



# A/D Controller Board

## ARV-190x/191x/192x/193x



### Overview

ARV-1910 series are medium size A/D converter boards designed for higher resolution upto 3840 x 2160 display systems. This controller board supports 3 types of LCD panel ( V-By-One, eDP, and LVDS). It drives various LCD panels from lower resolution up to 3840 x 2160 in 10-bit color depth. In addition, this LCD controller board provide PiP and PbP dual window feature. This product series also provide RS232 interface to allow PC to execute remote control on OSD features. Working with Spectrah's sensor controller, ARV-1910 series support light & temperature detection and brightness control automatically. This product line is a high quality converter with excellent scaler feature, capable of converting input signals HDMI & DP to display various 4k x 2k LCD panels.

### Specifications

#### ADC Controller

High resolution 3840 x 2160@60Hz (4kx2k) scaler engine  
Multi-function digital interface engines  
Integrated HDMI\_2.0 and DP\_1.2a compliant receiver  
Integrated Singl-link and Dual-Link DVI 1.0 compliant receivers  
10-bit data processing and programmable 12-bit RGB gamma  
Support frame rate conversion  
Support two windows PiP and PbP features

#### Input Port

Analog RGB  
HDMI (2.0 & 1.4 compliant)  
DVI-I  
Display port (1.2a compliant)  
Audio input/output interface  
UART port  
Sensor port

#### On Screen Display (OSD)

Auto setup  
Brightness / Balck level/ Contrast adjustment  
Image V-Position / H-Position adjustment  
Audio colume adjustment  
OSD rotation  
Aspect Ration options

#### Panel Support

TFT from VGA upto SXGA  
TFT WUXGA 1920x1080  
TFT WUXGA 1920x1200  
TFT 3840 x 2160  
V-By-One, eDP, and LVDS panels

#### RS232 remote control port

Support remote control of OSD (optional)

#### Image Processing Feature

Auto-detection (Input signal format and VESA mode detection)  
Auto-configuration (Input positioning, clock, and phase)

#### Audio Amplifier

Stereo 10W class D audio amplifier for dual channels of speaker

#### Power In Support

LCD Panel: +3.3V, +5V, +12V  
Backlight Power: +12V/+24V, +5V, +3.3V

#### Image Scaling

Scale up/down a lower/higher resolution image to fit higher/lower resolution panels

#### Panel Connection

One 40-pin V-By-One connector  
One 40-pin eDP connecgtor (optional)  
One 40-pin LVDS connector (optional)

#### VESA Standard

Supports VESA DDC2B and a subset of VESA DPMS standards  
On board EDID ROM compliant with VESA DDC2B 1.X

#### Power Requirement

Dual power modules support +12V/ or +24V Power adapter

#### Board Dimension

160(L) x 120(W) mm

### Ordering Information

- ARV-1900 (RGB, HDMI, LVDS)	ARV-1902 (RGB, DP, LVDS)	ARV-1903 (RGB, HDMI, DP, LVDS)
- ARV-1910 (RGB, HDMI, V-By-One)	ARV-1912 (RGB, DP, V-By-One)	ARV-1913 (RGB, HDMI, DP, V-By-One)
- ARV-1920 (RGB, HDMI, eDP-4)	ARV-1922 (RGB, DP, eDP-4)	ARV-1923 (RGB, HDMI, DP, eDP-4)
- ARV-1930 (RGB, HDMI, eDP-8)	ARV-1932 (RGB, DP, eDP-8)	ARV-1933 (RGB, HDMI, DP, eDP-8)

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