3080IPX

Module 2

Evertz Parts - IPX

3080IPX-16 → 16 x 1/10GE ports

Maximum Throughput

Uncompressed 16x 32 SD-SDI = 512 x 512 signals

6 HD-SDI= 96 x 96

3 3G = 48 x 48

Compressed 16 x 66 J2K = 1056 x 1056

Power: 60W

Evertz Parts - IPX

3080IPX-32 → 32 x 1/10GE ports

Maximum Throughput

Uncompressed 32x 32 SD = 1024 x 1024 signals

6 HD = 192 x 192

3 3G = 96 x 96

Compressed 32 x 66 J2K = 2112 x 2112

** Theoretical value, actual maximum of the 3080IPX is 2048 signals*

Power: 80W

Evertz Parts - IPX

3080IPX-64 → 64 x 1/10GE ports

Maximum Throughput

Uncompressed 64x 32 SD = 2048 x 2048 signals

6 HD = 384 x 384

3 3G = 192 x 192

Compressed 64 x 66 J2K = 4224 x 4224

** Theoretical value, actual maximum of the 3080IPX is 2048 signals*

Power: 120W

Evertz Parts – IPX 25G

3080IPX-25G → 128 x 1/10/25GE ports

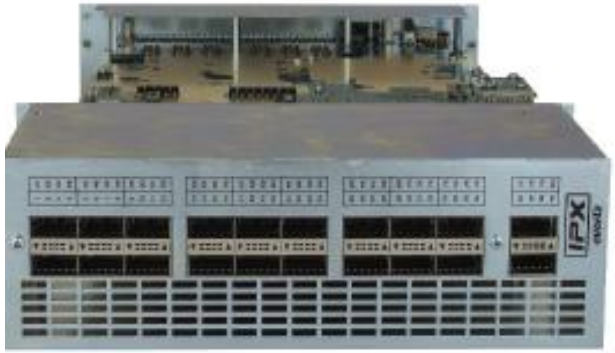
Maximum Throughput

Uncompressed 128 ports x 16 HD = 2048 x 2048 signals

8 3G = 1024 x 1024 signals

Compressed 128 ports x 62 J2K = 7936 x 7936

*this value calculated at max bandwidth of J2K i.e. 400Mbps



IPX

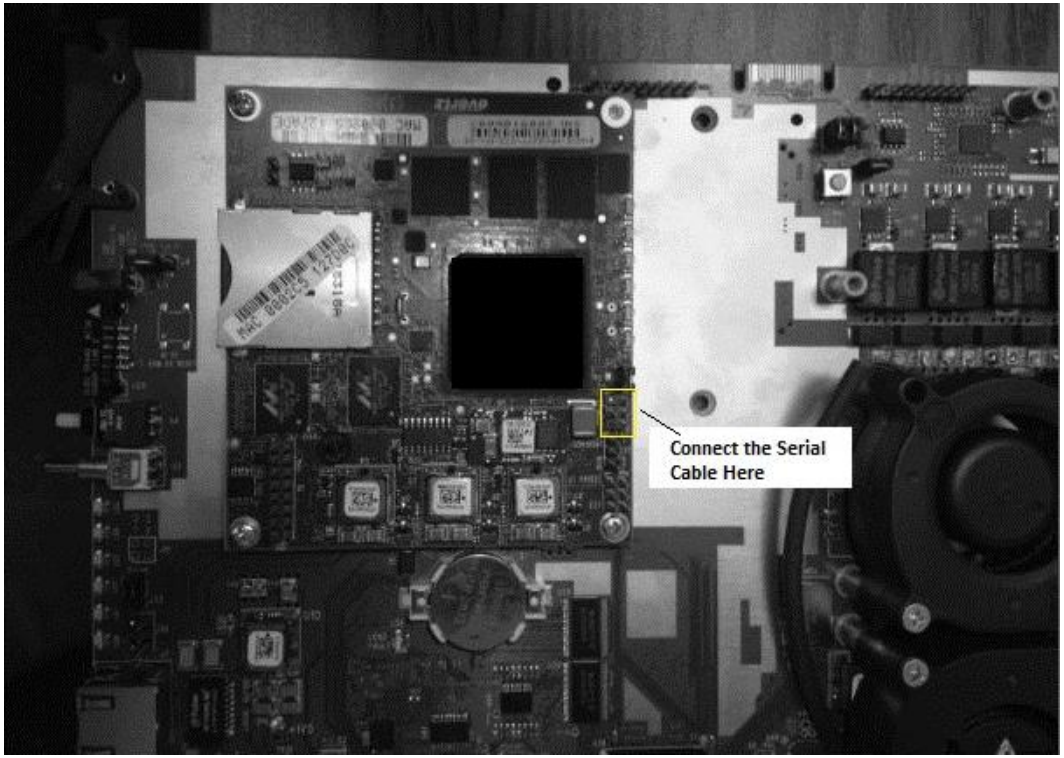
- The 3080IPX 10G series is built with 1G/10G ports and offers sizes of 16, 32 and 64 port options in 160Gb/s, 320Gb/s and 640Gb/s bandwidth configurations.
- The 3080IPX 25G series is built with 1G/10/25G ports with a total of 128 ports up to 3.2Tb of bandwidth
- The 3080IPX receives all the SNMP controls from the Frame Controller through the card
- The Frame Controller acts like a dumb switch to the 3080IPX.

