

FEATURES

- ▷ All Signals on ONE Cable
- ▷ Bi-Directional 12G-SDI & Bi-Directional 3G-SDI
- ▷ 10+Km Operation
- ▷ 4-Wire Intercom Interface
- ▷ Anton-Bauer or "V-mount" Battery Option
- ▷ Integrated Tally Indicator
- ▷ Camera RCP Control
- ▷ 1 Additional Data Path (232/422)
- ▷ Optical Connector on Integrated Swivel
- ▷ Top & Bottom Dovetail Plates with 1/4-20 & 3/8-16 Taps for Mounting Accessories
- ▷ Optional Tally/GPIO Cable
- ▷ Optional Tally Light Accessory
- ▷ Rugged Lightweight, Low-profile Design
- ▷ Designed & Built in New York

APPLICATIONS

- ▷ 4K Sports & OB
- ▷ Live Music & Entertainment
- ▷ Digital Cinema
- ▷ High Frame Rate Acquisition
- ▷ Live Cinematic Multi-cam

Convert 12G-SDI UHD and 3G-SDI FHD Cameras Into Live Multicam Systems



Multipurpose Your 12G, 4K Camera

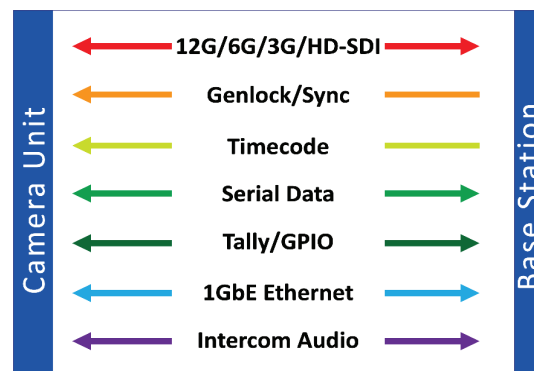
The SilverBack-VB system has been engineered to bring a lower cost and smaller footprint solution to a wider range of camera platforms and applications. The SilverBack-VB provides a robust, full bandwidth fiber optic link between any 12G 4K or HD camera and your truck, control room, or "video village" position. The system puts all of the signals needed for multi-camera 4K/UHDTV production onto a single tactical or SMPTE hybrid fiber cable, ensuring robust, trouble-free connectivity on any studio or remote production. The system can transport up to one 12G-SDI and one 3G-SDI signal bi-directionally between the camera and Base Station. Full camera control is provided by the camera manufacturer's control panel via serial or a 10/100/GigE Ethernet path. Genlock, Intercom, Tally and GPIO are also provided. Pair with the JUICE-48 power supply and operate on a hybrid cable and provide power to the camera or use lightweight, robust tactical fiber and power the camera locally for the lowest cost solution.

New Small Footprint Base Station

The Silver-back-VB system uses a 1RU half rack width enclosure reducing rack space requirements and shipping costs for flypacks and rentals. Status LEDs on the front panel provide peace of mind that signals are flowing.

MultiDyne Innovation

The SilverBack-VB's system design is modular so a system can be built with various types, amounts, and directions of I/O's. A representative signal flow is shown. The SilverBack-VB incorporates the proven connectivity solutions of MultiDyne's decades of experience outfitting production environments for OB vans and production control rooms to create a finely tuned solution for 4K/UHDTV multi-camera production.

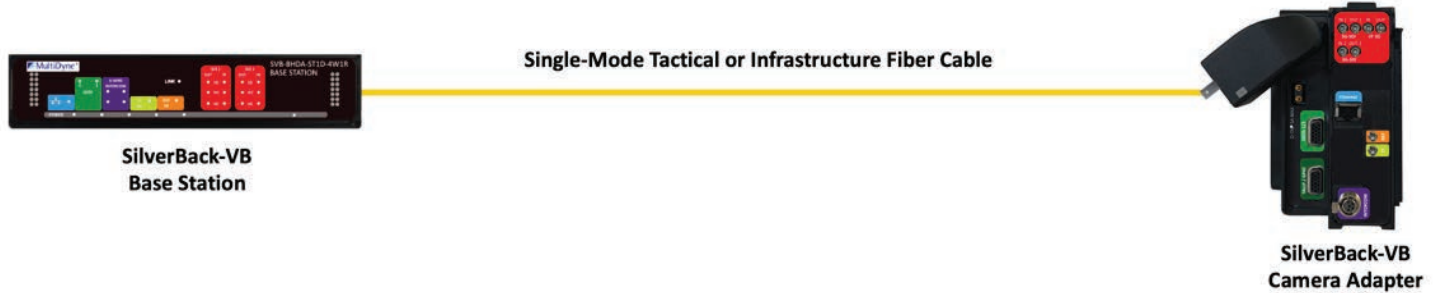


Supported Signals

FEATURES & APPLICATION

The SilverBack-VB can operate on lightweight tactical fiber cable, or with SMPTE hybrid fiber cable to deliver all of your signals and the power to run your camera and accessories.

