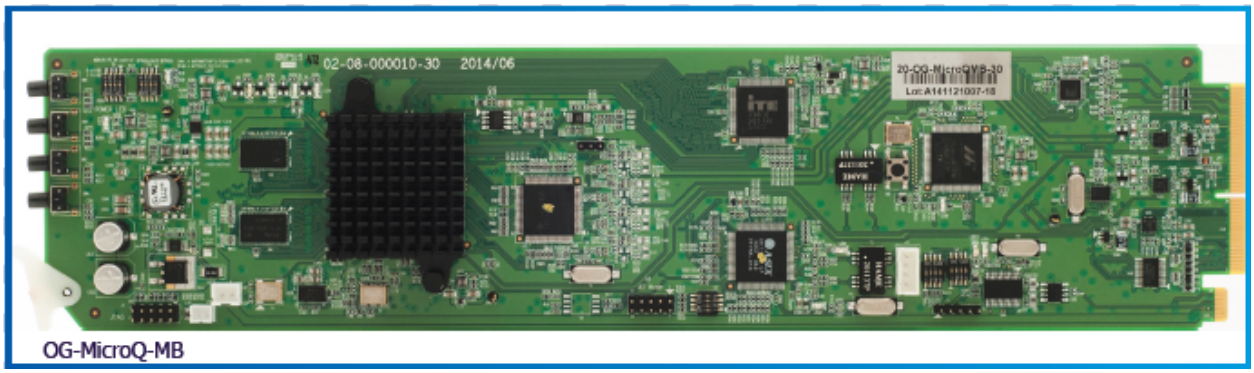
OG-MicroQ
User Manual



APANTAC LLC, 7470 SW BRIDGEPORT ROAD, PORTLAND, OR 97224
INFO@APANTAC.COM, TEL: +1 503 968 3000, FAX: +1 503 389 7921

COPYRIGHT and TRADEMARK

WARRANTY STATEMENT

Apantac LLC (herein after referred to as "Apantac") warrants to the original purchaser of the products manufactured by Apantac (the "Product,") will be free from defects in material and workmanship for a period of three (3) year from the date of shipment of the Product to the purchaser.
If the Product proves to be defective during the three (3) year warranty period, the purchaser's exclusive remedy and Apantac's sole obligation under this warranty is expressly limited, at Apantac's sole option, to:

(a) repair the defective Product without charge for parts and labor or,
(b) provide a replacement in exchange for the defective Product or,
(c) if after a reasonable time, is unable to correct the defect or provide a replacement Product in good working order, then the purchaser shall be entitled to recover damages subject to the limitation of liability set forth below.

Limitation of Liability

Apantac's liability under this warranty shall not exceed the purchase price paid for the defective product. In no event shall Apantac be liable for any incidental, special or consequential damages, including without limitation, loss of profits for any breach of this warranty.

If Apantac replaces the defective Product with a replacement Product as provided under the terms of this Warranty, in no event will the term of the warranty on the replacement Product exceed the number of months remaining on the warranty covering the defective Product.

Equipment manufactured by other suppliers and supplied by Apantac carries the respective manufacturer's warranty. Apantac assumes no warranty responsibility either expressed or implied for equipment manufactured by others and supplied by Apantac.

This hardware warranty shall not apply to any defect, failure or damage:

a) Caused by improper use of the Product or inadequate maintenance and care of the Product;

b) Resulting from attempts by those other than Apantac representatives to install, repair, or service the Product;

c) Caused by installation of the Product in a hostile operating environment or connection of the Product to incompatible equipment;

Table of Contents

1.0 WHAT'S IN THE BOX

There are 3 different OG-MicroQ sets

OG-MicroQ-SET-1

- 1 x OG-MicroQ-MB
- 1 x OG-MicroQ-RM
- 1 x RJ50 to DB9 cable for GPI/Tally and terminal block

OG-MicroQ-SET-2

- 1 x OG-MicroQ-MB
- 1 x OG-MicroQ-RMx
- RJ45-HDMI receiver
- RJ45-DVI receiver
- 1 x 15ft CATx cable
- 1 x RJ50 to DB9 cable for GPI/Tally and terminal block

OG-MicroQ-SET-3

- 1 x OG-MicroQ-MB
- 1 x OG-MicroQ-RML
- 1 x RJ50 to DB9 cable for GPI/Tally and terminal block

Important Note:

Default IP address: 192.168.1.151
The configuration PC must be on the same subnet as the MicroQ, for example, "192.168.1.1"
The default output resolution is set to 1024x768@59.95 Hz for 60Hz countries and 1024x768@60Hz for 50Hz countries to accommodate the most common display resolution