Frame Styles

- There are a number of frame options depending on the size of IPX being used:
  - EMX1-FR: 1 RU can hold either the IPX-16 or IPX-32
  - EMX3-FR: 3 RU can hold any of the IPX-16, IPX-32 or IPX-64
  - EMX6-FR: 6 RU can hold any of the IPX-16, IPX-32 or IPX-64
  - Ev6-FR: 6RU can hold the IPX-128

Setting Up the IPX

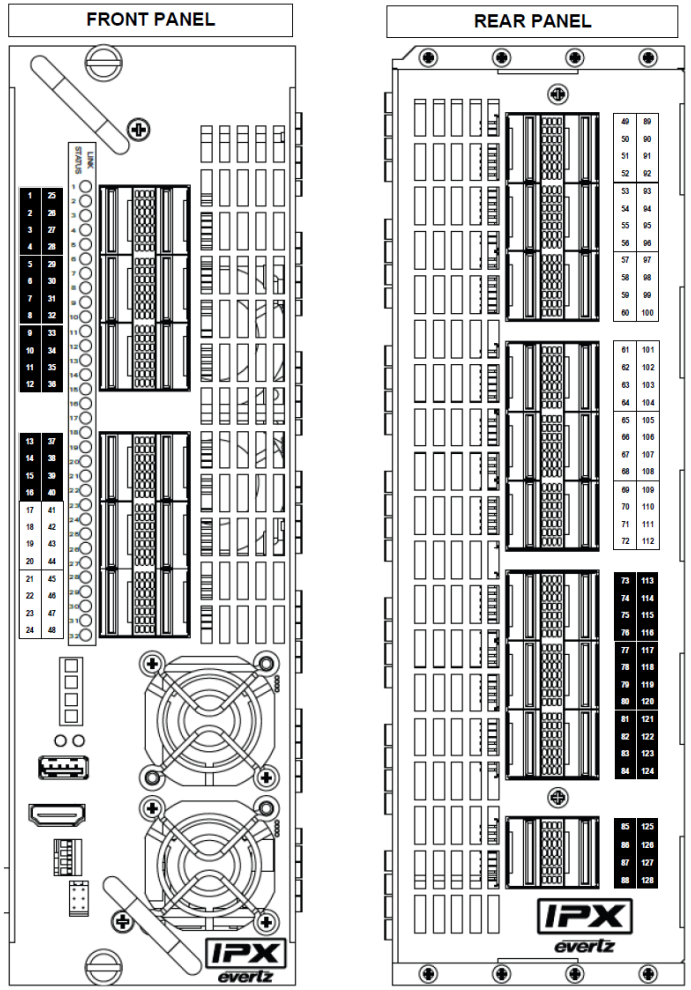
- Connect the serial cable to the serial port of the IPX and login to the serial menu
- Configure the desired network settings for the device



- Reboot the module
- Connect a Cat5 cable from the port labeled 1B on the frame to the Control Network to pass control data

