

FEATURES

- ▷ All signals on ONE Cable
- ▷ Two full bandwidth paths of 3G-SDI (one down, one return)
- ▷ 20+Km Operation
- ▷ Universal intercom interface with IFB/PGM inject
- ▷ 2 Mic inputs with phantom and pre-amps
- ▷ Anton-Bauer or “V-mount” battery option
- ▷ Integrated tally lamps
- ▷ 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
- ▷ Dovetail accessories”
 - Aux/Audio/Tally breakout module
 - 15mm iris rod bracket
 - Tally light
- ▷ Lightweight, low-profile packaging
- ▷ Rugged Design
- ▷ Designed & built in New York

APPLICATIONS

- ▷ Live HD Studios
- ▷ Flypacks and OB Production
- ▷ University/Education
- ▷ House of Worship

Convert any 3G/HD/SDI Camcorder to a “3G/HD/SDI Live” camera, connected to the base station with a single fiber cable.



Multipurpose Your 3G/HD/SDI Camcorder

The Silverback II provides a robust, full bandwidth fiber optic link between any 3G/HD/SDI camcorder and your truck, control room or “video village” position. The System puts all of the signals needed for multi-camera 3G/HD/SDI production onto a single tactical or SMPTE hybrid fiber cable, insuring robust, trouble-free connectivity on any studio or remote production.

The system transports a 3G/HD/SDI signal. All rates up to and including 3Gb/s from the camera to the Base Station and a return HD/SDI path the other way. Full camera control is provided by the camera manufacturer’s control panel. Genlock, intercom, tally and audio paths are also provided.

Operate on hybrid cable and provide power to camera or use lightweight, robust tactical fiber and power the camera locally.

Integrated Camera Unit

The company Silverback II Camera Unit mounts elegantly to any 3G/HD/SDI camcorder seamlessly, with no angles or sharp corners. The display uses high-intensity blue LEDs that are easy for the operator to see, but not intrusive.

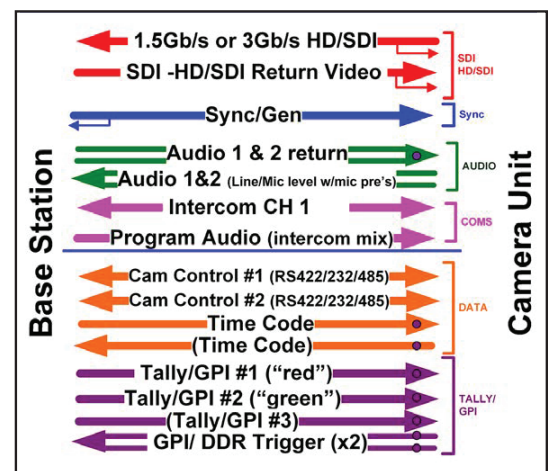
When equipped with the integrated “Juice 48™” option, no external power supplies are required; the rear battery plate can be used for back-up power.

Next Generation Base Station

The Silverback II Base Station is a standard 1R enclosure with LED status indicators for each signal.

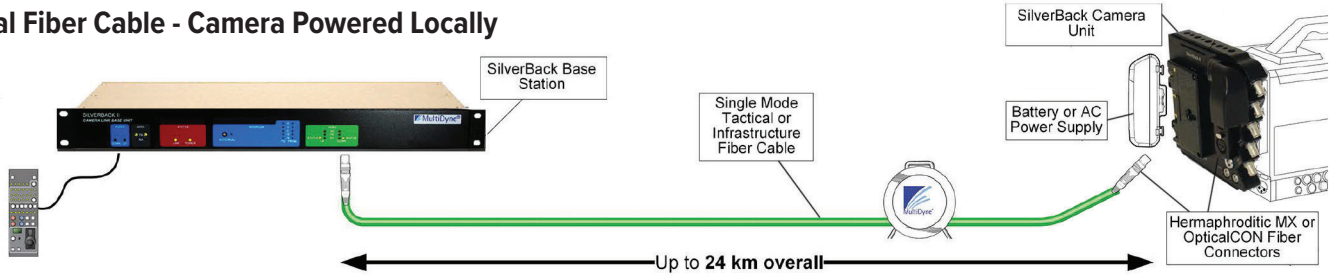
MultiDyne Innovation

The Silverback II 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 3G/HD/SDI multi-camera production.

