

# Nova73 HD



Set up, connect, switch on. This was the starting-point for the conception of our Nova73 router. Complex and flexible systems require configuration – a fact that one has to accept but which can be approached in different ways.

You can service, equip and re-configure the Nova73 while the system is running. Hot-plugging is no longer restricted to the replacement of similar components, but also allows system extensions even when you are on-air. This along with a synchronous audio-matrix offers far more than a trouble-free installation.

Our HD technology offers all that you expect from a modern routing system, like 96 kHz, Dolby-E compatibility, switching clock-synchronised to video frames or integrated signal processing for gain adjustment and mono-mixing. With the modular structure and the high-performance architecture you are prepared for tomorrow's needs. In addition, the Lawo STAR² technology guarantees reliability.

## Universal

Nova73 HD is designed as a central matrix for audio and additional data. Its modular construction allows for flexible adaptation to the real requirements and a scalable routing capacity of up to 8192 mono channels in a single frame.

Ports for MAD1, ATM/SDH and AES3 are available directly at the system core. Further interfacing possibilities are supplied by the proven DALLIS interface system. Homogeneously integrated in the system it serves for the integration of further formats as well as for the realisation of a decentralised structure. Individual connections as well as the complete system can be designed redundantly (Dual Star architecture).

Future modules with new formats and features can be integrated without any problems. This is because its open architecture makes the system an extremely flexible platform - and thus a future-proof investment.

## Manifold Features

Nova73 HD taps into the full potential of a digital and synchronous matrix system. For example, Nova73 performs the signal distribution accurately to the point: by means of clock-synchronised switching the crosspoints are set simultaneously to video frames. And if required, this applies to all targets all at once.

The transparent transfer of audio data allows the distribution of additional information and of compressed audio streams (e. g. Dolby E). As crosspoints are set mono in principle, signals can have any number of channels and summation can be applied where stereo signals are routed to an individual mono target.

Furthermore, the integrated signal processing ranges from modulation control to the setting of the gain – standard for every single input and output. Also enhanced DSP features like AGC, Equalizer, Dynamics and Delay are available – optionally provided on a dedicated DSP board with floating-point processing and the very high quality of our mixing console algorithms. The synchronously working crossbar fabric provides for a defined latency of a few samples. With a sampling rate of 96 kHz, production and post-production requirements are met.

## Nova73 HD AS AUDIO MATRIX IN A TV OB VAN

Due to its small dimensions and weight the Nova73 HD is optimally suited for the use in OB vans. Only 10 RU can host up to 256 AES/EBU and 128 multichannel interfaces as well as redundant controllers and power supply units.

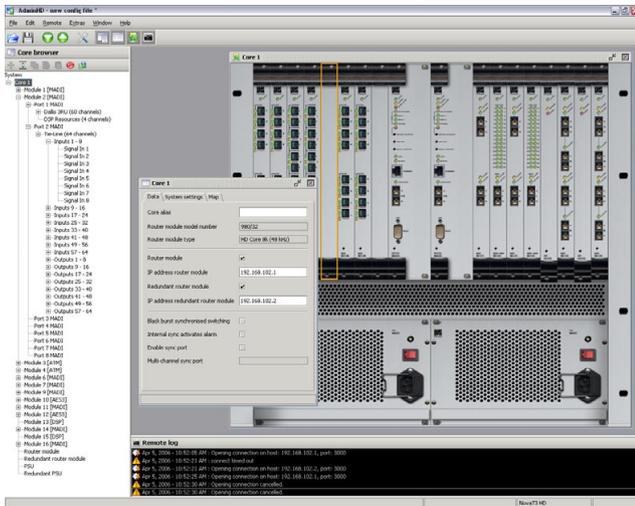
All active components like plug-in cards and power supply are accessible from the front of the rack. This guarantees easy maintenance and replacement of modules especially in narrow environments and proves the matrix to be very service-friendly.

The awkwardly accessible back planes remain for all that which is rarely handled. These are, for example, passively designed components which are fixed cabled, e. g. the connectors for the AES3 signals. With possible connections for up to 512 mono signals the space is used efficiently. Thereby you can choose between the connectors D-Sub (balanced 110 Ohm) and BNC (unbalanced 75 Ohm). Particularly in the field of video with the frequent use of BNC, the direct connection saves additional costs for complex transformation.

Anything not planned to be directly connected to the system core is decentralised and integrated via DALLIS breakout boxes. This requires only one optical fibre link to the respective location (e. g. video or audio control room) where the multichannel signal is distributed to the desired interfaces (digital, analogue, headsets). This applies also to stage boxes that are easily positioned at a distance and controlled via cable drums.

In cases where both picture and sound play a role in equal measure, the audio routing matrices are operated mostly as sub-layer to a video routing matrix. Therefore the Nova73 HD offers an open IP-based control protocol and protocols of other manufacturers. When synchronised with a video signal (black burst) it has the ability to switch the crosspoints frame-synchronously. This is a feature that guarantees clean signals, even after switching, particularly with Dolby-E streams.

A maintenance-friendly system was one core point when designing the Nova73 HD. Easily understood visual indication and simple error diagnostics, effortless replacement of modules and the different redundancy options make it possible for the system to be operated without the presence of comprehensively trained service personnel because more often than not, a sound engineer in an OB van has to rely on himself.



Configuration Software AdminHD

### Easy Configuration

Configuring the Nova73 HD matrix is child's play. All settings are executed with the help of the software provided. This can be done either online or unhurriedly prepared offline. With the transfer to the system via Ethernet, the settings instantly take effect without the necessity of a restart.

Likewise the Nova73 HD can be extended during operation: additional components are plugged in and configured without the worry of a sound drop.

