Pantera ARINC 818 4x4 Switch

With the Pantera 4x4 switch from Great River Technology, you can connect any ARINC 818 input to any ARINC 818 output. This can be achieved using a simple Web browser interface without any software installation or via the PanteraView software included with your switch.

Included

- **Pantera 4x4 Switch** (link rate specified by customer)
- **PanteraView installation software** (on CD-ROM)
- **DC power wall adapter** (24 V_{DC})
- **Network crossover cable** (for direct connections between your PC or laptop and the Pantera switch
- **LC fiber-optic cables**

Pantera switch features

IP address reset to default – You will be able to set the IP address of the Pantera switch using either the Web browser interface or the PanteraView software. In the event the new IP address is ever forgotten, there is a physical IP address reset located on the unit. This reset will return the switch to the default network address of **192.168.0.123**. The reset is accessed through a small **Reconfig** hole located next to the Ethernet port. To rest to the default address, insert a paper-clip end into the access hole. You will feel a button detent when depressing the reset.

Rocker switch – The Pantera has a rocker switch with three positions:

- **Reset** – This position will reset internal electronics and return all ARINC 818 outputs to idle.
- **Run** – Keep the rocker switch in this position for normal operation.
- **Test Pattern** – For Pantera units with test pattern capability, this position transmits test patterns to all output channels.

LED status lights are green when:

- **Power** – The Pantera switch is currently powered and ready
- **CH1 Active** – An optical source is attached to CH1 input
- **CH2 Active** – An optical source is attached to CH2 input
- **CH3 Active** – An optical source is attached to CH3 input
- **CH4 Active** – An optical source is attached to CH4 input

- **Test Pattern** – For units with test pattern capability, a test pattern is being transmitted on all outputs

Optical ports – The switch includes four pluggable optical transceiver modules, each having one receive and one transmit port. The inputs to the switch are labeled **RX**. The outputs are labeled **TX**.

Pantera web interface

To use the Pantera web interface, simply connect your PC or laptop to the Pantera by way of LAN or directly with the crossover Ethernet cable.

You can now set channel configurations or change the IP address of the device. This interface is compatible with common Web browsers such as Internet Explorer, Firefox, and (with version 2.0 and later) Chrome and Opera.
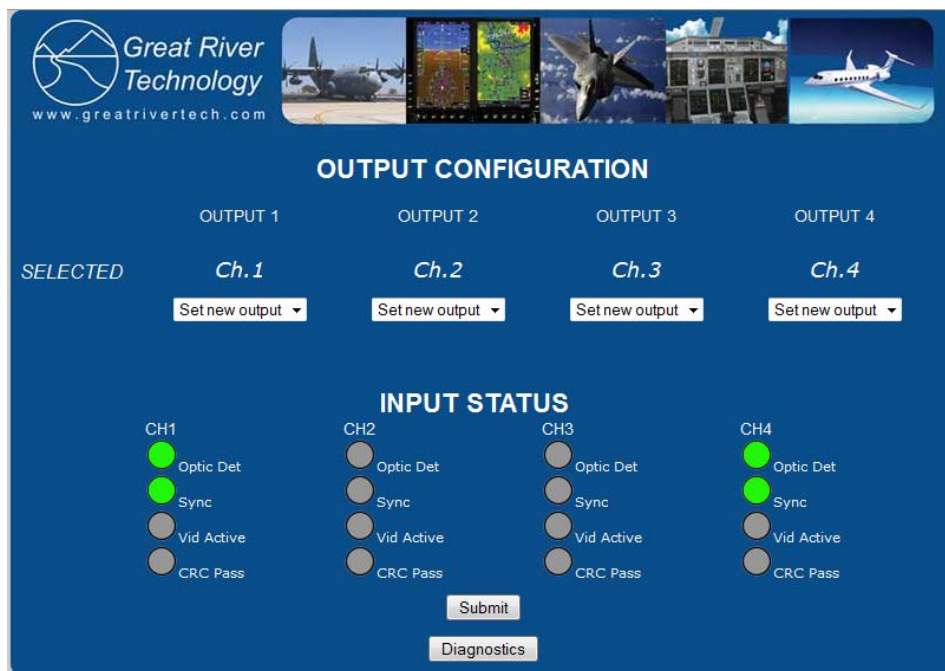
Setting your switch configuration – Use the web interface to map any ARINC 818 input to any output using the pull-down menus. Use pull-down menus to choose the desired switch configuration. Click **Submit**.

