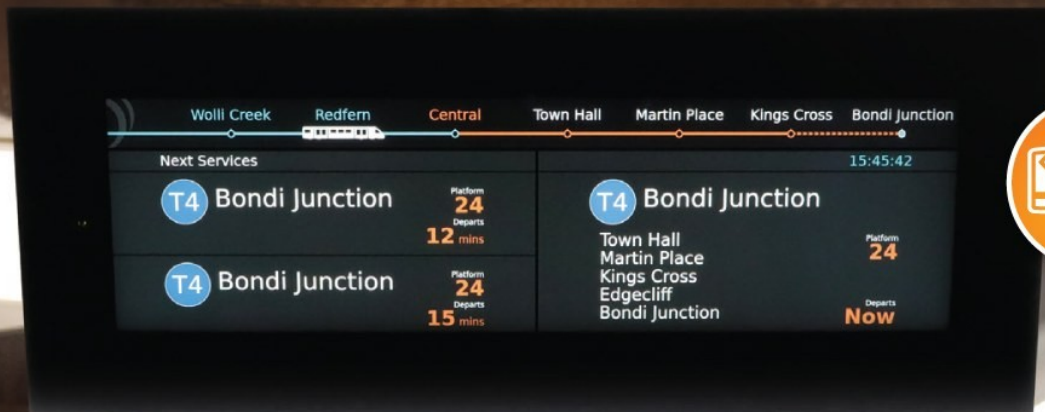




Visual Displays



Smart p1

ECOsystème



Audio PA Systems



Help Information Points



Ambient Noise Control



Hearing Loops

Onboard Audio & AFILs



Providing high quality hardware and software technology solutions for public address



Network Amplifier Modules



The Smart pi NAM (Network Amplifier Modules) are commercial and industrial amplifiers that can be installed in the field and close to the speaker location. This makes it easy to change audio zoning, sources, priorities and volume for every single speaker within the system.

Indoor and Outdoor (IP66) NAMs are available for each model.

Each NAM has 4 x 12-Watt RMS class D amplifiers, an Ethernet switch with 2 x SFP (fibre) and 2 x Ethernet ports, and built in DSP (EQ, FIR, delay and gain).

The NAM-HP has 4 x 75-Watt RMS class D amplifiers and can drive up to 2 hearing loops (single loops or a phased array), making it easy to add T-coil and induction loop support to PA systems for people with hearing loss.

Hardware Features

Power	36 – 52 VDC (1.5 A) – with real-time monitoring
Network	2 x Gigabit Ethernet and 2 x Small form-factor pluggable (SFP) ports.
Auto-detecting	– one of each type assigned per LAN in redundancy config.
Amplification	NAM: 4 x 12 W RMS (8 Ω) NAM-HP: 4 x 75 W RMS (8 Ω)
AES-3 IN (PLUS)	24 bit, sample rate conversion, input compression up to 7:1, 139 dB dynamic range.
Analogue I/O (PLUS)	Up to 2 in and 2 out at +4 dBu Line Level
GPIO (PLUS)	Vox sources for GPIO triggers.
Microphone input	48 V phantom, ref level -18 / -20 dBfs, gain -2.5 to +41.5 dB, max input +18 dBu
SD card	Audio files = 48k / 16 bit mono (card FAT32 : allocation unit size 512 bytes).
Status	Amp status LED Indicator. AES 'Lock' LED Indicator (PLUS option).
Management	Web browser interface (up to 20 users). API for remote integration. Dante™ Domain Manager (DDM). Backup / Restore Remote update via network

