

The MX2106AV Universal Switcher / Distribution Amplifier

The MX2106AV is the best universal video gadget around. With so many different functions in one box, you'll certainly want one in your arsenal of products. A simple review of its features shows the power and elegance of the MX2106AV's design packaging and functionality.

Start with built in, 2-input VGA and audio switcher with auto switch, contact closure, or RS-232 control functionality, then follow with a 2x1 distribution amplifier with programmable output to follow input 1 or to follow switched input, and conclude with transformer audio output to prevent any possible noise. Pretty impressive for a compact switcher!

The MX2106AV has a built in PnP (Plug and Play) memory that enables the proper power of laptop computers without the need for an external monitor. The PnP memory contains resolutions for most commonly available displays.

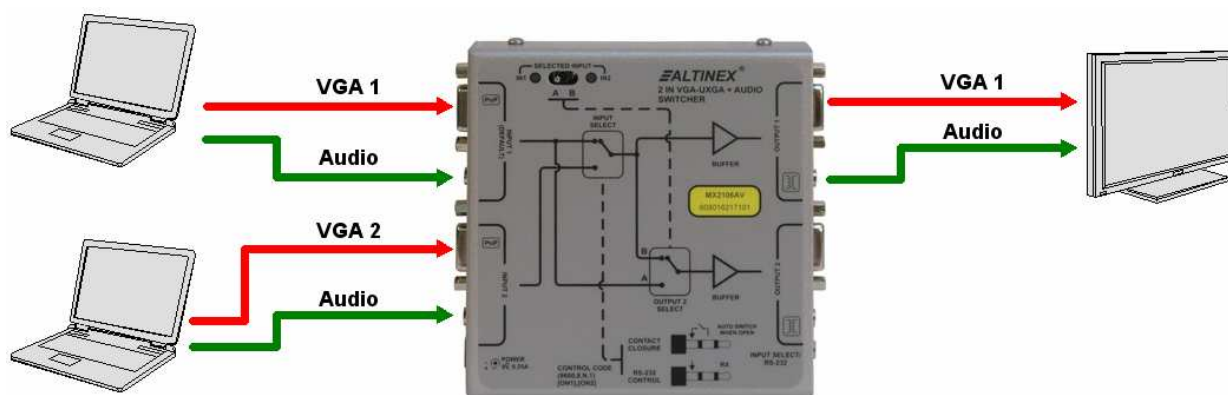


Figure 1

In the most basic application, the MX2106AV is used as a 2x1 auto switcher, as shown in Figure 1. The output from the two laptops is fed to inputs 1 and 2 of the MX2106AV using VGA cables and 3.5mm audio cables. The input 1 is the primary input and the switcher will default to this input on power up. When input 2 detects incoming signal, it automatically overrides input 1 and sends video to the output. The audio output from the MX2106AV is driven by a transformer, so that cable can be extended hundreds of feet without picking up any noise. Both a twisted pair and shielded cable can be used for routing audio signals. This configuration is ideal for a small conference room and a few table top units installed at each end of a table as shown below.

