ATEN®

Simply Better Connections™

8-Port HDMI Switch

USER MANUAL

VS0801H

EMC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna;

- Increase the separation between the equipment and receiver;

- Connect the equipment into an outlet on a circuit different from that which the receiver is connected;

- Consult the dealer or an experienced radio/television technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RoHS

This product is RoHS compliant.

KCC Statement: 유선 제품용 / A 급 기기 (업무용 방송 통신 기기) 이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 , 가정 외의 지역에서 사용하는 것을 목적으로 합니다 .

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T
　11363-2006规定的限量要求之下。

●: 表示符合欧盟的豁免条款，但该有毒有害物质至少在该部件的
　某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超
　出SJ/T 11363-2006的限量要求。

VS0801H User Manual

Online Registration

International	http://support.aten.com

Telephone Support

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8448-158923

Technical Support

- For international online technical support – including troubleshooting, documentation, and software updates: **http://support.aten.com**
- For North American technical support:

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://support.aten.com
Telephone Support		1-888-999-ATEN ext 4998

Package Contents

The VS0801H 8-port HDMI Switch package contains the following items:

- 1 VS0801H 8-port HDMI Switch
- 1 IR Remote Control Unit
- 1 Power Adapter
- 1 Mounting Kit
- 1 User Instructions*

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

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* Features may have been added to the VS0801H since this manual was published. Please visit our website to download the most up-to-date version of the manual.

Overview

With more and more HDMI devices entering the Home Theater market, the need for simultaneous access to different HDMI A/V sources is becoming increasingly important. Now, the VS0801H 8-port HDMI Switch offers an easy and affordable way to add HDMI capabilities to your home theater system by allowing you to switch easily between up to eight HDMI A/V sources that are connected to your HDMI display.

With eight HDMI A/V input ports, the VS0801H 8-port HDMI Switch allows you to connect eight HDMI devices (such as an HD camcorder or satellite box, HD-DVD player, hi-def Blu-ray player, home theater PC, stand-alone streaming media player, gaming console, etc.) to your HDMI monitor, display, projector or TV at the same time. The remote control and convenient front panel pushbuttons allow you to quickly and easily toggle between HDMI sources, while the front panel LEDs indicate the source device at a glance.

Furthermore, for complete system and install integration, RS-232 control is standard through the VS0801H's built-in bi-directional RS-232 serial port that allows the switch to be controlled through a high-end controller, PC, and/or home automation / home theater software package.

Features

- Allows up to eight HDMI sources to be connected to one HDMI display
- Quick and easy switching between HDMI sources via front panel pushbuttons or IR remote control
- Built-in bi-directional RS-232 serial port for high-end system control*
- Supports Dolby True HD and DTS HD Master Audio
- Up to 60 Hz refresh rate
- Long-distance transmission – up to 20 m (24 AWG) and 15 m (28 AWG)
- Superior video quality – HDTV resolutions of 480p, 720p, 1080i, 1080p (1920x1080); VGA, SVGA, SXGA, UXGA, and WUXGA (1920x1200)
- HDMI (3D, Deep Color)
- Plug-and-play – no software installation required
- DDC compatible
- HDMI and HDCP 1.1 compatible
- Consumer Electronics Control (CEC) allows interconnected HDMI devices to communicate and respond to one remote control
- Signaling rates up to 2.25 Gbits in support of 1080p display
- All-metal casing
- Easy and affordable way to add eight HDMI inputs to your home theater system

Note: The VS0801H AP and GUI operational instructions can be downloaded from the ATEN website (www.aten.com).

System Requirements

Source Devices(s)

- HDMI Type A output connector(s)

Note: A DVI/HDMI adapter is required when connecting a DVI source device.

