# ⌁ASL   ⌁Dante™ VIPEDIA-12-PRO

# PUBLIC ADDRESS & VOICE ALARM AUDIO ROUTER

- PROFESSIONAL AUDIO QUALITY
- 24 BIT 48 kHz AUDIO PROCESSING
- BUILT-IN DANTE® AUDIO NETWORKING
- 12 ANALOGUE AUDIO INPUTS & OUTPUTS

- 6 IP AUDIO INPUTS & OUTPUTS
- ON BOARD CONTROL INPUTS & OUTPUTS
- FULLY EN 54-16 CERTIFIED
- FLEXIBLE CONTROL OPTIONS

## OVERVIEW

VIPEDIA-12-PRO combines high-quality professional audio processing with everything required for safe emergency voice announcement. It is suitable for small, medium and large-scale live sound as well as corporate, installation and many more applications. Integrated low latency Dante® connectivity and Secure Loop audio support make both centralised and IP distributed architectures easy to realise. Perfectly suited to centralised or distributed architectures, the VIPEDIA supports 12 analogue audio inputs, 32 simultaneous Dante® sources and 12 independent zones. All audio processing is through powerful dedicated digital signal processing (DSP) circuits.

For easy construction of larger systems, VIPEDIA12-PRO includes support for both Audinate's Dante® and ASL's Secure Loop IP networking via third party switches. Up to 32 units can be grouped together in a cluster providing a total of 384 inputs and 384 zones. Ultimately a virtually unlimited number of clusters can then be linked to provide paging and music distribution using ASL's VIPA audio-over-IP solution.

Dante® networking allows for linear uncompressed high resolution sources to be shared between units, with near zero latency and exceptional synchronization. This makes the VIPEDIA-12-PRO the superior choice for music or speech venues that wish to combine audio quality with powerful voice announcement capability.

The VIPEDIA-12-PRO is built to deliver safe and reliable systems with the confidence you expect from ASL's over 30 years' voice alarm experience. It combines EN 54-16 capability and easy connection to fire systems and other life-safety equipment with professional sound quality and facilities. The unit can monitor every part of the signal chain, from microphone to loudspeaker, whilst routing high-quality audio where it's needed, and includes comprehensive fault reporting.

ASL offer a range of compatible wall controllers and microphones. Inputs can link to any third-party analogue sources such as microphones and music players. Analogue input and output is via professional noise rejecting balanced analogue connections with phantom power available for professional microphones. Digital links can be made via Dante® streams ensuring simple integration with mixing desks, digital amplifiers and other audio-visual (AV) equipment. Volume adjustment and source selection can be made from ASL's WMC01 or by third-party touchscreen devices from suppliers such as Crestron and AMX - or any device capable of sending basic ASCII commands via UDP/IP messages, as required by ASL's Vipedia Control Protocol (VCP).

DSP features on each input includes parametric EQ to optimise for clarity and tonal quality, a noise gate to compensate for the need to locate microphones in challenging locations and a compressor to equalise levels between users while allowing them to retain their natural style. For the outputs, parametric equalisation is provided to compensate for difficult acoustics while a limiter helps avoid clipping, night-time volume control assists building neighbourhood-aware systems and a programmable audio delay helps avoid echo and phasing effects. For its announcement role, the VIPEDIA-12-PRO includes internal recorded message storage and ambient noise sensing.

## INPUTS

### Analogue Audio Inputs

Microphones interface using 0dB balanced analogue audio and RS485 control. Each of the 12 analogue audio inputs support:

- MPS & EMS microphones
- DMS / FMS / SMC / SAP legacy microphones
- Mic Level Audio
- Line Level Audio (e.g. CD Player, Radio…)
- IP Microphone Inputs

Up to 12 MPS-IP / EMS-IP microphones can also be connected to each VIPEDIA-12-PROover Ethernet. Each IP microphone requires configuration against an analogue audio input.

### Chimes

One, two and three tone chimes are available as standard and can be played before live and DVA message broadcasts. Custom chimes can be downloaded onto the VIPEDIA main board DVA storage as WAV files and played before live announcements only.

### DVA Messages

Up to 64 monitored DVAs can be stored internally with a total duration of up to 40 minutes (@ 12kHz sample rate), 20 minutes (@ 24kHz sample rate) or 10 minutes (@ 48kHz sample rate). DVA messages sample rates can vary between different messages and use standard 16-bit, mono WAV file format. Up to eight messages can be played simultaneously from each VIPEDIA-12. Messages can be triggered from MPS or EMS microphones, or from the GPIO on-board / BMB01 input contacts, typically under the control of a fire alarm system.