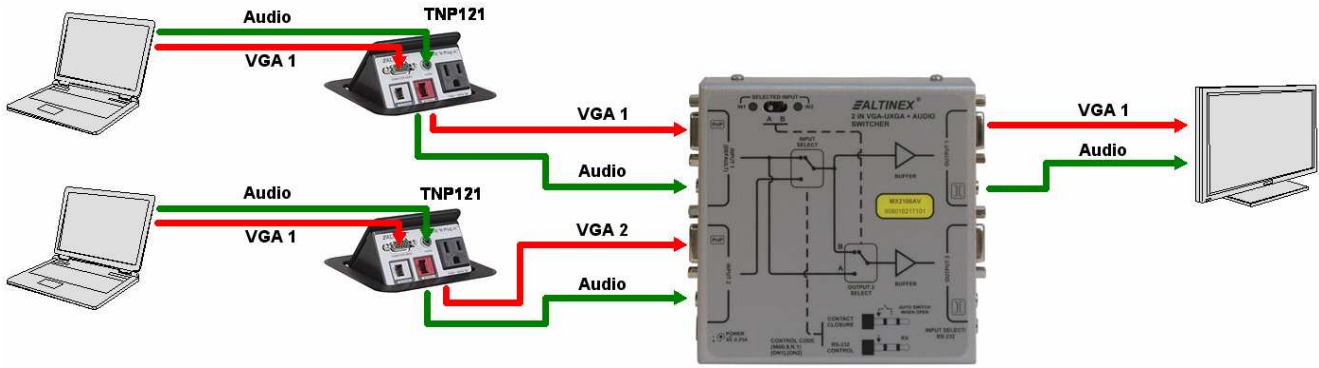


Figure 2

Each table top J box (TNP121) comes with 6ft cables already pre-installed so as to accommodate up to a 12ft conference table. In some cases, it would be easier to use a dual table top box that is located at the center of a conference table, but pointing in opposite directions as shown in Figure 3.

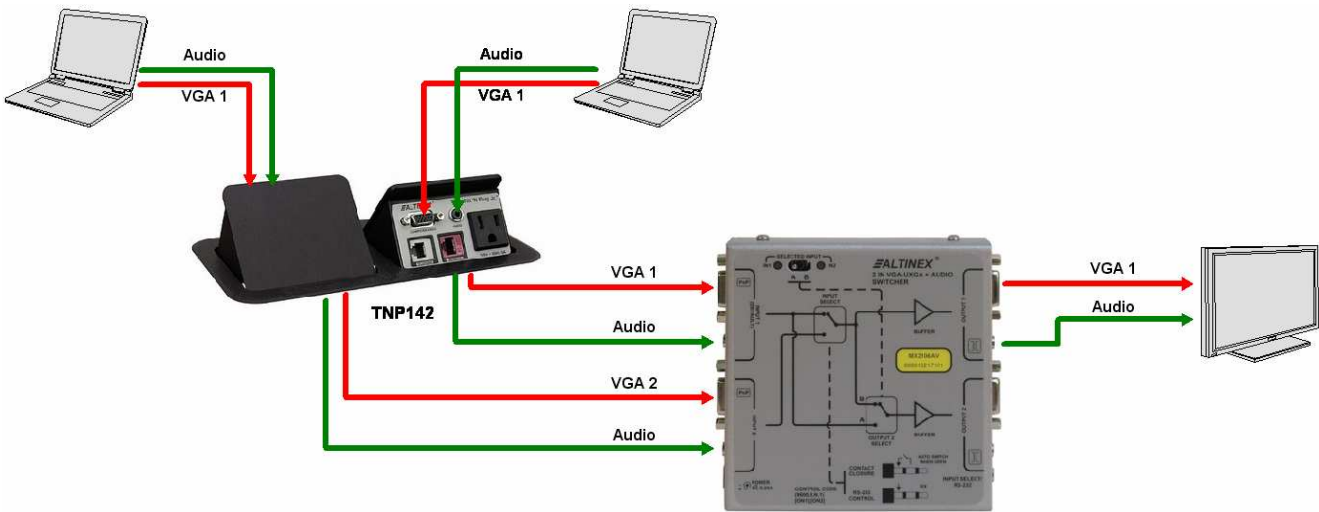


Figure 3

Depending on the configuration of the conference room, different locations of the tabletop units and the MX2106 can be selected. Figure 4 shows a top view of one of the possible configurations.