Display Device

- A display device or receiver with an HDMI Type A input connector
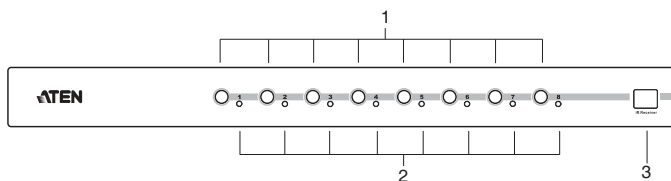
Cables

- 1 HDMI cable for each source device you will be connecting
- 1 HDMI cable for your display device

Note: 1. No HDMI cables are included in this package. We strongly recommend that you purchase high-quality cables of appropriate length since this will affect the quality of the audio and video display. Contact your dealer to purchase the correct cable sets.

2. If you wish to utilize the VS0801H's high-end serial controller function, you will also need to purchase an appropriate RS-232 cable. See *Installing the RS-232 Controller*, page 12.
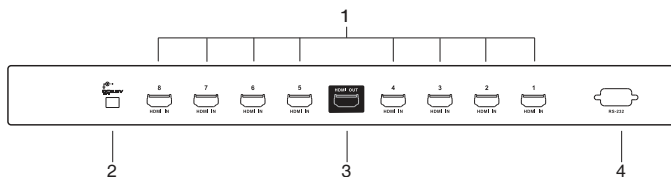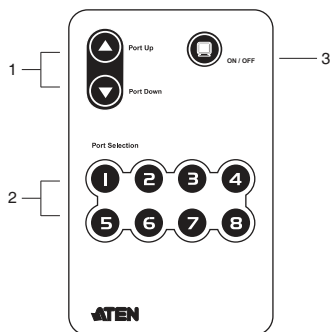
Components

VSO801H Front View

No.	Component	Function
1	Port Selection Pushbuttons	Pressing a port selection pushbutton routes the HDMI source from the corresponding input port to the output port for display.
2	Port LEDs	There is one port selected LED next to each port selection pushbutton. This lights green to indicate that the corresponding port has been selected. **Note:** When you use the IR remote control or serial commands to switch off the HDMI output port, the LEDs for port 3 and 6 will flash.
3	IR Receiver	This receives signals from the IR remote control.

VS0801H Rear View

No.	Component	Function
1	HDMI In	The cables from the HDMI source devices plug into any of the eight available ports.
2	Power Jack	The power adapter cable plugs in here.
3	HDMI Out	The cable from the HDMI display device plugs in here.
4	RS-232 Serial Port	This is the serial remote port for input source selection and high-end system control.

IR Remote Control

No.	Component	Function
1	Port Up / Port Down Buttons	Press the Port Up button to cycle forward through the source devices (1 to 2; 2 to 3; ... 8 to 1).
		Press the Port Down button to cycle backward through the source devices. (8 to 7; 7 to 6; ... 1 to 8)
2	Port Selection Buttons	Press a button to bring the focus directly to the source device attached to its associated port.
3	On / Off Button	This button enables / disables the HDMI output.

Installation

> ⚠️
>
> 1. Make sure that the power to all devices you will be installing has been turned off.
>
> 2. Make sure that all devices you will be installing are properly grounded.

Installation of the VS0801H is simply a matter of plugging in the appropriate cables.

To install the switch, refer to the installation diagram on page 12 as you perform the following three steps:

1. Use an HDMI cable to connect the HDMI input port on the video display device to the HDMI output port on the rear of the VS0801H.

2. Use HDMI cables to connect the HDMI output ports on the source device(s) to the HDMI input ports on the VS0801H. Eight HDMI input ports are located on the rear of the switch.

3. Plug the provided power adapter into an appropriate AC power source; plug the power adapter cable into the Power Jack on the VS0801H.
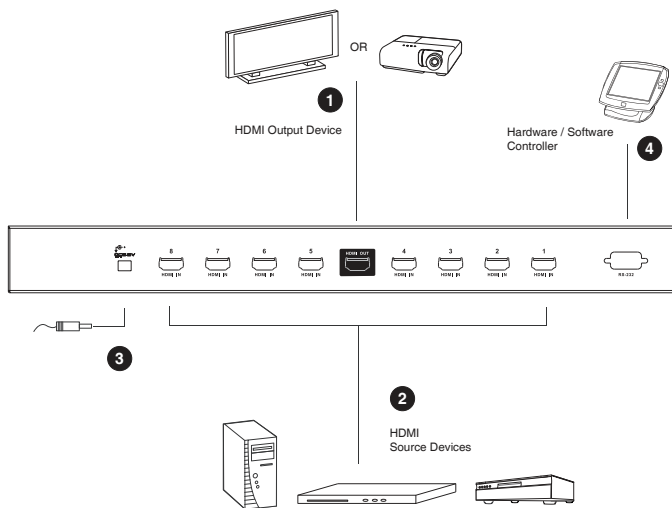
This completes the basic installation of the VS0801H 8-port HDMI Switch. You may now power on the display and source devices.