2.0 Key Features

- Low power consumption - 12 W and Silent – No fan!
- Fixed Quad Split, each window can go full screen
- Accepts 4 x auto-detect 3G SDI, HD SDI, SD SDI and Composite video signals
- Simultaneous HDMI and SDI outputs

- Decode/display up to 8 embedded audio per SDI input
- Ethernet port for Configuration, Dynamic Labels & Tallies interface (TSL)
- One 32 characters labels per Window
- Up to 32 characters
- Text and Background Colors, Transparency are adjustable
- Borders, can be turned ON or OFF
- Visual Alarms (Tags)
- 0 to 8 Embedded Audio Meters can be displayed for each Window
- Audio monitoring output – analog, HDMI
- Four Front Panel Buttons capabilities configurable for:
- Safe Area Markers
- Up to 4 tally levels control with TSL, 2 with GPI
- Support of the TSL protocol v. 3.1 over IP is standard
- 8 x GPI contacts: Configurable for tally or ASCII protocol
- Automatic aspect ratio

3.0 Specifications

Decription	Compact video quad split	Output	1 x HDMI, 1 x SDI
Total Windows	4	HDMI	800x480 to 1920x1200 (1080p) 50/59.94/60Hz
Inputs	3G/HD/SD-SDI/Composite	SDI	Matching the HDMI output resolution up to 3G
Serial Digital Video	SMPTE 424M, 292M, 259M	On Screen Display	Border, Tally, Audio meters, Alarm tags, Safe area marker
Equalization	120m at 2.97 Gbps, 140 m at 1.48 Gbps, 400m at 270 Mbps with Belden 1694A	GPI	8 for tally or AXP (ASCII commands)
Return Loss	>15db up to 1.485 Gbps >10db up to 3G	IP	100 Base-Tx, TSL, AXP_Lite
Embedded Audio	SMPTE-272M-A	Electrical	12 W, 90-250V 50/60Hz
Composite	NTSC (SMPTE-170M), PAL (ITU624-2)	EMI/RFI	Complies with FCC Part 15, Class A, CE, EU,

			EMC, C-tick
Signal Level	1V nominal	Power	DC 5V 3.2A
DC Offset	0V, ± 0.1V	Size	171 mm W x 120 mm D x 44.45 mm H
Impedence	75 Ω	Mount	Magnetic
Return Loss	40 db up to 5MHz	Option	Rack Mount

4.0 Rear Modules

There are three different types of rear modules that can accompany the OG-MicroQ-MB,

	OG-MicroQ-RM	OG-MicroQ-RMx	OG-MicroQ-RML
Video Inputs	4	4	4
Loopouts	0	0	4
SDI Output	1	1	1
HDMI out	1	0	0
HDMI RJ45 out	0	1	0
GPI	8	8	8
AA out	1	1	1
Slot width	2	2	4