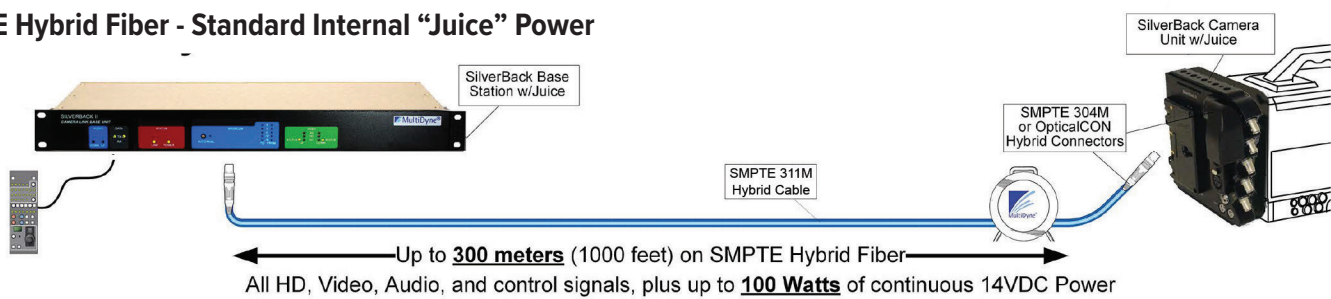


FEATURES & APPLICATION The SilverBack II™ can operate on lightweight Tactical fiber cable, or with SMPTE hybrid fiber cable to deliver all of your signals and the power to run your cameras and accessories.

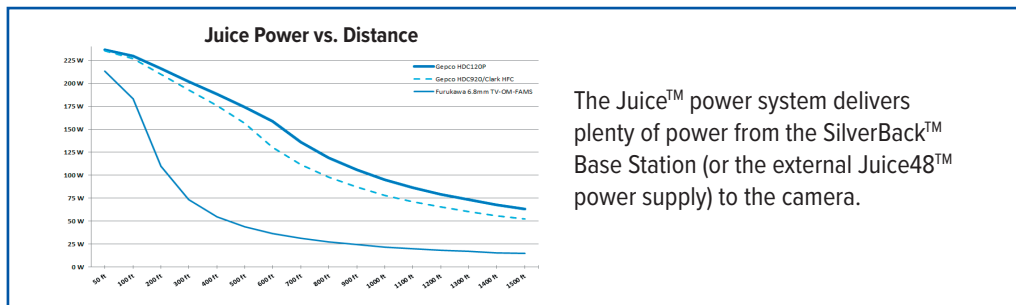
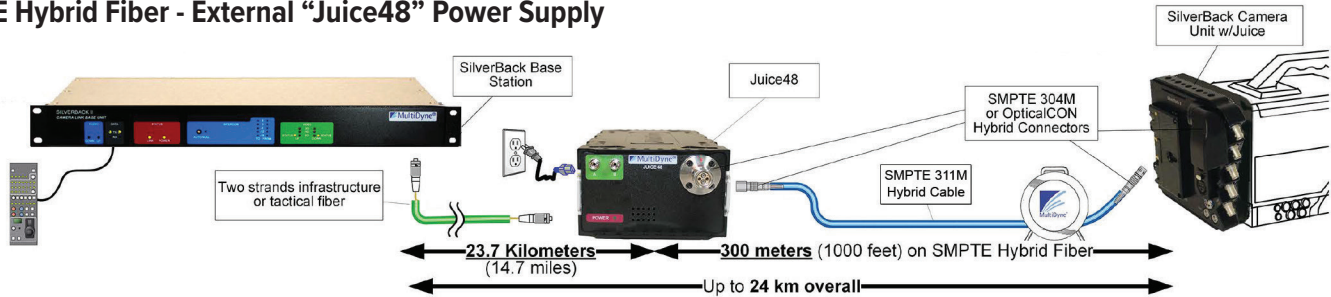
A. Tactical Fiber Cable - Camera Powered Locally



B. SMPTE Hybrid Fiber - Standard Internal "Juice" Power



C. SMPTE Hybrid Fiber - External "Juice48" Power Supply



Typical system examples (as shown above)*:

A: Tactical Cable

Camera Unit: SB2-CSD1-D2RD-5CVV-S:

SilverBack II Camera Unit, Dry fiber cable.