Installing the RS-232 Controller

In order to use the RS-232 serial interface to attach a high-end controller (such as a PC) to the VS0801H, use a serial cable such as a modem cable. The end connecting to the VS0801H should have a 9-pin male connector. Connect this to the serial interface on the rear of the VS0801H. Refer to number 4 on the diagram on page 12.

Note: To configure the controller serial port, see page 14.

Installation Diagram

OR

HDMI Output Device

Hardware / Software
Controller

HDMI
Source Devices

Source Device Selection

The VS0801H 8-port HDMI Switch offers easy and flexible source device selection with either the front panel pushbuttons, with the remote control, or through the RS-232 serial interface.

Manual Selection

To select a source device, press the pushbutton that corresponds to the port it is connected to.

Note: The SELECTED LED (green) light indicates which port is currently selected.

Remote Control Selection

To select a source device with the remote control, press the number button that corresponds to the port it is connected to.

Alternatively, you may also cycle through the source devices by pushing the Port Up and Port Down buttons on the remote control unit.

- Use the Port Up button to select the next port in ascending order (from left to right on the front view panel).

- Use the Port Down button to select the next port in descending order (from right to left on the front view panel).

Note: 1. The maximum range of the remote control unit is 10 meters (30 ft)

2. Aim the remote control unit at the IR receiver located on the front panel of the VS0801H. For optimum performance, make sure there is a clear line-of-sight between the remote control unit and the IR receiver.

Auto Switch

Auto Switch places priority on a port, so that when a source device is connected to that port the VS0801H will automatically switch to it. There are two types of auto switching – **Auto**: switch priority is placed on a particular port, and **Next**: switch priority is placed on the next port with a new source connected to it. Once Auto Switch is set it stays on that port until the device is disconnected or Default mode is enabled.

In addition, the **Go To** function can be enabled via RS-232 commands and enables the VS0801H to switch to the next port with a powered on source device when the current input source is off. To set Go To see *Switch Mode Command*, page 19.

You can use the front panel buttons to set **Auto** mode for port 1, **Next** mode or **Default** mode. To set Auto mode for other ports, you must use RS-232 commands (see *Switch Mode Command*, page 19).

◆ **Default Mode** – The switch behaves normally without automatic switching operation (disables Auto Switch mode).

   To set Default mode: Press and hold the port 1 pushbutton for 3 seconds, then release.

◆ **Auto Mode** – Sets *Auto* mode for port 1, so that when a device is connected to port 1 the VS0801H will automatically switch to it. When Auto mode is enabled the VS0801H will not switch ports until that port's video signal is disconnected or *Default* mode is enabled.

   To set Auto mode: Press and hold the port 3 pushbutton for 3 seconds, then release.

◆ **Next Mode** – With *Next* mode switch priority is placed on the next port that has a new source connected to it. To disable Next mode, Default mode must be enabled.

   To set Next mode: Press and hold the port 2 pushbutton for 3 seconds, then release.

RS-232 Serial Interface

The VS0801H's built-in bi-directional RS-232 serial interface allows system control through a high-end controller, PC, and/or home automation / home theater software package.

Configuring the Serial Port

The controller's serial port should be configured as follows:

Baud Rate	19200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

Verification

After entering a command, a verification message appears at the end of the command line as follows:

* **Command OK** - indicates that the command is correct and successfully performed by the switch

* **Command incorrect** - indicates that the command has the wrong format and/or values.