Port Allocation IPX-128

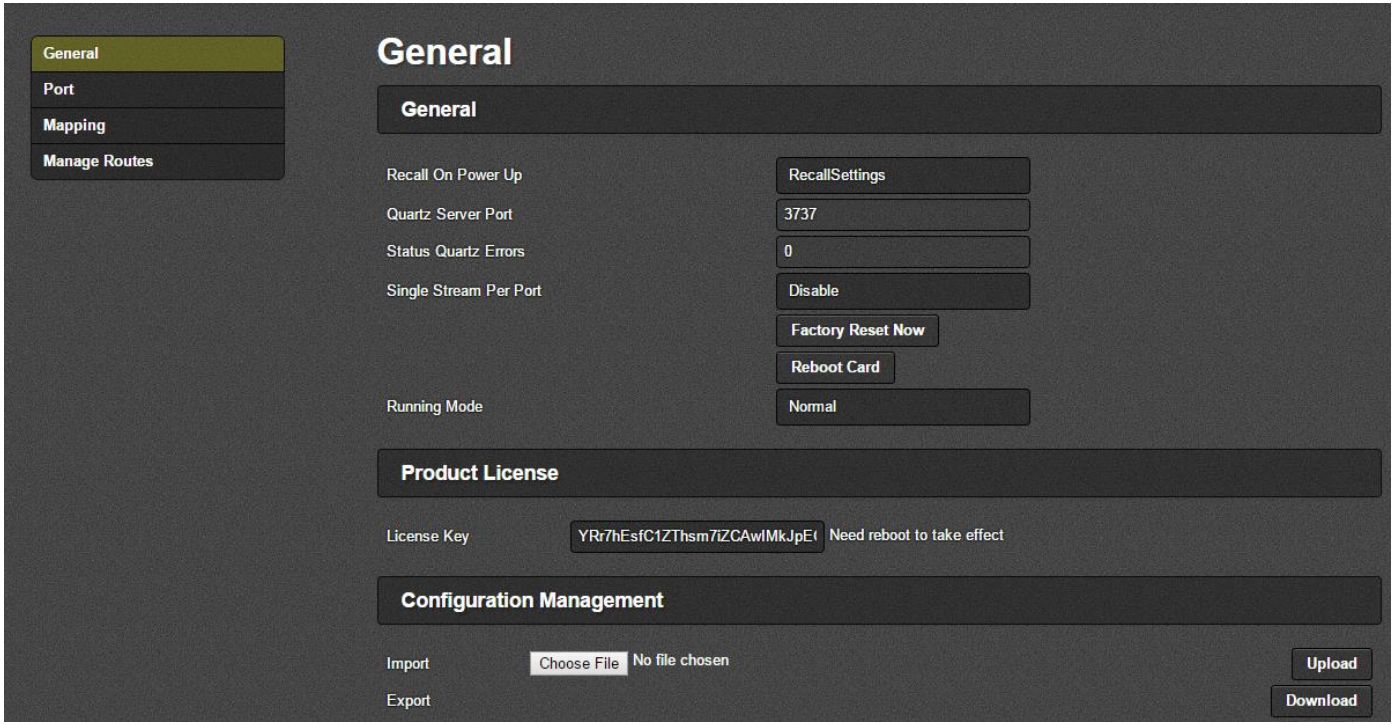
- 3080IPX-128-25G ports can be configured to support port speeds of 1G, 10G, 25G and 100G (4x 25G):



- Assign individual 25G ports to those ports numbered with white text on black background: 1-16, 25-40, 73-88, 113-128
- Assign1G/10G/100G ports to those ports numbered with black text on white background: 17-24, 41-48, 49-72, 89-112
- Additional 1G/10G/100G ports can be assigned to any remaining ports from the port group defined in Step 1.
- Individual 25G ports **cannot** be assigned to the port group defined in step 2: 17-24, 41-48, 49-72, 89-112