Fiber conn: OpticalCON receptacle.

"V"-Mount plates both sides.

Base Station: SB2-BSD1-D2RD-UB1R-S:

SilverBack II Base Station, dry fiber connectivity.

Fiber conn: OpticalCON receptacle.

B: Internal Juice Power

Camera Unit: SB2-CSD1-SPRJ-5CAA-S:

SilverBack II Camera Unit, "Juice" power via SMPTE cable.

Fiber conn: SMPTE 304M (hybrid) receptacle.

Anton Bauer plates both sides.

Base Station: SB2-BSD1-SPPJ-UB1R-S:

SilverBack II Base Station, internal "Juice" power supply.

SMPTE 304M plug.

C: External Juice48 Power

Camera Unit: SB2-CSD1-SPRJ-5CAA-S:

SilverBack II Camera Unit, "Juice" power via SMPTE cable.

Fiber conn: SMPTE 304M (hybrid) receptacle.

Anton Bauer plates both sides.

Base Station: SB2-BSD1-ST1D-UB1R-S:

SilverBack II Base Station, dry fiber connectivity.

Fiber conn: 1 ST.

Juice48: JUICE-48V-SPP-ST2-F: Juice48 power supply.

Wet fiber connector: SMPTE 304M plug.

Dry fiber connectors: 2 ST. *Both fiber connectors on front.*

CAMERA UNIT

The control panel's simple interface lets the camera operator easily monitor system link and signal status via a back-lit blue LED display. Soft-touch buttons permit easy adjustment of audio and intercom levels.

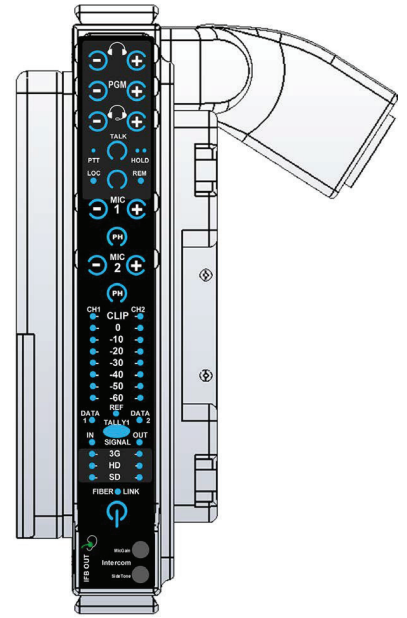
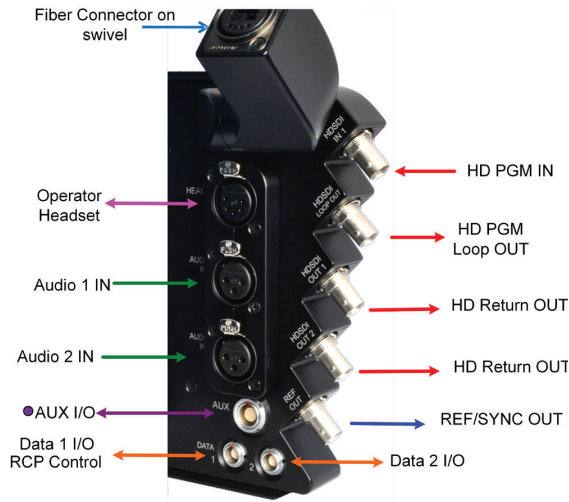
Two mic inputs' pre-amps and phantom power are controlled via convenient soft switches and the levels are easily monitored with VU meters.

The operator can trigger the intercom mic via a local toggle switch or via an external switch or button.

Five, full size BNC's allow connection from the camera's 3G/HD/SDI output, as well as return 3G/HD/SDI and genlock/sync.

Two XLR3-F allow for mic/line level inputs, with a 5-pin XLR for intercom headset and a 3.5mm headset jack also available for Program/IFB to the operator or Talent.

