

## 一流的信号传输解决方案 最大化增强光纤利用率



STAGE RACER 是一个用于户外赛事，转播车，评论现场，舞台，演播室连接以及总部大楼的完整的光纤传输解决方案。

STAGE RACER 是为了在同一设备中同时传输所有信号而设计。

### 产品主要特点

凭借ERECA独特的“on the fly”特性，具备方向可配置的HD-SDI通道，支持与视频同时传输所需要的所有通用信号的功能，Stage Racer是一款经济实惠、快速简便，便于部署的产品。

标准的Stage Racer可以复合传输如下信号：

- 12, 8 or 4 路 3G /HD/ SDI 视频信号 (信号传输方向可通过Web服务器设置)，
- 1 路双向同步信号 (复合模拟视频 / 黑场同步 / 三电平同步)，
- 双向各16 模拟音频，用于通话和广播，
- 2个10/100/1000Mbps以太网接口 (1个Gigabit trunk 接口，支持2个VLANS)，
- 2个RS 232/422/485数据接口，
- 8个GPIO，
- 4路AES 3 数字音频双向接口 (与Riedel面板兼容)，
- 1个双向MADI (AES10) 信号接口 (与2个AES接口共用)。

内置的Web服务器，支持远程管理和设置（信号存在报告/光功率测量/数据设置/配置每个高清视频信号的方向）。对于本地管理，每个单元都有一个LED显示屏，用于信号显示和警报。

所有信号通过两条单模光纤传输。

通过添加第二个光纤模块，可以在设备内部构建光缆冗余结构。如果一条光缆断开，设备会自动切换到另一根光缆，保证信号传输。

每台设备都具备冗余电源。

通过内置的Web服务器，可以保存和调用系统配置。



## 设备接口

所有信号都采用标准接口，SDI, 模拟视频和数字音频采用BNC接口，其他信号接口是RJ45 / D SUB。

光纤接口支持LC/PC 以及机箱上集成的SMPTE接口。

设备后接口图(包含LEMO SMPTE 接口选件):



## 设备选件

Stage Racer 可以传输12, 8 or 4路 3G/HD-SDI 视频，同时传输系统中需要的所有其他通用信号。不管机箱中视频传输通道有几个，都可以在Stage Racer中添加如下选件:

- 8个切换开关，用于切换麦克风/线路，调整增益，支持幻象电源和增益管理
- 12个额外的低速率RS 422 串口数据传输通道
- 6个额外的高速率RS 422 (500 Kbs) 串口数据传输通道
- 光纤链路冗余

机箱前面板可以安装两个额外的SC/APC光接口，用于以下用途:

- OpticalCON 四通道端口
- 用于连接外部设备，增加/减少Stage Racer所用的2根光纤的波长

通过添加第二个光纤模块，可以在设备内部构建光缆冗余结构。如果一条光缆断开，设备会自动切换到另一根光缆，保证信号传输。对于OpticalCON四通道接口，另外两条光纤也在内部切换，通常路由到前面板的SC/APC接口。