Audio Features

Linear Dante Support

NAM SIP (OPUS) option available for wide area and internet-based connectivity

7 Band Parametric Equalisers

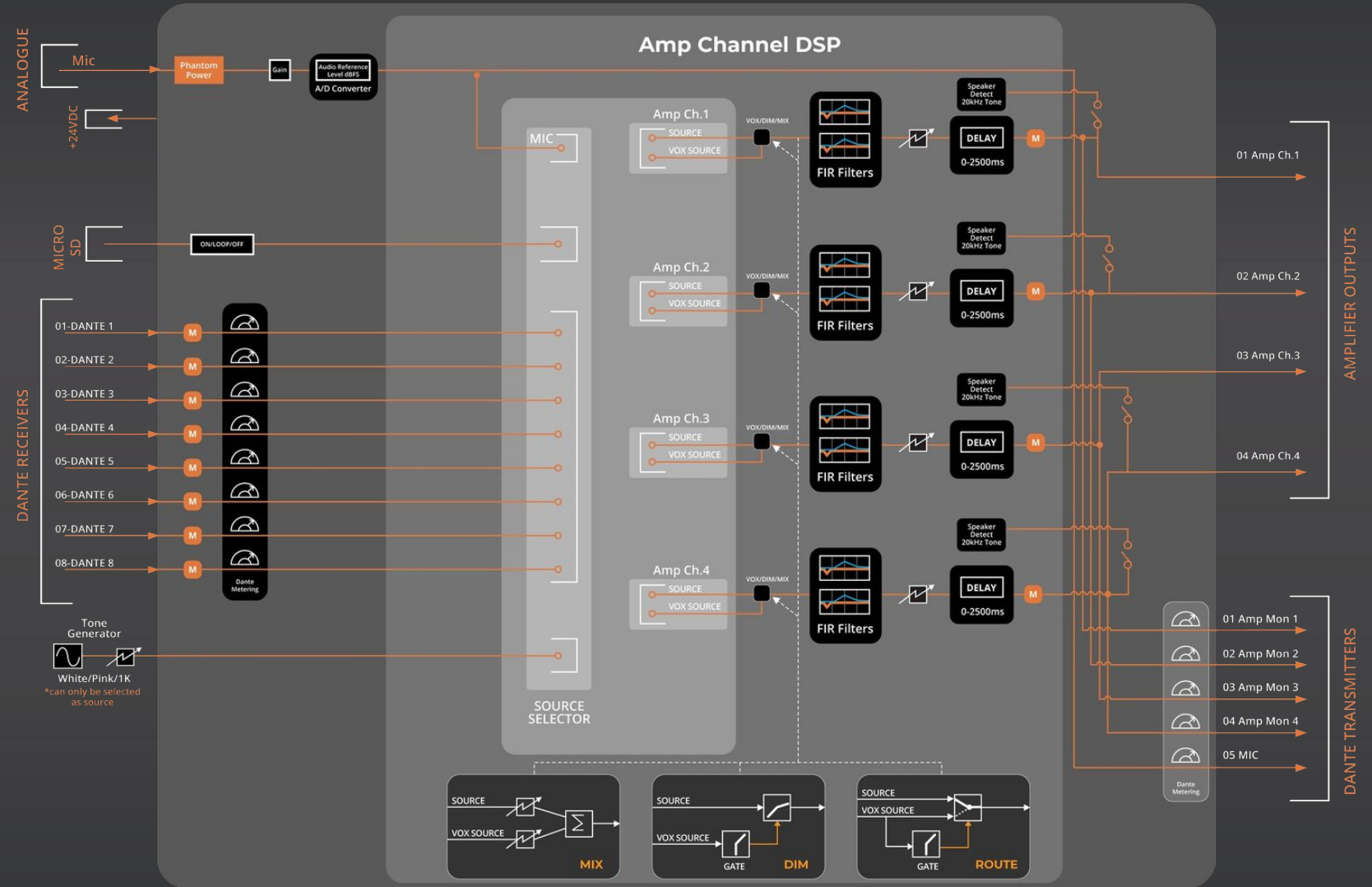
Ambient Noise Sensing Microphone input

Mix, Mute and DIM options built in for smaller installations

Low Noise High Quality Class D Amplifiers

Auracast Bluetooth LE Audio broadcast (NAM AURACAST option)

