

## MERGING+ANUBIS Description

Anubis is a ground-breaking product in many ways and incorporates the expertise of Merging Technologies in analog and digital audio, networked audio and DSP/FPGA technology. It is so unusual that we say it is:

### ONE OF A KIND.

A single product with multiple workflows. A Monitor controller that also controls your network. A Music recording hub that allows you to network a whole band or orchestra. A low latency mixer and processor with extraordinary audio quality. More features than you can believe and made in Switzerland. Would you expect anything less from Merging?

MISSION CONTROL from MERGING+ANUBIS

### EVOLVING MISSIONS

From the initial recording through to the final master, there are specific “missions” that require precision and control. If your mission of the day is to create a great mix, you need to be in complete control of your monitoring: reference monitors, nearfields, headphones, sources, surround mix, downmix, etc. Anubis gives you that “Mission Control” in a single, compact device that has unrivalled capabilities defined by the software application. But this is only one mission, MERGING+ANUBIS allows the user to choose the Mission Controller app that fits the task. Today, Anubis offers a first mission – ANUBIS+MONITOR.

#### MODULAR BY SOFTWARE.

What you buy today can offer more tomorrow. Anubis is already planned to implement two missions with more to follow. Each will put you in control of the tasks you want to accomplish. Today a control room or an on-location monitor controller, tomorrow a music studio or live event interface, the day after, it could be something else that allows you to succeed in your mission. Booting up between missions completely changes the user interface and the function of Anubis. Plug-ins will be released to aid whatever workflow is required. Your investment is protected, your missions are secured!

#### Monitor Mission

Control room, editing room, mastering room, location recording, opera house, OB vans: countless situations, one mission: Monitor!

#### Music Mission – Coming soon

Music studios, home studios, recording studios, live concerts, on-stage monitoring: countless situations, one mission: Music!

## NETWORK CONTROL.

Anubis not only offers exceptional in-the-box features, it also allows for expanding its capabilities to any other RAVENNA/AES67 devices on the network. From stereo to 22.2 monitoring, from a four-piece rock band to a full symphony orchestra, Anubis puts you in control of any situation, from one meter from your equipment to kilometers away, directly from its superb touch screen or on your tablet or computer through its built-in web server.

## MASSIVE SCALABILITY.

Your Anubis might look very small, but it has everything built-in to become a giant... Just with the tip of your finger on its touch screen you have access and control of the I/Os from any other Merging device on the network. We also provide you similar ability to connect the I/Os from any other compatible AES67 device, this extends it to something massive. "Pairing" these other devices allows Anubis to extend its I/O as if they were built-in. Anubis can reserve all or part of these paired devices, make them available to other users on the network and/or secure them for your own recording needs. With its internal DSP, Anubis can manage as many as 256x256 signal paths. Awesome power!

## NETWORK INTEGRATION.

Should you need a larger or more complicated RAVENNA/AES67 network configuration, involving devices from other vendors, DAWs, consoles, or simply multiple Anubis all together, Anubis integrates into existing ANEMAN controlled ecosystems very simply. ANEMAN unlocks the huge potential of a large network with an intuitive and powerful User Interface.

## BROADCAST COMPLIANCE.

IP in broadcast is the technology of now but there are standards to observe. Anubis has been designed from the outset to be ST2110 compliant, but some broadcasters are adhering to ST2022 (see Anubis SPS). No problem for Anubis. Merging's experience in being a key part of IP Showcase events for years and being a member of AIMS Alliance, means we keep abreast of the developments in broadcast connectivity, discovery and control. Mission protected!

## NETWORK AUDIO MONITORING.

Anubis not only allows monitoring analog or digital inputs, it also allows directly monitoring any AES67/RAVENNA stream on your network. In a fast-moving industry toward network audio, Anubis is the perfect investment to monitor your traditional audio sources today and add network audio monitoring tomorrow... with the same ergonomics: no complicated sysadmin tools required, just point your stream in a coherent list and select it like any other sources.