Switch Port Commands

The formulas for Switch Port commands are as follows:

1. Switch Command + Input Port + Port Number [Enter]

For example, to switch to input port 02, type the following:

sw i02 [Enter]

2. Switch Command + Control [Enter]

For example, to switch to the next port, type the following:

sw + [Enter]

3. Switch Command + Control [Enter]

For example, to turn off the output port, type the following:

sw off [Enter]

The following tables show the possible values for the **Input Port**, Port **Number** and **Control** commands:

Command	Description
sw	Switch command

Input Port	Description
i	Input port command

Port Number	Description
xx	01-08 port (default is 01)

Control	Description
+	Next Port
-	Previous Port
on	Turn on the output port
off	Turn off the output port

The following table shows the available command list:

Com-mand	Input	Port Number	Control	Enter	Description
sw	i	xx		Enter	Switch to input port xx (xx:01~08)
sw			+	Enter	Switch to the next input port
sw			-	Enter	Switch to the previous input port
sw			on	Enter	Turn on the output port
sw			off	Enter	Turn off the output port

Note: 1. Each command string can be separated with a space.

2. The **Input** / **Output** port command string can be skipped, and the default value(s) will be used. For example, to switch the input port 01 to the default output port 01, simply enter: **sw i01**.

3. The input port and output port command strings are interchangeable. For example: **sw i02 o01** can also be **sw o01 i02**.

Switch Mode Command

You can choose how the VS0801H behaves when a new input source is connected to it. By default the Next switch mode setting is enabled. Use the commands below to select a different mode.

Next - Switch priority is placed on the next port that has a new source device connected to it. (default)

Default - The switch behaves normally without automatic switching.

Auto - Places priority on a selected port so that when a source is connected to the said port, the VS0801H automatically switches to it, and the port can not be changed until the source is unplugged or auto switching mode is disabled with the default command.

In addition, the **Go To** function enables the VS0801H to switch to the next port with a powered on source device when the current input source device is powered off.

The formulas for Switch Mode commands are as follows:

1. Switch Command + Input Command + Port Number + Control [Enter]

For example, to enable Auto mode for port 02, type the following:

   swmode i02 auto [Enter]

2. Switch Command + Control [Enter]

For example, to enable Next mode, type the following:

   swmode next [Enter]

3. Switch Command + Control [Enter]

For example, to enable Default mode to disable Next/Auto mode, type the following:

   swmode default [Enter]

4. Switch Command + Control [Enter]

For example, to enable the Go To function, type the following:

   swmode goto on [Enter]

The following tables show the values for **Switch Mode**:

Command	Description
swmode	Switch Mode command

Input Command	Description
i	Input command

Port number	Description
xx	01-08 port (default is 01)

Control	Description
next	Priority is placed on the next port that has a new source connected to it (default)
default	No automatic switching
auto	Priority is placed on a selected port

Control	Description
goto on	Switch to the next port with a powered on source device when the current input source is off.
goto off	Disable Go To (default)

The following table lists the available commands:

Command	Input	Port #	Control	Enter	Description
swmode	-	-	default	[Enter]	Use Default switch mode
	-	-	next	[Enter]	Use Next switch mode
	i	xx	auto	[Enter]	Use Auto switch mode on port xx
	-	-	goto on	[Enter]	Enable Go To function
	-	-	goto off	[Enter]	Disable Go To function

Note: 1. Each command string can be separated with a space.

2. The **Input** port command string can be skipped and the default value(s) will be used.

Read Command

To view the current configuration settings of the device.

The formula for the Read command is as follows:

1. Read Command [Enter]

To read the current configuration settings, type the following:

read [Enter]

The following table shows the value for the **Read** formula:

Command	Description
read	Read information from the device

Powering Off and Restarting

If you power off the VS0801H, follows these steps before powering it on again:

1. Power off the attached devices.

2. Unplug the power adapter cable from the VS0801H.

3. Wait 10 seconds, and then plug the power adapter cable back in.

4. After the VS0801H is powered on, power on the attached devices.

Note: Whenever the VS0801H is powered on, it automatically selects the first port connected to a powered on source device.

