

# **AS3000V2**

## **Hardware Manual**





## Manual History

<b>Date</b>	<b>Revision</b>
December 3, 2003	First Edition
March 27, 2004	H/W Ver.2.00 Revision

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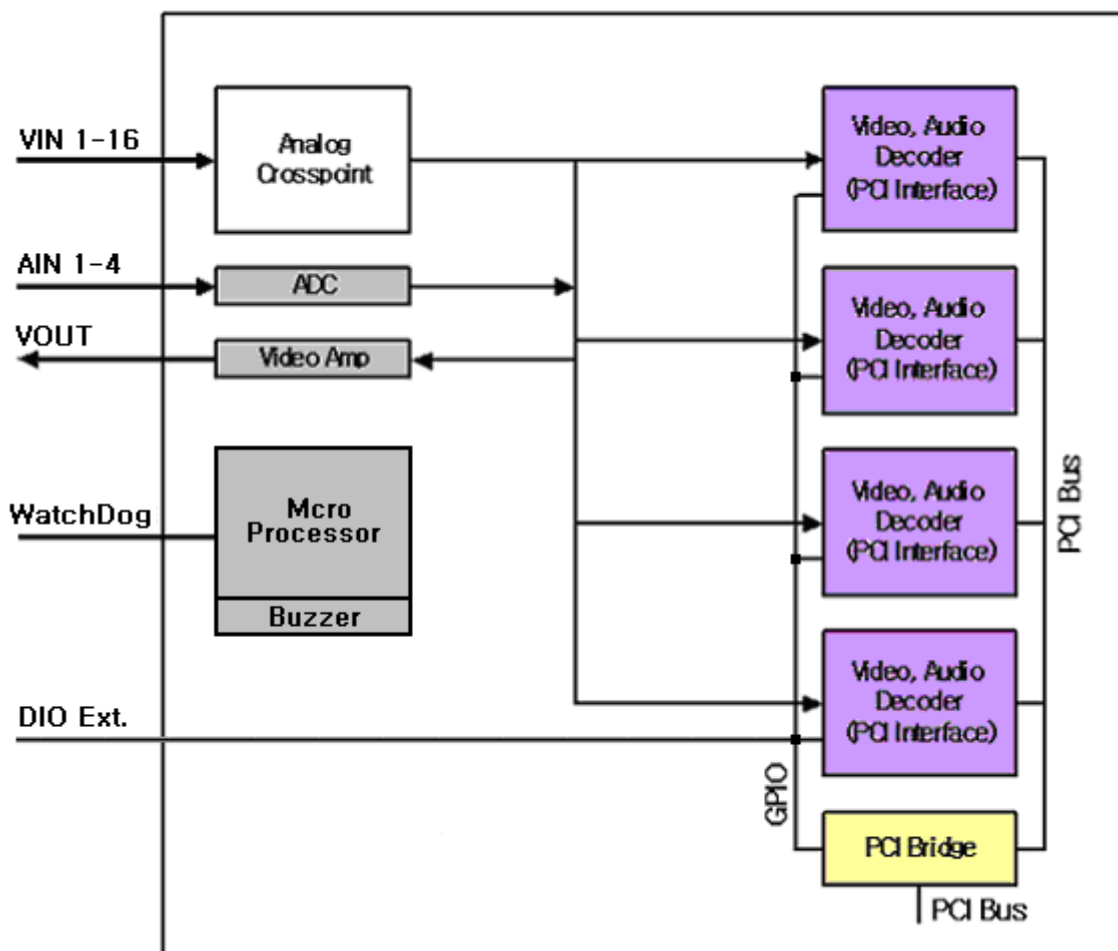
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# 1. Product Overview

## 1.1 Overview

AS3000V2 is a video capture card for PC based DVR and supports audio capture, digital input, digital output, and watchdog function as well as video capture. Video/audio data which is input through AS3000V2 is uncompressed raw data of which compression and recording should be done by software on PC.