此外，远端设备可以通过SMPTE电缆或8-20伏本地电源供电。

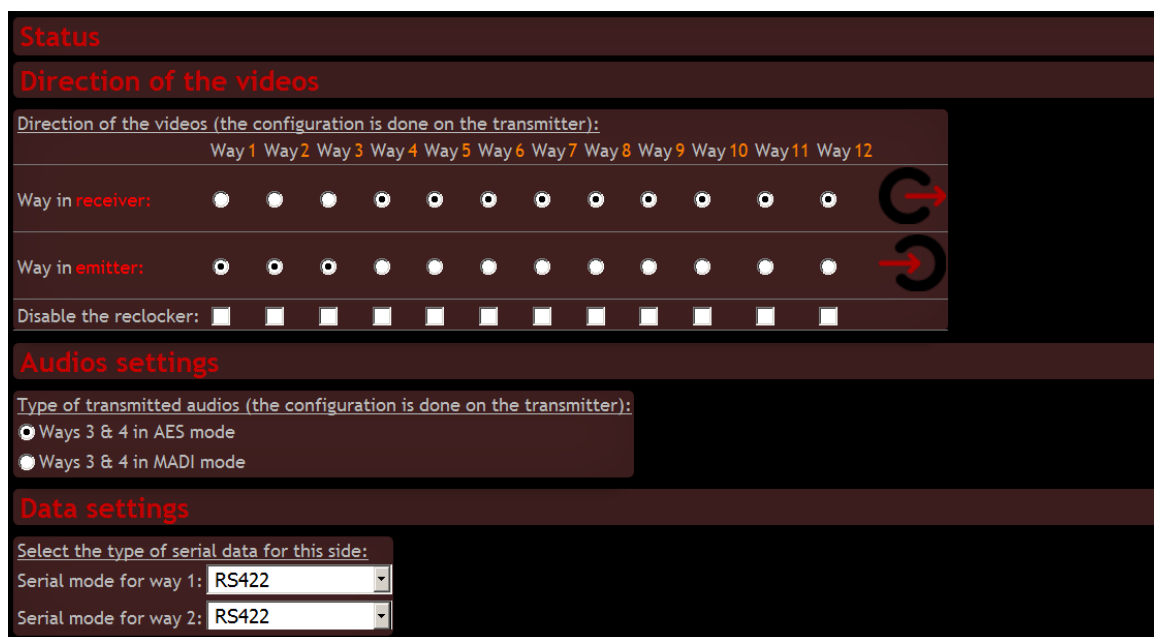
## 网络管理

Stage Racer 通过访问内部的Web服务器进行设置，控制和管理。所有信息按类别显示在四个页面上，方便快捷，不需要任何额外软件。

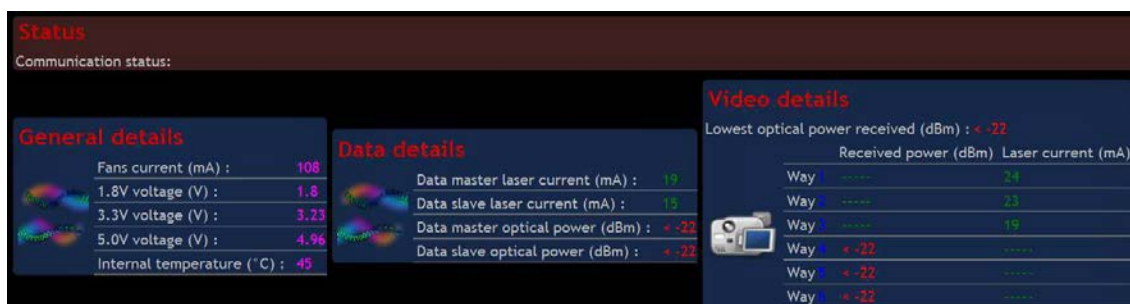
### 状态页面



## 设置页面

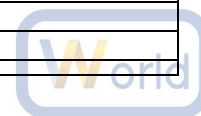


## 测量页面



## 技术参数

Optical	
Dynamic range:	10 dB for the 12 channels (11.5 dB for 8Ch, 13 dB for 4Ch) pathological signal.
Connector choice:	SC/APC, LC/PC, NEUTRIK OpticalCon DUO/ QUAD or LEMO 3K (EDW / FXW)
Video SD/HD/3G	
Number, connector:	4 to 12 channels on BNC (Each channel is direction configurable).
Direction setting	Internal Web Server.
Impedance:	75 Ω
Standard:	SDI, ASI, HD, 3G <span style="float: right;">Reclocker bypass available for SDTI, AES or MAD I compatibility</span>
Amplitude:	Input: cable equalization (140 m Belden 1694A for 3G), Output: 800 mV pp
Return loss:	Better than - 15 dB for 0 to 1500 MHz and better than - 10 dB for 1500 to 3000 MHz
Comopsite Video / GL	
Number, connector:	1 Bidirectional, 2 BNC
Standard:	PAL, SECAM, NTSC, Tri-level ( Bi / Tri level auto sense )
Impedance:	75 Ω
Bandwidth:	> 5.8 MHz at +/- 0.2 dB
Differential Gain/ Phase	< 1%, < 1°
Group delay:	< 10 ns
SNR:	> 67 dB (CCIR567)
Analog Audio	
Number, connector:	16 bidirectional channels
Impedance:	Input: 10 KΩ differential (non floating), Output: 20 Ω differential (non floating)
Amplitude:	+4 dBm nominal (saturation at + 18 dBm)
Bandwidth:	50 Hz to 15 KHz at +/- 0.5dB, (20 Hz to 20 KHz at -3 dB)
Distortion:	0.05% at 1KHz +18 dBm
Signal to noise ratio:	90dB, "A" weighted