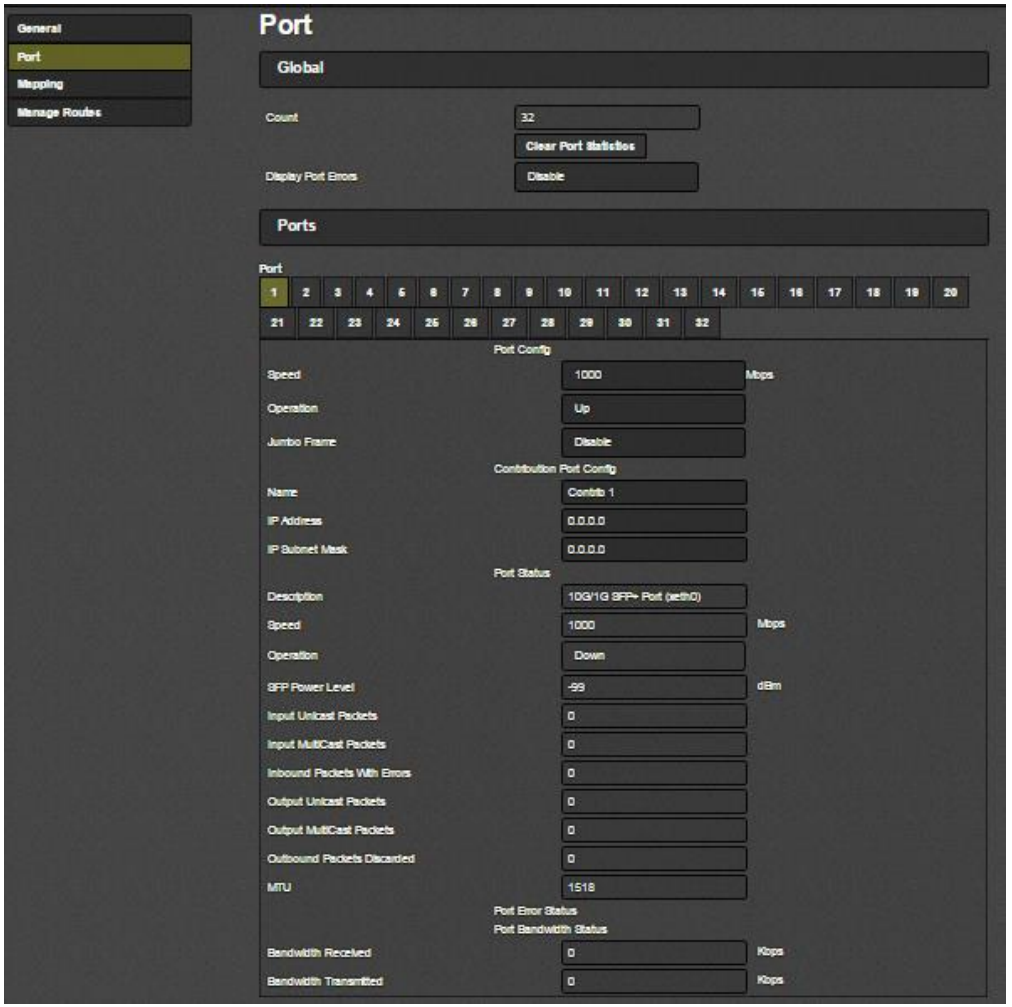
IPX Web Interface - General

- Key Feature of the General page is the Configuration Management tool
- It allows the user to import or export a configuration file for the IPX.



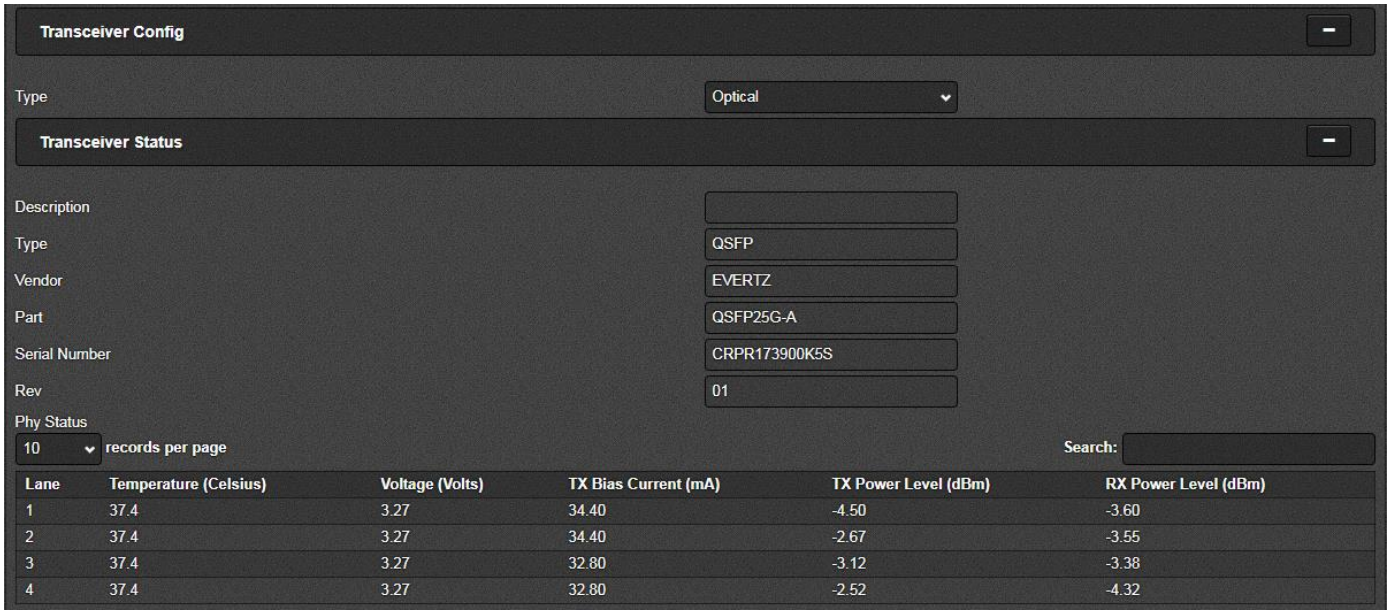
IPX Web Interface – Port Control

- This page is designed for troubleshooting
- Can check details such as port operation and transmit/received bandwidths
- Ports must be enabled as they are needed
- Port speed is essential to the port status negotiation and must be set to match the type of SFP being used