## 1.2 Block Diagram



## 2. Functional Description

### 2.1 Video

#### - Video Input

- Number of Channel: 16  
Input : Color Camera (NTSC, PAL), Black and White Camera
- Connections : 15pin DSUB Cable 2EA, 40pin connector(used to connect to real-time display card)
- Recommended Signal Range: 0.5V ~ 2V (p-p)

#### - Video Capture

Classification	NTSC	PAL
Capture Resolution	640*480, 640*240, 320*240, 240*160, 160*120	768*576, 768*288, 720*576, 720*288, 640*480, 640*240, 384*288, 360*288, 320*240
Capture Rate	Max 120 FPS	Max 100 FPS
Capture Rate per Channel	7.5 FPS ~ 30 FPS	6.25 FPS ~ 25 FPS

#### - Video Output

- Number of channel : 1(channel selection possible, controlled by software)
- Connection : RCA Jack or Molex 2Pin Connector

### 2.2 Audio

#### - Audio Input, Capture

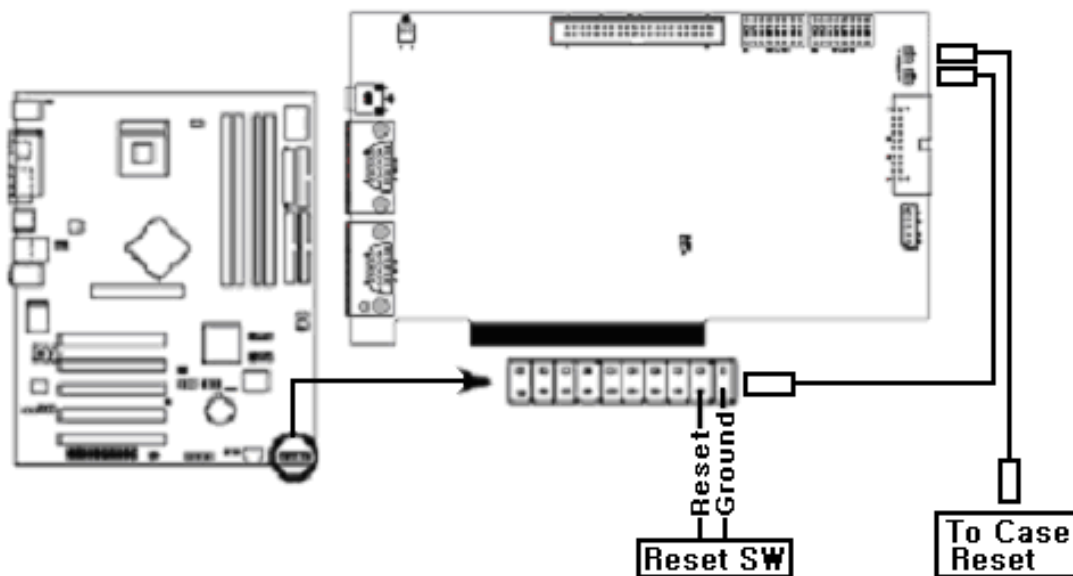
- Number of Channel : 4
- Input Type : Microphone, Line(mono)
- Recommended Signal Range : 1V(p-p)
- Sampling Quality
  - ▶ 8, 16bit/sample (A/D Convert Sampling)
  - ▶ 4, 8, 16, 32 kHz Sampling

## 2.3 Watchdog

Watchdog works by relay switch and two connectors (J1, J2) are respectively a 2pin pinheader. J1 and J2 physically do the same operation; one is connected to reset connector of mother board and the other to reset connector of the case. Or the vice versa.

The interval of watchdog operation is set by software.

