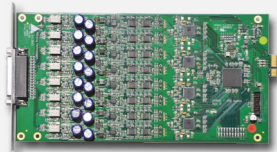




### IOC-HAPI Key Features

- 8x AES/EBU + 8x ADAT or 2x SPDIF
- Works from 44.1kHz to 192kHz (Premium up to DXD/DSD256)
- Signal routing from any input to any combination of outputs
- RAVENNA / AES67 Compatible
- Browser-based remote access using any web enabled device
- AC or DC power supply options
- Modular design for analog and additional Digital I/O
- Near-zero latency from in to out (<1 ms)



### IOM-HORUS-AKD8D/AKD8DP Key Features

- 8 x exceptionally transparent, Swiss designed pre-amplifiers
- Remote/Local switch to Line Level on a per channel basis
- Completely remote accessible for all parameter changes
- Phantom Power/Phase/Low Cut switchable per channel
- Better than 120dB dynamic range

### IOM-HORUS-AKD8D/AKD8DP Mic-Pre Analog Section

Frequency response +0/-0.5 dB, Line	2 Hz -> 200 kHz
Frequency response +0/-2.0 dB, Line	1 Hz -> 200 kHz
Frequency response +0/-0.5 dB, Mic, at G=40dB	2 Hz - 65 kHz
Frequency response +0/-2.0 dB, Mic, at G=40dB	1 Hz - 160 kHz
THD+N (1 kHz), Line/Mic at G=0dB	< -115 dB (0.00018 %)
THD+N (20 Hz-20 kHz), Line/Mic at G=0dB	< -112 dB (0.00025 %)
Interchannel Crosstalk @ 1kHz, typ.	-140dB
5° low-end in-channel Ø deviation pt: Line	9 Hz
5° low-end in-channel Ø deviation pt: Mic	9 Hz
Interchannel phase 10 Hz - 100 kHz	< ±0.1°



### IOM-RAV-DA8/DA8P Key Features

- Auto-mute circuitry for “no-pop” power cycling
- Digitally controlled trims for line up procedures
- Dynamic range of 127dB (typ.)
- Easy to set dip switches for international operating levels



### RAVENNA Key Features

- Sub-millisecond Latency
- Over 400 bidirectional channels @1FS on one CAT5e
- Sample-accurate play-out alignment
- QoS support
- Full network redundancy
- Utilizes standard protocols on IP layer
- Operate on existing networks (PTP-aware switches recommended)
- Operation in shared traffic environment (with QoS in place)
- Easy to configure and maintain Ravenna networks

### IOC-HAPI Specifications

Case Material	Powder Coated Steel
Front Panel Material	Brushed Aluminum
Weight (excluding redundant PS)	4.5 kg / 10 lbs
Dimensions (1U rack mounting)	483 x 320 x 44 mm
Voltage (AC)	90V-260V, 47-63 Hz
Volatge (DC)	10-14V
Power Consumption (Max)	< 30 Watts
Front Panel TFT size/resolution	OLED (160x128 px)

### Headphone Monitor Jacks

Max output Level (Unbalanced) Load = 300 Ohms	+14.5 dBu
Output Impedance	75 Ω
Dynamic Range (A-weighted, typ)	112 dB
THD+N (1 kHz) @ -2 dBFS	< -100 dB (0.001 %)
Gain Range (software controlled)	-60 dB to +12 dB
Gain Step/Precision	1 dB / ±0.05 dB

### Connectors

“Sync” Cable (LTC/Video Ref/MIDI)	D-Sub 15Pin
LTC In & Out (via “Sync” Cable)	Balanced XLR
Video Reference In (via “Sync” Cable)	BNC
MTC (I/O via “Sync” Cable)	5-Pin DIN
Word Clock Input (Switchable 75 Ω Termination)	BNC, 0.5Vp-p min
Word Clock Output (Zout = 35 Ω)	BNC, 5Vp-p
AES type/pinout	DB-25 (Tascam Dig.)
ADAT / SPDIF	
Heaphone Jack 1&2	6.3 mm(1/4”)/3.5mm
RAVENNA Primary / Secondary (GbE)	RJ45