### Uncomplicated Servicing

Be it installation, system expansion or maintenance: the simplicity of the system will enthuse you.

The replacement of active modules can be executed during operation without affecting any uninvolved components. When replacing I/O modules, the new components automatically take over the configuration of the old ones. In case of a fault, redundant components are activated automatically. Along with the service software provided, you will keep a clear overall view in every operational situation.



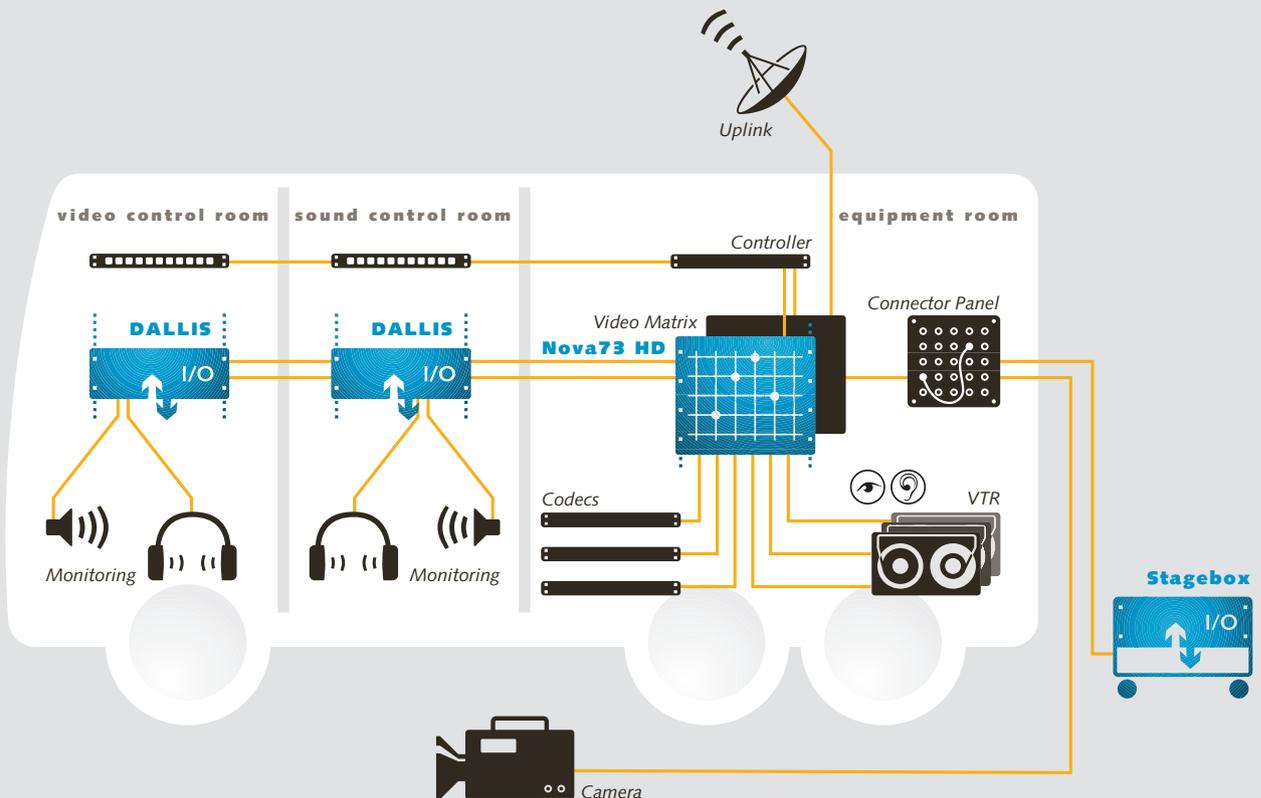
## MECHANICAL DETAILS AND POWER SUPPLY

### Frame:

- Width 19" respective 483 mm (front panel)/440 mm (housing)
- Height 10 RU respective 445 mm
- Depth 510 mm
- Weight 11.5 kg (unequipped)

### Power supply

- 2 slots for power supply units (PSU)
- One PSU required, second for redundancy
- PSU replaceable during operation (hot-pluggable)
- Input voltage 85...265 VAC / 47...63 Hz
- Max. power consumption (per PSU): 8,2 A at 100 VAC resp. 4,1 A at 200 VAC





### TECHNICAL DETAILS

- 19" mounting frame, 10RU
- 16 slots for I/O modules (MADI, ATM/SDH, AES/EBU)
- DALLIS breakout boxes for decentralised structures and further interfaces (analogue mic/line, AES3, SDI, ...)
- Available interfaces:
  - Analogue Mic/Line
  - AES/EBU, (AES3)
  - MADI (AES10)
  - ATM/SDH
  - HD/SD SDI (embedded audio)
  - ADAT®
  - Data transfer via RS422, , RS232, MIDI
  - GPIO (Opto, Relay, VCA)
- Transparent transfer (Dolby-E compatible)
- Integrated signal processing (DSP)
- Sampling rates 48/44.1khz as well as 96/88.2kHz
- Synchronisation via word clock, AES3, Video, MADI, ATM or internal generator
- Control via Ethernet TCP/IP
- Basic operating and configuration software included in delivery (requirements: IBM compatible PC with Windows 2000/XP™, Ethernet connection)
- Optional redundant central module
- Optional redundant power supply unit
- Operating voltage 85 V...265 V AC/47Hz...63Hz

### PROFILE

- Scalable to up to 8192x8192 mono channels
- Modular design with wide range of interfaces
- Cost-efficient design
- Direct connection of ATM/SDH
- 96kHz-capable
- Dolby-E compatible
- STAR<sup>2</sup> architecture and redundancy options for highest reliability
- Configurable without interruption of operation
- Comprehensive DSP features available