RS-232 Control Tool Operation

Overview

The VS0801H's built-in bi-directional RS-232 serial interface allows system control through a high-end controller, PC, and/or home automation / home theater software package. The RS-232 Control Tool is an application used to send operational commands from your PC - to the VS0801H through a serial (RS-232) interface connection. RS-232 serial operations to and from the VS0801H can be managed using ATEN's Graphical User Interface (GUI) on computers that are running the Microsoft Windows operating system. In order to use the RS-232 Control Tool, two separate programs must be installed on the PC- .NET Framework 2.0 and the RS-232 Control Tool. The procedure for installing and operating the RS-232 Control Tool is detailed in the following section.

Before You Begin

Installing .NET Framework 2.0

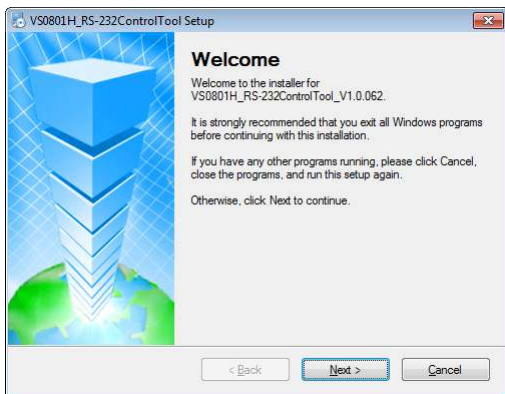To install .NET Framework on your PC, do the following:

1. Download the executable file from the ATEN website or the Microsoft Download Center online, and run it.

2. Follow the instructions on the screen. The installation applet will automatically detect the operating system and install the correct drivers.

Installing the RS-232 Control Tool

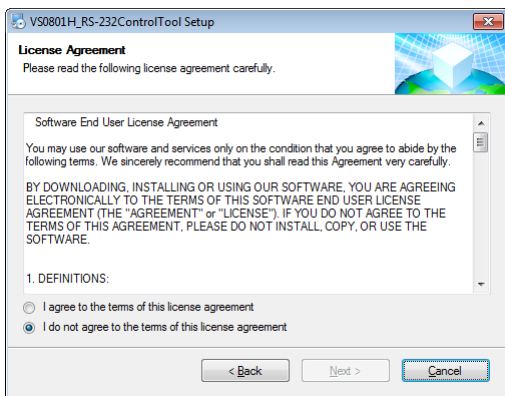To install the RS-232 Control Tool, do the following:

1. Download the RS-232 Control Tool from the Download or VS0801H's *Resource Page* on our website:

    www.aten.com

2. Save the file to a convenient location.

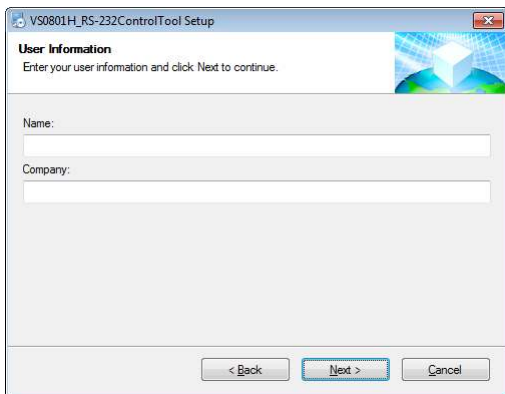3. Double click to run the setup file. The Welcome screen appears:
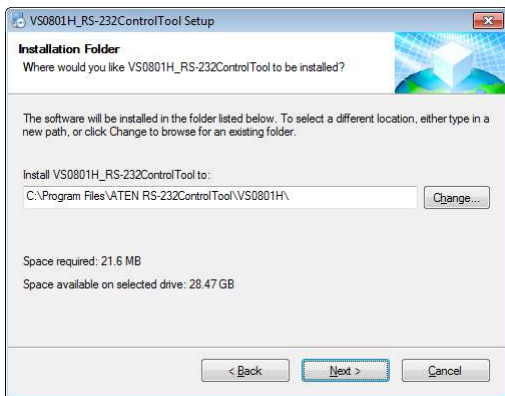

   Click **Next**.