### IOM-HORUS-AKD8D/AKD8DP Mic/Line Option Card Specifications

#### Mic Pre-Amp + ADC

Mic Pre Max Input (Pad On / Pad Off)	+24 dBu / +13 dBu
Input Impedance (Differential, Software Switchable Per Channel)	1.9 kΩ / 10 kΩ
Input Impedance with +48V ON (Diff, Soft. Switchable Per Channel)	1.9 kΩ / 10 kΩ
Dynamic Range (A-weighted, typ.) , ref +10 dBu	123.5 dB
Gain Range (software controlled)	0 dB to +66 dB
Gain Step/Precision	0.5 dB / ±0.2 dB
THD+N Pre + A/D (20 Hz-20 kHz)	
@ -2 dBFS (AKD8D/AKD8DP)	< -110dB (0.00031%)/-111dB (0.00028%)
Interchannel Crosstalk @ 1kHz, typ.	< -125 dB
EIN @ >40 dB Gain (150Ω Source Impedance, A-weighted, typ.)	< -128 dBu
Common Mode Rejection Rate (20 Hz – 20 kHz)	> 60 dB (up to 0 dBFS)
Phantom Power (Software Switchable Per Channel)	+48V
Phase Reverse (Software Switchable Per Channel)	YES
Low Cut filter (Software Switchable Per Channel)	-12 dB/octave, 80 Hz

#### Line Input

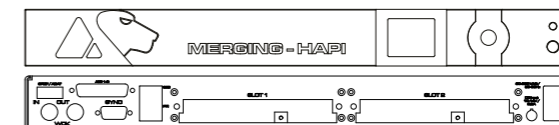
Max Line Input for 0 dBFS	+24 dBu
Input Impedance (Differential)	10 kΩ
Dynamic Range (A-weighted, typ), ref +24 dBu	124 dB
THD+N Line+A/D (20 Hz - 20 kHz) @ -10 dBFS	< -110dB (0.00031%)/-111dB (0.00028%)
Interchannel Crosstalk @ 1kHz @ fullscale	< -130 dB
Sensitivity Range for 0 dBFS (software controlled)	-42 dBu to +24 dBu
Gain Step/Precision	0.5 dB / ±0.2 dB
Common Mode Rejection Rate (20 Hz – 20 kHz)	> 60 dB / > 65dB (both up to 0 dBFS)
Connector Pinout	DB-25 / AES59 (Tascam Ana.)

### IOM-HORUS-DA8/DA8P Line Output Option Card Specifications

Frequency response +0/-0.5dB @ Gain 40 dB	2 Hz – 65kHz
Max Direct Output Level, typ	+24 dBu / +13 dBu
Direct Output Impedance (Differential)	100 Ω
Dynamic Range (flat 20 Hz-20 kHz, typ.)	140 dB
THD+N (1 kHz) @ +10dBu	< -120dB (0.0001 %)
Direct Output Connector Pinout	DB-25 / AES59 (Tascam Ana.)

### Software Specifications

RAVENNA 32bit MassCore Driver	Pyramix 8.0 or Higher / Win7 32bit
RAVENNA 64bit MassCore Driver	Pyramix 9.0 or Higher / Win7 64bit
Windows Driver/OS	ASIO 2.2 / Win7 32 or 64bit
Mac Driver/OS	CoreAudio / MacOS 10.6 or higher (Intel)



**RAVENNA - AES67 I/O**  
Ultimate Portability & Total Flexibility



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Please contact: Merging Technologies SA, Le Verney 4, CH-1070, Puidoux, Switzerland. T: +41 21 946 0444 E: www.merging.com/contact W: www.merging.com

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# Small is Beautiful...

Meet HAPI, the son of Horus. Born from the most flexible and sonically transparent audio interface and providing the same RAVENNA / AES67 connectivity as its father, HAPI is both the perfect primary interface for smaller systems as well as the ultimate accessory for a system using Horus where control room I/O is required.



## The HAPI Base Unit

### Horus quality, HAPI size.

Able to hold both the standard and premium analog cards from the Horus means that HAPI owners get the exact same sound that Horus users have been winning awards with for many years.