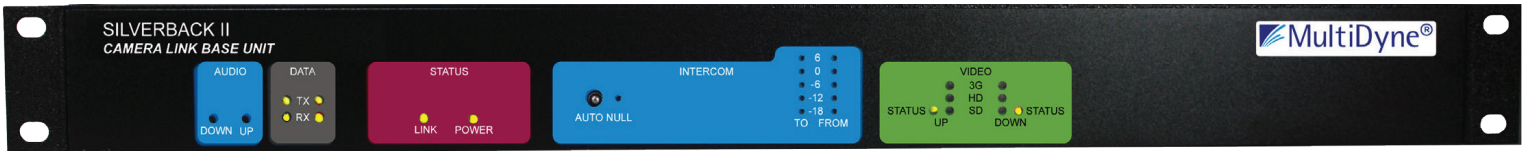
A variety of fiber connectors are available on a robust swivel. Choose Anton/Bauer™ Gold Mount or V-mount battery plates.



LED Control Panel

BASE STATION

SilverBack II Base Station - Frontside



The 1RU Base unit is ideal for space-limited production areas. Indicator LEDs provide easy monitoring of the entire system's status.

SilverBack II Base Station - Backside



Rear connectivity makes it easy to integrate into a simple studio or flypack system, or as part of a large-scale system consisting of multiple cameras spread over a wide area.

SILVERBACK II SYSTEM COMPONENTS AND ACCESSORIES:



SB2-CSD1-①②-5C③-S
SilverBack II Camera Unit



SB2-BSD1-④②⑤B1R-S
SilverBack II Base Station



JUICE-48V-④(w)④(d)⑦
Juice48 External Power Supply



SDT-BA4
Dovetail Audio Expander



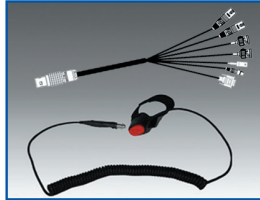
TL-SB2
External Tally Light



SLB2-15MM-RB
15mm iris rod bracket



MDCAB00⑥
Camera & Base Remote Cables



Camera Aux Cables:
Breakout: MDCAB00550-C
Intercom PTT: MDCAB00860



MC-SH⑧-⑨(h)⑨(b)
SMPT 311M hybrid fiber
cable assemblies: various
connectors, lengths



MC-2S⑧-⑨(h)⑨(b)
TAC2 two-fiber tactical
cable assemblies, various
connectors, lengths
(TAC1, TAC4, TAC6, TAC12 available)

① Camera Fiber Connector

D2R OpticalCON Duo(wet or dry)
SPR.....SMPT 304M recept (Lemo, wet)
MX2..... MX Expanded Beam (dry)
Others (Fischer, Tajimi, more) available

② Power

J "Juice" 14V to camera via SMPT cable
D.....Local 12VDC power at camera
H.....High power "Juice" to camera
2.....High power to camera with 24VDC tap

③ Battery Plate Options

AA.....Anton/Bauer ("A/B") plates both sides
V..... V-Mount ("V") plates both sides

AV.....Cam plate: "A/B", batt plate: "V"
VA.....Cam plate: "V", batt plate: "A/B"

④ Base Fiber Connector

D2R OpticalCON Duo (wet or dry)
SPP.....SMPT 304M plug (Lemo, wet)
ST1..... 1 ST
MX2..... MX Expanded Beam (dry)
Others (Fischer, Tajimi, more) available

⑤ Base Station Intercom Interface

4.....Four-Wire only
U..... Clear-Com Partyline (with 4W)
R..... RTS Partyline (with 4W)

⑥ Remote Data Cables (Camera/RCP)

150/160..... Sony
170/180..... Panasonic
190/200..... JVC
210/220..... Hitachi

⑦ Juice48: Fiber Connector Location

F Both on front
R..... Both on Rear
D..... Dry on front, wet on rear
W..... Wet on front, dry on rear

⑧ Cable Length

0000-to-9999..... Length in feet (4 digits)

⑨ Fiber Connector (hub end 1st, bitter end 2nd)

