

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



Digital Signal Processor

The Smart pi DSP (Digital Signal Processor) is the next generation of digital PA processor with massive audio processing ability that can support the smallest to the very largest of systems.

The Smart pi DSP is completely modular and future upgradeable via simple firmware updates. It is based on industry standards including Dante and OCA/AES70.

All configuration is managed in a simple web interface and can be externally controlled via OCA/AES70.

The hardware comes in a 1RU Node or 2RU SuperNode format being able to manage up to 384 zones in a single unit.

As with all Smart pi products, all components are high quality and industrially rated.



Features

- Exceptional Audio Quality and Speech Intelligibility
- Modular system to ensure flexible installation options
- Very easy to use and can be configured by anyone via a simple web UI
- Front to back cooling ensuring maximum use of rack space, with embedded web server so no additional computer is required
- Highly reliable, each card manages itself and can be mirrored (N+1). The Nodes use a passive backplane to ensure there is no single point of failure
- Standards Based API using OCA / AES70 for control and integration.

<awml/>

OCA^{AES70}
OPEN CONTROL ARCHITECTURE

toolkit

Dante®



Web Based User Interface

The web-based user interface for the Smart pi DSP is divided into two main sections: Configuration and Status.

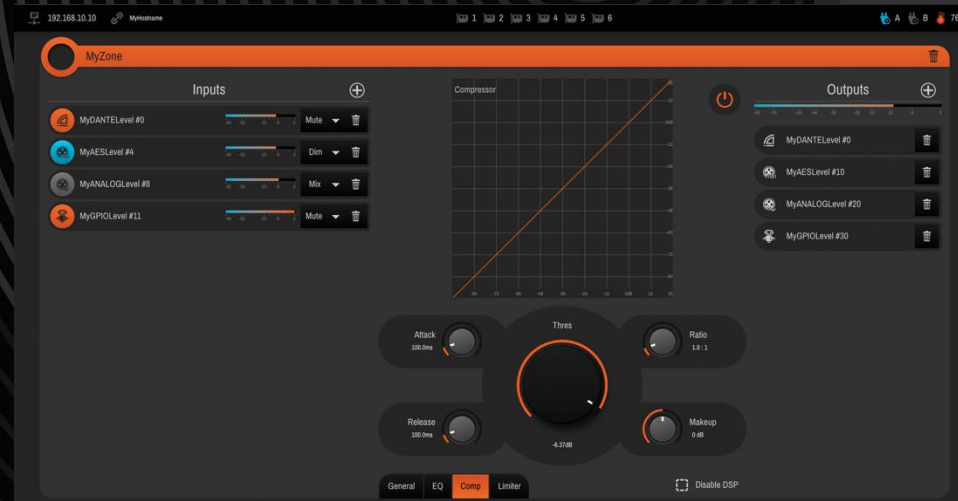
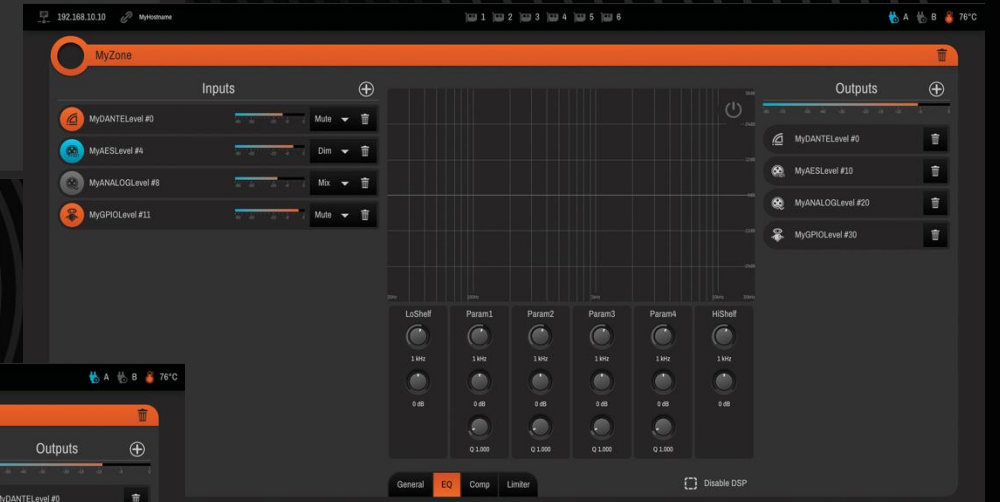
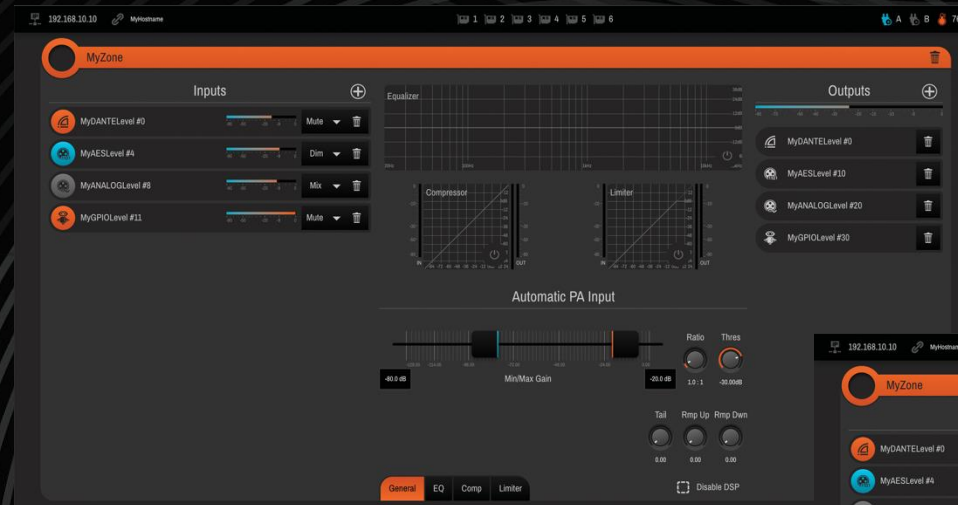
Configuration Page (Left Screenshot):