IPX-25G Port Transceiver Config

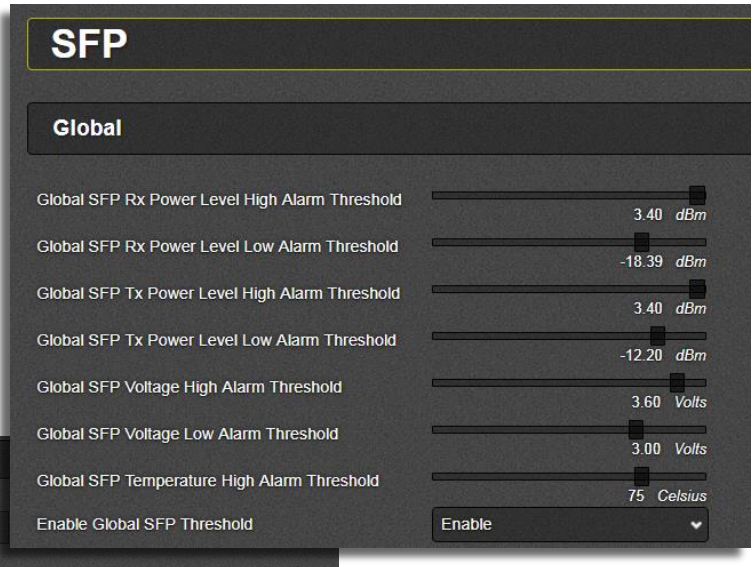
- Part of the Port page that exists uniquely for the IPX-128 is the Transceiver configuration
  - This will display all of the power levels and other important values on each lane of the QSFPP

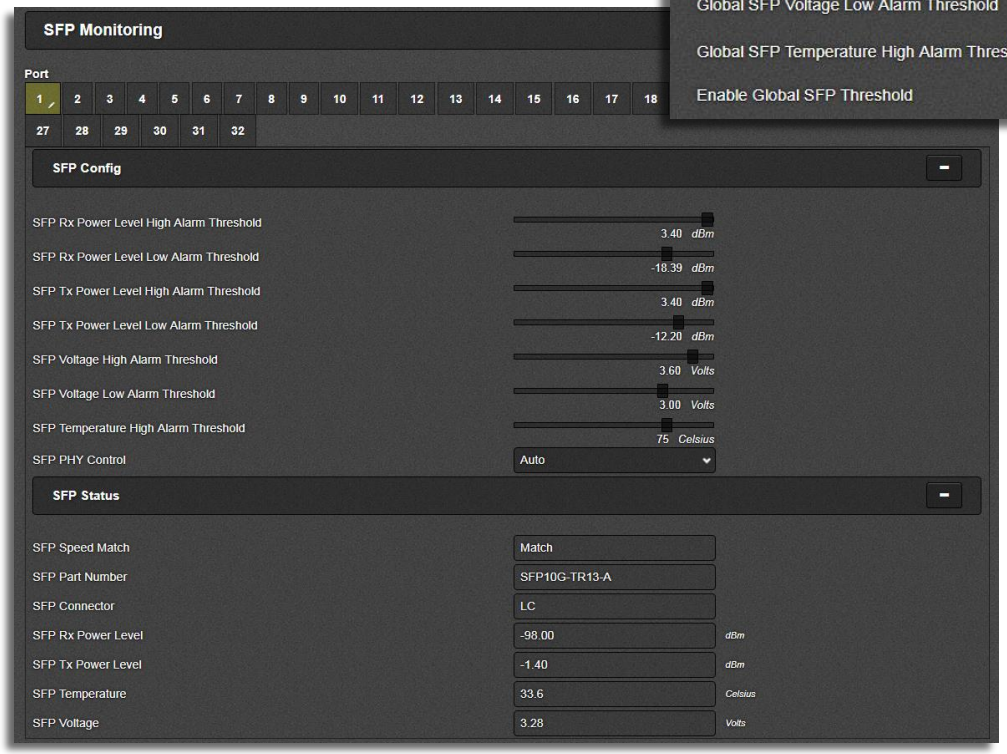


Lane	Temperature (Celsius)	Voltage (Volts)	TX Bias Current (mA)	TX Power Level (dBm)	RX Power Level (dBm)
1	37.4	3.27	34.40	-4.50	-3.60
2	37.4	3.27	34.40	-2.67	-3.55
3	37.4	3.27	32.80	-3.12	-3.38
4	37.4	3.27	32.80	-2.52	-4.32