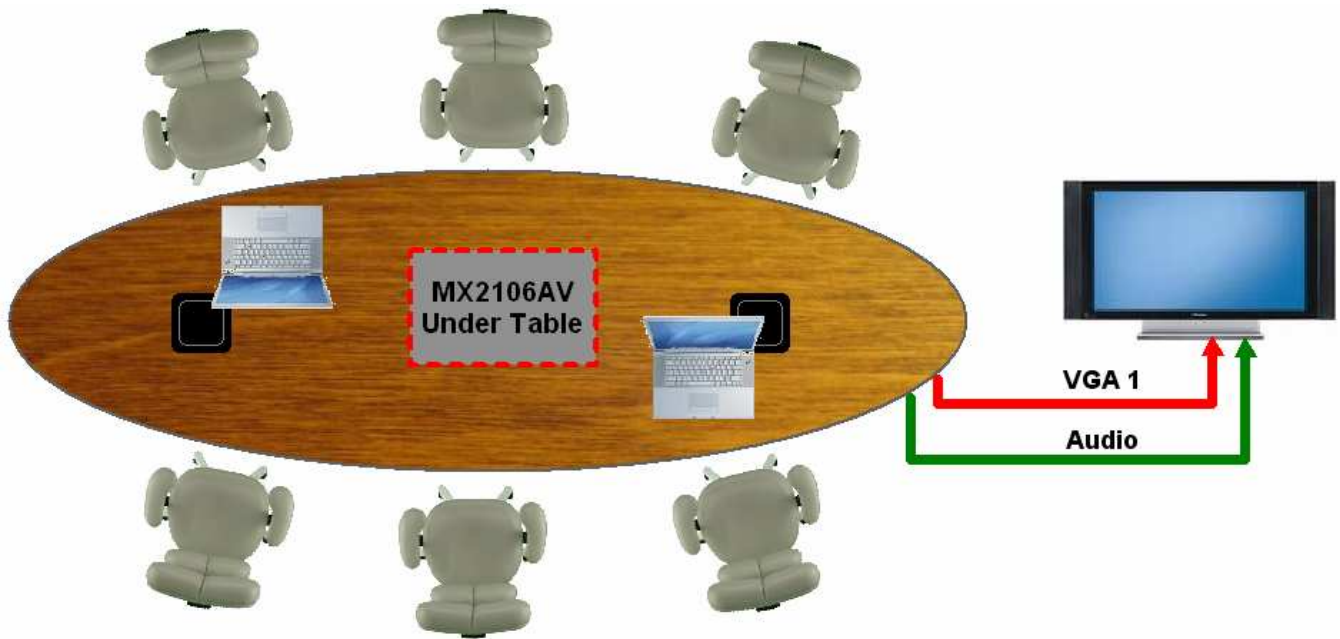


Figure 4

In some applications, there is a need to always display one computer output on a local monitor and still be able to select inputs for display on a large screen monitor. This can be accomplished with the MX2106AV switched to local monitor mode operation. A small switch on the top of the MX2106AV facilitates this selection.