<b>Digital audio</b>	
Number, connector	4 AES bidirectional (Riedel panel compatible) <b>OR</b> 1 MADI (AES10) + 2 AES bidirectional (Riedel panel compatible)
Bitrate	48 KHz AES audio / 125 MBs full bandwidth for MADI, clock phase conservative
Impedance / Connector:	75 $\Omega$ , BNC
Setting:	Internal Web Server.
<b>Data</b>	
Number, connector:	2 bidirectional channels, 1 RJ 45 socket per channel.
Protocols:	RS485, RS422, RS232
Data rate:	0 to 500 Kbd/s
Setting:	Internal Web Server.
<b>Ethernet</b>	
Number, connector:	2 channels on VLAN (802.1.ab), RJ45 Socket
Protocols:	10, 100 or 1000 Mb/s, Full or Half-duplex (Auto), MDI or MDI-X (Auto)
<b>GPIO</b>	
Number, connector:	8 bidirectional GPIO contacts                      6 on D-SUB plus 1 GPIO along each DATA RJ45 connector
Output:	Relay (dry contact). 'Common' – 'Normally Open' terminals for each relay
Input:	Floating on the D-SUB, Input pin grounding on RJ45.
<b>Powering</b>	
Consumption:	20 Watts per side for a 12 channels device
Low voltage source:	8 to 20 VDC, XLR 4 pins connector, protected by 5*20 mm standard internal fuse
Mains source:	From 90 to 260 VAC / 47 to 63 Hz <span style="float: right;">Dual supplies in the 1U rack</span>
<b>Mechanical</b>	
Size :	1 RU 19" rack, depth 315mm excluding connectors.
Weight:	3.8 Kilograms.
Cooling:	Internal fan, side panels in/out for the 1RU.
Operating Temp range:	From -20 to + 60°C. (Avoiding direct sun exposition).
<b>Signaling / Setup</b>	
Transmitted signals:	1 LED per signal
Alarms	1 LED per technical alarm (Power supply / Temperature / Fiber alarm )
Remote	All signal presence / alarm are reported trough the web server.
Settings	All settings are done trough the web server.

## 选件参数

<b>Optical OPTION</b>	
Redundant path:	Double optical transmission with automatic optical path selection.
Optical losses:	1.8 dB per link for optical switching
<b>Analog Audio OPTION</b>	
Input:	Microphone input gain block on 8 of the 16 channels
Mic input, Gain:	From 10 to 60 dB, Tunable by 3 dB steps, Totally bypassable, Setting through internal Web Server.
Phantom power:	48 volts switchable , through internal Web Server, Source Impedance 6.8 K $\Omega$
<b>Data OPTION (Fast)</b>	
Number, connector:	6 bidirectional channels on one SUB D 25 (1U rack version).
Protocols:	RS422
Data rate:	0 to 500 Kbd/s
<b>Data OPTION (Slow)</b>	
Number, connector:	12 bidirectional channels, one SUB D 25 for 6 channels (1U rack version).
Protocols:	RS422
Data rate:	0 to 19.2 Kbd/s
<b>Remote Powering OPTION on LEMO 3K / OpticalCON DUO</b>	
Power topology:	Power source: 1U rack STAGE RACER TX unit with external DC 72V on XLR 4 power source. Powered device: STAGE RACER RX without options.
Performance:	1500m of 9.2mm standard AWG16 SMPTE.

ERECA reserve the right to change specifications without notice.



## Stage Racer Application fields