### 2.3.1 Watchdog Connector Connection Diagram

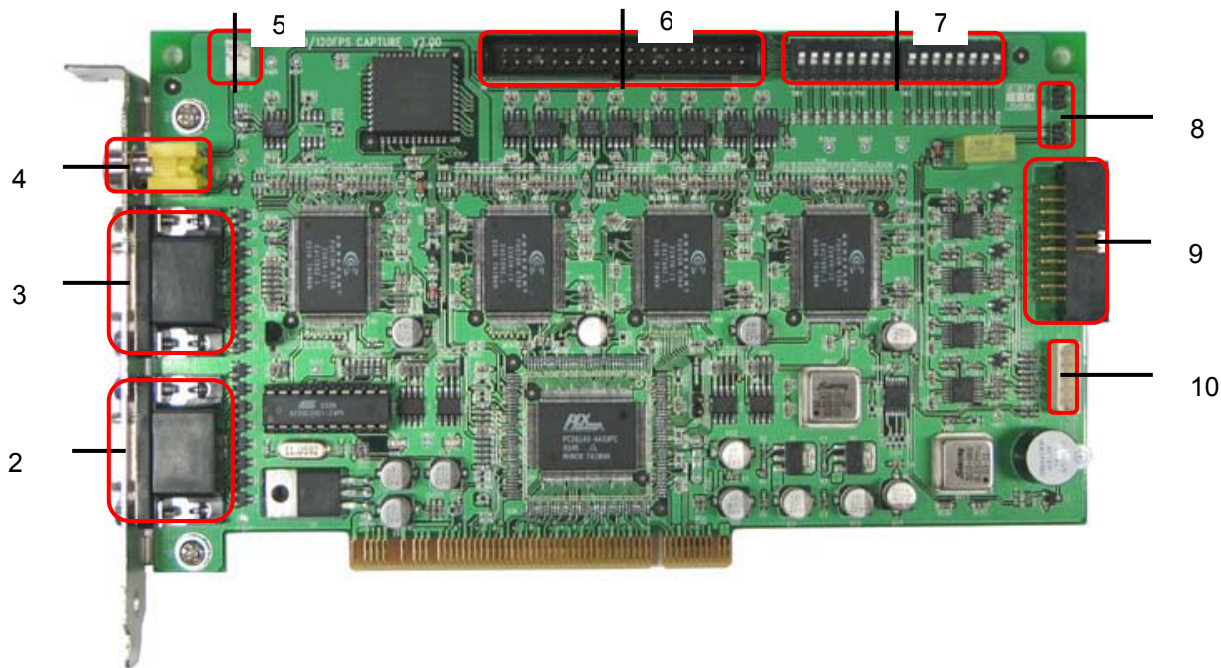


## 2.4 Etc.

- PCB : 4-Layer, PCI

### 3. Hardware Installation

#### 3.1 AS3000V2 Components



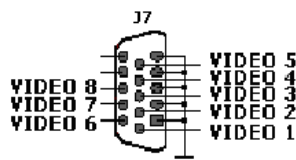
- 2. VIN 1-8(J7) : Video Signal Input DSUB-15 Female Connector
- 3. VIN 9-16(J9) : Video Signal Input DSUB-15 Female Connector
- 4. VOUT(J12) : External Video Out RCA Jack
- 5. VOUT(J3) : External Video Out Molex 2Pin Connector
- 6. VIN 1-16(J8) : Video Signal Input 40Pin Box Connector
- 7. SW1, SW2 : 16Pin DIP Switch x 2
- 8. WATCHDOG(J1, J2) : 2Pin Pinheader x 2
- 9. DIO(J13) : 20Pin Box Connector
- 10. AIN 1-4(J5) : Audio Signal Input 5Pin Molex Box Connector



## 3.2 Capture Card Component Description

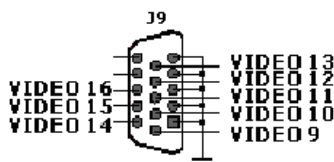
### 2 VIN 1-8 DSUB-15 Female Connector(J7)

This is a video input connector. Connect this to camera output port with the provided DSUB cable.



### 3 VIN 9-16 DSUB-15 Female Connector(J9)

This is a video input connector. Connect this to camera output port with the provided DSUB cable.



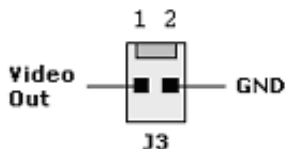
### 4 VOUT RCA Jack(J12)

This is a RCA jack for external video out. This is connected to Video In of TV monitor.



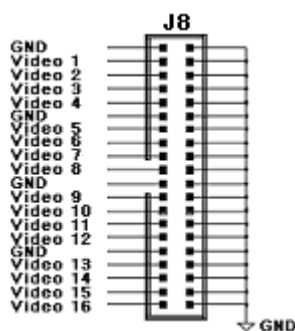
**5 VOUT Molex 2Pin Connector(J3)**

This is a video out Molex 2Pin Connector.



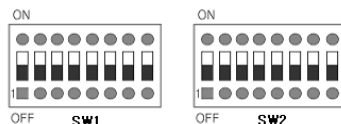
**6 VIN 1-16 40Pin Box Connector(J8)**

This is a video signal input connector. It is connected to the VIN1-16 connector of real-time display card when user uses the real-time display card with AS3000V2. To prevent misconnection, the connector was grooved.



