DVR 1215 – Transit case, 2-Diver, 15” Display

With Mouse and Keyboard included.

High-Level Features

- Diver Support: This family of DVRs will support/record 2-3 Divers simultaneously, each with their own audio channel:
  - 2-Diver: DVR-1215
  - 3-Diver: DVR-1315
- Designed to be the center of a semi-customer video recording system or a drop-in replacement for a pre-existing video system.
- Power Input: 3-Way auto-switching Power:115Vac/60Hz//230Vac/50Hz, External 12V Battery, and Internal 12V battery for limited operations. Internal battery voltmeter(Blue, 3½ digit display) and 3-LED charge mode status indicators.
- DVR: A multi-channel, high-tech DVR core, with mouse, keyboard inputs, on-screen GUI, and typical finger button control interfaces and 2 USB I/O ports.
- DVR: Automatic record and file save features to ensure that no data recording is lost
- DVR: USB I/O: (2) USB2.0 ports for mouse, keyboard, and/or thumb drive.
- DVR Video Formats: Will auto capture/support 4 different video formats for legacy, present, and future camera selections including IP cameras:
  - SD 480@ 25/30fps
  - AHD 720p/960p/1080p@25/30
  - HDTVi 720p@25/30/50fps at 3/4/5MP
  - HDTVi 1080p@25/30fps at 3/4/5MP
  - IP – 2 ch up to 6MP resolution. RS-485 available for PTZ camera operation. The digital control could be brought out through the Dive Cable connection.
  - Each channel can have a different type of camera. All will be simultaneously recorded. This is shown in the 4-camera desert shot image shown to the right.

- RS-485 available for Pan/Tilt/Zoom (PTZ) cameras.
- DVR Video Outputs: CVBS NTSC/PAL video out, Audio out (all channels combined), and HDMI video ports
- DVR Network: Network connections are available and can be brought out, if requested.
- DVR Playback: All or selected channels can be selected for simultaneous play back. Audio is played back through the panel speaker.
- DVR File and Storage: Each video file is saved under the channel and time stamp. File storage on 256GB(basic) 2.5” HHD. Upgradeable to 500GB and 750GB, or anything up to 1TB.
- Dive Channel: Each dedicated dive channel provides for:
  - The BWV Dive cable, which includes Video power, video return, lighting power, 4-wire comm’s, and 2 discrete control lines
  - Legacy drop-in capability, such as Aux Lighting and control

  - Aux Audio input
  - Aux Video Input
  - Two(2) Clearview (MudChaser) System functions: Camera Select and video Format Select
  - Audio Input controls for recording level adjustment and monitoring (10-segment display),
  - The Dive Channel On/Off switch.
- Panel speaker driven by a 4W audio amp
- Lid compression cylinder to prevent lid from slamming closed
- Display: 15” 1024x768dpi high resolution, 1000NIT brightness. Upgradable to 1600NIT w/auto-color saturation
- Audio Pass-thru of the 4-wire communications to the Customer’s comm’s box.

Display(s)

Basic system

- 15”, 4:3 aspect, 1024x768dpi LED high resolution, daylight readable
- Deep color, high contrast, very black blacks at normal room brightness
- 1000NIT brightness.
- On-screen display (OSD) control via hand-held remote
- Power: 12V, 1A
- Lid compression cylinder to minimize slamming closed

Optional Upgraded Display

- Wider aspect ratio for 16:9 cameras
- 1600NIT for sunlight readable
- Auto-color saturation. As the brightness goes up, color intensity is increased
- 1/3 lighter weight
- Operating temp -20C ~ 70C
- On-Screen Display menu

15" TFT LCD Monitor, LED Backlight 1,600nits,XGA(1024x768)

SLD1568 TFT LCD monitor, built-in 1600 nits high brightness for sunlight readable display. It offers the best visibility, performance and cost effective value. The high level of brightness together with the optimal contrast ratio renders high quality images and enhances legibility. With its fast response time and LED backlight technology, the monitor brings remarkable display quality and durability for your applications. Suitable for marine, military, medical, transportation, and industrial application.

