

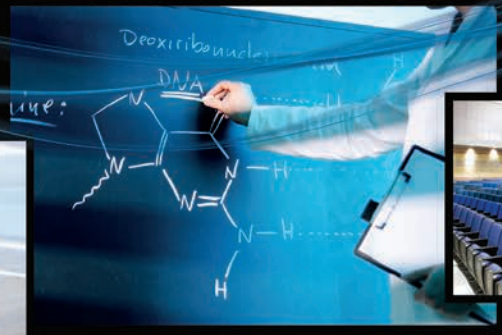
Panasonic

CONTROL, EXPANSION AND
OPERATION BY IP-BASED NETWORK

WORLD-CLASS SOLUTIONS TO REMOTE CHALLENGES



ADVANCED AND
FLEXIBLE SYSTEMS
FOR INDOOR
AND OUTDOOR
APPLICATIONS



HIGH QUALITY AND PROFESSIONAL
"ALL-IN-ONE" CONCEPT

OPTICAL TRANSMISSION SOLUTION

Panasonic is in partnership with French digital transmission specialist ERECA to produce an optical fiber transmission solution for the AW-HE120WE/KE HD integrated remote camera. The solution is suitable for both small and large scale applications, utilizing an optical transmission module integrated directly under the Panasonic AW-HE120WE/KE camera.



<http://business.panasonic.eu/broadcast-and-proav>

OPTICAL TRANSMISSION SOLUTION TOPAS ET 120



The TOPAS ET 120 is an optical transmission module fitting directly under the PANASONIC AW-HE120WE/KE camera. To ensure seamless integration, the housing is available in white or black to match the colour of the camera. Mechanically the module has the same mounting interfaces as the camera and allows fast integration of an existing installation.

Transmission of following signals:

1 HD SDI IN | 1 IN PAL | 1 Genlock
1 RS 422 | 1 IP 100 Mb/s

Specifications

SD / HD video

Number, connectors: 1 channel BNC, bidirectional option
Standards: HD SDI, SD SDI, ASI
Impedance: 75 Ω
Return loss: Better than 15dB
Double card slot receiver output HD SDI signal from the camera

Analog Video

Number, connectors: 1 bidirectional channel BNC (the HD SDI return option takes the place of PAL camera)

Standards: PAL, SECAM, NTSC
Impedance: 75 Ω
Bandwidth: > 5.8MHz to + / - 0.2dB
Differential Gain: <1% / Differential Phase:<1°
TPG: <10ns (TPG: Time Propagation Group)
Signal to Noise ratio > 67dB (CCIR567)

Double card slot receiver local Genlock output (PAL) for chaining Genlock on receiving cards

Ethernet

Number: 1 Way
Connectors: RJ45 (Auto MDI)
Protocols: 10 or 100 Mb / s, Full or Half Duplex (Auto-Negotiation).

Data

Number: one way track
Protocols: RS485, RS422, RS232,
Flow: 0-230 Kbd / s
Dry contacts: With the audio option: two GP IO

Analog Audio (Optional)

Number: two-way channels
Connections: multi-point connector, cord separation signals integrated connector
Impedance: 600 Ω differential input (not floating), 20 Ω differential output (not floating)
Range: 0 dBm nominal (saturation +6 dBm)
Bandwidth: 50 Hz to 15 KHz + / - 0.5dB (20Hz to 20 kHz-3dB)
Distortion: 0.05% at 1 kHz +6 dBm
Signal to Noise ratio: 90dB "A" weighting.

Microphone input gain: level -60 to -10 dBm, adjustable in 3dB locally or from the receiver.
Switchable Phantom power supply 48 volts, 6.8 K Ω impedance source.

Signaling

Video: Video presence (1DEL)
2 x Ethernet: "Link" and "activity" (2 LEDs)
2 x RS 422, 485: "Rx" and "Tx" (2 LEDs)
Optical: Optical receiving State (1DEL)
Power: 1DEL Certify that internal tensions in their tolerance.

Electricity (standard)

Consumption: 2-4 Watts for the transmission module (depending on version)
Input voltage: 12 V
Connectors: Jack and Plug (6.5mm ring, pin 3mm) (TV feed)
Capacity: 600 meters of SMPTE (Section 16 AWG) cable
Output Power: 21 Watts power supply camera
Output voltage: 48 V (receiver module, remote power supply)
12 V (power transmitter module for camera)
Connector: Plug (6.5mm ring, pin 3mm)

Mechanics & Accessories

Mechanical camera:
Housing silhouette incorporating under the camera, black or white

Mechanical reception: map module rack or standalone box ERECA (See documentation TOPAS RT)
Rack capacity: 16 standard rack modules, modules with 8 TV power supply. (See documentation NET RACER C)

Cable accessories:
Connecting cables to the camera ET 120, provided housing side camera

The module is available with two options of optical connectors and power:

2 connectors SC / APC, the module uses the power of the AW-HE120WE/KE camera

1 LEMO 3K or NEUTRIK OpticalCon DUO hybrid connector TV-feeding the camera assembly and transmission module is powered by the receiving module

Optionally, two-way audio transmission can be integrated, as well as, one optional microphone input with adjustable gain and phantom power.