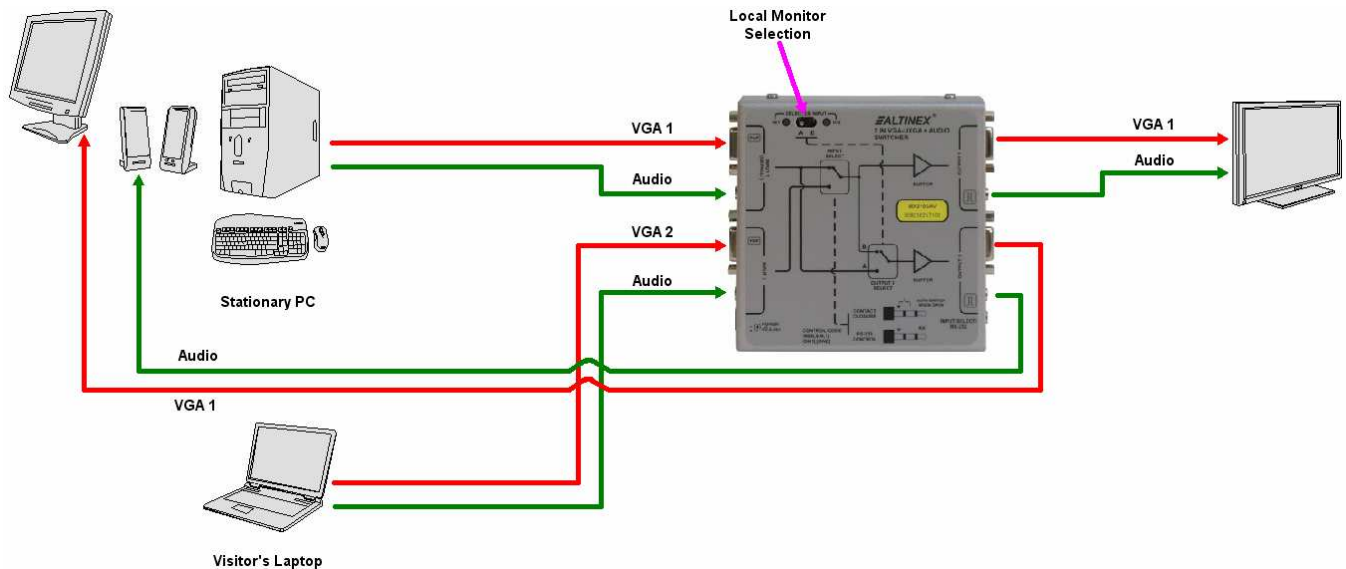


Figure 5

This configuration is often used when a lectern has a stationary PC installed inside and visitors bring their laptops. In this case, the stationary PC's local monitor is always connected to the stationary PC and the large screen display. When a visitor's laptop is connected to input two, the switcher automatically

switches to that input and sends video to the large screen display. The stationary PC's monitor still displays that PC's image.

Sometimes it is necessary to manually select the input to be displayed. The MX2106AV is ready to help. Wire-in an ON/OFF contact closure and click away. The button required must be a toggle - not a momentary contact. It works as follows: Input 1 is a default input and when contact is closed, input 2 is selected. When it is open, input one is selected.

The MX2106AV can be ordered with an external channel selection switch that can be easily mounted under the table or on the side of a lectern.