## OUTPUTS

### ASL Amplifiers

VIPEDIA-12-PRO analogue audio outputs interface directly with ASL's V400, X400 and V2000 amplifier ranges, which provide fully monitored Voice Alarm compliant audio amplification. Audio outputs are provided as nominal 0dB balanced analogue audio. Control & monitoring data is made using either CAN (V400 / X400) or Ethernet (V2000)

### Active Speakers

In large or complex acoustic environments, active intelligent loudspeakers often used optimise intelligibility. In order to support such loudspeakers without additional 3rd party hardware, VIPEDIA-12-PROoutputs can drive at levels up to 20dBu and simultaneously superimpose the 24kHz tone used by to monitor the cable link between the VIPEDIA-12-PROand loudspeakers.

## MICROPHONES

### Features

MPS and EMS microphones in VIPEDIA-12-PRO systems support the following features:

| Paging | Routing & Control | EN54 |
|---|---|---|
| - Live Broadcasts<br>- Store and Forward Broadcasts | - DVA Message Routing<br>- Music / Line Input Routing<br>- Volume Control<br>- Listen In Control | - VA Silence<br>- EN54-16 VACIE Mandatory Indications |

### Store and Forward

As standard, MPS and EMS microphones are configured to broadcast 'live' immediately after the press-to-talk button is activated and an audio route is made. They can also be configured to store a broadcast as it is made and then forward the audio when the microphone's press-to-talk switch is released. This is particularly useful to prevent acoustic feedback in situations where the microphone is not isolated from the broadcast, such as airport gates or offices with open spaces.

### Listen-In

An MPS microphone can be used to monitor announcements in any zone in the system. The zones to be monitored are pre-selected using MPS zone select buttons. When the Listen In button on the MPS is pressed, the broadcasts being made to the selected outputs are routed to a loudspeaker in the MPS microphone. If simultaneous broadcasts are being made to different outputs simultaneously, the audio is automatically mixed. Up to 16 different broadcasts can be monitored simultaneously.

### Dual Interface Microphones

To provide additional redundancy in safety applications, MPS and EMS microphones include dual router interface connections. Each interface can be connected to any 2 VIPEDIA-12-PRO units in the system including those linked in AB and ASL Secure Loop architectures.

### Switched Mode

The MPS microphone includes a key switch which must be activated to trigger emergency messages from the microphones buttons. The key switch can also be configured to:

- Raise the microphone's priority
- Disable ambient noise sensing (ANS)
- Disable / change preannouncement chime
- Disable night time volume control

Inputs 1 and 2 of VIPEDIA-12-PROsupport All Call Hardware Bypass Operation. The operation of microphones on these inputs continues in an all-call-only mode in the event of VIPEDIA-12-PRO processor failure. Hardware bypass operation is only supported in standalone and AB system architectures - it does not operate over ASL's Secure Loop.

## AUTOMATIC GAIN ADJUSTMENT

### Night Volume Control Gain Reduction

VIPEDIA-12's Night Time  Volume Control facility automatically limits the volume of announcements at configurable  times.  If an announcement is controlled by NVC, then either the nominal output gain or the configured maximum gain for NVC is used, whichever is lower. The nominal output gain for an output is the configured output gain minus any ANS attenuation and volume control attenuation.

### Ambient Noise Sensing

ASL's ANS and DANS (Dynamic Ambient Noise Sensor) devices ensure that if background noise is high, broadcasts remain audible and if background noise is low environmental noise is minimised. ANS are most useful in areas which experience a high variability in background noise levels. Train platforms, building entrances and shopping centres are typical examples.

## GPIO

VIPEDIA-12-PRO to fire alarm systems and external third party legacy systems. GPIO functions include:

- DVA Message Routing
- Music / Line Input Routing
- External System Fault Input
- VA Silence
- Cancel Route
- Route Busy Indication
- General Fault Indication
- VA Indication

The on-board GPIO capability can be expanded using ASL's BMB01 if required. Each VIPEDIA-12-PROsupports up to 9 BMB01 devices, each providing an additional 24 contact inputs and 12 contact outputs.

### VIPEDIA-12-PRO Fault Reporting

VIPEDIA-12-PRO and its connected peripherals including amplifiers, microphones, BMB01 IO expansion units and battery charging systems are fully monitored. Latching fault reports are presented on the VIPEDIA-12-PRO front panel and on any suitably configured MPS/EMS microphone. When fitted with the optional VIPEDIA-NET module,  fault reports can also be monitored via systems which have been integrated using the VIPA-SIL or VIPA-SDK

# TYPICAL STANDALONE AND DANTE® ARCHITECTURE

This example shows as a single VIPEDIA-12-PRO with a range of accessories. It uses standard analogue audio outputs to enable integration of the VIPEDIA-12-PRO with ASL's V2000 Amplifier Mainframe, or with any other analogue audio equipment including low impedance amplification. Please not that the VIPEDIA-12-PRO does not support DBB.

