Document information

This document lists the new features and bugfixes available in the new GigaCore firmware.

1. AVB Support

The 2.8.0 firmware enables support for the following standards:

IEEE 802.1AS: Timing and synchronization for Time-Sensitive Applications (gPTP);

IEEE 802.1Qat: Stream Reservation Protocol (SRP);

IEEE 802.1BA: Audio Video Bridging (AVB);

IEEE 802.1Q-2011: Forwarding and Queuing Enhancements for Time-Sensitive Streams (FQTSS).

The GigaCore Ethernet switch series are now AVNU certified.

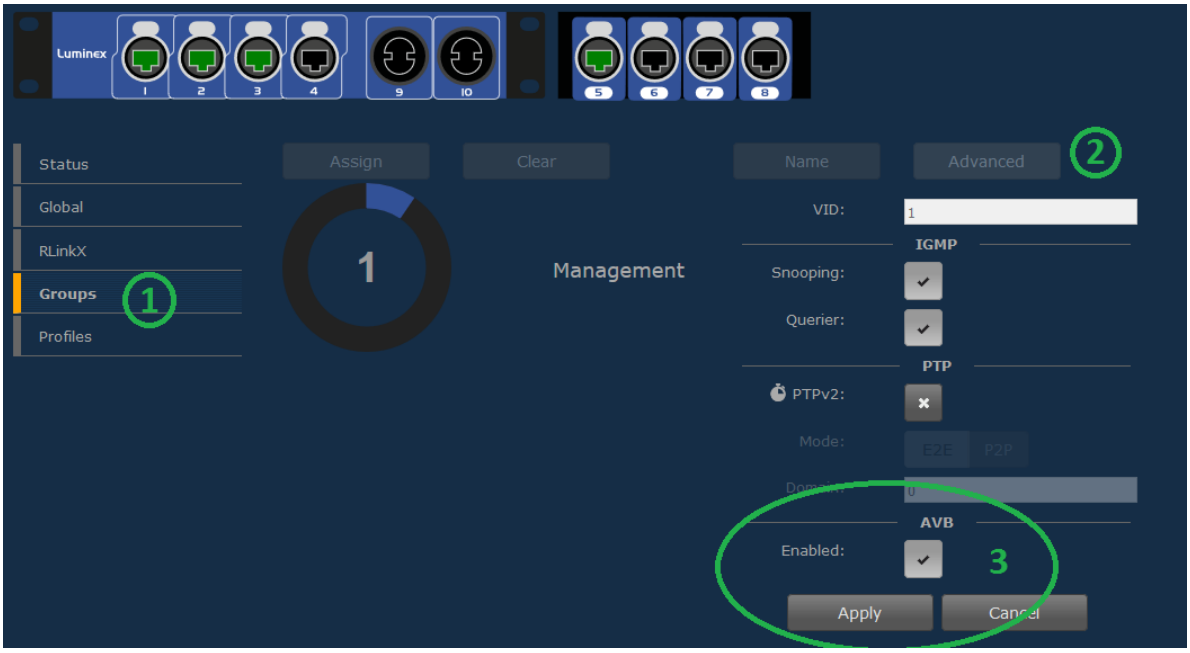
More info here.

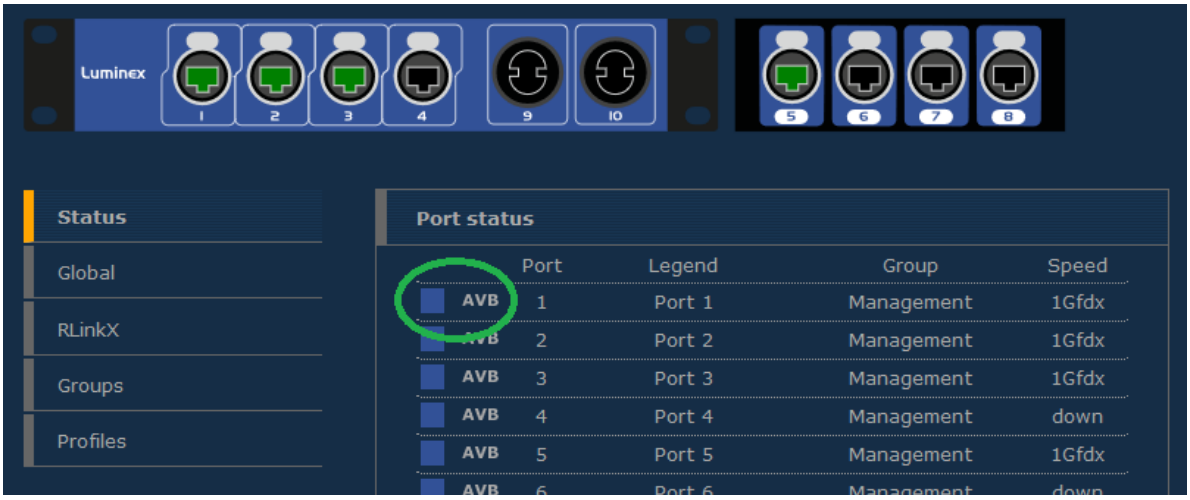
1.1) How to enable AVB

Enabling AVB is as easy as 1-2-3:

1. Enter group settings.
2. Select the group in which you want to enable AVB and open the advanced tab.
3. Enable the AVB check-box and hit apply.