## UNIVERSAL DRIVERS.

- Windows Merging Audio Device (MAD)
- MacOS CoreAudio
- Linux ALSA

Use these drivers with Anubis and the application of your choice; to record, edit, mix or playback.

## MERGING QUALITY.

This ultra-mobile and stylish unibody case offers astonishing A/D performance with a dynamic range of 139dB with equally impressive mic pres. Our pristine D/A technology ensures that you hear what your project deserves. Anubis come in two variants: Anubis Pro gives you exceptional performance up to 192kHz. If your mission is working in true high-resolution, Anubis Premium offers up to 384kHz and DXD plus DSD flavors up to 256. What else would you expect from Merging!

## ULTIMATE SOUND QUALITY.

Killer headphone circuit! Merging has invested great efforts in designing our best ever headphone preamplifier, offering the precision you need to evaluate your mix whatever the sample rate.

Anubis is engineered with the latest generation converter technology, coupled with 28 years of experience in designing excellence reference quality. A 32bit signal path from input to output via the mixer, combined with the latest circuit design, its short audio signal path decreases the latency and improves the power distribution. Phenomenal performance at any sample rate!

## DUAL GAIN 32BIT A/D CIRCUITRY.

Not only does this provide huge dynamic range with ample headroom, but you can control the gain independently for different circuits with clickless steps. It also allows for software add-ons. Creative innovation!

## SPLIT CHANNEL ON ALL INPUTS.

Every input has a separate split gain control for sending them to different paths. Typically, one for the recording device and one for the FOH.

## EXCEPTIONAL MECHANICS.

Anubis is not a piece of bent metal with a few knobs on the top. It may be a small desktop unit, but it is beautifully crafted from a single piece of aluminium. Inside is a miracle of production engineering under the guidance of masters of the miniature, Sonosax.

Swiss engineering at its best!

## BACKPACK PORTABILITY.

Anubis is designed to go where you do. Its rugged design and carry case with a weight of 950gr and dimensions of 200 x 128 x 40mm, make it ideal for stuffing in a backpack. It fits easily on your desktop or can be mounted on a microphone stand.

## SUPERB SPECIFICATIONS.

Merging has a reputation for getting it right when it comes to audio quality and we have years of experience. It would be surprising if Anubis was any less than the best we can achieve. Great sound is only part of the story, just look at the performance measurements on page 6.

## DEVICE CONNECTIVITY.

The Anubis interface has two analog high quality combo connectors, and an additional two front line/instrument analog inputs. On the output side, you get two gold plated XLR and two TRS jacks. In addition, there are two independent stereo headphone jacks with the best quality amplification we have ever done. There is also MIDI IO or GPIO and the all-important AES67/RAVENNA connector.

## REDUNDANT POWER OPTIONS

Anubis is small and compact, it can be powered by its main PSU or / and from PoE (Power over Ethernet) making it a reliable redundant powered device. The input voltage range offers the possibility to use a wide range of power supply such as a battery.

## ANUBIS+MONITOR

The Monitor Mission is designed for professional applications where superior monitoring capabilities are truly mission critical. No matter how small your studio, monitoring matters. State of the art features that are the standard of today have been carefully integrated, while unique and future proof capabilities were specifically added to the feature set to meet the challenges of tomorrow.

## MONITOR FOR EVERYONE.

The concept of software-based Missions allows for designing very versatile and highly dedicated applications, upgradable in time, and precisely targeting the requirements of multiple markets. The Monitor Mission is the central node of all Music and Recording Studios, its extreme sound quality fulfils the essential requirement of all Mastering Studios, its large number of supported surround formats will please all Film and TV Post Studios, its AoIP standards support makes it the perfect choice for Broadcast Studios, OB Vans or Editing Rooms, while its compactness and robustness make it the ideal choice for Location Recording and Live Events monitoring.

