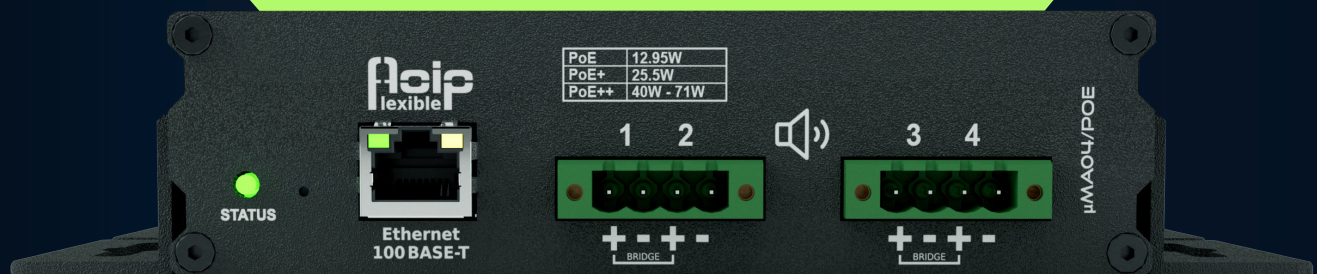


# MICRO MAXX SERIES

μMA04/POE



## DATASHEET

# Specifications

Table 1. AUDIO

|                                                  |                                                                                                                     |                             |                       |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------|
| Power Stage                                      | Half-Bridge GaN amplifier ( Gallium nitride )                                                                       |                             |                       |
| Output Power (EIAJ Test<br>Standard 1kHz 1% THD) | 4Ω                                                                                                                  |                             | 8Ω Bridge-Mode        |
|                                                  | 120W                                                                                                                |                             | 240W                  |
| Max output Voltage                               | 50 V <sub>peak</sub>                                                                                                |                             | 100 V <sub>peak</sub> |
| Max output Current Limited                       | 10 A <sub>peak</sub>                                                                                                |                             |                       |
| Emergency Shutdown Current                       | 15 A <sub>peak</sub>                                                                                                |                             |                       |
| DC Offset                                        | <25mV                                                                                                               |                             |                       |
| Frequency response                               | 10Hz-20kHz / 4-8Ω: +0.0 -1dB                                                                                        |                             |                       |
| S/N typ                                          | 108dBA                                                                                                              |                             |                       |
| Analog Gain                                      | Software Adjustable, 0dBFS on any Input Interface: 20V <sub>p</sub> - 60V <sub>p</sub> (default: 50V <sub>p</sub> ) |                             |                       |
| THD+N @ 4Ω                                       | 1W                                                                                                                  |                             | 10W                   |
|                                                  | < 0.05%                                                                                                             |                             | < 0.1%                |
| SMPTE IMD                                        | < 0.1%                                                                                                              |                             |                       |
| CCIF IMD                                         | < 0.1%                                                                                                              |                             |                       |
| Output impedance                                 | typ 40 mΩ                                                                                                           |                             |                       |
| Crosstalk                                        | channel enabled                                                                                                     |                             | channel disabled      |
|                                                  | typ < 70dB                                                                                                          | typ 90dB (distant channels) | typ < 120dB           |
| Protection                                       | Overtemperature, DC and Overcurrent                                                                                 |                             |                       |

Table 2. DSP

|                           |                                                                   |
|---------------------------|-------------------------------------------------------------------|
| <b>Architecture</b>       | ARM based 32/64-bit floating point                                |
| <b>Inputs</b>             | 1 x input matrix (4 inputs) per channel                           |
|                           | 4-Ch AoIP (Dante / AES67 / etc ) + sine, white- pink- brown-noise |
| <b>Level Control</b>      | Mute, Volume, Phase                                               |
| <b>Filter per channel</b> | 32 x EQ / Highpass / Lowpass                                      |