Table 1: OG-MicroQ Rear Module comparison table

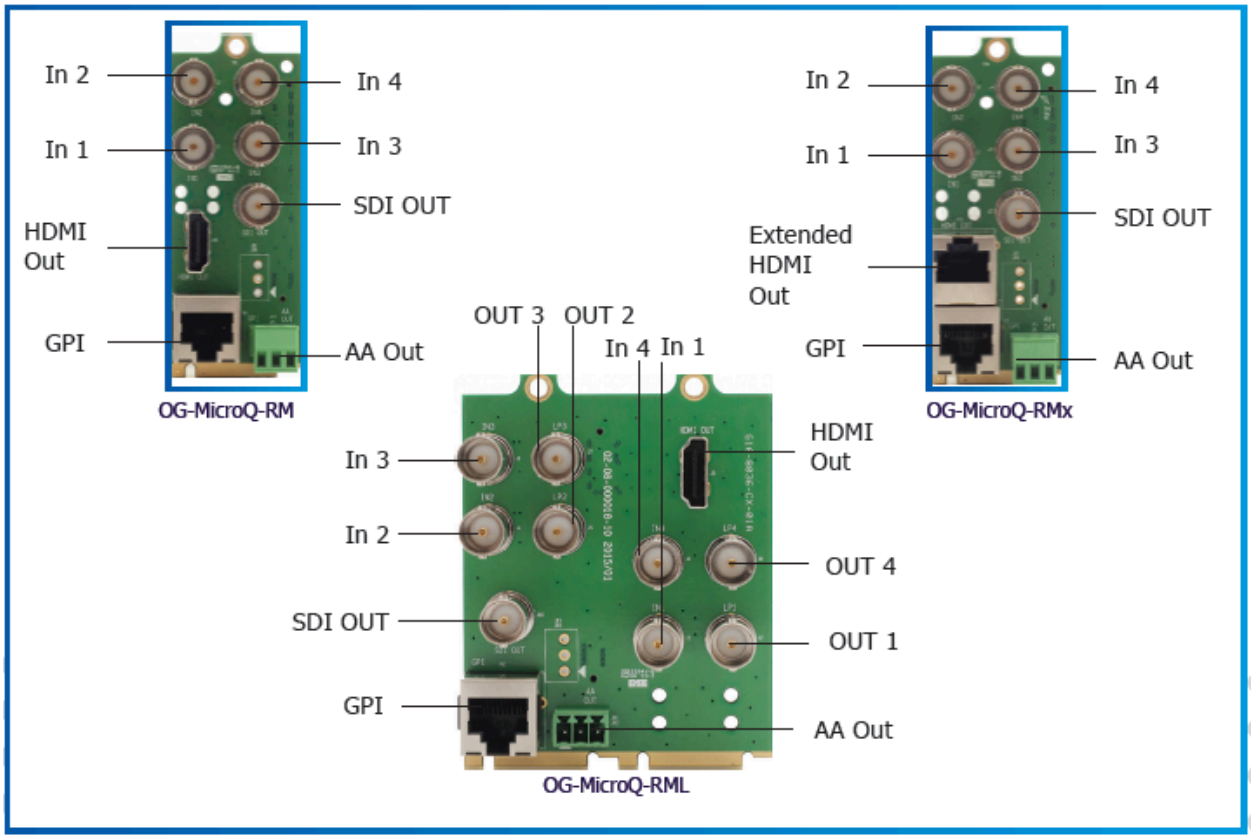
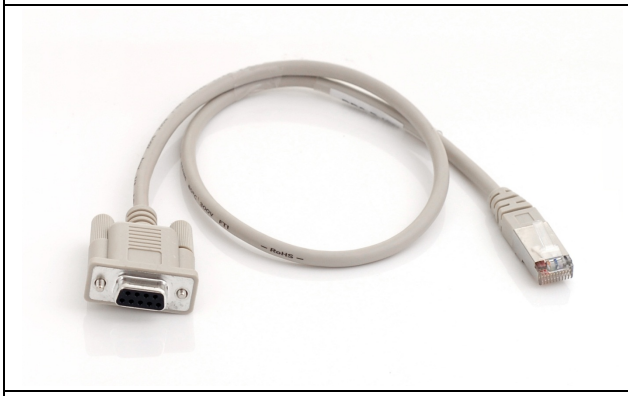
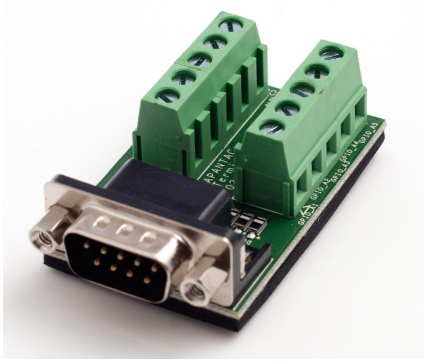


Figure 1: OG-MicroQ Rear Module

5.0 Accessories

RJ50 to DB9	Terminal Block
	
RJ45 to HDMI (RMx)	RJ45 to DVI (RMx)
	
15 ft CAT6 cable (RMx)	HDMI-1-R (RMx)
	

6.0 Dashboard Control

6.1 Getting Started

The openGear Dashboard is design to allow you to quickly access all the feature sets of the OG-MicroQ on a simple User Interface. This section will help you get the OG-MicroQ up and running as quickly as possible.

6.2 Running Dashboard

Before you can successfully run the Dashboard, you must first copy it from the CD prvided and place it in an appropriate location on your computer's HDD.

Now you can run the Dashboard by double clicking on the Dashboard icon.

6.2 Default settings

The default settings of the On screen Elements on the MicroQ are as follows,

Labels

- Default settings
    - On
    - On top of the video
    - Text - <Label>
    - Color – Dark blue
    - Fit to Text

Borders

- Default settings
    - On
    - Color – Dark Blue

Audio meters

- Default settings
    - Off
    - Width - 16

Alarms

- Default settings
    - Video – Off
    - Audio - Off

Tally

- Default settings
    - Off
    - Left LED – Red
    - Right LED – Green
    -

Safe area

- Default settings
    - Off
    - Line color – Yellow

6.4 General setup

Set output resolution

There are multiple output resolutions that can be set it is important that you select resolution and timing that is optimized for your monitor. If you would like to have SDI output simultaneous to your HDMI/DVI output, you will have to select a resolution that is recognized by SDI. There are selections such as "1920x1080+SDI", that will ensure the SDI out timing has been properly set. Also, the frequency is also very important, for most of the NTSC region, you must set the frequency to 59.94 instead of 60, if you would like to have SDI output. The SDI output format must match the HDMI/DVI output timing. However, as an exception, if the HDMI/DVI output is set to 1080p, the SDI output can also be set to 1080i.