## KEY FEATURES.

- Scalable/Networkable
- Studio/Mobile
- Mastering grade Preamp and Amp
- Sampling rate up to 192kHz (Pro)
- Sampling rate up to 384kHz/DXD (Premium only)
- DSD support up to DSD256 (Premium only)
- Direct Monitoring of DAW running on Windows, MacOS and Linux
- Direct AES67/RAVENNA Sources monitoring
- Cough Cut on every input
- Fully parametric EQ-X on monitor outputs
- All state of the art monitoring features (Bass management, Speaker alignment, Talkback, Down-mix, Crossfeed etc...)

## EASE OF OPERATION.

- Comprehensive user interface through the integrated multi-touch display
- Dedicated buttons for Volume control, Monitors selection, Talkback and Mute with customization possibilities
- Remote control capabilities through any tablet or web browser
- DAW Mic/Pre remote support
- Dedicated and configurable metering page for sources and monitors
- Flexible Talkback options for built-in microphone and external microphones
- Footswitch support for triggering actions
- GPO to signal events
- Can operate in standalone
- Freely configurable Monitor types (Speakerset, Headphone and Cue) to fit all scenarios
- 12 band fully parametric EQ on monitors with independent control of filter types
- Rotary knob for ergonomic volume controls and contextual operations
- Display information and notifications about the Anubis status
- Instant configuration presets save and load
- Brightness control for display and buttons
- Configurable Dim Max and Ref levels
- Summing mode for sources monitor
- Configurable bass management capabilities up to 22.2 surround format.
- Speaker delay adjustment for each channel up to 200ms
- Downmix to Mono, Stereo and all possible subset in case of immersive Speakerset
- Source mono, stereo, surround and immersive format automatically downmixed to the Monitor format

## VERSATILE AND SCALABLE.

- o In-the-box monitoring with ultimate analogue specifications:
  - Up to 4 Monitors with EQ-X
  - Up to 4 Sources
  - Up to 4 Cues Mixes with ultra-low latency and EQ-X
  - Up to 2 Headphones with EQ-X
  - Built-in Dual Gain 32bit Preamp circuitry on all inputs
  - AD split feature on all inputs: Each one of the 4 Anubis input channels can be split and thus have its independent gain and cut feature  
*This allows the separation of the inputs between the FOH and the Monitoring engineer, as well useful if you want to perform a live stage line check while cutting the FOH feed.*
  - Exceptional quality and very powerful Headphone Amp suitable for ultra-low to very high impedance headphones (near zero impedance output)
- o Expandable I/O through Hapi or Horus:
  - Up to 8 Monitors capable of up to 22.2 (maximum 32 channels)
  - Up to 128 Sources capable of up to 22.2 (maximum 128 channels)
  - Up to 8 Cues
  - Up to 256 additional Analogue I/Os
  - Up to 256 additional MADI, AES3, SPDIF I/Os
  - Up to 256 additional AES67/RAVENNA
  - Up to 256 additional Pro Tools HD I/Os
- o In-the-box I/O pairing management with Merging devices
- o Any other AES67/RAVENNA devices pairing using ANEMAN

## COMPLETE BASS MANAGEMENT AND SPEAKER ALIGNMENT.

- Freely configurable crossover filters on every speaker and LFE
- Adjustable cut frequency from 20 Hz to 200 Hz
- Adjustable cut off slope 12/24/36 up to 36 dB/ octave
- Trim Level and time alignment Delay for every speaker and LFE
- Time alignment / Lip sync delay up to 200ms
- 10 dB LFE boost function
- 2 LFE channels acting as stereo Sub channel

## MERGING+ANUBIS SPS

The standard Anubis is ST2110 compliant but for some broadcasters, there is a need to conform to additional standards as the move to IP based operations gathers pace. After consultation with broadcasters, Merging has developed an additional variant of Anubis offering these additional features:

- ST2022-7 Seamless Protection Switching with additional Ethernet port
- NMOS (Networked Media Open Specifications) IS-O4 and IS-O5 compliant

There is an additional use for the second Ethernet connection for those users that are not concerned about network redundancy. Another RAVENNA/AES67 device can be connected to the second port which removes the need for a network switch. This is particularly useful for location recording work where one stagebox is in use with a laptop as a recorder. For this reason, there is a requirement to address the higher resolution sampling rates. The Anubis SPS is available in two models:

- Anubis SPS Pro – Sampling rate up to 192kHz
- Anubis SPS Premium – Sampling rates up to 384kHz including DXD and up to DSD256

All specifications are the same as the base model except for additional EtherCon connector.

