

Camera Dockable optical fiber transmission set. From ENG up to 4K/8K cameras with 4 x 12G.



The CAM RACER is a complete optical fiber transmission solution for camera connection for Outside Broadcast, Studio and Cinema applications. It is composed of a camera dockable transmitter, agnostic to any type or brand of Camera and a 1RU basestation receiver.



Product Highlights

With up to four 12G-SDI channels, the CAM RACER can fit any camera from simple ENG to 8K Live sport devices making it suitable for any environment and ideal for rentals.

CAM RACER delivers up to 200 Watts to the camera. An automatic battery backup will help the remote powering system if more power is needed suddenly.

An internal audio mixer allows user to mix between talkback, programs inputs and local audio channels for Eng and Reporter headsets.

Monitoring SDI output at camera side performs tally insertion (Image border rectangle) and viewfinder / return feed internal switching. Monitoring in supports HD and 3G signals (transmitted after HD downscaling).

Camera control channel supports: Ethernet, RS422 Serial, Sony Lanc, Canon RC-V100 protocol.

Camera synchronization supports: Two composite video signals and one timecode.

Signals control and Setup is done through internal web server. Most signals are also reported on LED display of each unit. An Oled display gives direct access to optical receiving levels and server IP address.

Camera Power Section

CAM Racer is basically remote powered from its base station. The camera unit is able to source up to 200W of power for the camera at 360m of 9.2mm SMPTE cable. Power budget decreasing slowly for longer runs.

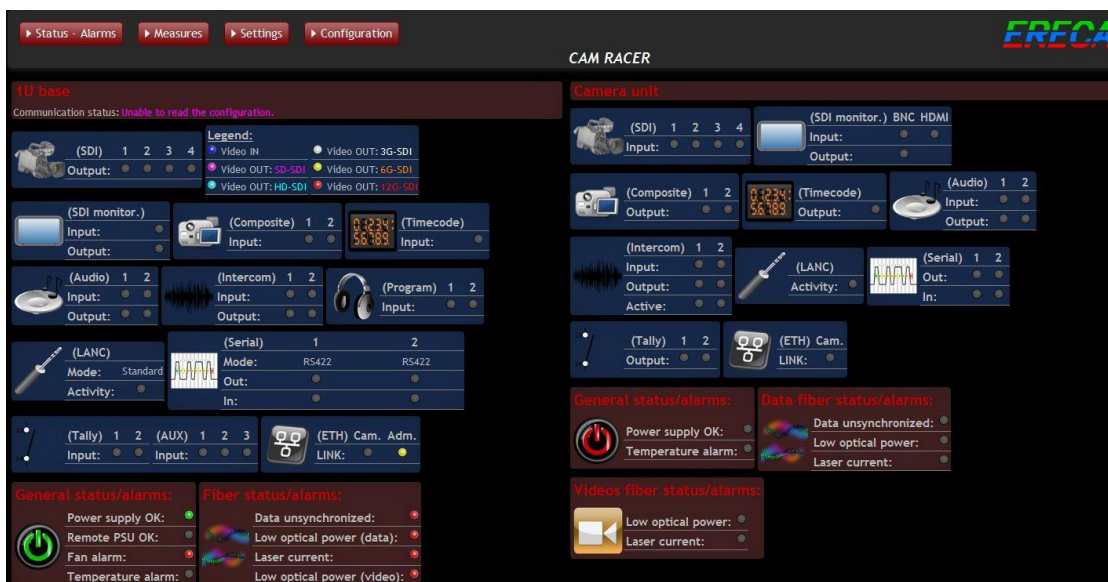
A battery support (V-lock / AB) enables the CAM racer and its camera to be locally powered by a battery.

A key feature of the Cam Racer is the automatic switching between remote power and battery power without power loss for the CAM Racer and its camera. On very long lengths of SMPTE a temporary sudden extra power consumption (accessory startup) may draw too much power regarding the loss of the installed SMPTE cable. In this case the CAM Racer will detect power drop and will switch on the battery then come back on the remote power supply when the extra power consumption stops.

For B-Mount 28V cameras an external step-up converter from Blueshape (MV2BM) can be used to keep the CAM Racer camera agnostic regarding their power supply voltage.

Web Management and Audio Mixing

The units can be monitored and managed via a simple and intuitive web interface.



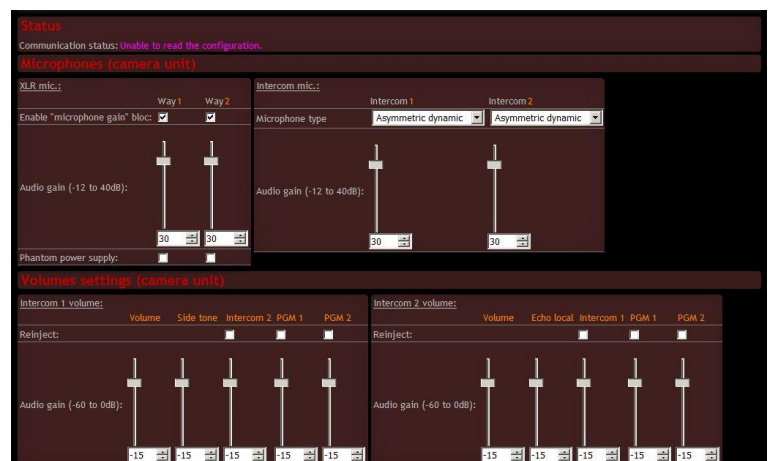
The **status-alarms** page displays all signals presence / activity for quick monitoring.