Output mode

The main difference between the DVI and HDMI output is that DVI does not carry audio, but HDMI does. If HDMI is selected, HDMI will also carry the audio monitoring output as part of its embedded audio

Labels

The default label is on top (inside) of the video, but this can be modified so the label is outside of the video. The aspect ratio of the video will be adjusted automatically.

Audio monitoring output

One pair of audio can be embedded into the SDI and HDMI out. You can select this pair from the SDI inputs and their embedded audio groups.

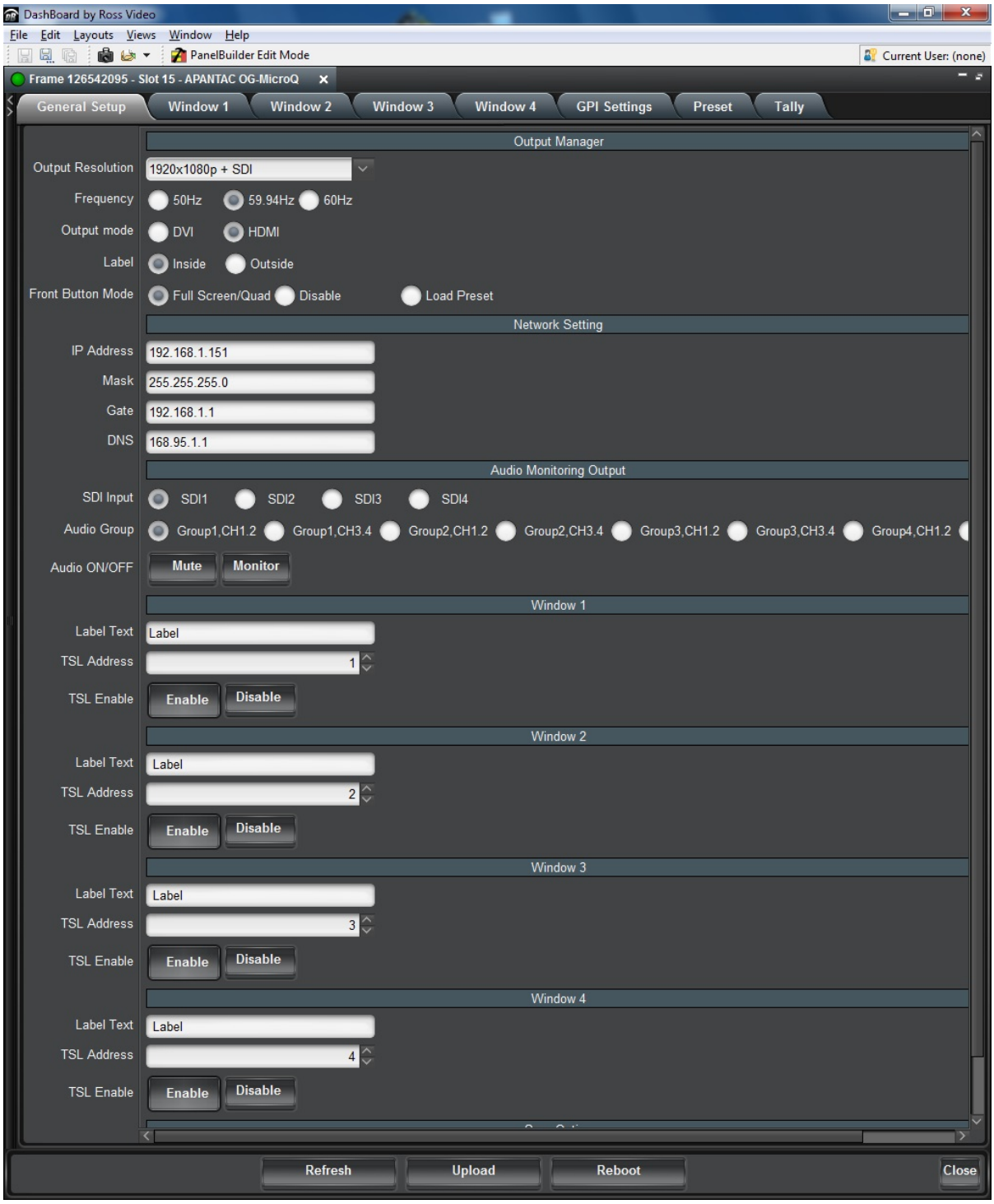


Figure 2: General setup

6.5 Window specific setup

6.5.1 Labels

Default Labels are on top of the video. IGo to the General setup tab to change the Got the labels outside the video, if desired.