A. Tactical Fiber Cable – Camera Powered Locally



B. SMPTE Hybrid Fiber Cable – External Juice Configuration



Typical system examples (as shown above):

A: Tactical Fiber Cable (Camera Powered Locally)

Camera Unit: SVB-CHDA-XXXX-5CY

Fiber Connector Options Include ST, LEMO, or opticalCON DUO
Battery Plate Options Include Anton Bauer and / or V-Mount

Base Station: SVB-BHDA-XXXX-4W1R

XXXX = Fiber Connector (Options Include ST, LEMO or opticalCON DUO)

B: SMPTE Hybrid Fiber (External JUICE- 48 Power Supply)

Camera Unit: SVB-CHDA-ST1D-5CAV

Fiber Connector Options Include LEMO, or opticalCON DUO
Battery Plate Options Include Anton Bauer and / or V-Mount

Base Station: SVB-BHDA-XXXX-4W1R

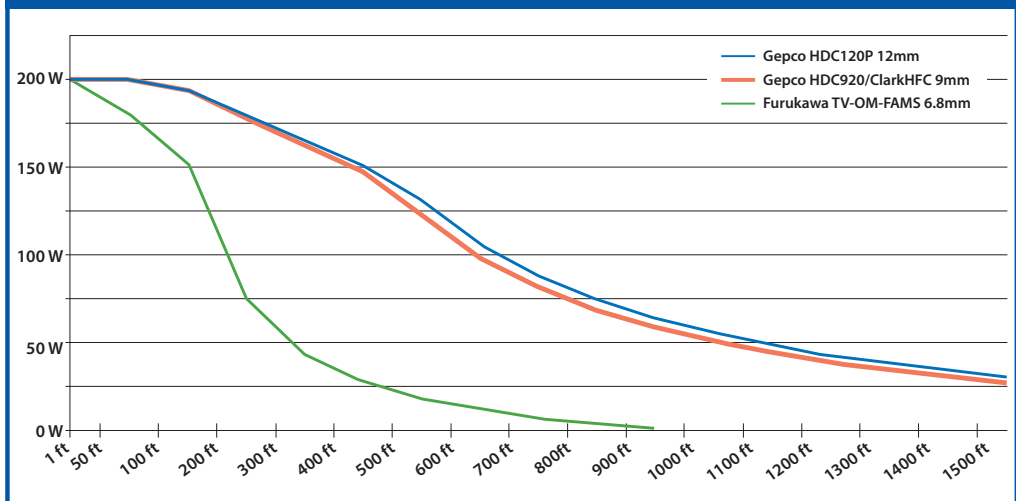
Fiber Connector Options Include ST, LEMO, or opticalCON DUO

JUICE-48: JUICE-48V-SPPST2F

Wet Fiber Connector = SMPTE 304M Plug (Optional opticalCON DUO)

Dry Fiber Connector = ST (Optional SMPTE 304M Plug or opticalCON DUO)

Juice Power vs. Distance

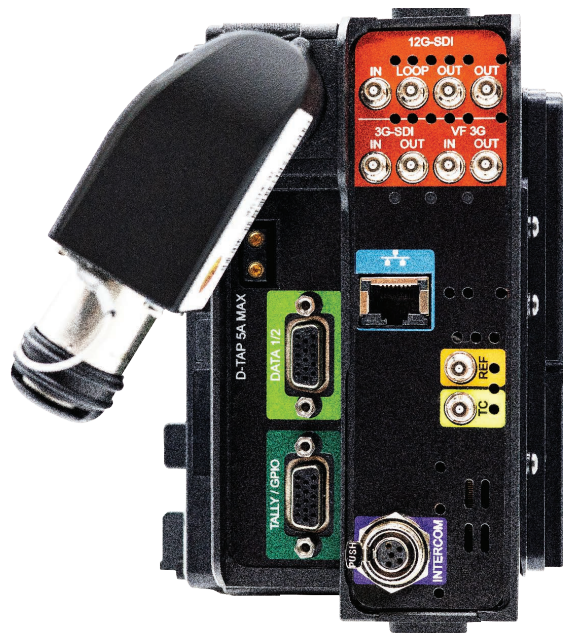


The JUICE-48 Power Supply can be rack mounted close to the base station or deployed at the far end of a long-haul tactical fiber run where there is AC Power