Please refer to ASL System Design Guidelines for detailed information.

## INPUTS

- Up to 12 analogue microphones
- Up to 6 IP microphones
- 2 hardware bypass microphone inputs (serially connected MPS or EMS) on inputs 1 and 2

## IP CONNECTIVITY

- Up to 32 Dante® Receive Channels
- Up to 6 concurrent IP Audio channels

## OUTPUTS / ZONES

- 12 analogue outputs / zones
- Up to 32 V2000 frames with up to 320 amplifiers.
- Up to 64 V400 / X400 frames with up to 256 amplifiers.
- 2 Listen-in outputs for zone monitoring via MPS microphones.
- Up to 24 Dante® Transmit Channels

## DVA

- Store up to 64 pre-recorded audio files
- Up to 40 minutes (12kHz), 20 minutes (24kHz), 10 minutes (48kHz)
- Up to 8 simultaneous pre-recorded message players

## GPIO

- 12 On-board analogue/digital inputs & 12 digital outputs
- 2 Output relays
- Connect up to 9 BMB01 IO expansion units

## AMBIENT NOISE

- Up to 12 ANS04 connected directly to the VIPEDIA
- Up to 12 analogue outputs maybe ANS controlled (Up to 4 ANS per output)
- Up to 12 DANS connected to directly to the VIPEDIA
- Up to 4 analogue outputs maybe DANS controlled (Up to 4 DANS per output)
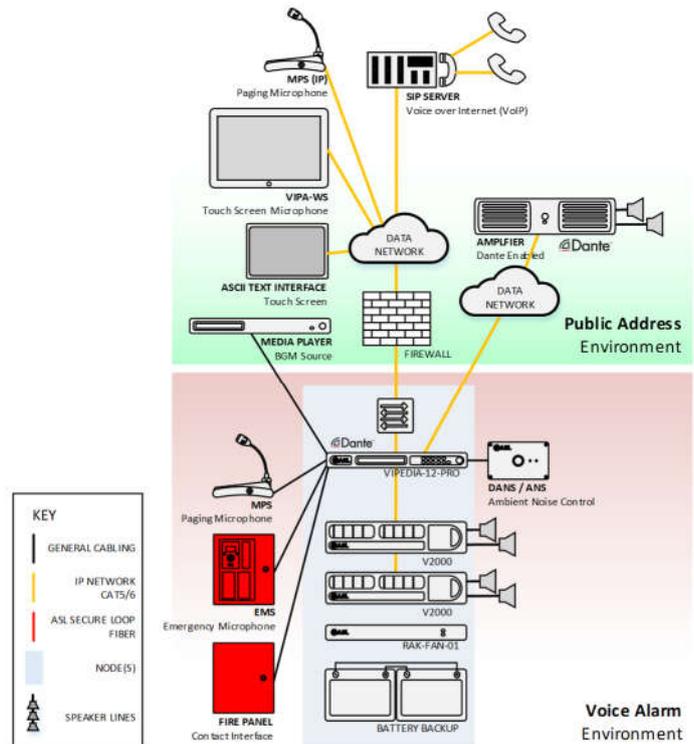
## TYPICAL SECURE LOOP AND DANTE® ARCHITECTURE

For large single site applications ASL's dedicated Secure Loop IP network using third party switches connects VIPEDIA, using standard Cat5/6 cable or multi-mode / single mode fibre. This enables a fully redundant and supervised audio network to be easy rolled out across a large site. Networking up to 32 VIPEDIA in a single cluster. Making VIPEDIA ideal for large and complex installations such as; stadia, tunnels, arenas and exhibition halls.

For specialist multi-user, cross-platform applications or for systems that require ultra-low latency networked audio Dante® maybe used. In this scenario, Dante® traffic can exist on the ASL Secure Loop IP network or can be easily segregated via dedicated primary and secondary Dante® ports.

Furthermore, for larger multi site applications VIPEDIA supports ASL's PMC audio over IP technology; providing uncompressed, low bandwidth, multi- channel, high quality audio. Using PMC, VIPEDIA offers simple remote Public Address, where operators can simultaneously address or control multiple sites from a central location. PMC can be deployed over a standard Layer 2/3 IP network, which enables systems to be installed using existing infrastructure.