- Set label properties
  - Turn on/off label
  - Change label text
  - Change label background color
  - Change label text color
  - Change label width
    - The maximum width is 32, which the same as the maximum number of characters
    - If the number selected is less than the number of characters on the label text, it will default to <Fit to Text>
  - Change label transparency
    - Change Label Transparency
    - 100% = opaque
    - 0% = 100% transparent
  -

6.5.2 Meters

- Set Meters
  - 0 – 8 meters can be turned on/off
  - Meter width can be set to 4 – 16 pixels
  - SDI embedded audio channels can be assigned to individual meters
  - One pair of audio meters can be selected as monitor output to go to the analog audio output or the HDMI output

6.5.3 Borders

- Set Borders
  - Border can be turn on/off
  - Border color can be set

6.5.4 Alarm Tags

- Set Alarm Tags
  - Video Format and Audio Status alarm tags can be turned on/off

6.5.5 Auto Aspect Ratio

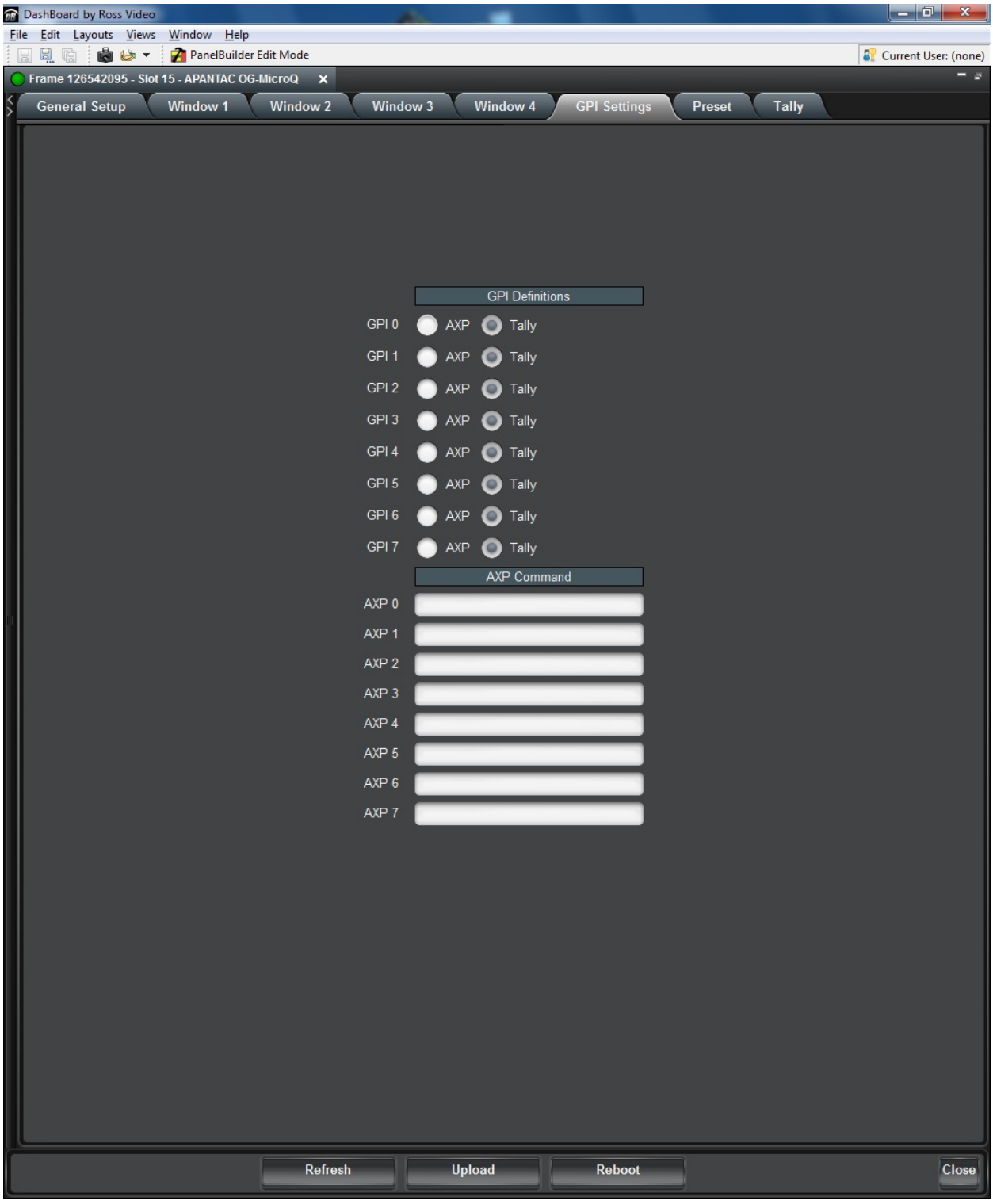
- Set Auto Aspect Ratio
  - Auto Ratio can be turn on/off
  - Aspect Ratio can be set by the user to any ratio
  - Default is 4x3 for SD and 16x9 for HD