CAMERA UNIT

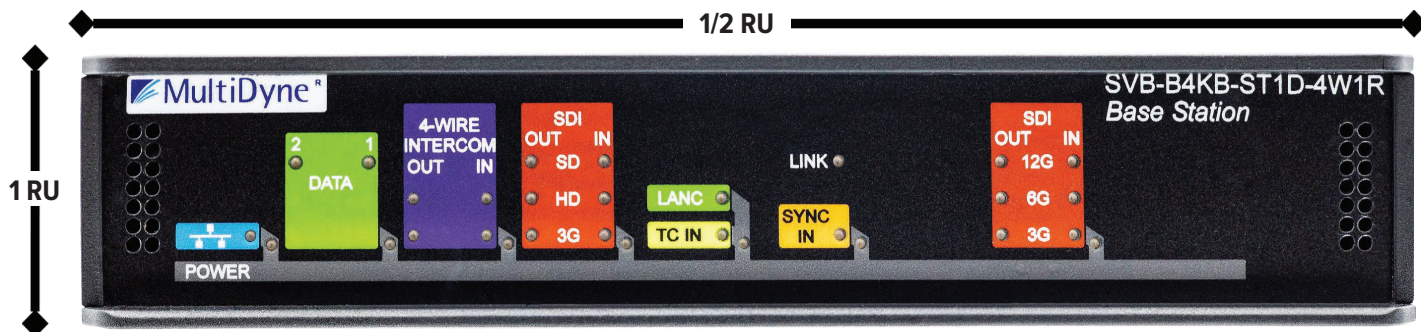


Control Side



Connector Side

BASE STATION



Front Panel



Rear Panel

SILVERBACK-VB SYSTEM COMPONENTS AND ACCESSORIES (ORDERING INFO):

All systems support (1) Genlock, (1) 4-Wire Intercom, (1) 1G Ethernet, (1) LANC, (2) RS-232/422 Serial Data, (1) Timecode, GPI/O and Tally

XXXX = Connector type. Substitute ST1D for ST connector, SPRJ for LEMO or D2RJ for Neutrik opticalCON DUO

YY = Camera & Battery Mount. Substitute AA for Anton Bauer or VV for V-Mount

Camera Adapters	
SVB-CHDA-XXXX-5CYY	Camera Adapter - Dual 3G-SDI Tx and Dual 3G-SDI Rx (Requires SVB-BHDA-XXXX-4W1R)
SVB-CHDB-XXXX-5CYY	Camera Adapter - Single 3G-SDI Tx and Single 3G-SDI Rx (Requires SVB-BHDB-XXXX-4W1R)
SVB-C4KA-XXXX-5CYY	Camera Adapter - Single 12G-SDI Tx and Single 12G-SDI Rx (Requires SVB-B4KA-XXXX-4W1R)
SVB-C4KB-XXXX-5CYY	Camera Adapter - Single 12G-SDI & 3G-SDI Tx and Single 12G-SDI & 3G-SDI Rx (Requires SVB-B4KB-XXXX-4W1R)

Base Stations	
SVB-BHDA-XXXX-4W1R	Base Station - Dual 3G-SDI Tx and Dual 3G-SDI Rx (Requires SVB-CHDA-XXXX-5CYY)
SVB-BHDB-XXXX-4W1R	Base Station - Single 3G-SDI Tx and Single 3G-SDI Rx (Requires SVB-CHDB-XXXX-5CYY)
SVB-B4KA-XXXX-4W1R	Base Station - Single 12G-SDI Tx and Single 12G-SDI Rx (Requires SVB-C4KA-XXXX-5CYY)
SVB-B4KB-XXXX-4W1R	Base Station - Single 12G-SDI & 3G-SDI Tx and Single 12G-SDI & 3G-SDI Rx (Requires SVB-C4KB-XXXX-5CYY)

Camera Adapter Accessories	
JUICE-48V-SPPST2F	Juice 48 External Power Supply, SMPTE-304M (wet) & ST (dry); Delivers 48V to Camera (Use with SPRJ or D2RJ equipped adapters)
JUICE-60V-SPPST2F	Juice 60 External Power Supply, SMPTE-304M (wet) & ST (dry); Delivers 60V to Camera (Use with SPRJ or D2RJ equipped adapters)
MDCAB00155-16	Camera Side 16" Paint Cable for Sony/Canon – 9-Pin to 8-Pin Hirose
MDCAB01257	Camera Side LANC Remote Cable for Sony/Canon 9-Pin to 2.5mm
BO-PTT-TALLY-DB15	Camera Back Cable DB15 connector – supports tally and intercom push to talk
TL-SBV	Tally light for SilverBack-VB camera back unit