4. The License Agreement appears:

   If you agree with the License Agreement, select *I agree with the terms of this license agreement,* and click **Next**.
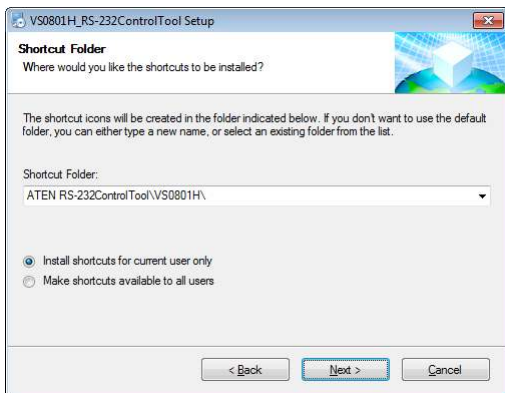
5. The User Information screen appears:

Fill in your *Name* and *Company*, then click **Next**.

6. When the Installation Folder screen appears, you can select where you want to install the program by clicking **Change**, or use the default installation location provided, then click **Next**.
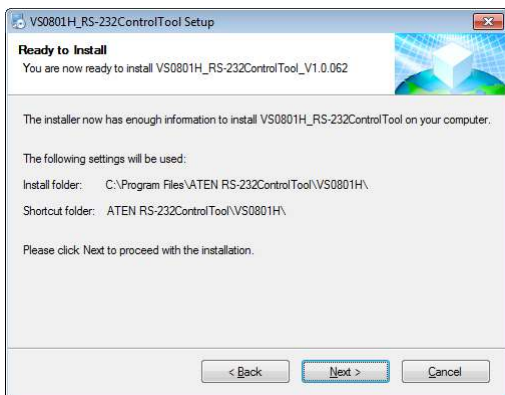
7. From the Shortcut Folder screen type in or use the drop-down menu to enter the folder where you want to install the shortcuts:
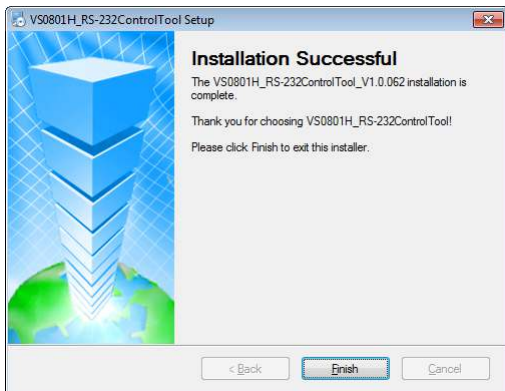

Then select *Install shortcuts for current user only*, or *Make shortcuts available to all users*, and click **Next**.

8. At the Ready to Install screen confirm your settings, click **Back** if you need to make changes, or click **Next** to begin the installation:
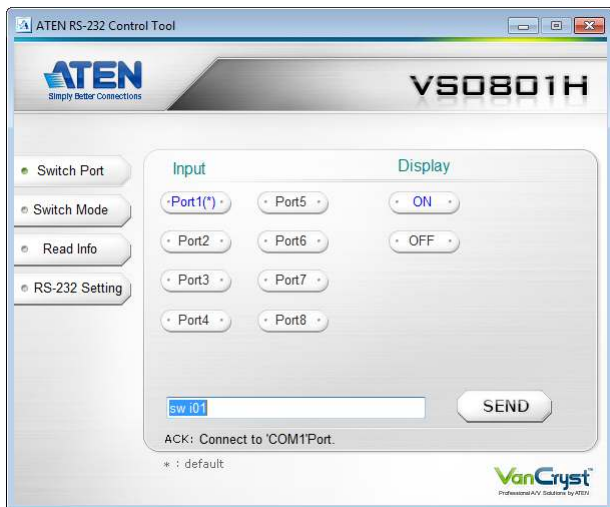
9. When the installation has completed successfully, the following screen will appear:

Click **Finish**. You are now ready to use the RS-232 Control Tool.