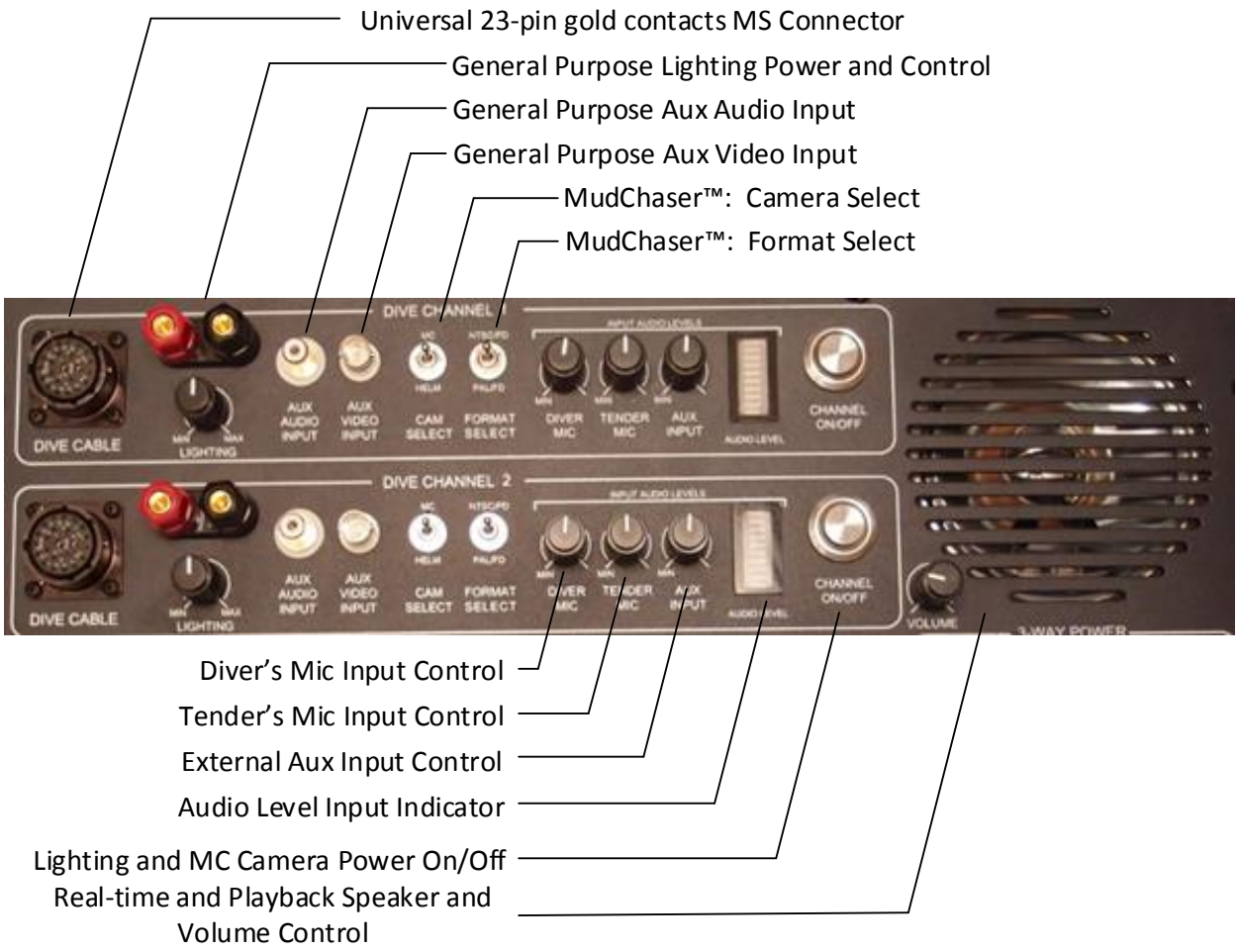
KEY FEATURES

- Brightness: 1600nits
- LED Backlight
- XGA(1024x768) High Definition
- High Shock & Vibration Resistance
- Low Power Consumption
- High Uniformity
- Low EMI Noise
- Wide Dimming

SPECIFICATIONS

Model No.	SLD1568 V3
Description	15" TFT LCD Monitor, LED Backlight 1,600nits,XGA(1024x768)
Display Area (mm)	304.13(H) x 228.1(V) mm
Brightness	1600 cd/m²
Resolution	1024x768 (XGA)
Contrast Ratio	1000 : 1
Pixel Pitch (mm)	0.297(H) x 0.297(V)
Pixel Pre Inch (PPI)	85
Viewing Angle	+80°~-80°(H), +80°~-80°(V)
Color Saturation (NTSC)	69%
Display Colors	16.7M