IPX-10G Web Interface - SFP

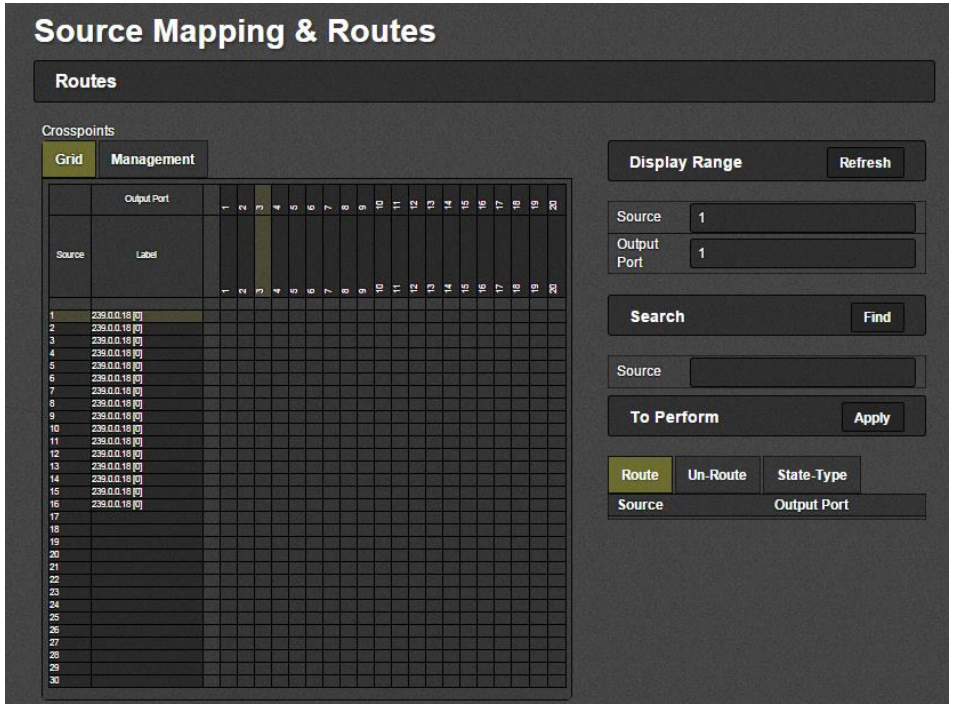
- The SFP page will allow the user to setup monitoring parameters for the SFP's as well as view the actual parameter values of each SFP





IPX Web Interface – Source Mapping and Routes

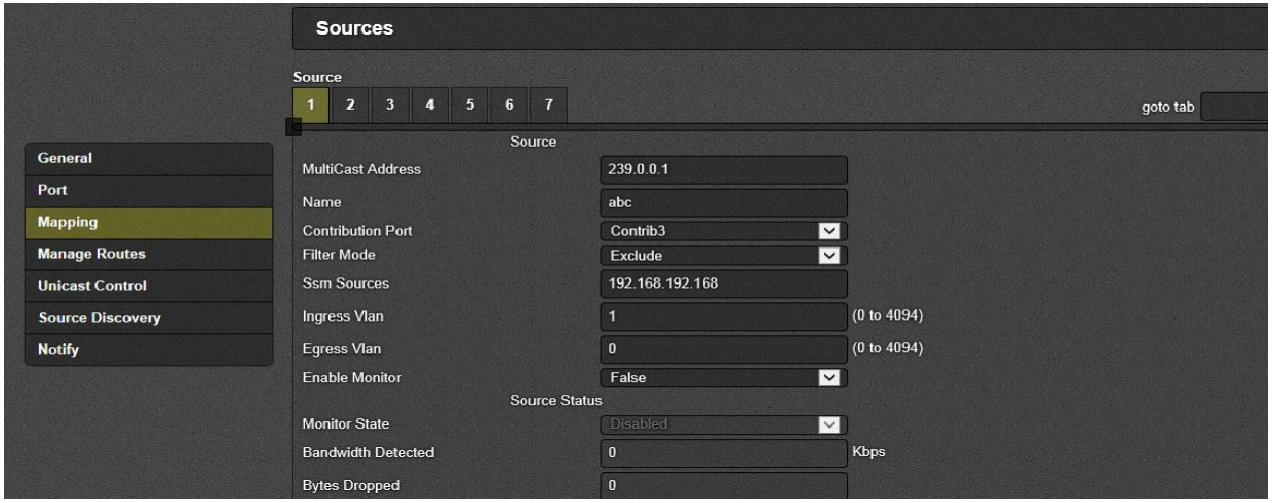
- The X-Y Area is where to route a source towards a destination through a cell cross-point selection. It has the sources (Multicast) listed down the left hand and the destinations (physical Ethernet port) listed across the top of the panel.