### RAVENNA and AES67

Using RAVENNA (AES67 compatible), HAPI is able to provide flexible connectivity of every single input and output across standard networks, using off-the-shelf network equipment. The future is most definitely networked audio, and HAPI provides it today.

### Complete Control over LAN

HAPI is designed to fit into hard to reach places. So, HAPI comes with the same web-browser based control interface allowing any web-enabled device to access all the parameters of each HAPI unit over the network.

### What is in the box?

- 8 (4 Stereo) AES/EBU I/O
- 8 ADAT I/O or 2 SPDIF I/O
- Wordclock I/O
- LTC/MTC/Video Reference
- RAVENNA / AES67 Port
- 2 Option Slots for AD, DA or MAD1
- AC and DC power input



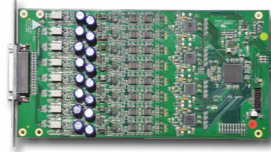
Detachable Rackmounting Brackets



## The Option Cards

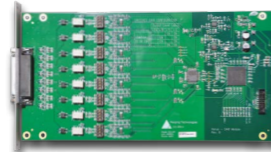
### IOM-HORUS AKD8D/AKD8DP

These remotely controlled Mic/Line Input cards have set a new benchmark in analog circuitry design. Available in models that work up to 192kHz (AKD8D) and DXD/DSD256 (AKD8DP).



### IOM-HORUS DA8/DA8P

The DA8 (up to 192kHz) and the DA8P (up to 384kHz/DXD/DSD256) have consistently shown in testing to be the quietest multichannel D/A conversion modules available anywhere.

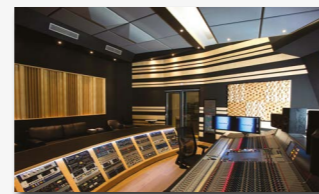


### IOM-HORUS-MADM/MADS

The MAD1 Expansion card (MADM - Multimode / MADS - Singlemode) provides 64 MAD1 inputs and 64 outputs @1FS.



## The Perfect Solution For:



### Control Room I/O for RAVENNA Studios

When Horus is doing the heavy lifting in the live room, let HAPI be the perfect complement to your RAVENNA or AES67 connected control room by providing pristine talkback and multichannel speaker outputs.



### 3rd Party Workstations Welcome

Mac or PC, users now have access to one of the most sonically impressive mic preamps and ADDA interfaces the audio industry has ever seen. Using dedicated RAVENNA/AES67 drivers, users of any software on either the Mac or PC platform are able to use HAPI as their I/O solution.



### Small I/O Stage Box

For recording setups where smaller amounts of inputs or outputs are needed in a variety of locations around the room, HAPI provides a cost-effective solution with mind-blowing results.

### HAPI 16|18: Digital Only \*



### HAPI 24|26: 8 Mic/Line Analog Inputs + 8 Analog Outputs \*



### HAPI 16|26: 8 Analog Outputs \*



### HAPI 24|18: 8 Mic/Line Inputs \*



### HAPI 32|18: 16 Mic/Line Inputs \*



### HAPI 16|34: 16 Analog Outputs \*



### HAPI 80|82: 64 MAD1 Coaxial/Optical \*

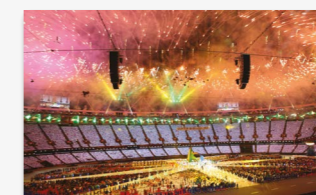


### HAPI 80|90: 64 MAD1 Coaxial/Optical + 8 Analog Outputs \*



\* All units come as standard with 8 AES/EBU + 8 ADAT or 2 SPDIF I/O

Example HAPI Configurations



### Installation AV with Ovation

Match the power of Merging's multichannel audio and show sequencer with HAPI units placed strategically around the installation to provide the ultimate flexibility in creative AV.



### Post-Production I/O

The perfect post interface has arrived. Just enough analog and digital I/O and a comprehensive set of referenced sync options including LTC/MTC and video reference, all connected using nothing more than a simple CAT5E/CAT6 cable.



### The Ultimate Mastering Interface

With analog option cards that match a level of quality never heard of before (no pun intended) and one of the only converters ever to be known for "not having a sound at all", HAPI is able to provide just the right amount of I/O without pushing budgets too far.