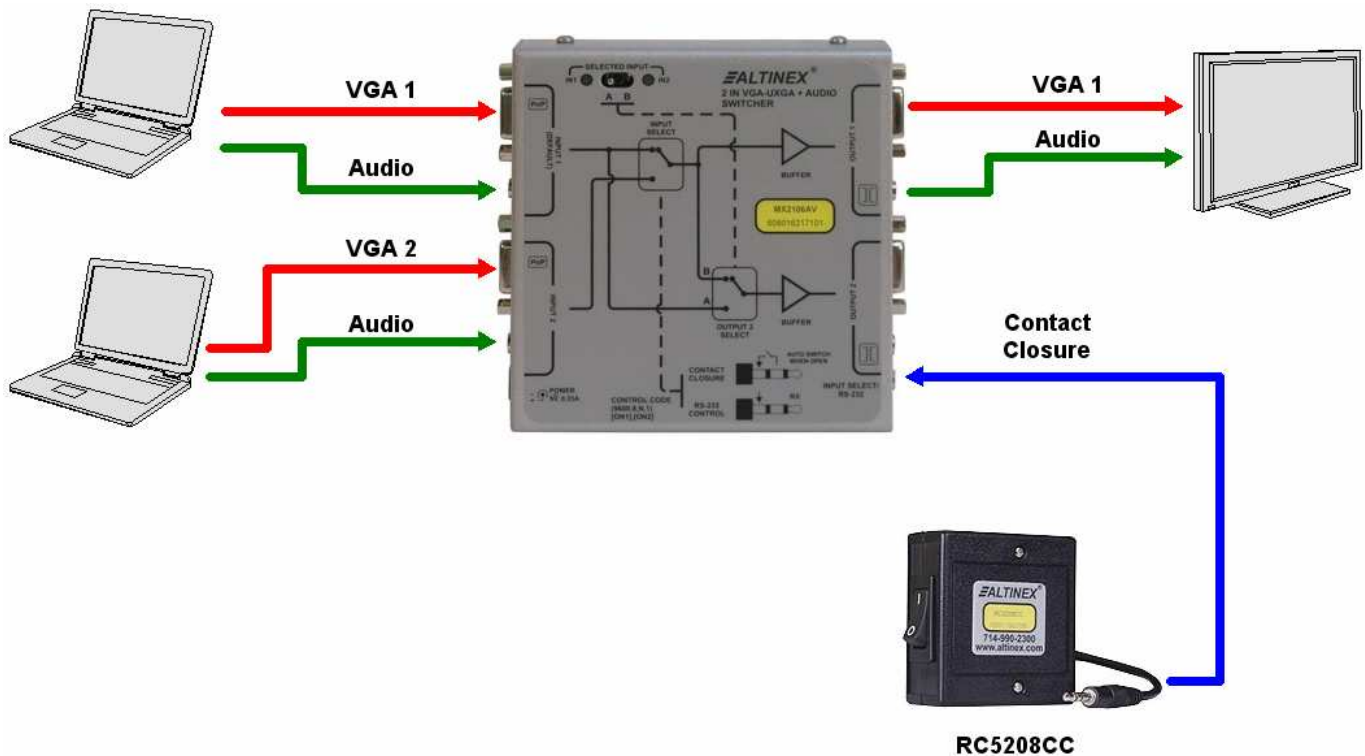


Figure 6

In addition to the channel selection switch, there are applications that require the MX2106AV to be controlled using an external control system. A control system can utilize two methods of control: contact closure or RS-232. The contact closure is connected the same way as the channel select switch above. The same connector on the MX2106AV is used for RS-232 control. The communication port is set to 9600,8,N,1 and there are only two commands: “[ON1]” and “[ON2]” to select inputs. Since a one way “receive” line is utilized for communication, only two wires are required: RX and ground. The RC5209LC cable can be used to connect the MX2106AV directly to a control system. Once an RS-232 command is sent to the MX2106AV, the auto switch function of the switcher is disabled and now it is controlled by RS-232 only. To enable auto switching again, re-power the unit.