Base Station Accessories	
MDCAB00160	Base Station Paint Cable for Sony/Canon 10' – 9-Pin to 8-Pin Hirose
MDCAB01257	Base Station LANC Remote Cable 10' for Canon - 9-Pin to 3.5mm
MDCAB01256	Base Station LANC Remote Cable 10' for Sony - 9-Pin to 2.5mm
CA-HD15M2DE9-GPIO-1M	Base Station Data/Tally/GPIO Cable – 2x 9-Pin Female
MDR-XLR-4x2AN-1M	Base Station 4-Wire Intercom Cable 1m
RM-HUT-CP-2RU-X	JUICE-48 Rack Mount – Replace X with 1, 2, or 3 depending on how many to be racked
RM-VB10-X	Base Station Rack Mount – Replace X with 1, 2, or depending on how many to be racked

TECHNICAL SPECIFICATIONS

SDI Video

Interface	SMPTE ST259, ST292, ST425, ST2081, ST2082
Data Rate	270Mbps, 1.5Gbps, 3Gbps, 6Gbps, 12Gbps
Number of Channels (Cam to Base)	1 to 2, depending on particular model ordered
Number of Channels (Base to Cam)	1 to 2, depending on particular model ordered
Input/Output Level	800mVp-p
Input/Output Impedance	75 Ohms
Connector, Camera Unit	HDBNC
Connector, Base Unit	BNC
Embedded Audio Supported	Yes

Video, Genlock

Type	Analog Black Burst, HD Tri-Level
Impedance	75 Ohms
Level	1Vp-p
Connector, Camera Unit	HDBNC
Connector, Base Unit	BNC

Intercom

Number of Channels	2
Interface	4-Wire
Headset MIC Type	Dynamic
Headset MIC Impedance	200 Ohms nominal
Level, 4-Wire	+4dBu nominal, +24dBu max.
Connector, Headset	miniXLR-5
Connector, Base Unit	MDR Connector Supplied With Unit (Break Out to XLR Available)

Serial Data (Control)

Type	RS232, RS422, LANC
Number of Channels (bidirectional)	2
Data Rate	1Mbps max
Connector, Camera Unit	HD15
Connector, Base Unit	HD15

Ethernet

Data Rates	10/100/1000 Base-T
Connector	RJ45 Cat5e

Tally/GPIO

Number of Channels (Base to Cam)	2
Number of Channels (Cam to Base)	2
Input type	Short to GND or TTL Low to Activate
Output Type	Relay Contact Closure (30V, 2A max)
Connector, Camera Unit	HD15
Connector, Base Unit	HD15

Timecode

Type	SMPTE/EBU LTC
Input	Unbalanced, 15Vp-p max
Output	Unbalanced, 3Vp-p max
Connector, Camera Unit	HDBNC
Connector, Base Unit	BNC

Electro-Optical

Operating Wavelengths	1271-1611nm
TX Laser Output Power	0dBm (Class 1 Laser)
Receiver Sensitivity	-24dBm(1.25G), -20dBm(3G), -14dBm(12G)
Optical Budget*	16dB (3G models), 10dB (12G models)
Fiber Compatibility	Single-mode
Available Optical Connector Types	opticalCON DUO, SMPTE 304M, ST, LC

* The number, quality, and cleanliness of all fiber cables and interconnection points in the fiber path will affect the maximum usable cable length.

Power

Power Input, Base Unit	2.5mm Jack Center Pin Locking Connector
Power Consumption, Base Unit	TBD
Power Input, Camera:	
Remote Power	Hybrid Fiber Connector, 54 VDC From JUICE-48
Local Power	Battery Mount (Anton Bauer or V-Mount), 11-17 VDC
Power Consumption, Camera Unit	30W max
Total Power Available From Camera Unit via Hybrid Fiber for Camera & Accessories*	14V (nominal), 150W max When used with the JUICE-48
Auxiliary Power Outputs From Camera Unit	2
Connector Type	D-Tap
Power Output	14V (nominal), 5A max (each)

* Maximum powered Hybrid Fiber distance varies and is determined by the size of the hybrid cable and the overall system power requirements. Power consumption of the camera, viewfinder, lens, and any other accessories will effect maximum available power at any given distance.

Mechanical/Environmental

Dimensions	
Camera Unit	6" x 7" x 4"
Base Unit	7.25" x 8.62" x 1.75" 1RU Tall
Operating Temperature	0 to 50°C
Operating Temperature	0 to 95% RH, non-condensing.

Compliance

Laser Safety	Class 1 Laser
Other	RoHS