**7 Termination Resistor 16Pin DIP Switch (SW1, SW2)**

This switch is used to choose termination resistor (75Ω) in VIN1-8(SW1) and VIN9-16(SW2). Please set switch 'ON' to set to the termination resistor.



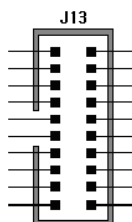
**8 WATCHDOG 2Pin Pinheader x 2(J1, J2)**

Two watchdog 2pin pinheaders are respectively connected to reset connector of mother board and reset connector of system case. The pin has no polarity.



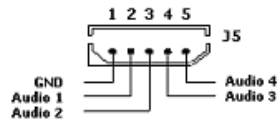
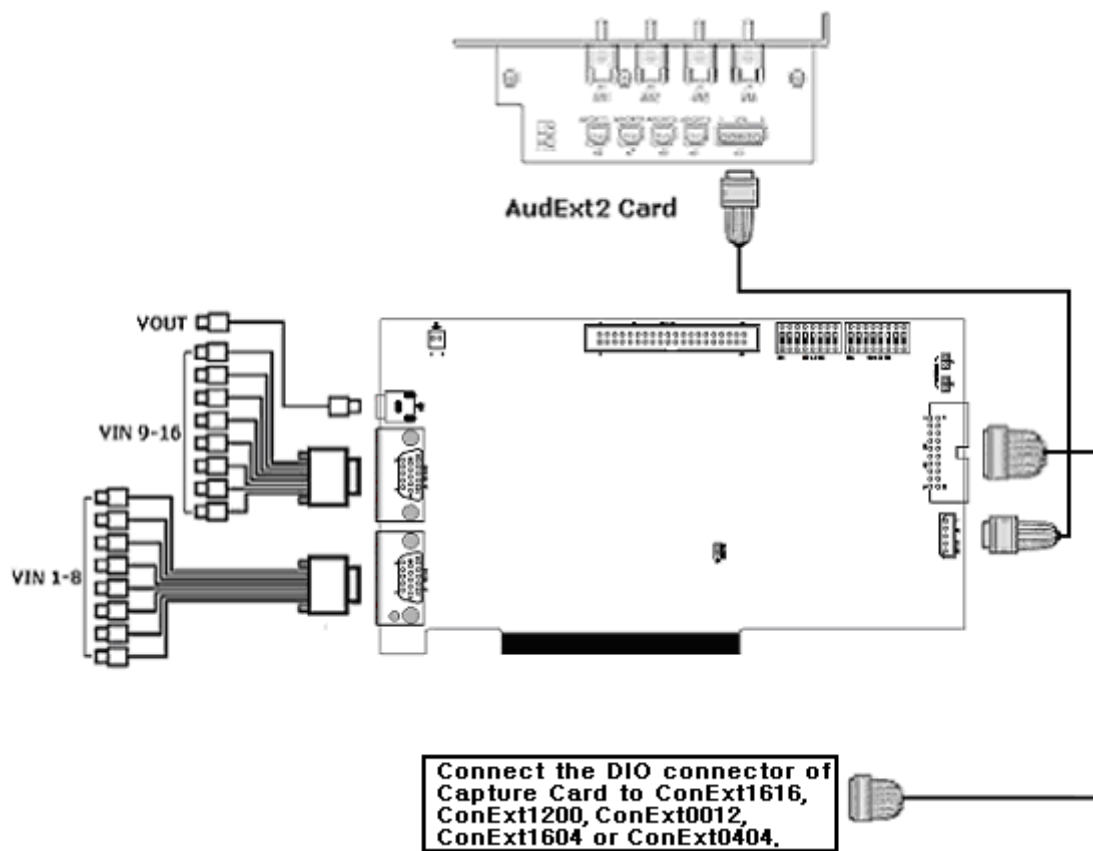
**9 DIO 20Pin Box Connector(J13)**

This connector is used to test DI/DO and connected to extension card. (Please refer to Extension Card Manual for more details.)



**10 AIN 1-4 5Pin Molex Box Connector(J5)**

This is a connector for Audio Input 1-4 and connected to J5 of **AudExt2 Card** (AudExt2 Card is option.)