GUI Main Page

The RS-232 Control Tool is a convenient and intuitive application to send RS-232 commands to your VS0801H. For detailed information about the function of each RS-232 command, *RS-232 Serial Interface*, page 16. To invoke the GUI, simply click the RS-232 Control Tool shortcut. The interface opens on the *Switch Port* page by default, as shown below:

The various elements of the GUI are described in the following sections.

The Switch Port page is used to connect a source device to the display port, and to power the display port On/Off. On the Switch Port page, the following actions are possible:

◆ Click on an **Input** port button (options are Ports 1–8).

◆ Turn the **Display** On or Off.

◆ Use the text box to manually enter the command.

◆ Click **Send** to send the command.

Switch Port Commands

These actions can also be performed by keying the command into the text box, and clicking **Send**.

The available formulas for Switch Port commands are as follows:

1. Switch Command + Input Command + Port Number + [Enter]

For example, to switch to input port 02, type the following:

sw i02 [Enter]

2. Switch Command + Control + [Enter]

For example, to switch to the next input port, type the following:

sw + [Enter]

3. Switch Command + Control + [Enter]

For example, to turn off the display port, type the following:

sw off [Enter]

Possible Values

The following table shows the possible values for switch commands:

Command	Description
sw	Switch command

Input Command	Description
i	Input command

Port Number	Description
xx	01-08 port (default is 01)

Control	Description
+	Switch to next input port
-	Switch to previous input port
on	Turn output port on
off	Turn output port off

Enter	Description
[Enter]	Enter and send out the command

Switch Port Command Table:

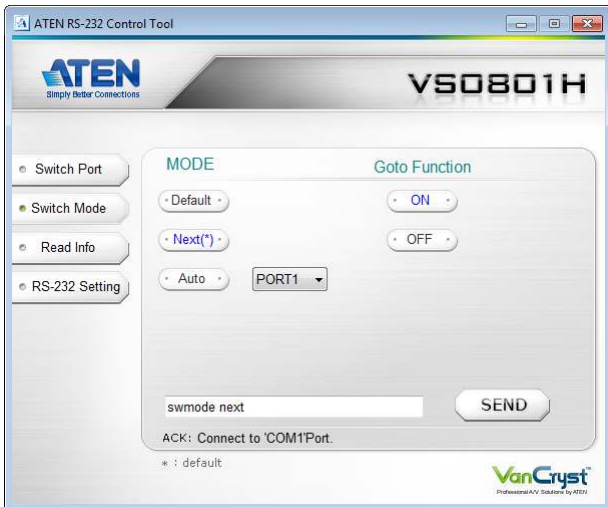| Cmd	In	N1	Control	Enter	Description
sw	i	xx		Enter	Switch to input port xx (xx:01~08)
sw			on	Enter	Switch to next input port
sw			off	Enter	Switch to previous input port
sw			+	Enter	Turn on the output port
sw			-	Enter	Turn off the output port

Acknowledge:

After commands are sent acknowledge messages are returned.

Ack	Description
Command OK	Command is correct and function executed
Command Incorrect	Unavailable command or parameters

Note: 1. Each command string can be separated with a space.

2. The **Port Number** command string can be skipped, and the default value will be used.

You can choose how the VS0801H behaves when a new input source is connected to it. By default the Next switch mode setting is enabled. Use the commands below to select a different mode. There are three Switch Modes:

Next - Switch priority is placed on the next port that has a new source device connected to it. (default)

Default - The switch behaves normally without automatic switching.

Auto - Places priority on a selected port so that when a source is connected to the said port, the VS0801H automatically switches to it, and the port can not be changed until the source is unplugged or auto switching mode is disabled with the default command.

In addition, the **Go To** function enables the VS0801H to switch to the next port with a powered on source device when the current input source device is powered off.