Please refer to ASL System Design Guidelines for detailed information.
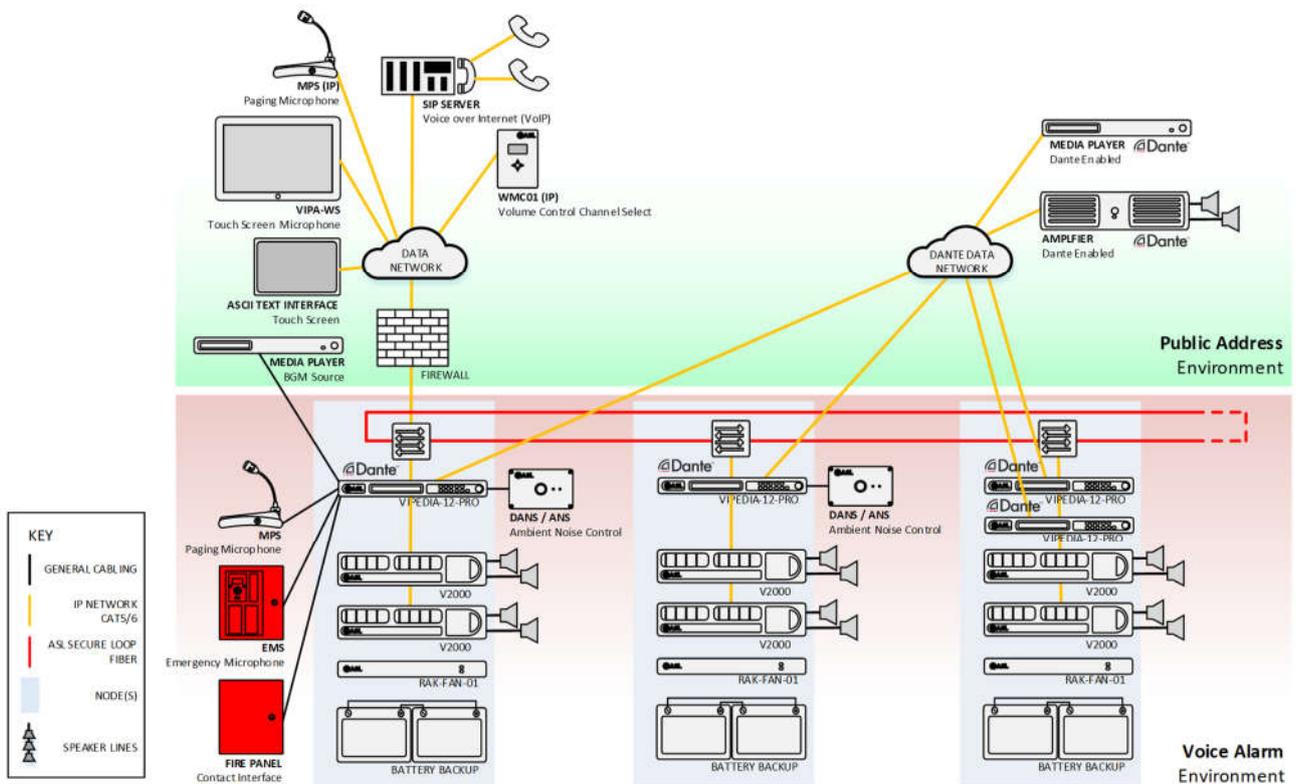


## FRONT AND BACK PANELS
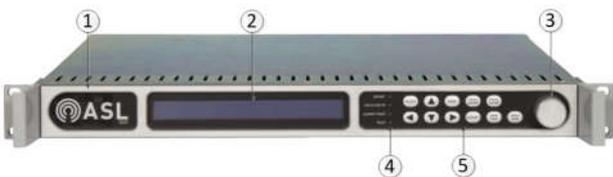


1. Fault  Sounder and Audio Monitoring Loudspeaker
2. 2 x 40 backlit LCD Alphanumeric Display
3. Rotary Control for increment and decrement of menu items & volume control of monitor audio
4. Mandatory EN54 Indications
5. Menu Control Buttons
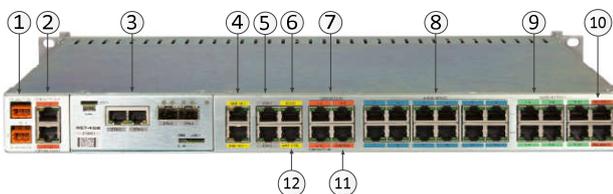