## Anubis Technical Specifications

GENERAL	
Case Material	Premium machined and anodized aluminium
Dimensions	200 x 128 x 40mm
Weight	950 gr
Top Panel Display	Capacitive Touch, TFT LCD 800 x 480 pixels resolution 16:9 Aspect ratio
Rotary Encoder	Anodized aluminum + Black rubber O-ring
7 x Hardware + Soft buttons	RGB LEDs
Bottom Panel Mic stand thread	3/8" 16BSW European thread incorporated <i>Note: Americas 5/8" 27UN adaptor not included</i>

<b>POWER</b>	
Power Supply Voltage (DC)	9V to 15V DC
Power Supply Connector Type	Barrel jack, int. 2.5mm/out. 5.5mm, with locking function
Power Consumption (Max)	< 15W
PoE (Power Over Ethernet)	IEEE 802.3af class 0 Power-over-Ethernet standard

<b>MICROPHONE INPUTS 1-2 (Combo)</b>	
Connector Type	Combo Locking Neutrik XLR / TRS
Dynamic Range Mic / Mic Lift	137 dB / 128 dB (A-weighted, typ.)
Max Input level Mic Pad / Mic / Mic Lift	+24 dBu / +12 dBu / +0 dBu
Frequency response +0/-0.2dB @ fs = 48 kHz	9 Hz – 22k Hz
Frequency response +0/-3dB @ fs = 96 kHz	9 Hz – 46 kHz
Frequency response +0/-3dB @ fs = 192 kHz	11 Hz – 94 kHz
THD+N Preamp + A/D 1kHz @ 0 dBFS	< -110 dB (0.0003%)
Interchannel Crosstalk @ 1kHz	< -130 dB
Equivalent Input Noise Mic / Mic Lift (150Ω Source)	< -125 dBu / -128 dBu (A-weighted, typ.)
Common Mode Rejection Rate (20 Hz – 20 kHz)	< -80 dB
Input Impedance (Differential)	~ 10kΩ
Gain Range (Software controlled)	0 dB to +66 dB
Gain Step Coarse / Fine	0.5 dB / 0.1 dB
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
<b>LINE INPUTS 1-2 (Combo)</b>	
Connector Type	Combo Locking Neutrik XLR / TRS
Dynamic Range, ref +24 dBu	139 dB (A-weighted, typ.)
Max Line Input Level	+24 dBu
Input Impedance (Differential)	~ 10kΩ
THD+N Preamp + A/D 1kHz @ 0 dBFS	< - 104 dB (0.0006%)
Interchannel Crosstalk @ 1kHz	< -140 dB
Sensitivity Range for 0 dBFS (Software controlled)	+24 dBu to -42 dBu
Common Mode Rejection Rate (20 Hz – 20 kHz)	< -80 dB

<b>INSTRUMENTS / Hi-Z &amp; LINE INPUTS 3-4</b>	
Connector Type	¼" TRS Female
Dynamic Range, ref +18 dBu	136 dB (A-weighted, typ.)
Max Input Level	+18 dBu
Input Impedance (Single ended / Differential)	~ 1MΩ / ~ 2MΩ
Gain Range (Software controlled)	0 dB to +66 dB
THD+N Preamp + A/D 1kHz @ 0 dBFS	< - 111 dB (0.0003%)
Interchannel Crosstalk @ 1kHz	< -150 dB
Sensitivity Range for 0 dBFS (software controlled)	+18 dBu to -48 dBu
Common Mode Rejection Rate (20 Hz – 20 kHz)	< -70 dB