|                            |                                                                    |  |
|----------------------------|--------------------------------------------------------------------|--|
| <b>Filter types</b>        | bell, notch, highshelf, lowshelf, allpass 1th / 2nd order          |  |
| <b>High- Lowpass types</b> | 6 - 48dB/Oct, Bessel, Butterworth, Linkwitz/Riley, Variable Q      |  |
| <b>FIR Filter</b>          | 512 Tabs, ASCII file import                                        |  |
| <b>Fraction Delay</b>      | 48000 Samples / 330m / 1000ms (resolution 0.001 units) per channel |  |
| <b>CurrentLimiter</b>      | Threshold [Ap]                                                     |  |
| <b>VoltageLimiter</b>      | 2 x Threshold [Vp], Attack, Release                                |  |
| <b>Powerlimiter</b>        | Threshold [W], Attack, Release                                     |  |
| <b>SpeakerDetection</b>    | 20kHz Pilot Tone generating with Volume, Threshold, Debounce       |  |

|                      | Latency                                         |                |
|----------------------|-------------------------------------------------|----------------|
| <b>digital input</b> | 134 samples, (117 samples DSP + 17 samples DAC) |                |
|                      |                                                 |                |
| <b>Input</b>         | <b>@ 44.1kHz</b>                                | <b>@ 48kHz</b> |
| <b>AoIP</b>          | 3.04ms                                          | 2.8 ms         |

Table 3. CONNECTOR

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| <b>Network</b>           | RJ45 ( 100Mbit/s Ethernet + PoE)                      |
| <b>Speaker connector</b> | Wuerth Elektronik 691343710004                        |
|                          | Phoenix Contact MSTB 2,5/ 4-ST - 1779851              |
|                          | Phoenix Contact MSTB 2,5/ 4-STF - 1786857             |
|                          | Note: All 5mm pitch "Euroblock" connectos can be used |

Table 4. PoE Power Specification

|                                      |                                                                                                                                  |          |                                             |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|
| <b>Power supply</b>                  | <b>Isolated</b> switch mode with constant current draw based on PoE-Class                                                        |          |                                             |
| <b>Grounding</b>                     | Case and audio outputs are referenced to the Ethernet screen. Datalines and power are safely isolated as specified by IEEE 802.3 |          |                                             |
| <b>Supported PSE Type</b>            | PoE                                                                                                                              | PoE+     | PoE++                                       |
| <b>Available Power at the Device</b> | 12.95W                                                                                                                           | 25.5W    | 71.3W                                       |
| <b>IEEE Standard</b>                 | 802.3af                                                                                                                          | 802.3at  | 802.3bt                                     |
| <b>Maximum Cable Resistance</b>      | 20 Ohm                                                                                                                           | 12.5 Ohm | 12.5 Ohm (4 Pairs used<br>6.25Ohm in total) |

| Recommend Cable                                                  | AWG23 - CAT5e to CAT7 |      |      |
|------------------------------------------------------------------|-----------------------|------|------|
| <b>Continuous Audio Output</b><br>(shared over all channels)     | 4W                    | 14W  | 51W  |
| <b>Audio Output 10dB Crest Factor</b> (shared over all channels) | 40W                   | 140W | 480W |

Table 5. Consumption

|                          |     |
|--------------------------|-----|
| <b>amps power off</b>    | 3W  |
| <b>idle</b>              | 8W  |
| <b>1/8 power @ 4 Ohm</b> | 70W |

Table 6. THERMAL

|                                           |                |     |
|-------------------------------------------|----------------|-----|
| <b>Enviromental operating temperature</b> | 0 - 40°C       |     |
| <b>Thermal dissipation</b>                | passive cooled |     |
| amps power off                            | TBD            | TBD |
| idle                                      | TBD            | TBD |
| 1/8 power @ 4 Ohm                         | TBD            | TBD |

Table 7. USER INTERFACES

|                            |                                      |
|----------------------------|--------------------------------------|
| <b>Hardware</b>            | Multicolor LED, Factory-reset button |
| <b>Software</b>            | RESTful-API used by maxx_remote      |
| <b>Third Party Plugins</b> | Q-SYS, Loxone                        |