Switch input status – This web interface indicates the presence and the health of fiber-optic inputs to the switch. There are four indicators for each input port, defined as follows:

- Optic Detect – Green indicates optic power is detected.
- Sync – Green indicates valid 8b10b encoding is detected.
- Vid Active – Green indicates ARINC 818 packets have been detected with video data.
- CRC pass – Green indicates ARINC 818 packets have valid CRCs.

Diagnostics page – The **Diagnostics** button on the home page will take you to a diagnostics page that can be used to verify software and firmware versions and set the unit's IP address.

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PanteraView software interface

PanteraView runs on Windows 7 (x86, x64) or Windows XP and must be installed by an administrator:

- Insert the PanteraView CD-ROM. In the **AutoPlay** window, select **Open folder to view files**.
- In the installation folder, right click **PanteraViewInstallation.exe** and choose **Run as administrator**.
- When the PanteraView Setup Wizard welcome page appears, click **Next**.
- Verify the install location of PanteraView, and click **Next**.
- In the **Confirm Installation** window, click **Next**. Thereafter a progress bar will show. The installation may pause for Windows security authorization.
- When the **Installation Complete** window appears, click **Close**.

Use PanteraView to set channel configurations or change the IP address of the switch.

Direct connection to Pantera – Upon opening the interface, type the IP address of the Pantera into the field below **Enter IP Number**. Select **Connect**.

Setting your switch configuration – Once connected, use the interface to map any ARINC 818 input to any output using the pull-down menus.
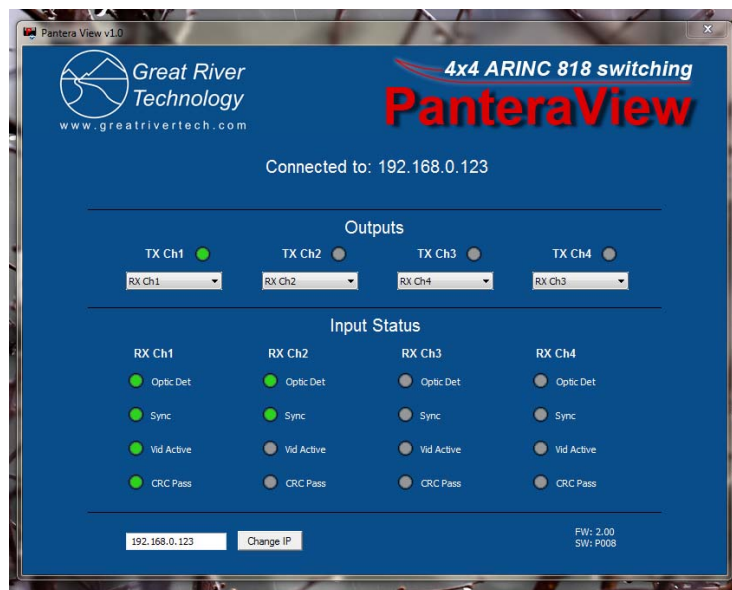
Switch status – This interface indicates the presence and the health of fiber-optic inputs and outputs for the switch. There are four indicators for each input port. When lit green:

- Optic Detect – Optic power is detected.
- Sync – Valid 8b10b encoding is detected.
- Vid Active – ARINC 818 packets have been detected with video data.
- CRC pass – ARINC 818 packets have valid CRCs.

The single indicator for each output port shows green when ARINC 818 packets being output have been detected with video data. Below each port is a dropdown field that can be used to set the output port to idle or to assign a new input channel to it.