The audio option includes also the provision of two GPIO. Optionally also for the display of local requirements, the PAL signal IN may be replaced by a return channel HD SDI OUT.



OPTICAL TRANSMISSION SOLUTION NET RACER

MULTISIGNAL BROADCASTING ON OPTICAL FIBER



NET RACER focus on transmission capabilities for Broadcast applications. All functions are grouped in a 3U chassis that are developed to support the future developments.

The base frame contains up to 2 hotswappable power supplies. The supervision module, based on http / snmp (basic linux controllers), enables a system expansion, van control, as well as a integrated monitoring module. 16 Slots for hotswappable transmission cards.

Main features:

16 of 16 optical fiber links
14 CWDM optical links
16 connections with optical CWDM Multiplexers
10 Gigabit Ethernet optical fiber 2

Operating or offset
Optical fiber

TDM 10Gbs cards allow to perform several topologies: Distribution of linear bus, Ring simple transmission, transmission Ring with securing optical path. The unit is configured via the management interface of the chassis.

Basically there is no master module, when configured each TDM multiplexer retains its configuration and restarts instantly after a power outage.

Each motherboard has TDM trunk 10Gbs management (two SFP transceivers 10Gbs) and 6 inputs SD / HD outputs. Option cards allow you to add paths SD and IP channels (Fast / Giga). 10G networks

Signal distribution solution
Solution networks 10 Gb / s rescued main trip / trip secur
Solution networks 10 Gb / s dual

Various maps are available:

- Simple card transmission (signal 1 of 1 FO) Mono λ or CWDM
- Simple maps transmission + TV camera power supply. (via hybrid cable: Fiber + Power)
- Card on 2Fo TDM transmission in 10Gbs (Motherboard: Trunk 10G and 6 I / O HD)
- Cards multiservice transmission, including an IP stream of audio channels

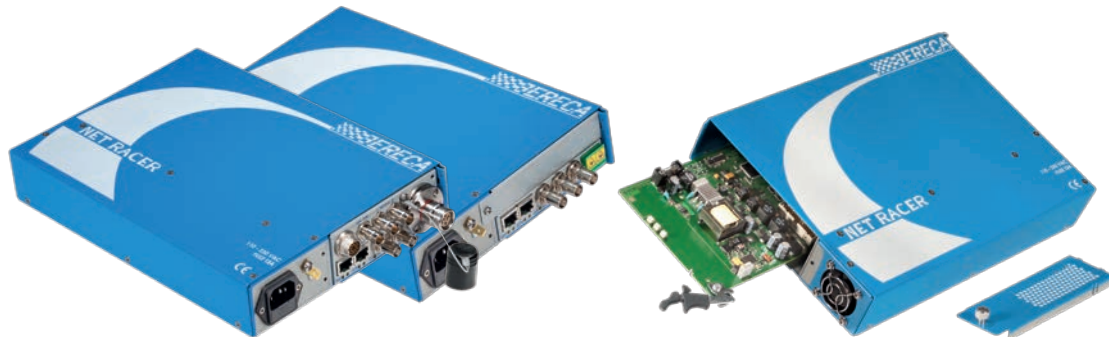
Cards and power supplies are inserted and extract from the front of the chassis. A global swing door gives access to all functions and an alarm is generated if the door stays open. The breakdown occurs transversely from the right to the left of the frame. The supervisor module also allows you to configure the cards and modules in the chassis. Each transmission card has a minimum width of 22mm. Depending on the application widths are multiples of 22mm (44mm, 66mm, 88mm etc. ...).

Each card has three status LEDs indicating its condition. An optional display panel is provided on the door frame. It offers a more accurate display the status of each card leds synthesis.



OPTICAL TRANSMISSION SOLUTION NET RACER C

STAND ALONE BOX FOR NET RACER BOARDS



The NET RACER COMPACT is a stand alone box to install NET RACER boards for small transmission architecture and mobile installations.

Main features:

2 slots chassis allowing 2 single slot or 1 double slot user board

Embedded thermally controlled cooling

Embedded 120 watts high reliability PSU, 90V to 265V

Small size 202*278*47 mm

Specifications

Power Supply:

Mains voltage input: 90 to 264 VAC

Mains frequency: 47 to 63 Hz

Inrush current: 40 A

Efficiency: 88 % at full load

Remote powering capacity:

600 meters of SMPTE cable (section 16 AWG)

Connector: CE 22 / Quiescent power:

1 Watt MTBF 400 000 hours

(Exclu. Fan, about 120 000 hours)

Mechanical:

Dimensions: 202 x 278 x 47 mm (excl. connectors and door screw)

User boards: 2 x standard module (1 slot), 1 double module (2 slots)

Temperature: - 10 to + 50 °C

Protections: 2 fuses 2 A / Slowblow

Mounting: M4 Threads and 2 apertures for wall mount

The high power embedded PSU enables usage of optical receiver board with hybrid cable remote camera and transmitter powering.

