



# DOCKING STATION FOR DSS MODULES

V2251/2

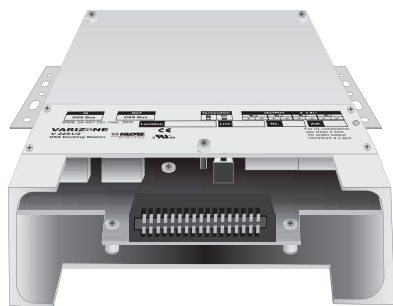


Figure 1: V2251/2 docking station for DSS modules

## Description

The docking station for DSS modules is a component of the Atlas Sound VARIZONE digital speaker system (DSS) bus. The station accommodates modules including the programmable amplifier module (PAM) and the ambient noise module. Including connectors, bus address and termination, the docking station includes all parts necessary for the easy installation and exchange of the DSS modules. A LED on the docking station controlled by the DSS module indicates the following:

- DSS module status
- DSS bus audio signal status
- DSS bus power supply status

The docking station's connectors include:

- A card edge connector for DSS modules.
- Phoenix connector for loudspeakers or a microphone, whose audio signal is processed by the DSS module.
- RJ-45 connector for the DSS bus.

| Docking station | Connector type for DSS bus connection | Connector type for the installation of external equipment |
|-----------------|---------------------------------------|---|
| V2251/2         | RJ-45                                 | Phoenix   |

## Features

- Card edge connector for the following DSS bus components:
  - Programmable amplifier module (PAM)
  - Ambient noise module
  - Handheld programmer V2290. (The V2290 is a tool for testing and programming the DSS bus components).
- Status LEDs controlled by the DSS module
- RJ-45 connectors to connect the DSS bus
- Phoenix connector to connect external equipment like:
  - Loudspeakers, if a PAM is installed on the docking station.
  - A microphone, if an ambient noise module is installed on the docking station.
- Slide switch to switch the termination on/off
- EPROM memory chip to store the module address

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Specifications subject to change without notice



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## Specifications

|                            |  |
|----------------------------|--|
| Connectors                 | <ul style="list-style-type: none"><li>• 34-pin card edge connector, female for the installation of the DSS bus module and the handheld programmer</li><li>• 2 x 8-pin RJ-45 connector, female for DSS bus input and output</li><li>• 8-pin Phoenix connector, male, type MSTBVA2.5/8G for the connection of up to 4 loudspeakers. A microphone or headphones for service purposes, can be used for the installation of wires from 0.14 mm<sup>2</sup> (AWG26) to 2.5mm<sup>2</sup> (AWG13)</li></ul> |
| LED                        | Status LED, green, controlled by installed DSS module  |
| Termination                | 100Ω typ.; termination can be switched on/off via a slide switch located between DSS bus connectors and connectors for external equipment  |
| Ambient temperature limits | 0° C min., 50° C max. for the operation of the device  |
| Meantime between failure   | 689 k hours typ. @ 50° C ambient (MTBF) temperature, calculated on the basis of the data sheet values of the components or according to MIL 217F   |
| Dimensions                 | Depth: 220mm / 8.7"<br>Height: 54mm / 2.1"<br>Width: 173mm / 6.8"  |
| Weight                     | 1 lbs. 5 oz (530g) typical   |

### Architect & Engineer Specs

The specified DSS buss docking station shall be the Atlas Sound VARIZONE model V2251/2. Unit shall be utilized for DSS modules including the V2250 (I/D) PAM, and the V2271 ambient noise sensing module. Connection to modules shall be via a 34-pin female card edge connector. I/O to DSS bus shall be via (2) female RJ-45 connectors. Speaker/microphone connections shall be via a 8-pin detachable Phoenix style connector to allow connection of up to four loudspeakers. Phoenix connector shall be capable of accommodating speaker / mic cable gauges ranging from 26 AWG to 13 AWG. A system status LED shall be provided to show communication status. A slide switchable 100 – ohm type termination shall be provided to allow "end of line" termination in the event the V2251/2 is the last device on a DSS bus line. Dimensions shall be 8.7" (220mm) D, 2.1" (54mm) H, 6.8" (173mm) W. Weight shall be 1lb, 5oz (530g)

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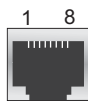
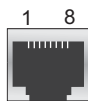
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# DOCKING STATION FOR DSS MODULES (CONTINUED)...

V2251/2



## Pin configuration

### I. Pinouts for the installation of a PAM

#### I.1. DSS bus connectors

##### I.1.1. CAT5 cabling

#### RJ-45 connector 8-pin, female for the DSS bus input

| Pin | Signal      |
|-----|-------------|
| 1   | RX+ (GND)*  |
| 2   | RX- (GND)*  |
| 3   | TX+ (48 V)* |
| 4   | RX- (GND)*  |
| 5   | RX+ (GND)*  |
| 6   | TX- (48V)*  |
| 7   | TX+ (48V)*  |
| 8   | TX- (48V)*  |

\* Referring to the docking station

#### RJ-45 connector 8-pin, female for the DSS bus output

| Pin | Signal      |
|-----|-------------|
| 1   | TX+ (GND)*  |
| 2   | TX- (GND)*  |
| 3   | RX+ (48 V)* |
| 4   | TX- (GND)*  |
| 5   | TX+ (GND)*  |
| 6   | RX- (48V)*  |
| 7   | RX+ (48V)*  |
| 8   | RX- (48V)*  |