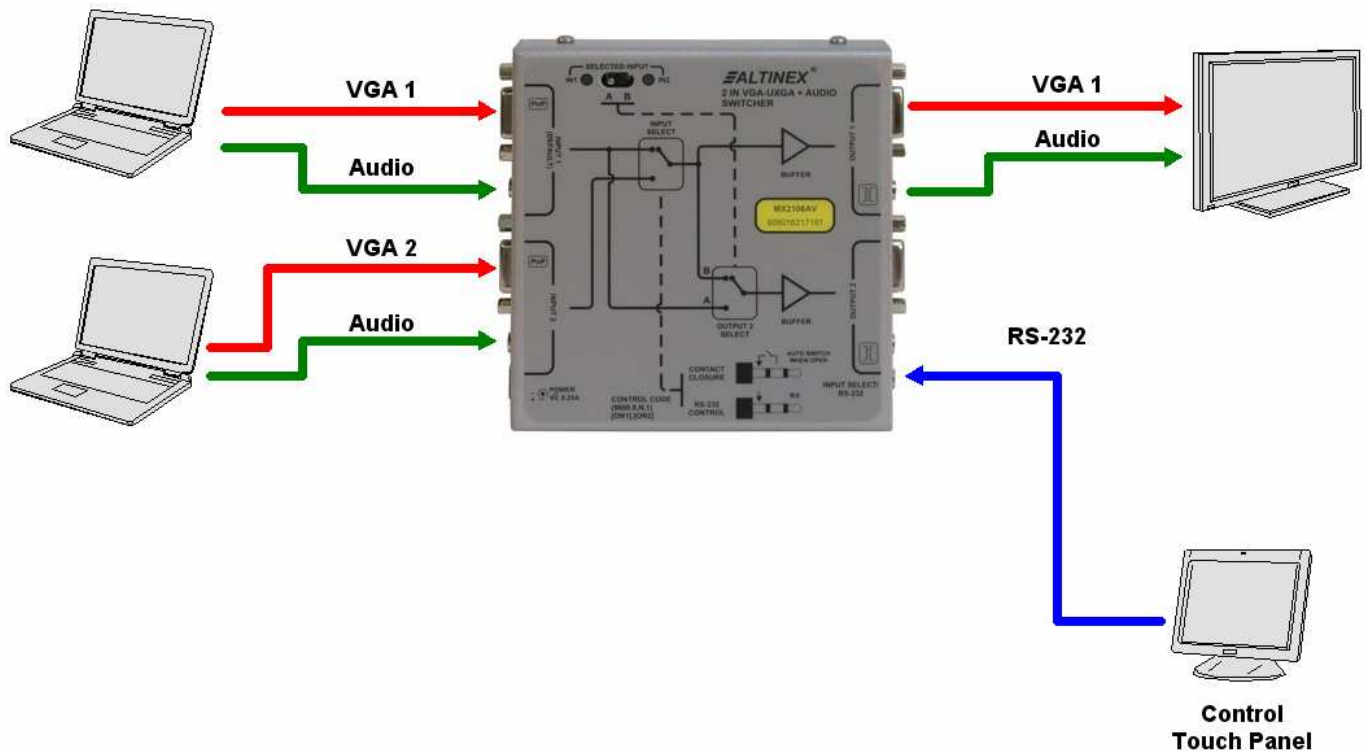


Figure 7

With the built in distribution amplifier the MX2106AV can drive two large displays at the same time. Considering that the MX2106AV can handle any computer resolution between 640x480 to 1600x1200 and HDTV resolution from 480i to 1080p, it is clearly the choice for many day to day installations.

In a church or worship environment, the MX2106AV is ideal for driving two large screen projectors at the same time. Select from a dedicated computer on the input 1 or switch to the pastor's laptop on input 2 for a perfect sermon. And with the optional MB1005 mounting bracket, it can be mounted almost anywhere.

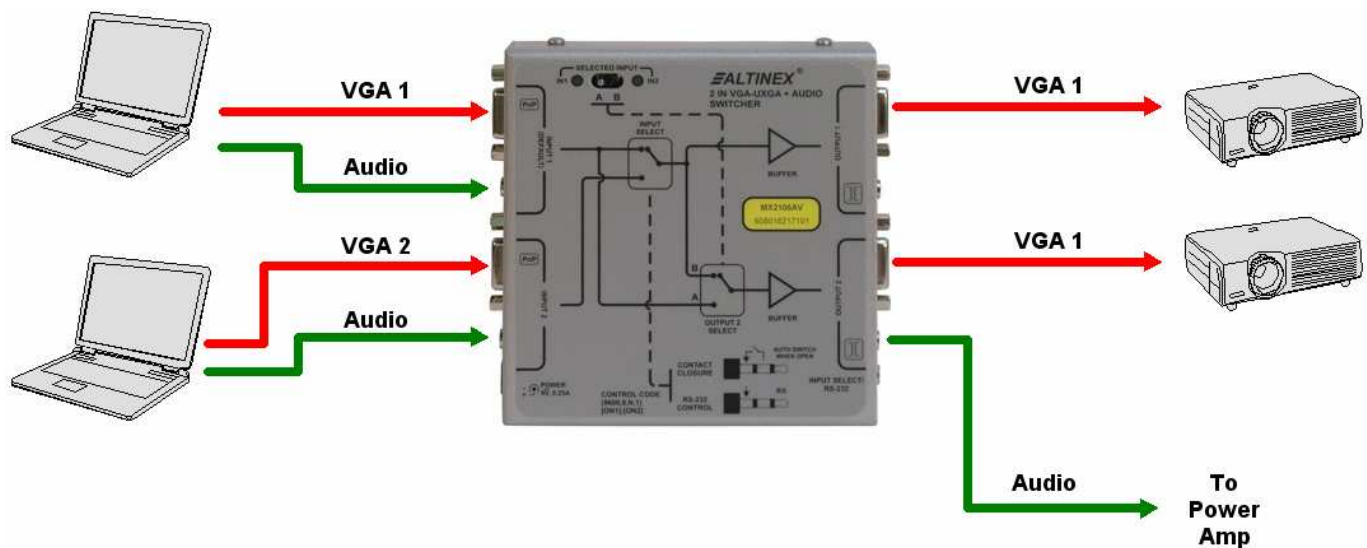


Figure 8

All in all, the MX2106AV auto switcher and distribution amplifier delivers tremendous functionality and great value in a compact metal enclosure. So why buy separate switcher and a DA when you can get the functionality of 3 different products in a single MX2106AV?

Products shown and described above:

MX2106AV	2-In, 1-Out VGA auto + audio switcher with 1x2 DA
MB1005	Mounting bracket for MX2106AV
RC5208CC	Contact switch box
RC5209LC	RS232 control cable
CB415-006	VGA + audio input cable
CB415-025	25ft VGA cable
CP450-008	MultiTouch, touch screen control panel
TNP121	Table top junction box
TNP142	Dual table top junction box