The cooling is assumed by a single thermally controlled fan, the air flow passes through the power supply section then onto the user boards thus allowing a very efficient cooling scheme for a standalone enclosure.

The compact size allows installing two "NET RACER C's" onto a 19 type width mounting plate, two M4 threads are provided on the bottom of the cabinet to allow easy screwing. For wall mounting, two special apertures also located on the bottom of the cabinet allow easy vertical installation by sliding the unit onto two wall screws.



OPTICAL TRANSMISSION SOLUTION TOPAS RT Cards

HD SDI CAMERA OPTICAL TRANSMISSION



The TOPAS RT Cards, available with several options for optical connectors ensure transmission of the following signals:

- 1 HD SDI OUT | 1 PAL OUT |
- 1 Genlock IN | 1 RS 422 | 1 IP 100 Mb/s

Specifications

SD / HD video

Number, connectors: 1 channel BNC, bidirectional option
Standards: HD SDI, SD SDI, ASI
Impedance: 75 Ω
Return loss: Better than 15dB
Double card slot receiver: Double HD SDI output signal from the camera

Analog Video

Number, connectors: 1 bidirectional channel BNC (the HD SDI return option takes the place of PAL camera)

Standards: PAL, SECAM, NTSC
Impedance: 75 Ω
Bandwidth: > 5.8MHz to + / - 0.2dB
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Double card slot receiver:
local output Genlock (return PAL) for chaining genlocks on receptors cards

Ethernet

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Data

Number: one way track
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Flow: 0-230 Kbd / s
Dry contacts: With the audio option: two GP IO
Analog Audio: (Optional)
Number: two-way channels
Connections: multi-point connector, cord separation signals integrated connector
Impedance: 600 Ω differential input (not floating), 20 Ω differential output (not floating)
Range: 0 dBm nominal (saturation +6 dBm)
Bandwidth: 50 Hz to 15 KHz + / - 0.5dB (20Hz to 20 kHz-3dB)

Distortion: 0.05% at 1 kHz +6 dBm
Signal to Noise ratio: 90dB "A" weighting.

Signaling

Video: Video presence (1DEL)
2 x Ethernet: "Link" and "activity" (2 LEDs)
2 x RS 422, 485: "Rx" and "Tx" (2 LEDs)
Optical: Optical receiving state (1DEL)
Power: 1DEL certify that internal tensions in their tolerance.

Electricity (Standard)

Consumption map: 4 Watts (excluding remote supply) (TV feed)
Capacity: 600m of SMPTE (Section 16 AWG) cable
Output Power: 45 Watts PSU camera (after restoring 21W 600m SMPTE cable)
Output voltages: 48 V (receiver module, remote power supply)

Mechanics & Accessories

Mechanical completion:
Module card for rack or box autonomous ERECA

Capacity rack NET RACER:
NET RACER: 16 standard modules or 8 double width modules.
NET RACER C: 2 modules 1 slot or 1 double-width module

The cards are available with several options for optical connectors:

- 2 Connector SC / APC
- 1 LEMO 3K or NEUTRIK OpticalCon DUO

(This cards provide a hybrid connector remote power supply of the camera assembly and its associated transmission module)

Optional two-way audio transmission signals can be integrated. The audio option also comprises providing two GPIO. Optionally also a return path to HD SDI can be transmitted. This video signal comes in place of the PAL signal OUT. Supervision of cards is provided by the monitoring module NET RACER chassis. On the rear panel LED indicates the presence of electrical signals. Front panel LEDs indicate the correct supply of the card and the absence of optical signal.



PANASONIC REMOTE CAMERA AW-HE120WE/KE



The AW-HE120 is an integrated pan-tilt HD remote video camera featuring a 20x zoom lens and a 2.2 megapixel U.L.T. 3-MOS image capture system with support for Full HD video.

Main features:

- 1/3 type Full-HD "U.L.T." 16:9 3MOS sensors
- Available in Black or White
- 20x optical zoom lens with ND filter
- Compatible with current Panasonic controllers

Specification

- Multi format HD/SD 1080i, 720p or 576i
- SD/HD-SDI, HDMI, Component, Composite output
- 1000 TV line resolution
- High sensitivity F8,
Low signal to noise ratio 60dB
- Built-in ND filter; clear/ND4/ND16/ND64
- Pan: -175 to +175 degrees
- Tilt: -30 to +210 degrees
- Control over IP (same protocol as HE60)
for easy connection and settings
- Compatible with Panasonic remote controllers
- Power consumption 100-240v AC
- Lightweight approx 4kg
- Compact size and simple system configuration