- Number in square brackets is the SFP port number its connected to, the number along the input column is the multicast source number, these 2 values are unrelated

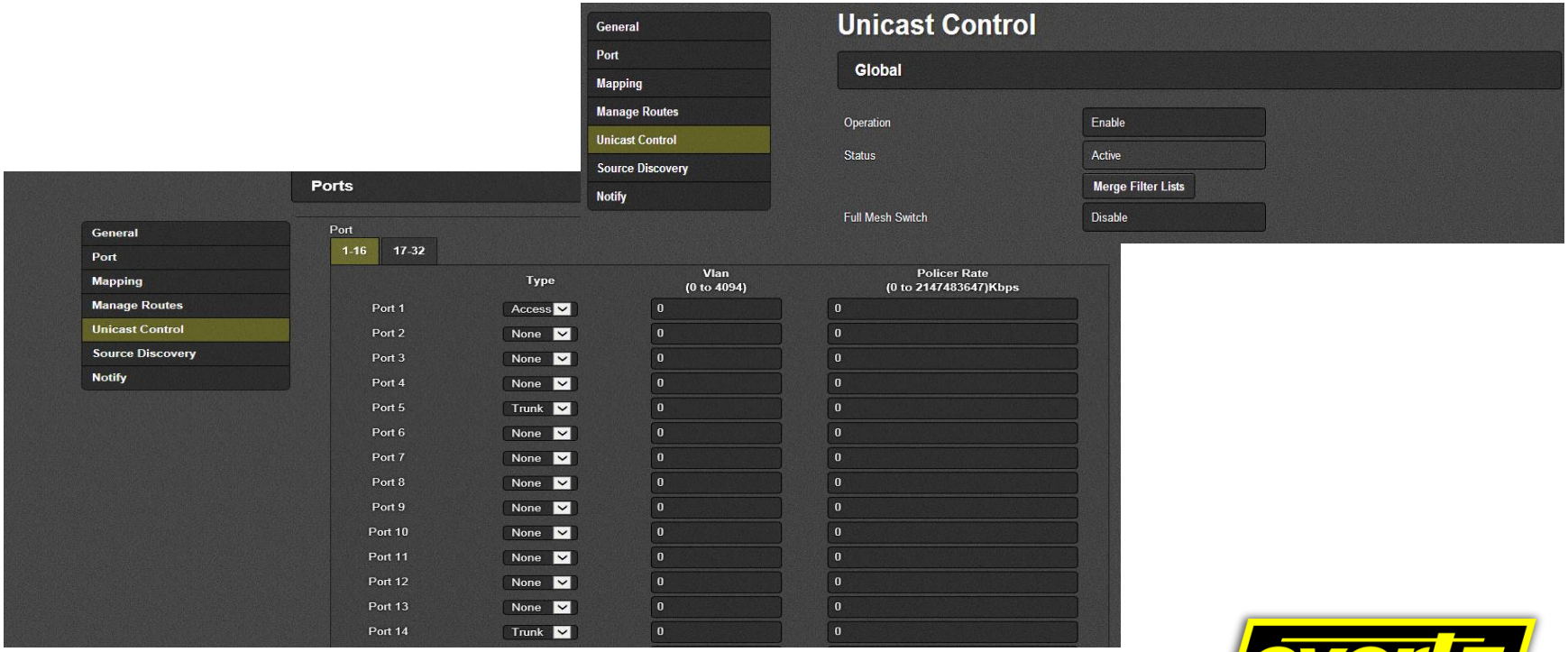
IPX Web Interface - Mapping

- **Input:** This field displays the index number of each new source entry in the table.
- **Multicast Address:** This control allows the user to set the multicast IP address of each new source entry in the table.
- **Contribution Port:** This control allows the user to set the contribution port associated to each new source entry in the table.
- **Filter Mode:** This control allows the user to set the filter mode to either the INCLUDE or EXCLUDE option. INCLUDE mode is necessary for IGMP v3 requests.
- **SSM Sources:** This control allows the user to set the Source Specific Multicast (SSM), or the Source IP of the sender, that the source multicast stream will be requested from using IGMP.
- **Ingress VLAN:** This control allows the user to set the VLAN of the incoming source multicast stream.
- **Egress VLAN:** This control allows the user to set the VLAN of the outgoing source multicast stream. Upon setting the egress VLAN, the multicast stream is tagged when routed to an egress port (i.e. leaving the 3080IPX).