Dive Channel Functions



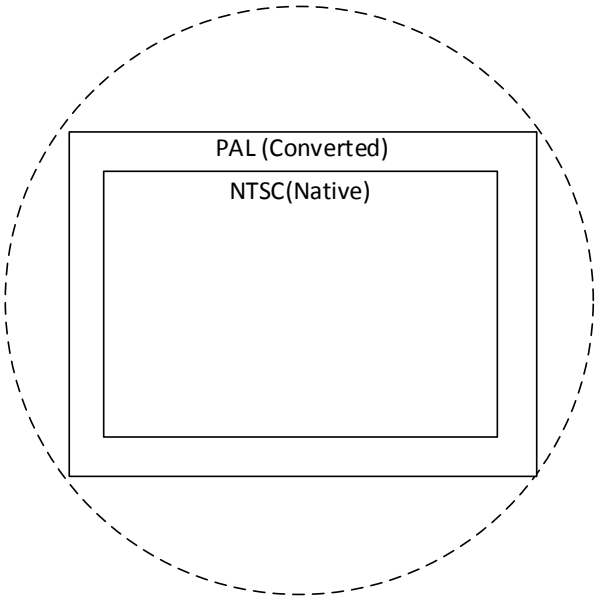
Universal Connector –Gold contact, hermetic sealed, 23-pin, mil-spec connector. Blackwater Vision's proprietary universal connection that currently supports 4-wire analog voice and digital communications, 2/4-wire RS-485, 4-wire Ethernet, and discrete control functions

Lighting Control – General purpose drive control to provide up to 1A for LED lighting regardless of cable length. This control controls both the lighting on the Universal connection and the legacy banana connection.

Aux Audio and Video Inputs – General purpose inputs for pre-existing or legacy video systems. The record output from a comm's box will go into the Aux Audio input. If camera power is needed, it can be brought out thru the rear pass-thru connector.

MudChaser™ Camera Select: BWV's MudChaser™ has the capability to drive an external helmet-mounted camera and receiving the video feed. The Camera Select allows the Tender to select which camera to use. The diver may start the dive in slightly murky water, but as the dive progresses, it will come to a point when no one except the MudChaser can see. Coordinating with the diver, the Tender would then switch over to the MudChaser™.

(Video) Format Select – The optional Diver Display has two(2) display options: 1) the native NTSC video format[NTSC/Partial Display], and 2) PAL (European) video format [PAL/Full Display]. The native NTSC is a sharp, no latency image, but does not fill the entire display area. To fill the entire display area, the video is converted to PAL and then sent to the display. The down side to this approach is a slightly degraded image with some very slight latency due to the additional processing. If the diver doesn't mind this and prefers the larger image, then select the PAL/FD option from the control panel.



The relative size difference between the NTSC and PAL displayed video images as displayed on the helmet-mounted Diver's Display.

Input Audio Levels

- Diver Mic – Adjusts the input level of the diver's mic signal into the recorder
- Tender Mic – adjusts the input level of the tender's mic signal into the recorder
- Aux Input – This adjusts the input signal level from the external comm's box. Typically, this signal is the "Recorder Output" port.
- Audio Level – This is a 10-segment display showing the signal strength going into the recorder. This helps to ensure the signal is sufficiently strong enough, but not over powering and distorted.

Channel On/Off – This turns lighting power and the MudChaser™ power (video camera) off.

Note 1: As long as System Power is on, the video recorder is powered. As long as the video recorder is on, and if there is a video stream from either the Universal connector or the Aux Video Input, the recorder will capture the video.

Note 2: Only one video stream per channel is allowed because the video paths are wired together.

