GVG2ATEM Controller Kit

Pricing and availability (August 2016)

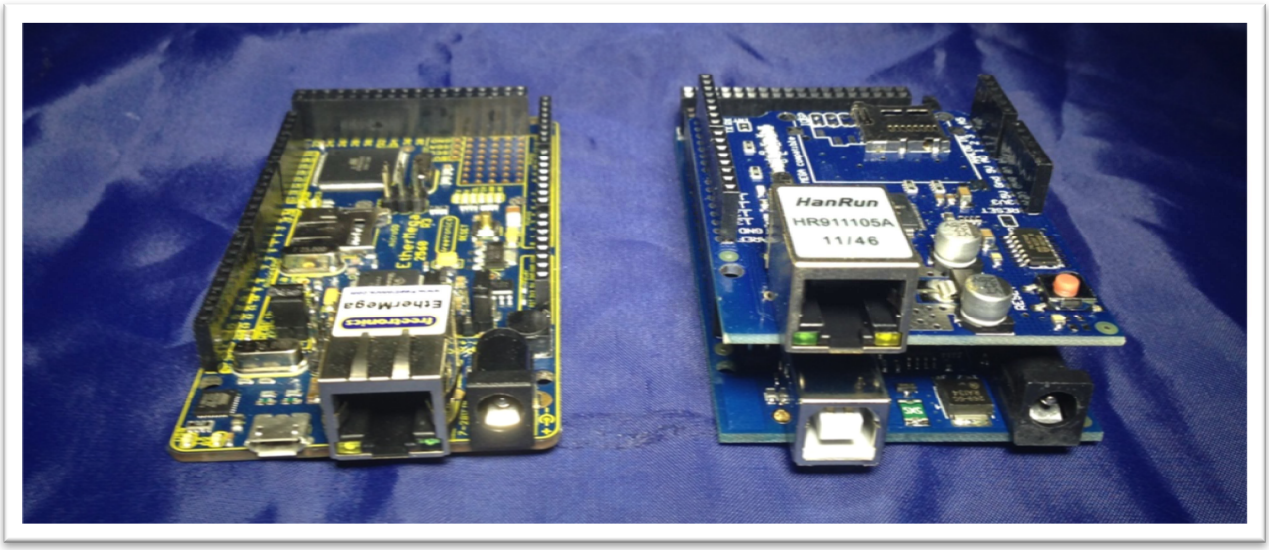
(pricing and specifications subject to change)

There are 2 different controller model options. Both prices include the GVG firmware.

Arduino Mega2560 + Ethernet shield with a 4gig MicroSD (shown on the right) **US$435**

or . . .

Single board Arduino solution called 'Ethermega' with a 4gig MicroSD (shown on the left) **US$490**