Block Diagram - Smart pi NAM



Audio Features

Linear Dante Support

NAM SIP (OPUS) option available for wide area and internet-based connectivity

7 Band Parametric Equalisers

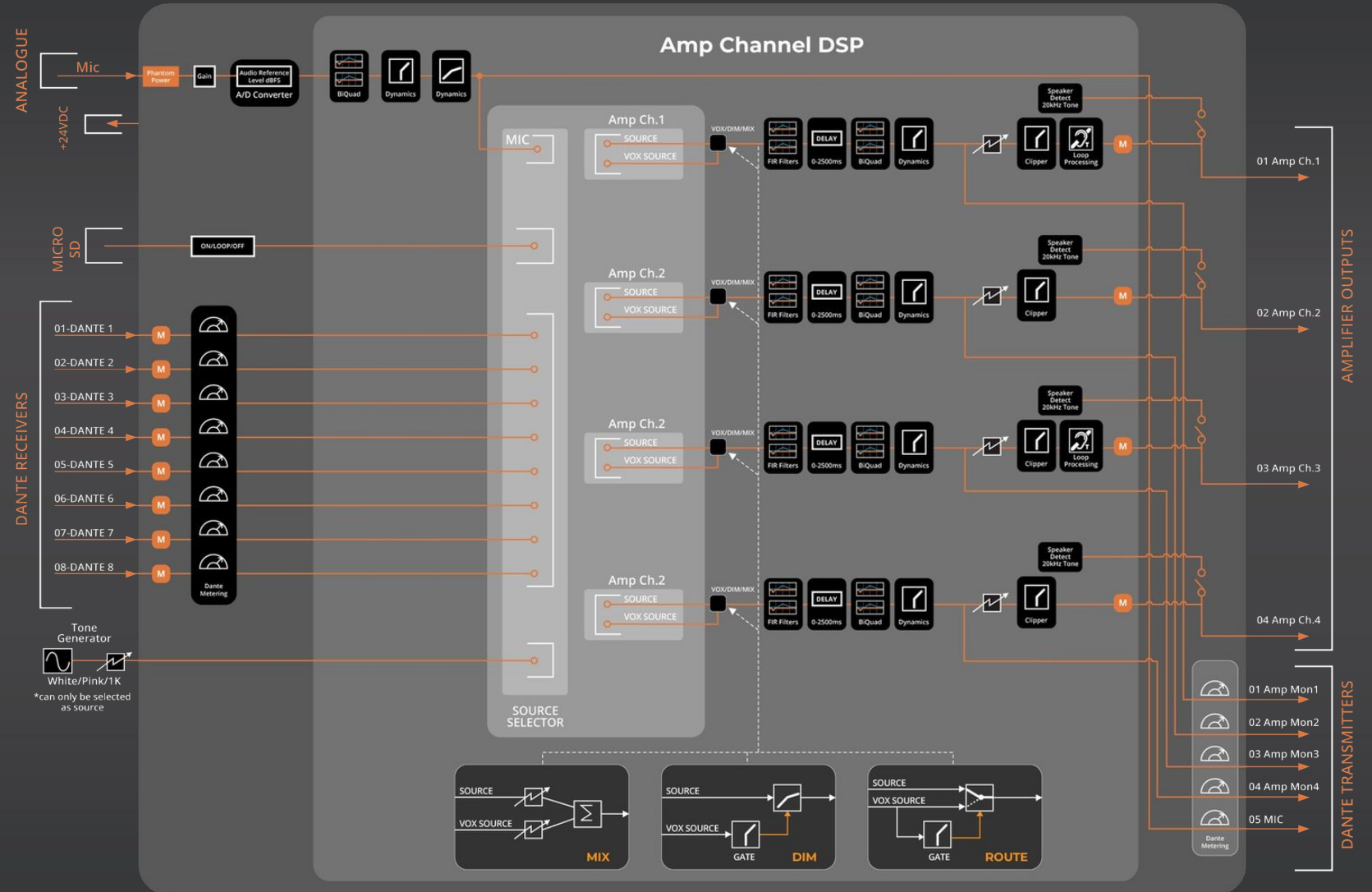
Ambient Noise Sensing Microphone input

Mix, Mute and DIM options built in for smaller installations

Low Noise High Quality Class D Amplifiers

Auracast Bluetooth LE Audio broadcast (NAM AURACAST option)

Block Diagram - Smart pi NAM-HP



Processing

- Speaker Impedance Measurement with definable tolerance range
- Amp status with fault codes
- Onboard tone generator
 - White, Pink, 1 k Sine, 400 Hz Sine – adjustable level
- Selectable DSP per output and input
 - AES, Dante™ 1-8, Mic, AES (L,R), Tone and SD Card.
- 2500 ms delay per channel in 1 ms steps.
- VOX control triggers – Dante™ 1-8, Mic, AES (PLUS option)
- Latency settings
- 1000 point FIR filter per channel
- 7 band Parametric equaliser per channel



Dante Features

Dante Domain Manager (DDM)
Compatible

Enhanced Dante Wide Area Support for
low bandwidth and large systems.



Indoor NAMs

Standard 4 x 12 Watt NAM and
NAM-HP 4 x 75 Watt versions available
Supports up to 4 zones with built in DSP
(EQ, Dynamics, Mixer)
Speaker Monitoring
Hearing and Induction Loops (NAM-HP
only)



Outdoor IP66 NAMs

NAM and NAM-HP options available
NAMplus boards for GPIO, AES/IP
and SIP available
4 port switch 2 x Ethernet RJ45
and 2 x SFP
Custom Colours Available



Modules

Outdoor NAMs can be fitted with different modules depending on the features required.

Enhanced Dante Wide Area Support for low bandwidth and large systems.

Outdoor Modules

- AFILS Board
- SIP Module
- Auracast Module
- GPI/O Module
- EN 54-16 Interface Module (Analogue Audio & GPIO)



Temperature Range

- Operating: 0 – 70 °C
- Storage: -40 to +100 °C