1. 18V-40V Dual DC Power Supply
2. Contact Outputs 1 to 12
3. Netcard module housing the Dante®  Brooklyn Card
4. DBB Expansion Ports
5. Dual Ethernet Ports
6. RS232 Port
7. Contact Inputs 1 to 8
8. Fault Relays and ASL BMB01 Serial Interface
9. Microphone / Audio Inputs 1 to 12
10. Audio Outputs 1 to 12 (A&B)
11. Hardware Bypass

# ASL

## SPECIFICATION

### Audio - General
Digital Format........................................48kHz / 24-bit PCM
THD............................................................ <0.01% at 1 kHz
Crosstalk ...................................................... >70 dB at 1 kHz
Residual Noise...............................................<90 dBu (A)
Frequency Response .................... 20 Hz to 20 kHz  ±0.5 dB

### Audio - Inputs
Analogue Input Channels..................................................12
Input Sensitivity..................................-60 / - 40 / -20 / 0 dBu
Max Input Level...................................................... +20 dBu
Input Trim.............................–90 dB to  +10 dB (1 dB steps)
Switchable HPF.................... 20 to 500 Hz / Slope: 12 dB/oct
EQ......................................................... 4 Band Parametric
Dynamics .....................................Gate/Compressor/Limiter
Chime.........................Off / 1 note / 2 note / 3 note / Custom
Chime Level ........................... -60 dB to +10 dB (1 dB steps)

### Audio - Outputs
Analogue Output Channels ...............................................12
Nominal Output Level.................................................. 0 dBu
Maximum Output Level ........................................... 20  dBu
Output Impedance........................................................660  Ω
Master Level...............................+10 to - 90 dB (1 dB steps)
Delay (per output) ...................1 ms to 5000 ms (1 ms steps)
EQ....................................................... 10 Band Parametric
Dynamics ...........................................Limiter / Hard Clipper
Hardware Bypass Gain ...........-31.5  dB to 0 dB (1 dB steps)

### Compatible Amplification
X400......................................Up to 64 Amplifier Mainframes
V400......................................Up to 64 Amplifier Mainframes
V2000...................................Up to 32 Amplifier Mainframes

### Connectivity
Ethernet Ports ............................................. 4 x 100BASE-T
1GB Copper / Fibre ......................................... 2 x SFP Slots
Audio and Control Protocol ...... PMC (48 kHz, 16 bit) & VIPA
ASL Management Options .................................... SIL / VIPA
NTP Server .............. Built in or Supports an External Source
Protocols  ................ TCP IP / Layer 2+3/ Multicast / Unicast
Dante® Receive Channels........................ 32 (Cluster Wide)
Dante® Transmit Channels........................24 (Per VIPEDIA)

### Power Supply
Input Voltage.....................................................18—40 V DC
Current Consumption (maximum) ............................ 490 mA
Current Consumption (nominal) ............................... 445 mA

### I/O Interfaces
Inputs ............. 12 x combined digital and analogue contacts
Outputs .................................... 12 x open-collector contacts
V400 Amplifier............................................... 1 x Audio-CAN
General Fault Relay ............................................................1
Voice Alarm Indicator Relay...............................................1
Legacy Serial Host Control Interface...................................1
BMB01 IO Expansion Interface............................................1
Local Expansion DBB Ports ...........................Not Supported

### Mechanical
Dimensions .......................... 41.8 mm  x 436 mm x 260 mm
Mounting ...................................19-inch rack mounting (1U)
Weight....................................................................3.75  kg

### Environmental
Temperature (storage) ..................................-20°C to  +55°C
Temperature (operating) ...............................-10°C to +55°C
Humidity ...................................0% to 95%  non-condensing
IP Rating ..................................................................... IP20

## PRODUCT PART CODES

VIPEDIA-12-PRO  .......................................................................................................... Dante® Enabled DSP Audio Controller / Router

## COMPATIBLE HARDWARE

VIPEDIA-12-NET .................................................................................................................................................................DSP Audio Router
INTEGRA ..................................................................................................................................... Integrated Wall Mount PAVA System
INTEGRA-PRO..........................................................................................................Dante® enabled Integrated Wall Mount PAVA System
BOA01.....................................................................................................................RJ45 DIN Terminal breakout Adapter—Single Port
BOA02.....................................................................................................................RJ45 DIN Terminal breakout Adapter— Four Port

CE

This equipment is designed and manufactured to conform to the following EC standards:
EMC:   EN55103-1/E1, EN55103-2/E5, EN50121-4, ENV50204
Safety:  EN60065

**Manufacturer:**

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**www.asl-control.co.uk**

**Assessed to ISO 9001**

**LPCB Cert No: 1043QMS**

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