

## 19" 3U PLATFORM for FIBER OPTIC TRANSMISSIONS of BROADCAST SIGNALS



The **NET RACER** platform concentrates the transmission solutions of ERECA products for Broadcast applications.

The **NET RACER** is a 3U rack with 16 slots for transmission ranging from single HD transmission boards to high data rate multi-signals multiplexing and routing to create network solution. Integrated high power supplies extend application usage, like remote powering of devices through Hybrid SMPTE cable.

The basic rack comprises:

- 2 slots for redundant power supply module. Each PSU has 350 W power source capacities.
- 1 management and supervising module with "http" and "snmp" protocol.
- 1 cooling unit (integrated on the supervising module).
- 16 "user" slots for transmission solutions of ERECA.

Transmission boards and modules drop and insert the rack from the front face. The front door is tip-up type and gives the access to all modules.

The rack offers a dual flow cooling for harsh environments, cooling of the boards is done from cooling unit at the right of the chassis to the front through a refresh tunnel. Power supply modules have their own cooling unit and use a separate air refreshing circuit.

The management module configures all the user boards which required an internal setting. Each user board holds its own settings, and recovers them, even if management module is off the chassis. The management module features 2 RJ45 sockets allowing to daisy chain the modules without the need of an external IP switch.

Each transmission board has a minimum width of 22 mm, which can also become multiple of 22mm (44mm, 66mm, 88mm etc...) depending of application/solution requirement.

Each board comprises status led at connector face and also at front face. At connector face LED mainly display input/output signal information and alarm. At front face three LED provide quick information of the powering of the board, general alarm status and operating of the board. As an option, a LCD panel can take place at the front to provide complementary information.

## TECHNICAL SPECIFICATIONS

<b>Mechanical</b>	
Dimension:	19" 3RU Chassis RACK, depth 280mm excluding connectors.
Chassis capacity:	16 single slot user boards.
Management / cooling:	1 Dedicated slot (not shared with a "user" slot).
Power supply:	2 Dedicated slots (CEE22 / IEC C14 socket on chassis).
<b>Environmental</b>	
Operating T°C:	-10 to +50°C..
Storage T°C:	-10 to +70°C.
EMC:	CE compliant.
<b>PSU module</b>	
<b>NET RACK PSU 01</b>	
Voltage:	90VAC to 265VAC.(Frequency 47 to 63 Hz – built in PFC (Power Factor Corrector))
Power:	350 W.
Efficiency:	87% at full load.
Fuses:	2 x 3.15 A slow blow located on CE22 power socket.
Redundancy:	Oring system with current share, total peak power 700W with the 2 PSU modules.
MTBF:	400K Hrs (Excluding fan, about 120Khrs), evaluated at +25°C.
<b>Supervising and cooling module</b>	
Operating system :	µC Linux
Protocol:	HTTP web based management / SNMP.
Connectors:	2 RJ45 sockets on chassis. (Auto sense for: 10-100Mbs, MDI, Duplex mode).
MTBF:	130K Hrs at +25°C.(including fans).
Fans:	3 * 19m <sup>3</sup> /h fans (11 CFM), thermally controlled, current measurement on each.



Front face with door open

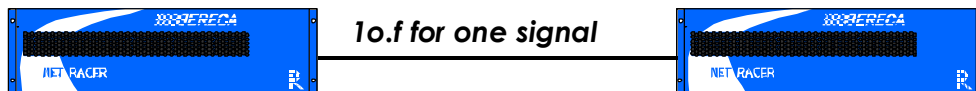
Rear face with supervising RJ45



## APPLICATIONS & BOARDS

- ❖ Boards for "multipurpose" transmission, with IP, audio channels, RSxxx, GPIO...multiplexed together.
- ❖ Boards for point to point transmission (1 signal / 1  $\lambda$ ), 1310 nm, 1500 nm, WDM, CWDM...

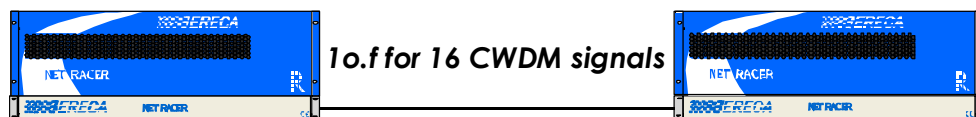
### 16 transmissions over 16 optical fibers



### 14 transmissions with CWDM optical multiplexing (2 optical fibers) Optical CWDM multiplexer in the NET RACER chassis



### 16 transmissions with CWDM optical multiplexing (1 optical fiber) Optical CWDM multiplexer out of the NET RACER chassis



- ❖ Boards with camera remote powering (through SMPTE cable).



- ❖ Boards with TDM principle in a 10Gbs format over 2 optical fibers (Trunk 10G and 6 I/O HD).

The 10 Gbs TDM boards are designed for several applications topologies: linear bus signal distribution , simple ring and redundant optical path ring.

The whole network is set using the supervising module of the racks, through IP network.

Typically, there is no master module in the NET RACER network, each TDM multiplexer has is own configuration and can restart without delay.

Each TDM board has the management for the 10 Gbs trunk (two SFP transceivers at 10Gbs) and 6 SD/HD inputs / outputs. Optional boards can add SDI SD and IP channels (Fast / Giga).