In regards to audio, the device integrates talkback headset interfaces suitable for any kind of mic (dynamic, electret, fully static) and any kind of earpiece impedance.

An internal audio console is available via the web interface which allows to control talkback, local audio channels inputs and program inputs. These signals can be mixed on every Camera unit audio outputs.

The **settings** page provides control for:

- Audio input type,
- Headsets type,
- Mic gain & Headphone volume,
- Talkback mixing,
- Audio mixing,
- Camera control,
- Tally settings,
- Setup save/recall.



Technical Specifications

	CAM Racer Lite	CAM Racer Std/4K	CAM Racer 8K
Optical			
Dynamic range:	15 dB for control, 10dB for 12G channels		
Connector:	LEMO 3K (EDW / FXW) or NEUTRIK OpticalCon DUO		
SDI Video HD to 12G			
Number:	1x3G	2x3G + optional 2x12G	4x12G
Connector:	3G certified 75Ω BNC and 12G certified 75Ω BNC		
Standard:	HD, 3G, 6G, 12G with optional 12G channels board		
Amplitude:	Input: cable equalization on all channels including 12G, Output: 800 mV pp / reclocked		
Return loss:	Better than: -15 dB for 0 to 1.5 Ghz, -10 dB for 1,5G to 3G, -6dB for 3G to 12G		
Composite Video / GL			
Number, connector:	1 x 75Ω BNC from RX to TX	2 x 75Ω BNC from RX to TX	
Standard:	Composite video, Black Burst, Tri-level (Bi / Tri level auto sense)		
Performance:	BW > 5.8 MHz at +/- 0.2 dB, DgDp < 1%, < 1°, Group delay < 10 ns, SNR > 67 dB (CCIR567)		
Analog Audio			
Number, connector:	2 bidirectional channels, XLR 5pins on camera unit, XLR 3pins on base station		
Impedance:	Input: 10 KΩ differential (non floating), Output: 20 Ω differential (non floating)		
Amplitude:	+18 dBm maximum		
Bandwidth:	50 Hz to 15 KHz at +/- 0.5dB, (20 Hz to 20 KHz at -3 dB)		
Distortion:	0.05% at 1KHz / 0 dBm		
Signal to noise ratio:	90dB, "A" weighted		
Mic input			
Input:	Microphone input gain block on the camera unit		
Mic input, Gain:	From -12 to 40 dB, Tunable by 1 dB steps, Totally bypassable		
Phantom power:	48 volts switchable, Source Impedance 6.8 KΩ		
Timecode			
Number, connector:	1 from basestation to camera unit, 75Ω BNC		
LANC			
Number, connector:	1 bidirectional, Jack2.5mm		
Protocol	Standard LANC or RC-V100 remote protocol (5V open collector signaling)		
Data			
Number, connector:	1 bidirectional channel, RJ45	2 bidirectional channels, RJ45 for Ch1, Hirose 12 for Ch2	
Protocols, Data rate:	RS485, RS422, RS232 from 0 to 500 Kbd/s		
Ethernet			
Number, connector:	1 channel, RJ 45		
Protocols:	10 or 100 Mb/s, Full or Half-duplex (Auto sense), MDI or MDI-X (Auto sense)		
Intercom / Tally			
Number:	1 Tally, 1 Intercom	2 Tally, 2 Intercom	
Tally output:	Relay (dry contact) shared with serial RJ45 (red) and Hirose 12 (green). Red/Green LED		
Tally input:	Contact or Voltage input. Shared on intercom D-SUB 25 pins with standard CCU pinout		
Camera Intercom I/O:	Any type of Headset Mic (Dynamic, Electret, Static) and Earpiece impedance (20 to 600 Ohms)		
Basestation Interc. I/O:	Line levels for Intercom and program input		
Talk command:	Pushbutton on cam unit, PTT input on RJ45 for pocket PTT switch. (Talk latch release on basestation)		
Connector:	XLR 5 pins (intcom1), Hirose 12 pin (intcom2), Standard D SUB 25 pins on base (Tally, Intcom, PGM)		
Power section			
Camera unit:	7 Watts for Lite or Standard device / 10 Watts for 4K or 8K device.		
Camera power capacity	14.4V, 50W continuous	14.4V, 140W continuous or 13.2V, 200W continuous	
Battery plates:	V-Lock or Anton Bauer		
Basestation unit:	10 VA for the basestation (Additionally up to 200VA for remote power source)		
Mains source base:	From 90 to 260 VAC / 47 to 63 Hz		
Mechanical			
Camera unit:	155 * 145 * 44mm excluding connectors & plates (Add 13mm for power converter), weight 1400 grams		
Basestation:	1 RU 19" rack, depth 250mm excluding connectors, weight 3000 grams		
Operating Temp range:	From -20 to + 60°C. (Avoiding direct sun exposition)		