Switch Mode Commands

The formulas for Switch Mode commands are as follows:

1. Switch Command + Input Command + Port Number + Control [Enter]

For example, to enable Auto mode for port 02, type the following:

   swmode i02 auto [Enter]

2. Switch Command + Control [Enter]

For example, to enable Next mode, type the following:

   swmode next [Enter]

3. Switch Command + Control [Enter]

For example, to enable Default mode to disable Next/Auto mode, type the following:

   swmode default [Enter]

4. Switch Command + Control [Enter]

For example, to enable the Go To function, type the following:

   swmode goto on [Enter]

The following tables show the possible values and formats for the **Switch Mode** formulas:

Command	Description
swmode	Switch Mode command

Input Command	Description
i	Input command

Port number	Description
xx	01-04 port (default is 01)

Control	Description
next	Priority is placed on the next port that has a new source connected to it (default)

Control	Description
default	No automatic switching
auto	Priority is placed on a selected port

Control	Description
goto on	Switch to the next port with a powered on source device when the current input source is off.
goto off	Disable Go To (default)

The following table lists the available commands:

Command	Input	Port #	Control	Enter	Description
swmode	-	-	default	[Enter]	Use Default switch mode
	-	-	next	[Enter]	Use Next switch mode
	i	xx	auto	[Enter]	Use Auto switch mode for port #
	-	-	goto on	[Enter]	Enable Go To function
	-	-	goto off	[Enter]	Disable Go To function

The read command allows you to read information about the connected device. Click **Send** to retrieve information.

Read Command

To view the current configuration settings of the device.

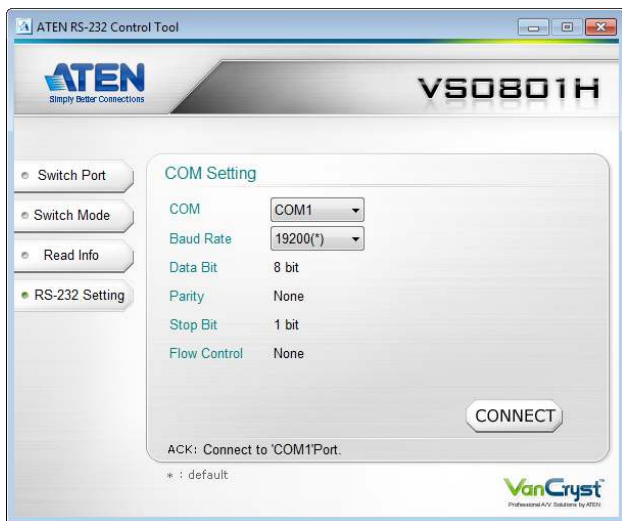The formula for the Read command is as follows:

1. Read Command [Enter]

To read the current configuration settings, type the following:

read [Enter]

The following table shows the value for the **Read** formula:

Command	Description
read	Read information from the device

On the RS-232 Settings page, the serial port should be configured as follows:

Baud Rate	19200
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

From the RS-232 Settings page you can set the COM serial port and Baud Rate. To set the COM port or Baud Rate, do the following:

◆ Select a **COM** port or **Baud Rate** from the drop-down menu and click **CONNECT**.

If the port connection exists, the *Acknowledgment* message will read: Open port 'COM1' successfully.

Specifications

Function			VS0801H
Display Connections			1
Connectors	Device	HDMI In	8 x HDMI Type A Female (Black)
	Display	HDMI Out	1 x HDMI Type A Female (Black)
	RS-232 Port		1 x DB-9 Female (Black)
	Power		1 x DC Jack
Switches	Port Select		8 x Pushbuttons
LEDs	Selected		8 (Green)
HDMI Resolution			HDTV resolutions of 480p, 720p, 1080i, 1080p (1920x1080); WUXGA (1920x1200)
Power Consumption			DC5.3V, 3.71W
Environment	Operating Temp.		0–50ºC
	Storage Temp.		-20–60ºC
	Humidity		0–80% RH, Non-condensing
Physical Properties	Housing		Metal
	Weight		1.75 kg
	Dimensions (L x W x H)		43.70 x 15.97 x 4.40 cm

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM THE DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK OR ITS DOCUMENTATION.

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