IP Address – To change the IP address, type the new address into the address field at the bottom right of the interface, then select **Change IP** button.
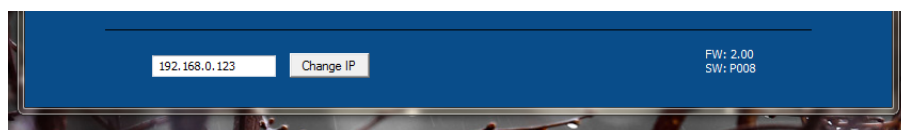
Connection through a LAN

The Pantera IP address can then be set by following the steps listed on the **Diagnostics** page of the web interface or by using **Change IP** in Pantera View. Once this new IP address is set, it will remain in the unit through power cycles. With the new IP address set, you can connect your switch to your LAN and access it by typing the new IP address into your browser or by connecting upon opening PanteraView.

Note: Do not use the crossover cable to connect to your LAN. Use standard network cables for PC-to-LAN and Pantera-to-LAN connections.

Steps for connecting to the Pantera switch

The first time you connect to the Pantera should be direct to a PC (that is, removed from the LAN). Once this connection is made, the IP address of the unit can be changed via the Web interface

Thereafter, you can connect to the Pantera switch directly from your PC or through a LAN. The Pantera is delivered with the default IP set to 192.168.0.123. Because this is a fixed IP address (rather than one dynamically assigned), be sure the IP address does not conflict with other IP addresses on your LAN. Contact you network administrator to determine a fixed IP address that can be used safely with the Panera on your LAN. You can take the simple steps described below to set this IP in the Pantera unit.

Direct connection to the Pantera – To connect the Pantera direct to a PC, you must use a standard crossover cable (as provided) or you can use standard network cable that connects to the switch though an Ethernet switch or hub that is NOT connected to you LAN.

Once the cable is connected, you may also need to change the network settings of the PC from "DHCP" to "Fixed IP". (This is because some PC operating systems lose their dynamically assigned IP address when disconnected from the DHCP server on the LAN). Set the fixed IP address of the PC to something other than that of the Pantera (such as 192.168.0.100), and also make sure the subnet mask on the PC is set to 255.255.255.0.

Once this is done, you can open your Web browser and type the IP address directly into the address bar as shown below:


Connection to the Pantera through a LAN – To connect the Pantera to a LAN, contact your network administrator to determine a fixed IP address that can be used safely with your LAN. To change the IP address to this new address, first use the steps above to make a direct connection to the Pantera.
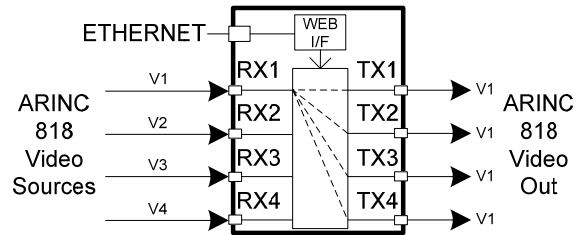
Pantera channel topologies

The Pantera 4x4 switch is highly configurable through the web interface or PanteraView. Below are examples of common connection topologies:
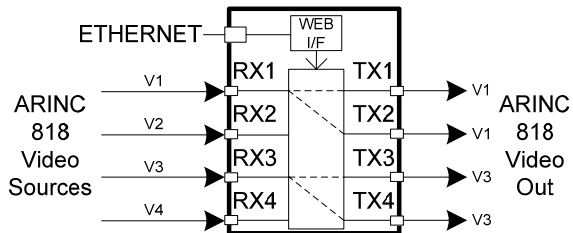
UNICAST: Connect one RX input to a single TX output.
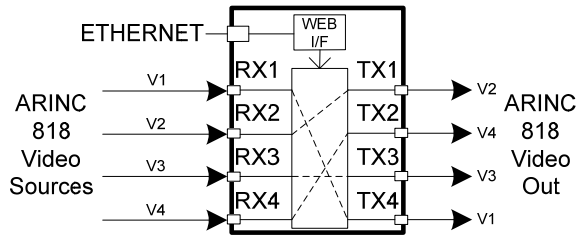
BROADCAST: Connect one RX input to all TX outputs

MULTICAST: Connect one RX to more than one TX output.

MIXED: Mix and direct RX inputs in many different ways.