# Signature Series

Maximum Resilience Broadcast Audio

## Signature ADDA 1

Stereo Analogue To Digital & Digital To Analogue Converter


ADDA 1 Front


ADDA 1 Rear

## FEATURES

**Analogue input & output on 2 x 3 pin XLR, & 2 x phono**

**Digital input & output on AES 3 Pin XLR, & S/PDIF on phono**

**Digital input & output also on optical TOSLINK**

**Front panel headphone connection for monitoring**

The Signature ADDA 1 is a broadcast specification, bi-directional, analogue to digital, and digital to analogue audio converter.

The analogue inputs and outputs are available separately on balanced XLR connections, or unbalanced RCA phono connections.

The digital inputs and outputs are available separately in three formats:
- 3 pin XLRs using AES
- RCA phono plug using S/PDIF
- optical connectors using TOSlink

The digital output is 24 bit and can be selected to be from 44.1kHz to 192 kHz.

The DARS (Digital Audio Reference Signal) can also be input on a separate 3 pin XLR input, or via the word clock input on a BNC connection.

The front panel features a 6.35mm stereo jack socket for headphones monitoring, with a full size pot to adjust the volume level. A front panel screen shows current operation mode and allows configuration of all unit parameters.

Power is provided by an internal switch mode power supply, with a wide input range. There is also an input for external 12v DC power. The 12v DC input can be connected to the optional Signature PS1external DC Master Power Station, for situations where a redundant power supply is desirable.

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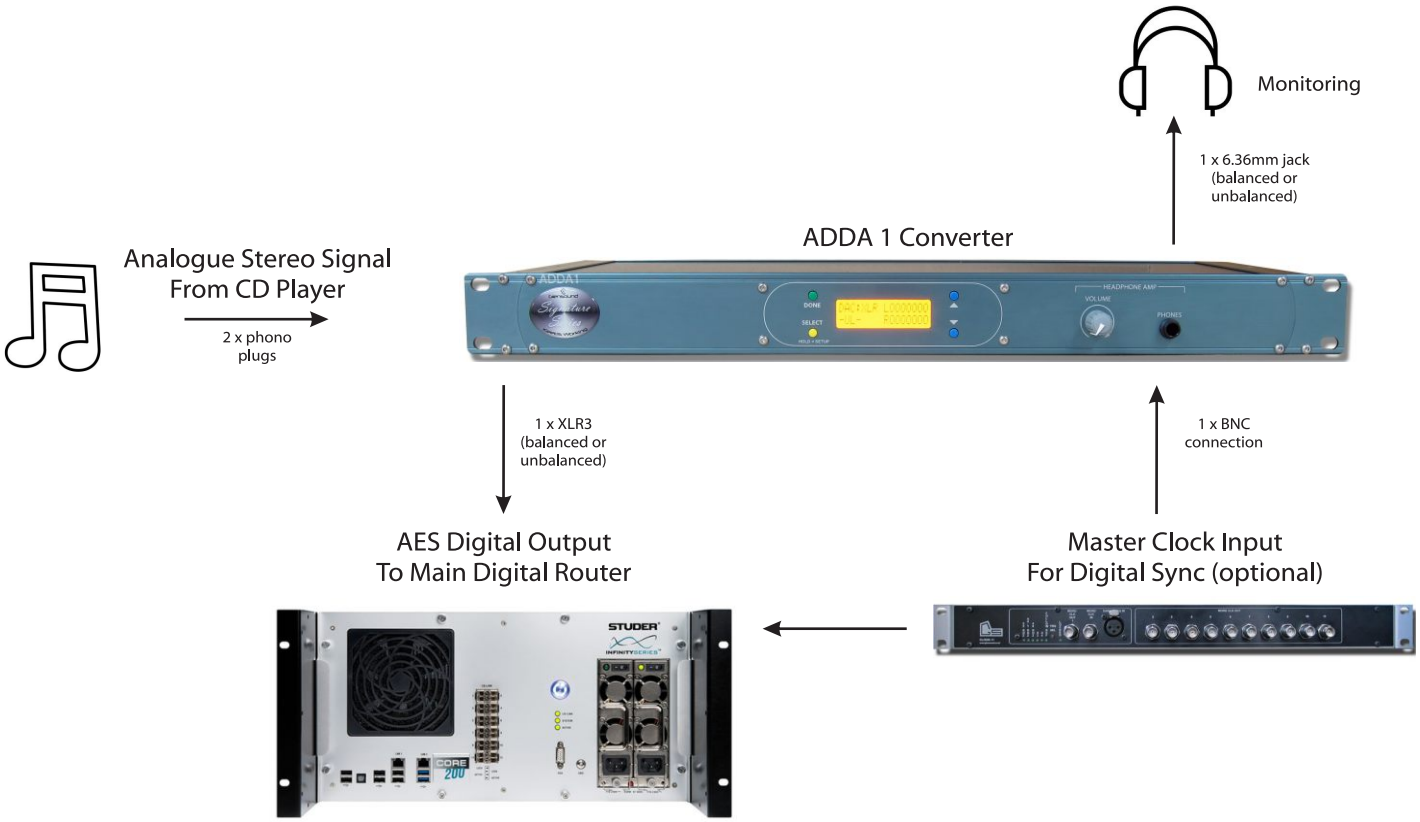
## Signature ADDA 1
Stereo Analogue To Digital & Digital To Analogue Converter

## EXAMPLE APPLICATION

### Radio Station Analogue To Digital Conversion
Connecting CD Player Into Digital System




A radio station may be largely digitally linked, with all router and mixer connections via AES. If there are no analogue inputs on the system then the Signature ADDA can be used to link the CD player into the digital console.