\* Referring to the docking station

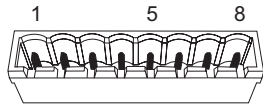
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### I.2.1. Installation with Phoenix connectors (docking station V2251/2)

#### 8-pin Phoenix connector, male

| Pin | Signal           |
|-----|------------------|
| 1   | LS1- (channel 1) |
| 2   | LS1+ (channel 1) |
| 3   | LS2- (channel 1) |
| 4   | LS2+ (channel 1) |
| 5   | LS3- (channel 2) |
| 6   | LS3+ (channel 2) |
| 7   | LS4- (channel 2) |
| 8   | LS4+ (channel 2) |

#### NOTE!

The docking station V2251/2 is delivered with 2 corresponding female 4-pin Phoenix connectors of the type MVSTBR 2,5/4-ST.

**2 4-pin Phoenix connectors, female; counterparts of the 8-pin male Phoenix connector for the connection to the speakers.**

#### Connector 1

| Pin | Signal           | Connect to the following pins of the male 8-pin Phoenix connector of the docking station for DSS modules |
|-----|------------------|--|
| 1   | LS1- (channel 1) | 1  |
| 2   | LS1+ (channel 1) | 2  |
| 3   | LS2- (channel 1) | 3  |
| 4   | LS2+ (channel 1) | 4  |

#### Connector 2

| Pin | Signal           | Connect to the following pins of the male 8-pin Phoenix connector of the docking station for DSS modules |
|-----|------------------|--|
| 1   | LS3- (channel 2) | 5  |
| 2   | LS3+ (channel 2) | 6  |
| 3   | LS4- (channel 2) | 7  |
| 4   | LS4+ (channel 2) | 8  |

## II. Pinouts for the installation of an ambient noise module

### II.1. DSS bus connectors

#### II.1.1. CAT5 cabling

The pinouts of the 8-pin female RJ-45 DSS bus input and output connectors are identical to those of the corresponding connectors for the installation of a PAM.

#### II.2.1. Installation with Phoenix connectors (docking stations V2251/2)

#### 8-pin Phoenix connector, male

| Pin | Signal   |
|-----|----------|
| 1   | Mic-     |
| 2   | Mic+     |
| 3   | Shield   |
| 4   | HP left  |
| 5   | HP right |
| 6   | GND      |
| 7   | Not used |
| 8   | Not used |

#### NOTE!

The docking station V2251/2 is delivered with 2 corresponding female 4-pin Phoenix connectors of the type MVSTBR 2,5/4-ST.

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# DOCKING STATION FOR DSS MODULES (CONTINUED)...

V2251/2



2 4-pin Phoenix connectors, female; counterparts of the 8-pin male Phoenix connector for the connection of a microphone or headphones for service purposes.

### Connector 1

| Pin | Signal  | Connect to the following pins of the male 8-pin Phoenix connector of the docking station for DSS modules |
|-----|---------|--|
| 1   | Mic-    | 1  |
| 2   | Mic+    | 2  |
| 3   | Shield  | 3  |
| 4   | HP left | 4  |

### Connector 2

| Pin | Signal   | Connect to the following pins of the male 8-pin Phoenix connector of the docking station for DSS modules |
|-----|----------|--|
| 1   | HP right | 5  |
| 2   | GND      | 6  |
| 3   | Not used | 7  |
| 4   | Not used | 8  |

### View of DSS module installation side

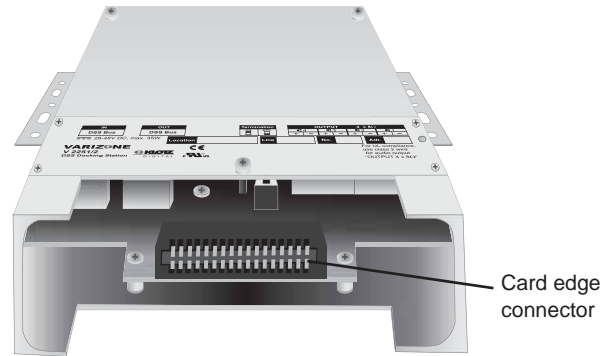


Figure 2: V2251/2 docking station for DSS modules, module installation side with card edge connector

### View of DSS module installation side

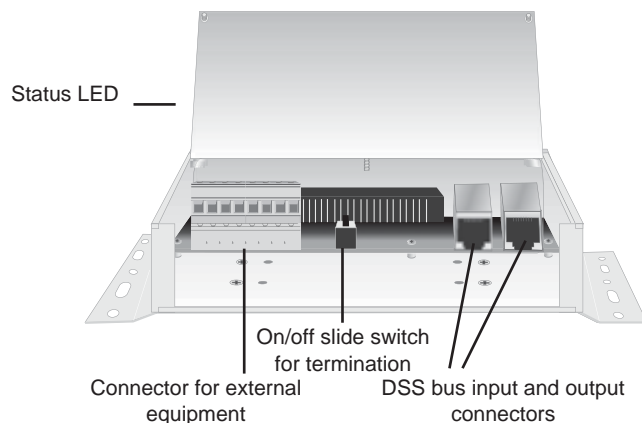


Figure 3: V2251/2 docking station for DSS modules, DSS bus installation side with DSS bus connectors, on/off slide switch for termination and connector for external equipment

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