- Header:** Displays the IP address (192.168.10.10), hostname (MyHostname), and slot information (192.168.10.13 Slot #3).
- Dante Device Section:**
 - Device Name: MyDanteDevice#1
 - Password: [Redacted]
 - Redundancy: Redundant (Selected), Switched
 - Redundancy (Reboot): Redundant (Selected), Switched
 - Master Clock: ON (Selected)
 - Latency: 20ms (Selected), 100ms
 - Channels / Flow: 4 (Selected), 2
- Dante Primary Section:**
 - IP Address: 192.168.10.10
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.0.1
 - DNS Server: 192.168.0.1
 - DNS Suffix: stagetec.com.au
 - MAC Address: 00:1D:C1:10:48:7A
 - Clock State: SLAVE
 - TX util Kbps: 53
 - RX util Kbps: 11
 - DHCP Active: ON (Selected)
 - DHCP (Reboot): ON (Selected)
- Dante Secondary Section:** (Identical to Primary)
 - IP Address: 192.168.10.10
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.0.1
 - DNS Server: 192.168.0.1
 - DNS Suffix: stagetec.com.au
 - MAC Address: 00:1D:C1:10:48:7A
 - Clock State: SLAVE
 - TX util Kbps: 53
 - RX util Kbps: 11
 - DHCP Active: ON (Selected)
 - DHCP (Reboot): ON (Selected)

Status Page (Right Screenshot):

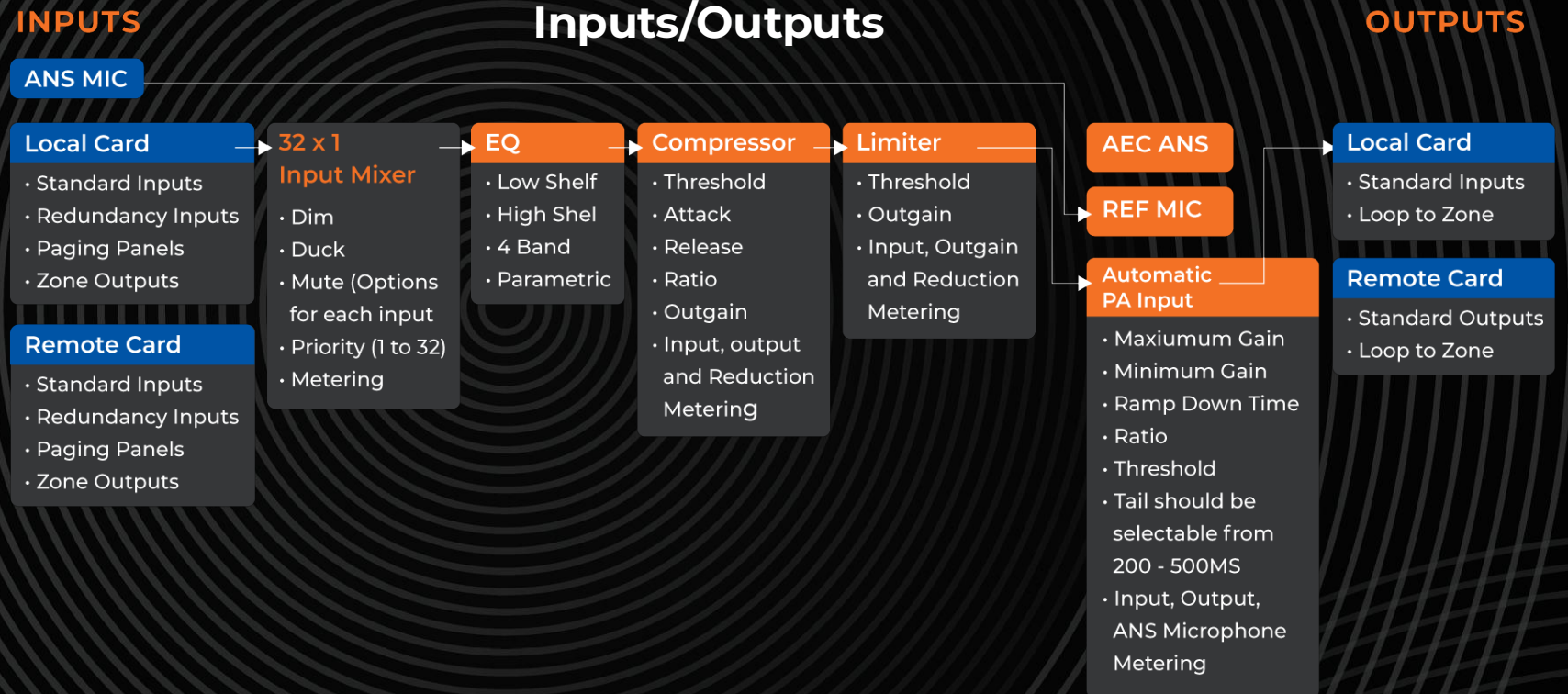
- Header:** Same as the configuration page.
- System Metrics:**
 - DSP: 31%
 - Backplane: 56%
 - Temperature: 48°C
- Extension Cards:**
 - Net 1 (1Gbit): SFP 1 (optical)
 - Net 2 (100Mbit): SFP 2 (optical)
 - AES INPUTS: [Bar chart showing levels 1-16]
 - AES OUTPUTS: [Bar chart showing levels 1-16]
 - ANALOG INPUTS: [Bar chart showing levels 1-8]
 - ANALOG OUTPUTS: [Bar chart showing levels 1-8]
 - GPIO: [Grid showing levels 1-16]
 - GPIO: [Grid showing levels 1-16]
 - GPIO: [Grid showing levels 1-16]
- Inputs and Outputs:**
 - Inputs:** MyDANTELevel #0 to MyGPIOLevel #11.
 - Outputs:** MyDANTELevel #0 to MyGPIOLevel #31.