**3.3 Connection with Peripheral**

## 4. Electrical Specifications

### 4.1 Recommended Operating Conditions

Parameter		Min	Typ		
Power supply +5V		4.75	5	5.25	V
Power supply +12V		11	12	13	V
Power supply -12V		-11	-12	-13	V
Video Input Range	Peak to Peak Amplitude	0.5	1	2	V
	Sync Amplitude	143	286	572	mV
	Horizontal Lock Range	-	-	±7	% of Line Length
	Color sub-carrier Lock-in Range	-	-	±800	Hz
Audio Input Range		0.01	2.593	3.3	V <sub>P-P</sub>
Ambient Operating Temperature		0		65	°C
Ambient Operating Humidity		0		90	%

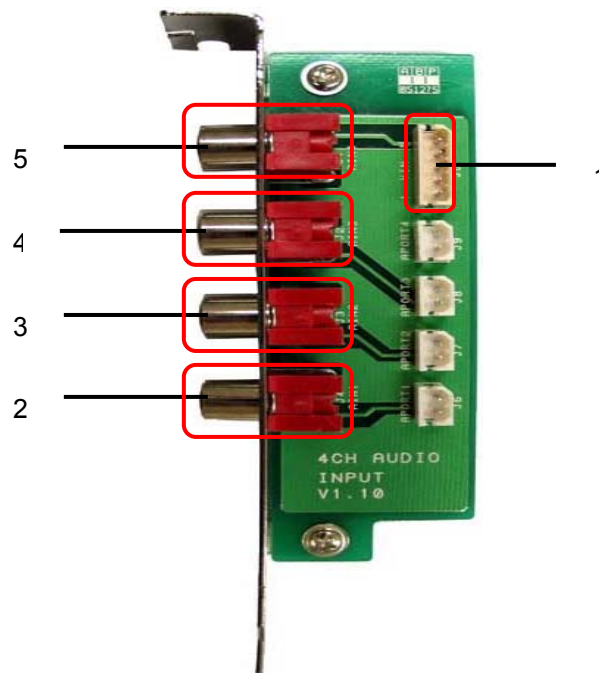
### 4.2 Power Supply Current Requirements

Parameter	Max	Units
Power supply +5V	884	mA
Power supply -12V	37	mA

## 5. Option Card

### 5.1 AudExt2 Card

#### 5.1.1 AudExt2 Card Picture



#### 5.1.2 AudExt2 Card Components

**1 AIN 1-4 5Pin Molex Box Connector(J5)**

This connector is used to transmit input CH 1 to 4 audio signals to capture card.

**2 ~ 5 AIN 1-4**

A connector was devised for RCA Jack to input audio signals from external.

## 6. AS3000V2 Installation Guide

### □. Components

- AS3000V2 Capture Card
- 2PIN Cable (for watchdog)

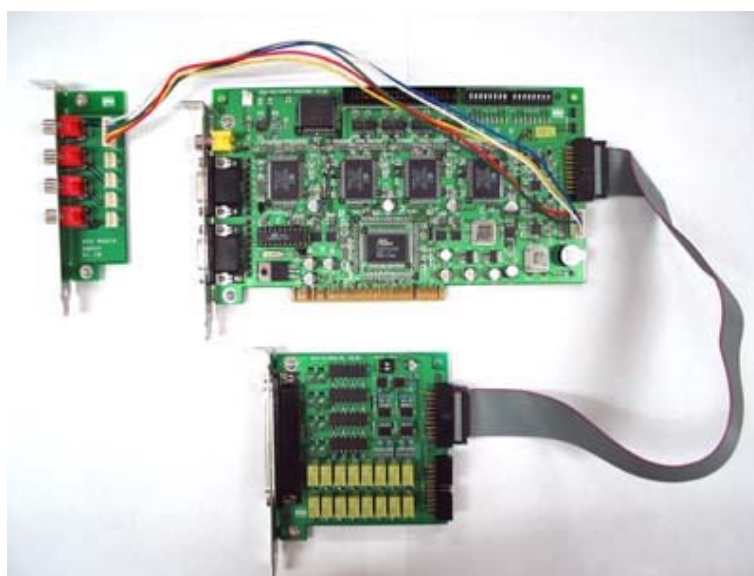
### □. Option Components

- AudExt2 Card
- ConExt1616 Card
- ConExt1200 Card
- ConExt0012 Card
- ConExt1604 Card
- ConExt0404 Card
- PTZExt2 Card

- **Option Components are optional. User can select DI/DO extension cards among the above. Cables are provided with selected DI/DO ext cards.**

### □. Hardware Installation

- (1) As the below, connect AS3000V2 Capture Card to AudExt2 and ConExt1616 Card.