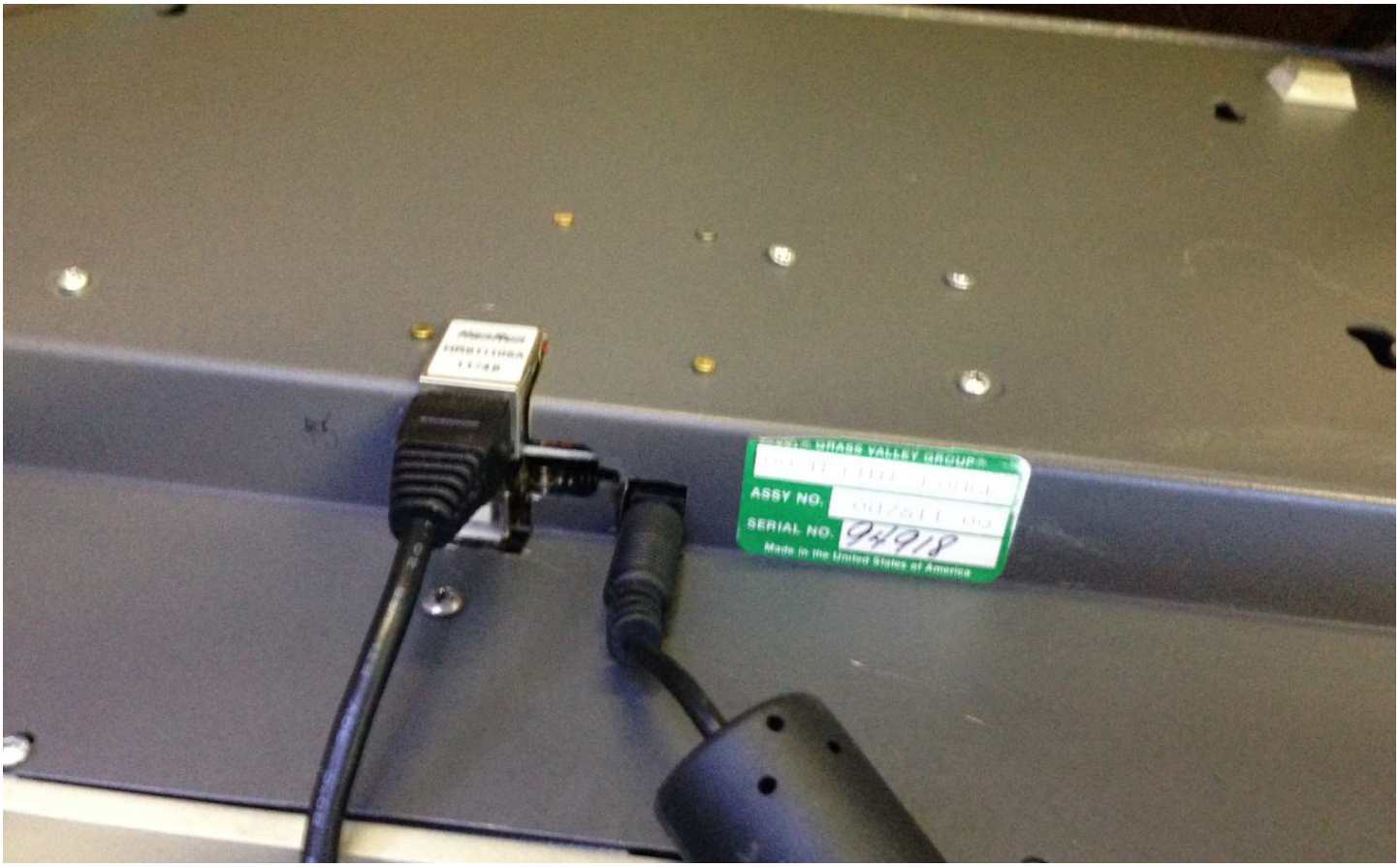
The Ethermega is on the left and the Arduino Mega2560+Ethernet shield is on the right. Notice the height difference.

Both options include the installed power connector that connects to the GVG control panel J3 to enable a single 9 volt power feed (not supplied**) to both the controller and the panel.**

Also included with the kit is the USB cable for firmware upgrades and a Utilities disk with drivers and uploaders. The Kit is supplied tested and ready to install.

Both the Arduino Mega2560 + Ethernet shield and the Ethermega are specially encrypted.
The USB port also allows firmware updates via a supplied HEX file and uploader.

Both Controllers are small enough to fit inside the GVG panel, but the 'Ethermega' does not need cutting out a larger hole. You may need power, USB and ethernet extension cables to run to the rear of the unit.



This is the cut out required to fit the lower priced Arduino Mega2560+Ethernet shield.
The cut is where the original DB15 connector was. The ethernet connector extends outside the bottom of the panel but the panels feet (as seen at the top right corner of the picture) **are deeper so the connector does not sit on the desk.**

Options:

Custom made ribbon cable (40 pin IDC to 20 pin IDC to open end) **US$65**

This is designed so the end user can hard wire any special connections they need.
This cable connects the controller to the GVG panel J2 for all the control/status functions.

If you want to make your own ribbon cable, see the instructions on this web site. No soldering is required for the basic interface (crimps)**.**
Soldering may be required for the tally interface and GPI IN wires on the expansion end of this ribbon cable.

Custom made ribbon cable (40 pin IDC to 20 pin IDC to DB 37 pin) **US$75**

This is the same as the standard cable but with a DB37 connector at the expansion end.

'Super bright' LEDs used in the panel modifications **US$65**

There are about 60 LED's all up and come in 5 different colours; RED, GREEN, BLUE, ORANGE and WHITE.

Serial Interface **US$225**

This module plugs on the back of the Arduino Controller board and has connectors for -

- **2 x RS422 9 pin deck control**
- **1 x RS232 9 pin terminal interface (for future serial control features)**
- **1 x 20 pin extended GPI IN connector for 8 more contact closure commands**
- **1 x 6 pin interface for the optional Configuration Panel**
- **1 x 20 pin connector for a tally relay card type A or tally relay card type B**