<b>MAIN OUTPUTS 1-2</b>	
Connector Type	Neutrik XLR Male
Dynamic Range	123 dB (A-weighted, typ.)
Max output Level (Differential / Single ended)	+24 dBu (12.2 Vrms) / +18 dBu (6.1 Vrms)
Frequency response +0/-0.2dB @ fs = 48 kHz	6 Hz – 22 kHz
Frequency response +0/-3dB @ fs = 96 kHz	2 Hz – 46 kHz
Frequency response +0/-3dB @ fs = 192 kHz	2 Hz – 92 kHz
Output Impedance	< 70Ω
THD+N 1 kHz @ 0 dBFS	< - 110 dB (0.0003%)
Output Level Matching	±0.01 dB
Attenuation Range (Software controlled)	- ∞ dB to 0 dB
Gain Step / Precision	0.5 dB / ±0.05 dB

<b>LINE OUTPUTS 3-4</b>	
Connector Type	¼" TRS Female
Dynamic Range	123 dBFS (A-weighted, typ.)
Max output Level Differential / Single ended	+24 dBu (12.2 Vrms) / +18 dBu (6.1 Vrms)
Output Impedance	< 70Ω
THD+N 1 kHz @ 0 dBFS	< - 110 dB (0.0003%)
Output Level Matching	±0.01 dB
Attenuation Range (Software controlled)	- ∞ dB to 0 dB
Gain Step / Precision	0.5 dB / ±0.05 dB

<b>HEADPHONES</b>	
Headphone Jacks	2 Independent ¼" TRS Female Stereo 6.3 mm
Dynamic Range (A-weighted, typ.) High / Low	< -122 dB / - 117 dB
Max output Level High / Low	17.1 dBu / 7.8 dBu
Frequency response +0/-0.2dB @ fs = 48 kHz	6 Hz – 22 kHz
Frequency response +0/-3dB @ fs = 96 kHz	2 Hz – 46 kHz
Frequency response +0/-3dB @ fs = 192 kHz	2 Hz – 92 kHz
Output Impedance	< 0.035Ω
THD+N 1 kHz @ 0 dBFS High / Low	< -108 dB (0.00039%) / -110 dB (0.0003%)
Gain Range (Software controlled)	- ∞ dB to 0 dB
Gain Step / Precision	0.5 dB / ±0.05 dB



<b>A/D – D/A CONVERSION</b>	
Supported Sample Rates PRO	44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and 192 kHz
Supported Sample Rates PREMIUM	44.1 kHz up to 352.8 kHz (DXD), 384 kHz, DSD64, DSD128 & DSD256
Bit Depth Per Sample	32
A/D Latency Sharp / Slow @ 44.1kHz to 96kHz	19 / 7 samples
A/D Latency Sharp / Slow @ 174.6kHz to 192kHz	15 / 8 samples
A/D Latency Sharp / Slow @ 352.8kHz to 384kHz	7 samples
D/A Latency Sharp / Slow @ 44.1kHz to 384kHz	35 / 9 samples

<b>COMPLEMENTARY I/O</b>	
RAVENNA (Gigabit Ethernet)	Locking EtherCON compatible with standard RJ45 connectors
Built-in Talkback microphone	Mono omnidirectional condenser capsule
GPI/MIDI Input	¼" TRS Female
GPO/MIDI Output	¼" TRS Female

<b>SOFTWARE SPECIFICATIONS</b>	
Windows Driver/OS	RAVENNA ASIO v12.0 (ASIO 2.2) for Win7-64bit / Win8.1-64bit / Win10-64bit
Mac Driver/OS	VAD Core Audio for MacOS 10.8.5 or higher (Intel)
Linux Driver/OS	ALSA Linux driver for RAVENNA/AES67
ANEMAN	Version 1.1.7 and above