The stereo analogue outputs from the CD player connect into the 2 x phono analogue inputs on the Signature ADDA 1.

To maintain digital clock rates throughout the station, an optional link can be made to the station master clock for the digital clock reference. Without this, the digital clock sampling frequency rate can be set on the front panel from 44.1 kHz to 192 kHz.

The single XLR output connects the stereo digital AES signal into the master routers digital input for use and routing throughout the stations digital infrastructure.

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## EXAMPLE APPLICATION

## Digital To Analogue Conversion

Connecting Active Monitors Into A Digital System


If a broadcast facility largely contains digital connections and you need to connect monitors to a studio, you will need a suitable analogue output. The Signature ADDA 1 can be used to convert the system AES signal into an analogue output for active studio monitors.

An AES output from the master router or console is connected into the ADDA 1 via a single XLR connector.

Two analogue XLR connections are taken from the ADDA and connected to the active monitors.

A 6.35mm jack socket can be used to connect headphones on the front panel for monitoring.

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## SPECIFICATION

### AUDIO INPUTS - ANALOGUE

**Maximum Input Level**
+24dBu

**Input Impedance**
20k ohm balanced, 10k ohm unbalanced

**Balanced Input Type**
Sophisticated electronically balanced (can be wired unbalanced) on 2 x Neutrik XLR connectors

**Unbalanced Input Type**
2 x Gold plated RCA phono sockets

### AUDIO INPUTS - DIGITAL

**Sampling Frequency Rates**
44.1kHz to 192kHz

**Resolution**
Up to 24 bit

**0dBFs Equivalents**
+18dBU, +12dBu, +6dBu, -0dBu

**Physical Inputs**
- AES/EBU balanced XLR
- S/PDIF RCA phono
- TOSlink optical

**Digital Sync**
Input 1: Word clock TTL on BNC
Input 2: DARS (AES/EBU) Neutrik XLR 3 pin socket

### AUDIO OUTPUTS - ANALOGUE

**Output Impedance**
110 ohms

**Balanced Output Connectors**
Neutrik 3 pin XLR plugs

**Unbalanced Output Connectors**
Gold plated RCA phono sockets

**Noise**
-108dBFs

**Frequency Response**
>-0.5dB 15Hz to 22kHz @48k sampling

**THD+Noise**
0.001% @ 1kHz

### AUDIO OUTPUTS - DIGITAL

**Internal Clock Frequency Rates**
44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz

**Resolution**
24 bit

**0dBFs Equivalents**
+18dBu, +12dBu, +6dBu, 0dBu

**Noise**
-108dBFs

**Frequency Response**
>-0.5dB 15Hz to 20kHz

**THD+Noise (ref +8dBu)**
- 100Hz = 0.008%
- 1kHz = 0.006%
- 10kHz = 0.009%

**Physical Outputs**
- AES/EBU balanced XLR
- S/PDIF RCA phono
- TOSlink optical

### HEADPHONE OUTPUT

**Output Gain Range**
+10dB to off

**Headphone Impedance**
100-1000 ohms

**Maximum Output Level**
+18dB into 600 ohms

### POWER

**Mains Input**
Filtered IEC, 100 to 240VAC
47 - 63Hz

**AC Consumption**
4 Watts @ 230VAC

**DC Input**
4 Pin Neutrik XLR plug +/- 12V

**DC Consumption**
+12V=200mA, -12V=100mA

**Internal Mains Fuse**
20mm 1A Anti Surge

### PHYSICAL

**Size**
445 x 163 x 44mm (LxDxH) no rack ears
482mm 19" (1RU) with rack ears

**Weight**
1.35kg

**Mechanics**
All aluminium construction, anodized and laser etched

**Shipping Carton**
Rugged export quality cardboard carton
610 x 420 x 130mm LxDxH

**Shipping Weight**
2.8kg

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# Signature Series

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## Signature Series
Standard Features

## STANDARD FEATURES

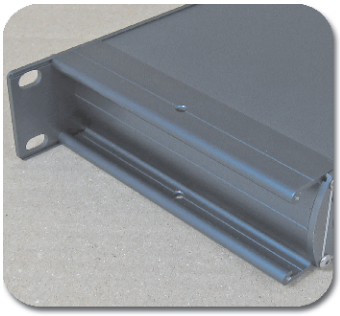
### 19" Rack Mount Ears

A Signature unit can rack mount in a 1U 19" rack, regardless of the size of the unit. Rack ears are included as standard with every unit.

### Front Or Rear Mounting


A Signature unit can be rack mounted via the front panel or if it is more convenient, via the rear panel by simply swapping the rack ears over.

### Side Wings For Flat Surface Fixing



A Signature unit has side wings with mounting holes at the top and bottom, allowing flush fixing from above **OR** underneath.

### Neutral Colour Scheme To Compliment Equipment Areas

### Rack Screws Included

### Modern Design

### Internal Switch Mode AC Power Supply


A Signature unit has an internal switch mode AC power supply, allowing worldwide power connections from 100-240v via an IEC socket.

### 12V DC Power Connection


All Signature units (except PS1) have a 4 pin XLR ±12V DC socket for connection to the PS1 Power Station. This can act as the primary or backup power source.

### Quick Find Manual

A Signature unit has a QR code attached. This can be scanned to simply and quickly locate the manual and technical information.

## CONTACT

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