6.5.6 Set Safe Area

- Safe Area can be turn on/off
  - With a mask
  - With a line
  - Or with both mask and line
- The safe area line color can be changed
- The safe area can be freely assigned

6.6 GPI setup

GPI can be set to be used as Tally or AXP. When AXP is selected, AXP commands needs to be entered into blank space



6.7 Preset setup

15 presets can be defined, saved and recalled.

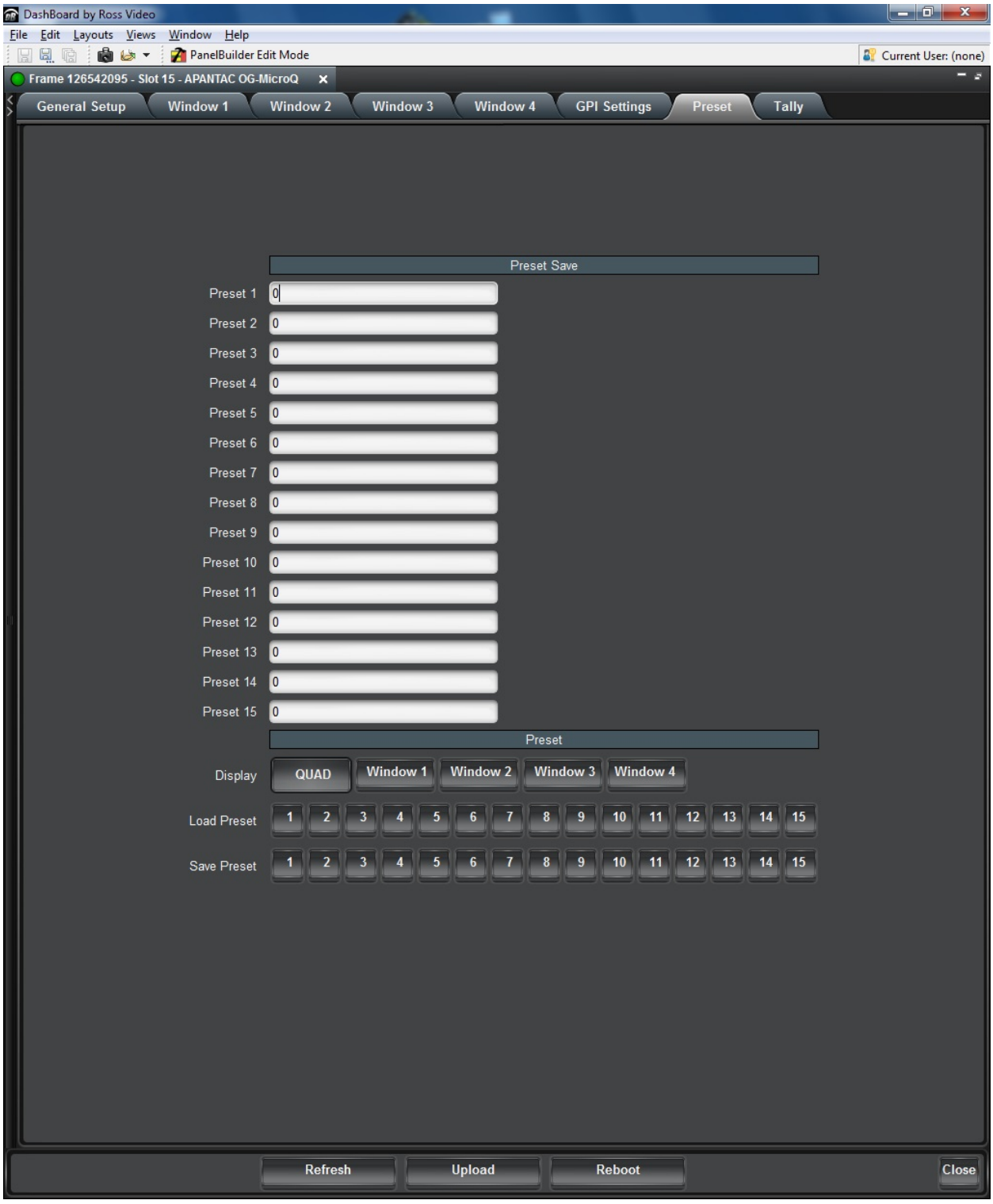
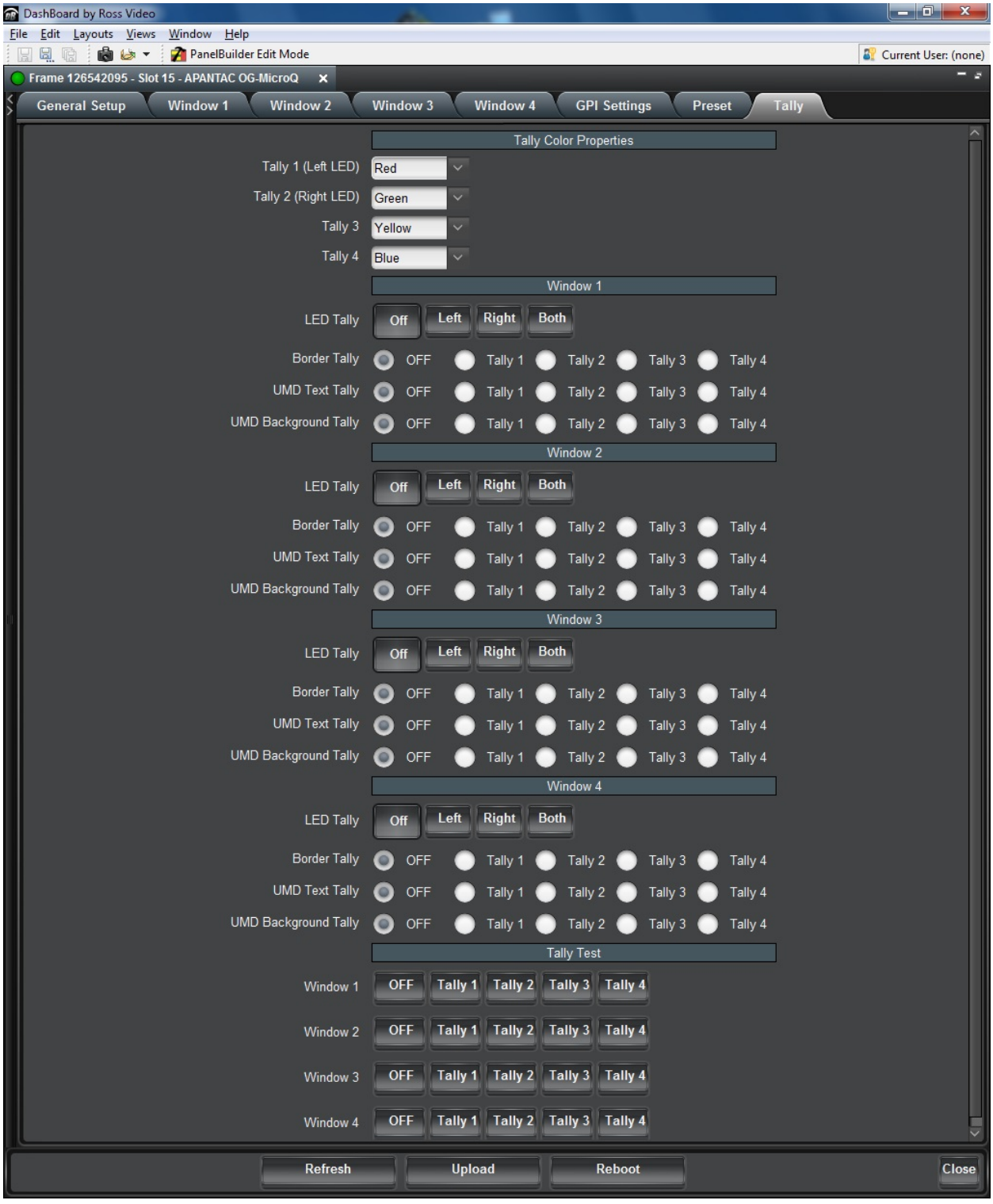


Figure 6.1: Double click

6.8 Tally setup

- Tally 1 (left) and Tally 2 (right) can be turned on/off
- Border, UMD (Label) Text and UMD (Label) Backgruond can be assigned to be associated with the tally

- Tally LED colors can be set
- GPI can be assigned to the tallies
- TSL can be assigned to the dynamic tallies



Appendix A

Apantac eXchange Protocol – MicroQ

Revision Date: November 23, 2012

Introduction

The AXP-Lite is a set of text commands to allow 3rd party interface to control the OG-MicroQ via TCP/IP

