do not have a desk, it can bring the total working capacity to 8 people.

This well thought out facility is bursting with features and functionality to make it as versatile as possible for any type of use.

Each desk position has its own UK power & Euro Power supplies, Fast USB3 or USBC charging, Talkback and laptop monitoring capability as well as Ethernet and USB connectivity on the gigabit network for seamless integration.

Utilities are set amongst a "showbiz" style glittery Perspex folding desk, that gently shimmers under the spot lights, powder coated racking and diamond stitch faux leather, carpeted and suedeliner upholstery throughout to create a classy, contemporary and professional feel.

Desks can be folded up to stow or work in different configurations. The rear gallery also has an "L shape" configuration if only 2 users are sharing the space to allow for extra controls at their fingertips during busy productions.

An Evertz "Timecode" generator and clock are also installed to keep an eye on critical broadcast transmission junctions and transmission schedules above the gallery screens and in the rear cab area which could be used for logging.

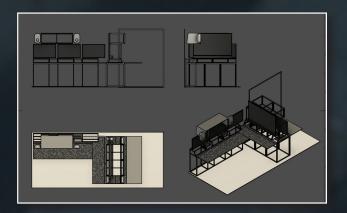
An Electric 12v Thule Fold down step is provided to allow access to the rear gallery, a Thule Electric Omnistor 6300 Awning runs the entire nearside length of the vehicle as does led awning illumination and powerful load lighting at the rear.

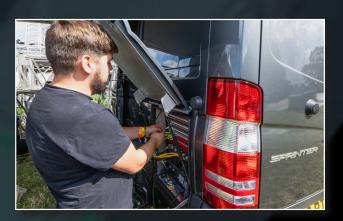
The CTP even boasts its very own Smartscope Duo, capable of displaying 32 cameras from 2 ATEM multiviews to your riggers as they connect up circuits. This simple feature keeps riggers out of the van allowing you to concentrate on your show without interruption.

The ambience really does have a "wow factor" with dimmable spot lighting and fully adjustable RGB mood lighting throughout to create a professional and exciting environment both to work in and to impress your clients.



















#### **ATEM Constellation 8K Switcher**

We can work with up to 40 cameras or inputs from interlaced or progressive HD resolutions up to 12G UHD or DCI formats at 2160p50 as it utilises a Blackmagic Design ecosystem via a Constellation 8K with 4 Multiviews, 4 Mix Effect banks, 24 Auxiliary Feeds and built in standards conversion on every input.

It has 16 Upstream Keyers, 4 Downstream Keyers, 16 Advanced Chroma Keyers and 2 SuperSource.

Control can be via our ATEM Advanced Panel with selectable M/E banks as well as the ability to have Hyperdeck Control.

#### Key & Fill

We have an Ultrastudio Mini that has 2 separate SDI outputs that can be utilised to connect to graphics software and providing separate pre-multiplied key and fill outputs to the ATEM Mixer. This could be from a local Character Generator or even a cloud based CG providing graphics over HTML.

#### **Monitoring**

The vehicle features a 55" 8K smart TV with soundbar, 6x LG Ultrafine 4K 60Hz Monitors, a Blackmagic Design Smart Monitor 4K 12G and 2x Smartscope Duo 6G monitors placed in the front cab for scope or audio level monitoring and the CTP for accurate monitoring and installation.

#### **Processing & Conversion**

3x Teranex AV converters are installed for standards conversions, audio embedding or shuffling and/or Ident generation using animated or static colour bars.

Additional input signals, monitoring and routing are conducted via three cross pointed 40x40 12G routers for multiple destinations to be accurately re-clocked and distributed quickly.

#### Connectivity

Each input is connected via the large CTP presented as either ST singlemode fibre or BNC and is all fully 12G rated using high quality Belden 4694R cable to support maximum SDI transmission officially rated to an impressive distance of 257ft at 12G.

Each connection can be mapped via high quality 12G rated Micro Musa panels for 0 latency and to allow for future supported 8K cameras for the 10 input 8K configuration of the switcher.