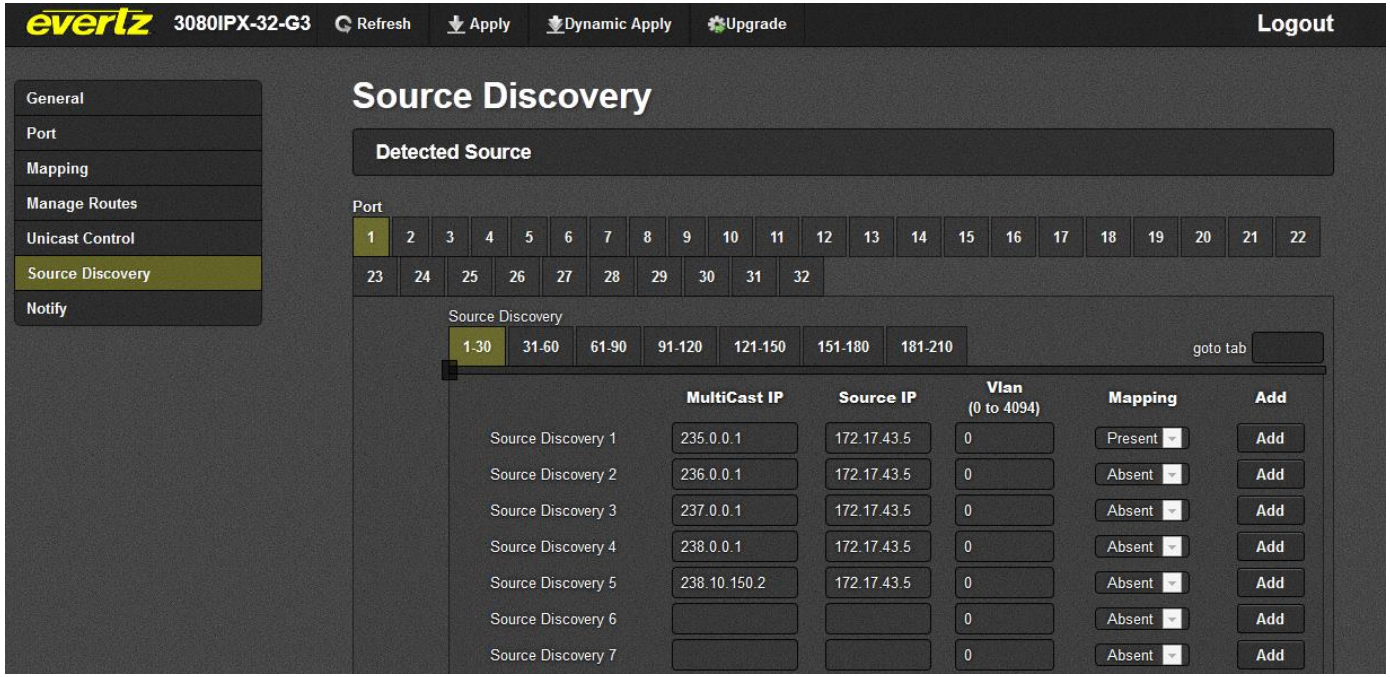
IPX Web Interface – Unicast Control

- **Operation:** This control allows the user to enable or disable to L2 unicast forwarding feature.
- **Status:** This field displays the current state of the unicast control feature.
- **Merge Filter Lists:** This control allows the user to merge IP filter list of the unicast control upstream port.
- **Full Mesh Switch:** This control allows the user to enable or disable "Full Mesh Switch" feature, i.e., allowing the L2 communication between any two ports belonging to the L2 pool (Access or Trunk port)



IPX Web Interface - Source Discovery

- the Source Discovery feature enables the 3080IPX to automatically discover all the multicast sources present at each port
- After discovering the sources, the user can selectively add each one to the mapping table as a new source
- This feature is available with the license key: +SCR



Upgrade Procedure

- Upgrades are typically performed through the web interface
  - Select the desired firmware version followed by the *Upgrade* button
  - Do not refresh the page or reboot the card while the firmware push is in progress.
  - When the upgrade is complete the card will reboot automatically