Port Description

TCP/IP: Default port = 101

AXP-Lite Commands set Overview

Command	FW Release	Overview
Audio		Set audio monitoring output
Exit		Exit from text command mode
Ledumd		Turn on/off tally and set label text

AXP-Lite command sets

Audio: Set audio monitoring output

Note: OG-MicroQ only supports 2 groups of embedded audio (8 channels), audio monitoring must be done in pairs, therefore, when you choose meter 1, you will get a stereo pairs, therefore, when you choose meter 1, you will get a stereo pair of 1 and 2, when you choose 3, you will get a stereo pair of 3 and 4 and so on …

Audio [SDI_Number][Group][Channel/PAIR]

Parameters	Value	Description
[SDI_Number]	1 – 4	SDI input number
[Group]	1 – 2	
[Channel/Pair]	1 – 4 channel	Pair of audio meters to be monitored

Examples:

Command	Description
Audio 1 2 3	Select SDI input 1, Group 2, Channel 3 and 4 to the monitoring ouptut

Exit: Exit from text command mode

Exit the text command mode. Press <CR> to return to text command mode

Ledumd: Turn on/off tally and set label text

Paramaters	Values	Description
[WIN_ID]	0 ~ 4	
[LED 1 on/off	1, 0	Turn on/off Tally LED 1
[LED 2 on/off	1, 0	Turn on/off Tally LED 2
[LED 3 on/off	1, 0	Turn on/off Tally LED 3
[LED 4 on/off	1, 0	Turn on/off Tally LED4
[TEXT]	Text	Label text. Must be bracked with "| |"

Load:

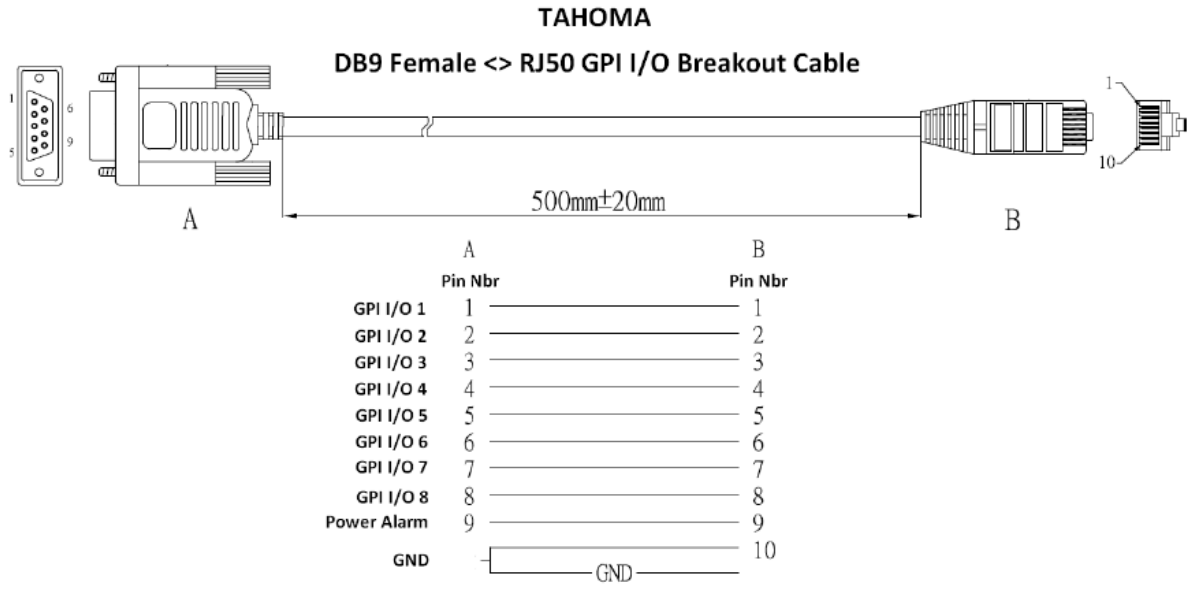
Load [FILE_NAME]

Parameters	Values	Description
[file_name]	The preset file name	*The file name mus be bracketed with "| |"

Example:

Command	Description
Load | 1_full.pt1|	Load preset name "1_full.pt1"

Appendex B


TAHOMA
DB9 Female <> RJ50 GPI I/O Breakout Cable
1
6
5
9
A
500mm±20mm
B
1
10
A
Pin Nbr
B
Pin Nbr
GPI I/O 1
1
1
GPI I/O 2
2
2
GPI I/O 3
3
3
GPI I/O 4
4
4
GPI I/O 5
5
5
GPI I/O 6
6
6
GPI I/O 7
7
7
GPI I/O 8
8
8
Power Alarm
9
9
GND
10
GND