We have 32 4K UHD channels dedicated over fibre with official BMD 12G SFPs rated up to 28 miles away. Return video can be separated in sets of 8 across the 4 Talkback Converters (if you needed to separate them for a studio, Autocue or different ME bank for example).

Extra ad-hoc fibre circuits can be made available for vision inputs, auxiliaries or data, and of course we stock a range of 2, 4 and 12 core fibre to use with it as well as 12G fibre converters



#### Recording/Playback

2 Hyperdeck Pro 4Ks are installed as standard for recording to SSD or SD card as clean and/or dirty recordings or playback with an additional 2x Hyperdeck Mini HD if working in HD resolution for recording or playback.

#### **VMix**

We also carry a VMix Pro 4K licensed computer on board. This can be utilised to provide up to 6 replay angles subject to video standard with a professional JL Cooper SloMo controller & 2 screen display.

Alternatively the machine could be used for live graphics, streaming or a completely different production that could be produced from the other area of the van.

#### Internet

We have a Starlink Roam for data feeds and general internet usage and will soon be installing a Peplink HDX4 4G load balancing router. The aim is to get this fully up and running as a streaming backup solution combining Starlink Roam, 5G MiFi units and internal 4G LTE connections. High ping rates and gaps in the LEO satellite constellations combined with poor cell service in remote areas are currently still a limiting factor.

#### **Streaming**

There is a built in Blackmagic Web Presenter 4K for high quality RTMP streaming or use one of the other 4 main dedicated transmission circuits to dark fibre, satellite truck or cellular/IP service such as LiveU.

#### **Audio**

The vehicle also boasts fantastic sound monitoring from a high fidelity Genelec Speaker system independently driven in the front and rear areas as well as a Blackmagic Audio Monitring Unit that can monitor and de-embed any channels of a 12G SDI signal with signal levels and impressive audio clarity.

If not using the powerful ATEM Constellation Fairlight Audio Mixer, Audio can be derived via a Behringer X32 Compact which can also be combined and controlled via MADI output to be mixed with Analogue or AES sources and/or be used as a MIDI control interface with the Constellation 8K.

Separate audio feeds can be additionally embedded via the three Teranex Audio to SDI embedders into ME2, ME3 or ME4 for separate outputs as the Constellation follows ME1 programme audio. This could be a variation of the same production with international commentary for example or a totally separate mix such as studio or onboard cameras.

Alternatively you can use the audio Embedders to "stack" channels for multiple embedded audio tracks such as bi-lingual host feeds onto channels 3&4, 5&6 + 7&8. You could use the 3 Teranex AVs to utilise all 16 channels of SDI audio including using 15&16 for standard ATEM talkback.



















#### **Talkback**

We are also able to provide licensed UHF Radio Talkback with "Duplex" operation for "continuous duty" operation from the gallery for camera operators and dedicated "simplex" production channel as standard.

We also have Peltor Shielded "deadcan" headsets for these with slim cup on one side for better proximity to the camera during handheld operation.

Talkback can also be distributed via an additional Behringer X32 rack, all of which can be IP controlled and integrated to our Elgato StreamDeck Talkback control via Bitfocus Companion for modern aesthetic and configurable control.

#### Standard Equipment

- 1x BMD ATEM Constellation 8K
- 1x BMD ATEM 2 M/E Advanced Panel
- 1x BMD Camera Control Panel