Zones Configuration



Audio Features

- Fully Digital Signal Processor
- 64 Zones Per Slot for a maximum of 384 in 2RU and 192 in 1RU
- Each Zone has 32 Inputs (With prioritisation and mixing)
- Echo Cancelled Ambient Noise Control (EC ANC)
- 6 Band Parametric Equaliser
- Compressor
- Limiter
- All Audio and Processing is at 24bit 48K

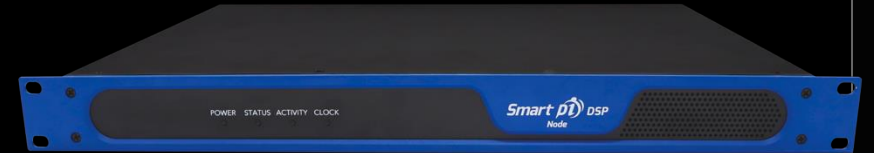


Dante Features

- Dante Domain Manager (DDM) Compatible
- Enhanced Dante Wide Area Support for low bandwidth and large systems.

1RU Node

- Supports up to 3 DSP Cards and 1 I/O Card
- A switch with up to 12 ports switch with 6 x Ethernet and 6 x SFP ports
- Up to 192 Zones can be installed.



2RU Node

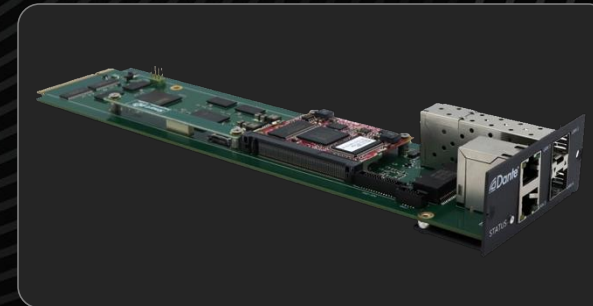
- Up to 24 Port Switch with 12 x Ethernet and 12 x SFP ports
- Hot Swap Redundant Power Supplies
- Front Panel Multi Touch Screen.



Supernode TFT



Dante DSP Card



Technical Specifications

1RU Node

Power Supply Type	Non Redundant 300W
Power Connector	1 x IEC C14 Type Inlet
Input Voltage	88 – 264 Volts AC
Input Frequency	47 – 63 hertz
Power Consumption	Max 50W
Temperature Range	0C - +50C
MTBF	Greater than 100000 hours
Slots	3 x DSP, 1 x PSU
Rack Units (RU)	1 Rack Unit
Status	4 x Tri Colour LED

2RU Node

Power Supply Type	Redundant Dual Input 450W
Power Connector	2 x Isolated IEC C14 Type Inlets
Input Voltage	88 – 264 Volts AC
Input Frequency	47 – 63 hertz
Power Consumption	Max 150W
Temperature Range	0C - +50C
MTBF	Greater than 100000 hours
Slots	3 x DSP, 2 x PSU
Rack Units (RU)	2 Rack Unit
Status	4 x Tri Colour LED, TFT Display

Dante-DSP Card

Style	Smart pi DSP Node / Supernode
Connector	PCIe Type Connector
Options	Optional DSP Processor Board
SD Card	16GB SD
Ports	2 x Ethernet and 2 x SFP
Status	Status LED