The DVR Section

Video Input and Transmission

- Self-adaptive HDTVI/HDCVI/AHD/CVBS signal input
- Up to 2-ch 6 MP IP cameras input
- 5 MP/4 MP HDTVI video input and live view
- Long distance transmission over UTP and coaxial cable: max. 500m for 1080p and 1000m for 720p HDTVI signal

Compression and Recording

- H.264 / H.264+ / H.265 / H.265+ encoding for the main stream, and H.265/H.264 for the sub-stream of analog cameras
- Connectable to H.265+/H.265/H.264+/H.264 IP cameras
- Full channel recording at up to 5 MP resolution

Video Output

- Simultaneous HDMI/VGA/CVBS outputs (VGA is used for the integrated display)
- HDMI output at up to 4K (3840 × 2160) resolution for AR326-8/326-16
- Separate CVBS and HDMI output ports

Storage and Playback

- 1 SATA interfaces (up to 8 TB capacity per HDD)
- 4ch synchronous playback
- Smart search for efficient playback

Smart Function

- Support Pan/Tilt/Zoom (PTZ) camera control via Omnicast VMS of Genetec protocols

Network & Ethernet Access

- Network access is available, but not currently brought out.
- Guarding Vision & DDNS (Dynamic Domain Name System) for easy network management
- 1 RJ45 10M/100M self-adaptive Ethernet interface
- Output bandwidth limit configurable

Detailed Specifications – Refer to the Video System Core Specifications section for more information.

3-Way Power Input

- Auto-switching between commercial 115Vac/60Hz, external 12V battery, and internal 12V battery. No interruption of power – smooth transition
- Both the internal power supply and external battery maintains the charge on the internal battery. The green status LED indictor
- Internal battery voltmeter(Blue, 3½ digit display) and charge mode status indicator (Yell=fast/bulk charge; Grn=boost; Blue=float)

Video System Core Specifications

Function		Specifications
Video/Audio input	Video compression	H.265+/H.265/H.264+/H.264
	Analog video input	4-ch
		BNC interface (1.0 Vp-p, 75 Ω), supporting coaxitron connection
	HDTVI input	5 MP, 4 MP, 3 MP, 1080p30, 1080p25, 720p60, 720p50, 720p30, 720p25
	AHD input	1080p25, 1080p30, 720p25, 720p30
	HDCVI input	1080p25, 1080p30, 720p25, 720p30
	CVBS input	PAL/NTSC
	IP video input	2-ch
		Up to 6 MP resolution
		Supports H.265+/H.265/H.264+/H.264 IP cameras
	Audio compression	G.711u
	Audio input	4-ch, RCA (2.0 Vp-p, 1 KΩ)
	CVBS output	1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704 × 576, NTSC: 704 × 480
	HDMI/VGA output	1-ch, 1920 × 1080/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz
Video/Audio output		
	Encoding resolution	5 MP/4 MP/3 MP/1080p/720p/WD1/4CIF/VGA/CIF
	Frame rate	Main stream: 5 MP@12fps/4 MP@15fps/3 MP@18fps 1080p/720p/WD1/4CIF/VGA/CIF@25fps (P)/30fps (N)
		Sub-stream: WD1/4CIF/CIF@25fps (P)/30fps (N)
	Video bit rate	32 Kbps to 10 Mbps
	Audio output	1-ch, RCA (Linear, 1 KΩ)
	Audio bit rate	64 Kbps
	Dual stream	Support
	Stream type	Video, Video & Audio
	Synchronous playback	4-ch
Network management	Remote connections	128
	Network protocols	TCP/IP, PPPoE, DHCP, Hik-Connect, DNS, DDNS, NTP, SADP, NFS, iSCSI, UPnP™, HTTPS, ONVIF
Hard disk	SATA	1 SATA interfaces
	Capacity	Up to 8 TB capacity for each disk
External interface	Two-way audio input	1-ch, RCA (2.0 Vp-p, 1 KΩ) (using the 1st audio input)
	Network interface	1, RJ45 10M/100M self-adaptive Ethernet interface
	USB interface	2 × USB 2.0
	Serial interface	RS-485 (half-duplex)
	Alarm in/out	4/1
General	Power supply	12 VDC
	Consumption (without HDD)	≤ 10 W
	Working temperature	-10 ºC to +55 ºC (+14 ºF to +131 ºF)
	Working humidity	10% to 90%
	Dimensions (W × D × H)	315 × 242 × 45 mm (12.4 × 9.5 × 1.8 inch)
	Weight (without HDD)	≤ 1.16 kg (2.6 lb)