- 4x BMD Talkback Converters
  32x BMD 12G SFP modules
  3x BMD Smart Videohub 40x40 12G Routing
- 1x BMD Web Presenter 4K
- 2x BMD Hyperdeck Studio Pro 4K
- 2x BMD Hyperdeck Mini HD
- 1x BMD Audio Monitor 12G
- 3x BMD Teranex AV
- 3x BMD Teranex Audio to SDI
- 2x BMD Smartscope Duo 4K
- 1x BMD Smartview 4K Monitor
- 6x LG 32UN880 Ultrafine 4K 60Hz 31.5" Monitors
- 1x Samsung QN700 55" 8K Smart TV
- 1x Samsung HW-T400 2.0 All-in-One Sound Bar
- 1x Apple TV 4K
- 2x Genelec 8010 Speakers Cab
- 2x Genelec 8030 Speakers Gallery 1x Behringer X32 Rack (Talkback)
- 1x Behringer S16 (Talkback)
- 1x Behringer Ultranet
- 1x Behringer Ultramatch
- 1x Behringer Ultralink 1x Evertz SDI Timecode Master 8010
- 1x Evertz 1201DD Broadcast Clock
- 1x BMD Sync Generator 1x VMix Computer with Decklink Quad Duo
- 1x Peplink HD4 Max 4G router
- 1x Starlink Roam satellite system
- 1x Ubiquity Dream machine Pro
- 1x Ubiquity 48 port POE+ switch
- 1x Netgear 1Gb 24 way switch with POE
- 2x Canford Audio Sequential fused PDU
- 6x Pop up power supply with UK/EU power
- 6x PDU 13amp with 3 sockets
- 6x Silex USB to Ethernet network adaptors
- 6x Behringer HLC660M Headsets
- 6x Elgato StreamDeck XL
- USB 3.0/C Charging Points throughout
- 1Gb/s Ethernet Connectivity throughout



#### **Utilities**

- Dometic Freshjet 2200 (AC Operated)
- Touch Control DC panels
- Touch control dimming panel
- Remote Control RGB & Dimming Lighting
- Separate Front & Rear Cab Lighting
- LED dimmable Spot Lighting Throughout RGB dimmable Mood Strips
- High power load lights over rear doors
- Thule LED Awning light (nearside)
- CTP LED lighting
- 12v Fold down rear step for easy access
- 12v Thule Omnistar 6300 Awning
- 5 x Luxurious Corsair T1 gaming chairs with Lumbar Support

#### **Accessories for Hire**

- Blackmagic ATEM 1 Panel (legacy) Blackmagic Television Studio HD8 ISO Blackmagic ATEM Mini Extreme ISO SDI

- Blackmagic ATEM Mini Extreme ISO SD Blackmagic Camera Control Panels Blackmagic Fibre Mini Converters Blackmagic Camera Converters Blackmagic Streaming Bridge Singlemode Fibre Media Converter Silex USB to Ethernet Network Adaptor Behringer HLC660M Headsets Elgato Stream Deck XL Behringer X32 Compact with Madi Card Behringer BCF200 MIDI Desk Behringer S32 Ultranet stage box Behringer P16 Audio Monitor Behringer Headset with condenser mic Tait Licensed UHF Basestation Datavideo ITC100 Intercom System

- Datavideo ITC100 Intercom System
- Timecode Systems Pulse
  JL Cooper USB Replay Control for VMix
  Softron Multicam Logger (Dongle)

- Sky Stream Off Air Starlink Roam Satellite Internet
- Pepwave HD Max 4G Vodaphone MiFi Hotspot 5G Ubiquiti Mesh Network

- Teradek Cube 755 H.265 Encoder
  Teradek Bond Pro V Lock H.264 Encoder
  Teradek 155 H.264 Encoder
  Teradek 255 H.264 Decoder
  Teradek Bolt Pro 2000 (HD only)
  Blackmagic Ursa Broadcast G1

- Blackmagic Ursa Broadcast G1
  Blackmagic Ursa Broadcast G2
  Blackmagic Micro Studio Camera 4K
  Blackmagic Studio Viewfinder
  Blackmagic Zoom & Focus Controllers
  Video Village/Hague Side Monitor Mount
  CamRade OB/Eng rain covers
  12 core Singlemode Fibre
  4 core Singlemode Fibre
  2 core Singlemode Fibre
  Lenses