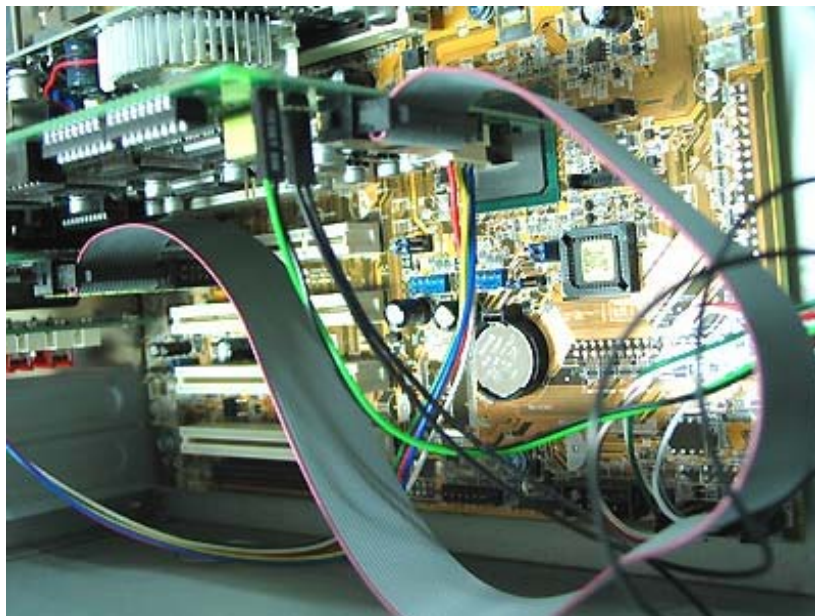
**<AudExt2 and ConExt1616 Connected to AS3000V2>**

- (2) Insert AS3000V2 vertically into PCI slot from one side to the other and then insert AudExt2 and ConExt1616 in the same way. Check if the cards were well inserted into PCI slot.



**<AS3000V2, AudExt2 and ConExt1616 Inserted into PCI Slot>**

- (3) Connect a pin of watchdog 2pin connector of AS3000V2 to the reset switch of mother board by 2pin cable. And then connect the other pin of watchdog 2pin connector to the reset cable of PC case. Hardware installation of capture card finished.



**<Watchdog Pin Connected to Reset Pin of Mother Board>**

□. **Cable Connection**

**(1) DSUB 15pin Cable**

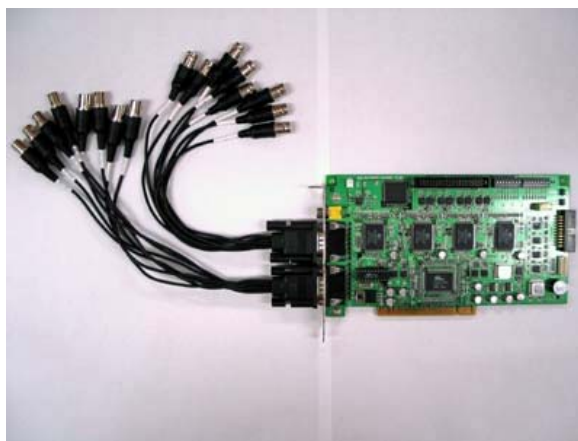
DSUB 15pin cable is used for video input (J7, J9) of AS3000V2 Capture Card. Connect it as the below picture.

**VIN1~VIN8 Terminal(J7)**

-Video In 1~8 Channel

**VIN9~VIN16 Terminal(J9)**

-Video In 9~16 Channel



**(2) External Monitor Output Terminal (J12)**

External monitor output port (RCA jack) is connected to external monitor.

**Note**

The video input port of DSUB 15pin is BNC type. To use RCA type, use a BNC to RCA Converter.