FUW..... SMPT 304M in-line plug (FUW, wet)
PUW..... SMPT 304M in-line recept (PUW, wet)
D2P OpticalCON Duo (NK02, wet or dry)
Q4P OpticalCON Quad (NK04, dry)
M2P MX Mini ExBeam Plug (dry)
ST2/SC2/LC2 2 ST, 2 SCs, 2 LCs (breakout, dry)
Others (Fischer, Tajimi, more) available

Contact: sales@MultiDyne.com for reel
capacity of various fiber types, other options

TECHNICAL SPECIFICATIONS

Video, Digital

Signal Count
Camera Unit-to-Base..... 1
Base-to-Camera Unit..... 1
Interface..... SMPT 424M, 292M, 259M
Data Rate 3 Gb/s, 1.5 Gb/s, or 270 Mb/s
Input/Output Level800 mV (peak to peak)
Input/Output Impedance..... 75 Ohms
Return Loss > 15 dB typical (5 – 1500MHz)
> 10 dB typical (1.5 – 3GHz)
Cable Equalization (Belden 1694A):
270 MHz up to 500m
1.5 GHz up to 200m
3 GHz up to 150m

Audio, Camera to Base

Format Analog
Number of Channels 2
Mic Input Level Adj. Range: -60 dBu to -0 dBu
Phantom power 48V
Impedance >1485KΩ
Maximum Input Level 22 dBu
Sampling 24 bits, 48 kS/sec
Frequency Response ±0.5 dB, 20 Hz to 20 KHz
Output at Base Station Line Level

Audio, Base to Camera (Return/IFB)

Number of Channels 2
Input Level at Base Station Line Level
Output at Camera Unit Line Level
Connector Aux breakout

Intercom/IFB

Channels 1 bi-di intercom, 1 program/IFB
Interface types (Base) RTS, Clear-Com or Four-Wire
Frequency Response 200 - 18KHz ± 3dB
Max Distortion <= 0.5%
Noise < -60dBu
Input gain -60 dBu to -0 dBu
Connectors:
Base: 4-wire: Phoenix terminal. 2-wire: XLR3M
Program/IFB input: XLR3F
Camera Unit:
Headset XLR5F
Return/IFB 3.5mm headset jack
Remote PTT Aux breakout

Data

Number of Channels 2
RS422/RS485 0 to 3 Mbaud
RS232 0 to 400 Mbaud
Connector Camera Unit: 7-pin Lemo. Base: DB9

GPI/Tally (aux breakout connector)

Inputs:
On: TTL Low or Short to GND
Off: TTL High or Open
Outputs:
..... 2 pos Form A (SPST, norm open) relay, to GND
Max Switching Voltage 24VDC/AC,
Max current 1 Amp

Electrical Output (aux breakout connector)

Power 14VDC, ~1A
Connector Aux Breakout

Electro-Optical

Nominal Optical Loss Budget Values
TX Laser output power (std./opt) -6 dBm/0 dBm
RX Sensitivity, HD/SDI (bars) -22 dBm
Fiber Compatibility Single Mode
Optical Connector Options - Camera Unit:
Local Power: OpticalCON, MX, ST, FC, LC
Remote Power: OpticalCON, SMPT 304M
Optical Connector Options - Base Station:
Unpowered Cable (Tac fiber): OpticalCON, MX,
ST, LC, FC
Remote Power-carrying Cable (Hybrid fiber/wire):
..... SMPT 304M, OpticalCON, or ST+Molex

Mechanical/Environmental

Dimensions (WxLxD)
Camera Unit:
Local Power (no "Juice") 8" x 7" x 3.25"
w/ Internal "Juice" Power 8" x 7" x 3.75"
Base Station 7.5" x 19" x 1.75"
Weight
Camera Unit:
Local Power (no "Juice") 3.0lbs
w/ Internal "Juice" Power 3.75lbs
Base Station 6.0lbs
Power Consumption
Camera unit 10 watts@14VDC
Base Station (Tac Fiber) 30 watts@90-230VAC
Temperature Range -25° to +55°C
Humidity Range 0 to 95% RH, Non-condensing

Compliance

Laser Safety Class 1 Laser
Other RoHS