- Lenses
- Tripods
- Batteries
- 11m x 4m Awning Co. Motorsport Awning











# **Technical Specification of VV08**









ATEM Constellation 8K (Supports 1080i) Mixing 10 inputs in 8K (2Si) 12G 4K Support in UHD at 50FPS 40 inputs in 4K or HD Standards Conversion on every input Progressive or Interlaced Standards 24 Auxilaries 4x Customisable Multiviews 4 M/E Banks 2x DSKs Media Player Stills Store IP control **Audio Mixer** Camera Control Hyperdeck Record & Control Macro Control

Standards

HD Video Standards
720p50, 720p59.94, 1080i50, 1080i59.94
1080p23.98, 1080p24, 1080p25, 1080p29.97,
1080p50, 1080p59.94
Ultra HD Video Standards
2160p23.98, 2160p24, 2160p25, 2160p29.97,
2160p50, 2160p59.94
8K Video Standards
4320p23.98, 4320p24, 4320p25, 4320p29.97,
4320p50, 4320p59.94

External Cable Lockable Lift up door with air sprung struts 48 x Shielded Cat 6A Ethernet Ports Tie Point 40 x 12G Input connectors 40 x 12G Camera Return Connectors 40 x 12G Auxiliary Connectors 40 x Duplex ST Single mode Fibre connectors RF Connectors Sync/Genlock Connectors LTC Timecode Connectors 8 x balanced XLR Audio Inputs 8 x balanced XLR Audio Outputs Smartscope Duo 6G Confidence Monitor 6x LG Ultrafine 32UN880 4K 32" Monitor Monitoring 1x Samsung QN700A 55" Smart TV 1x BMD Smartview 4K 17" 12G Monitor

Starlink Roam Connectivity Vodaphone MiFi 5G Unifi Dream Machine Pro Router Ubiquity POE+ 48v Switch Ubiquiti Dual Band Wifi AP Ubiquiti AC Mesh system (Ad Hoc) Bonding/Load Pepwave HD4 Max 4G Balancing Connectify Speedify Teradek Bond Routing 3x BMD Smart Videohub 40x40 Router 12G Micro Musa Patch Panels 12G BNC Patch Panels RS232 Panel (9 pin D Type) 6.35 TRS Patch Panel

2x SmartScope Duo 4K



# **Technical Specification of VV08**

Replay/
Graphics

VMix 4K
8 I/O card
Support for:
6 x HD 25p inputs with A/B outputs
Option for integration with EVS, 3play etc.

VTR

2x Hyperdeck 4K
50fps UHD support
IP or local Control
SSD or SD card recording
Continuous recording across 2 slots

2x Hyperdeck Mini
HD recording
SD card recording
FTP File Transfer
Ultrastudio 4K Mini
FTP file transfer
SDI/HDMI support
Support up to 4K 50 FPS

Encoding/ Blackmagic Web Presenter 4K RTMP
Delivery DD Mall HDMI H.265 SRT
Options Teradek Cube 755 H.265
Teradek Cube 155 H.264
VMix NDI/H.264 RTMP

**Audio** 

OBS 12G BNC to Sat Truck or infrastructure SM Fibre to Dark Fibre infrastructure

3x Teranex Audio to SDI Embedders
3x Teranex AV for Shuffling Channels/Pairs
BMD Audio Monitor 12G with speaker/HP
Listen to all 16 Audio channels (8 Pairs)
See Audio Levels clearly via LED display
Confidence of Video source with monitor
Independent Switchable audio in Gallery
Independent Switchable audio in Rear Cab

Talkback via headset system for shielding Controlled Via X32 Rack

Additional Channels via S16 stage box

IP software control option

Dante Support for 3rd party system XLR in & outs for any type of input Works with UHF licensed base station

3rd party talkback support

Mic Level or a phantom Power available Limiting & balance equalisation available

Custom Headphone volume

Connectivity to every vehicle position

Easily expand via CTP

Stream Deck allows Per to Per or Party wire

Toggle or Latch Channels Mute independent channels Call users if muted for Alert

Stream Deck Control via IP connectivity

Power 32A 1ø Fused Primary Inlet

16 amp outlet on CTP 1000W inverter

Leisure battery 2 x Softstart Fused Sequential PDU

12v DC Power (Lighting, awning and step)













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