Done, Notice how the Port Status is showing AVB is enabled.





1.2) AVB QoS Mapping

When you enable AVB the following QoS mapping will be applied. Please note this is switch wide.

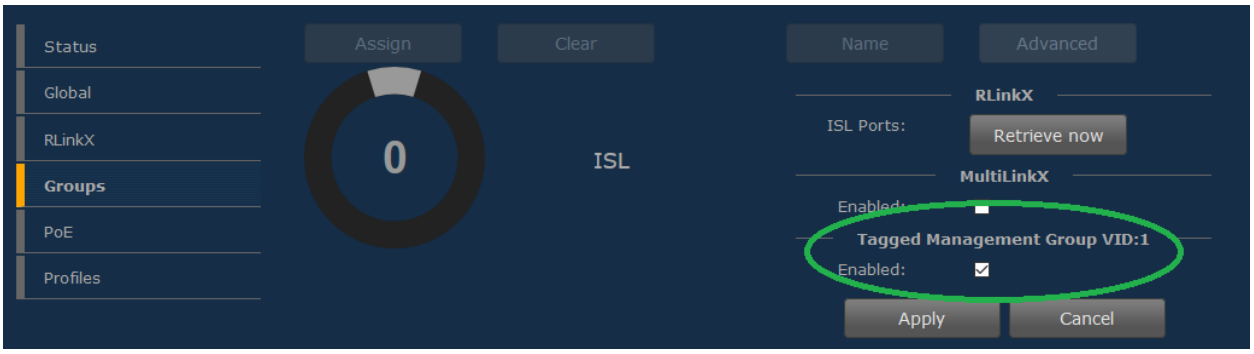
Protocols	AVB Enabled			AVB Disabled		
	QoS Mapping			*QoS Mapping*		
	Decimal	*DSCP Class*	*Queue*	*Decimal*	*DSCP Class*	*Queue*
	AVB Class A		7			
	AVB Class B		6			
	PTP		5			
	MRP		4			
	63		4	63		7
	62		4	62		7
	61		4	61		7
	60		4	60		7
	59		4	59		7
	58		4	58		7
	57		4	57		7
Dante PtP	56	CS7	4	56	CS7	7
	55		4	55		6
	54		4	54		6
	53		4	53		6
	52		4	52		6
	51		3	51		6
	50		3	50		6
	49		3	49		6
	48	CS6	3	48	CS6	6
	47		3	47		5
Dante RTP / AES67 PtPV2	46	EF	3	46	EF	5
	45		3	45		5
	44		3	44		5
	43		3	43		5
	42		3	42		5
	41		3	41		5
	40	CS5	3	40	CS5	5
	39		3	39		4

	38	AF43	2	38	AF43	4
	37		2	37		4
	36	AF42	2	36	AF42	4
	35		2	35		4
AES67 RTP	34	AF41	2	34	AF41	4
	33		2	33		4
	32	CS4	2	32	CS4	4
	31		2	31		3
	30	AF33	2	30	AF33	3
	29		2	29		3
	28	AF32	2	28	AF32	3
	27		2	27		3
	26	AF31	2	26	AF31	3
	25		1	25		3
	24	CS3	1	24	CS3	3
	23		1	23		2
	22	AF23	1	22	AF23	2
	21		1	21		2
	20	AF22	1	20	AF22	2
	19		1	19		2
	18	AF21	1	18	AF21	2
	17		1	17		2
	16	CS2	1	16	CS2	2
	15		1	15		1
	14	AF13	1	14	AF13	1
	13		1	13		1
	12	AF12	0	12	AF12	1
	11		0	11		1
	10	AF11	0	10	AF11	1
	9		0	9		1
Dante reserved	8	CS1	0	8	CS1	1
	7		0	7		0
	6		0	6		0
	5		0	5		0
	4		0	4		0
	3		0	3		0
	2		0	2		0
	1		0	1		0
	0		0	0		0

2. Added support for the new RPSU 400

More information regarding the functionality and specifications of the RPSU 400 can be found here.

3. Added option to disable tag native VLAN on ISL



This menu offers the user to connect third party network device who cannot communicate with the switch through tagged management packets.

4. Bug Fixes

- Fix storing custom QoS mappings on cli.
- ISL ports now display PTP stopwatch when PTP is enabled
- Fix PoE+ negotiation for JVC camera
- Fix incorrect PoE coloring in profile manager

5. Limitations Known Issues, and Restrictions

- When enabling AVB the following limitations apply:
  - PTPv2 is disabled in every group;
  - MultiLinkX (aggregation) is disabled;
  - VID 2 is not permitted for a group;
  - Only use 100Mbps/1Gbps FDX port links;
  - AVB can only be active in one group.
  - Jumbo frames are disabled switchwide when AVB is enabled.
  - Copper SFP's are not supported.

6. Remarks

In very rare occasions, when disconnecting an active link with gPtP traffic, an Out Of Sync (OOS) problem can occur. When the link is disconnected when less than 3 bytes of a packet were received, the hardware timestamper of the switch can be offset with 1.

The GigaCore can detect this when the link is connected again and will indicate this port has an OOS problem by a blinking RLinkX LED. The only way to resolve from this OOS situation for this port, is to reboot the switch.

A message in the web interface will clearly mark this error and give the user the possibility to reboot the switch remotely, at its convenience.