# DIMENSIONS / WEIGHT

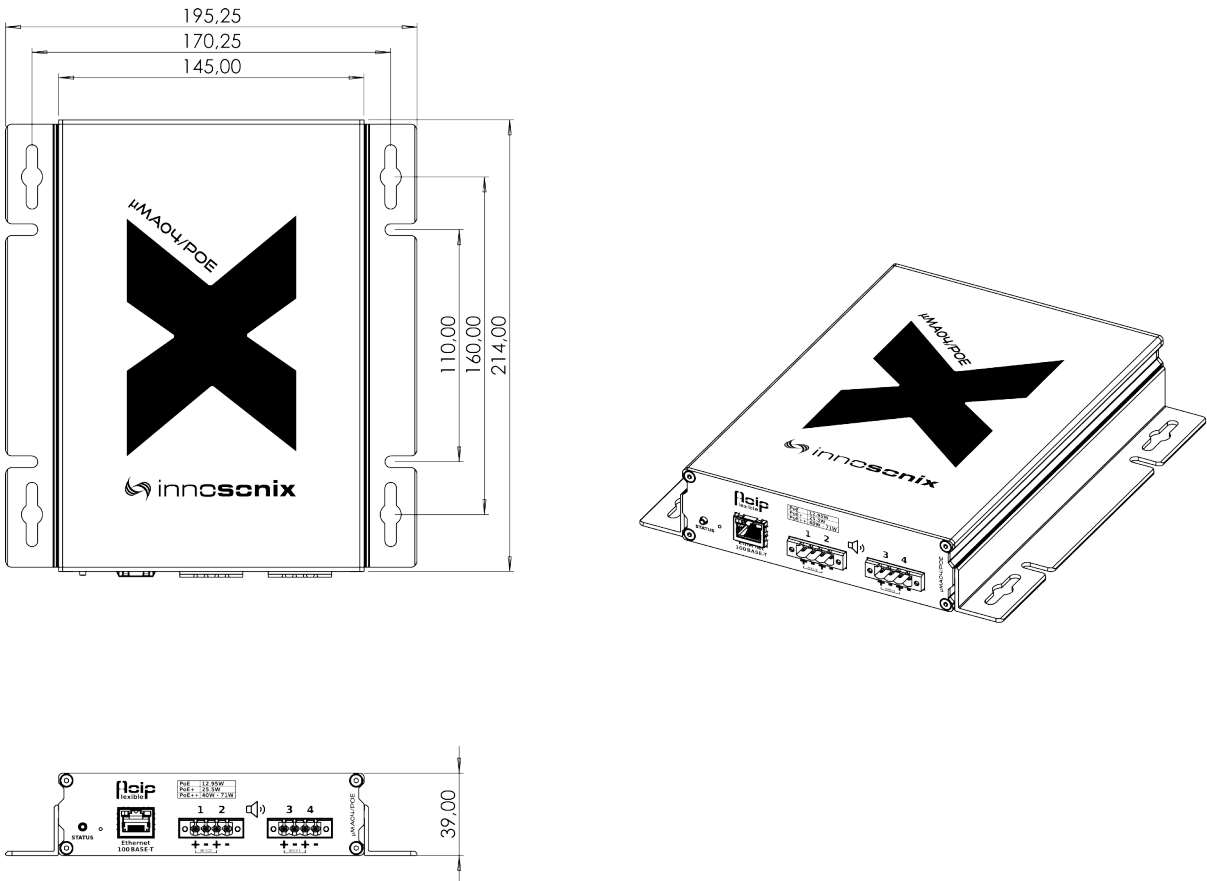


Figure 1. μMaxx dimensions

Table 8. μMaxx dimensions

|                  |                               |
|------------------|-------------------------------|
| Dimensions       | W 195.25mm H 39.00mm, D 214mm |
| Weight           | 1.2 kg                        |
| Dimensions Boxed | 30 x 7 x 27 cm                |
| Weight Boxed     | 2.5 kg                        |