This is the Serial Interface plugged into the Ethermega

This is the Serial Interface plugged into the Arduino Mega2560+Ethernet

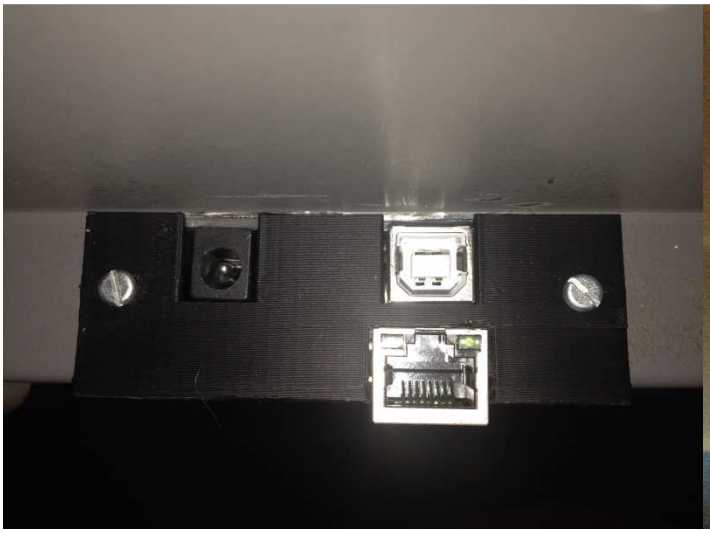
Also available for the Serial Interface are -

- 10 pin IDC to 9 pin male	**US$12.00**
- 10 pin IDC to 9 pin female	**US$12.00**
- 10 pin IDC to 9 pin female to	**US$12.00**
- 20 pin IDC to 25 pin male tally cable	**US$28.00**
- 6 pin SIL to 6 pin Minidin I2c cable	**US$35.00**
- 20 pin IDC to 25 pin female GPI cable	**US$28.00**

NOW AVAILABLE – Plastic plate kit — US$35

Includes Arduino cover plate and expansion connector cover plate.

These enable rough holes to be cut out in the GVG base and then cleanly covered.



cover plate for Arduino

cover plate for expansion connector

Other options that will soon become available:

Configuration Panel **(temp out of stock)** **US$220**

This is for setting up parameters and displaying various status of the controller. This is a Rotary knob with push button and a 16x2 backlit LCD display.

This connects to the Serial Interface option via a 6 pin mini-din cable.

Extended tally interface **(temp out of stock)** **US$260**

This allows Program Tally and Preview Tally relay card controls (currently comes standard with 10 Program only tallies on the ribbon cable). This option connects to the expansion cable.

Extended Operational Panel **TBA**

This uses a 20x4 LCD backlit display with 5 Rotary knobs and 6 illuminated push buttons.

Future software enhancements

Each GVG to ATEM Controller has a unique serial number that can have additional software added to it.

This additional software is not needed for normal functionality and takes the place of addition accessories that I supply and reduces the need for extra interfaces normally required.

Event Logger integrated into the GVG software **US$185**

This allows the creation of an industry standard EDL of all cuts and fades created during a live production

Audio follow video (AFV) integrated into the GVG software **US$95**

This allows the ATEM audio to follow whatever is selected on the vision including T-Bar crossfades

Handling and Registered Post INTERNATIONAL **US$55.00**

Other forms of shipping are available including Courier Pickup

International Payment is via Paypal. (Australian sales via bank deposit or Paypal)

After you have decided what you require please email me with your order and email to

jobstuff@lefflerpost.com.au

and I will send you a Paypal invoice.

All orders are handled within a week after payment received (subject to stock)

Please see

http://www.lefflerpost.com.au/gvg2atem/

for more details and videos.

~~**DOWNLOAD ONLY VERSION - US$365**~~ ***** NO LONGER AVAILABLE *****

*****PLEASE NOTE - this is for download only. You will need an Arduino Mega2560 Rev 3** (or compatible)**.**
You will also need a ethernet shield with a SDcard slot and a SDCard (2g upwards recommended)**.**
You can also use an *all in one 'Ethermega'* for a lower profile solution.

There have been some 'cheaper' Mega2560 boards that will not upload the main controller firmware.
There is no current work around for this yet so best try the upload first.

This is how the download version activates.....

All the following instructions are used by connecting the Controller card to a terminal program eg PuTTY as a Serial/USB port running at 115200

ACTIVATION - (it is advisable to run the 'uploader program' first)
On start up the Serial/USB port displays -

```
ATEM switcher interface for GVG1x0 control panel

(C) 2016 Baz Leffler - version 02.00
UNAUTHORISED UNIT! - re-testing... fail 01
Request authorise code? (y/n)
```

PRESS 'y' to get a 16 digit 'authorisation code' and any other key to enter the 'activation code'.
if 'y' pressed the following message appears -

```
Please send the following code to
jobstuff@lefflerpost.com.au
to get authorise code
41 52 75 188 227 71 193 133 106 209 114 175 1 39 254 195
```

(the 16 digits above are for example only)
Copy the 16 digits into an email and send to jobstuff@lefflerpost.com.au
Within 48 hours you will get a reply containing a 22 digit activation code.
When returned, this code also contains your unique serial number.
Once you get the activation code run the Controller again.
On start up the Serial/USB port displays -

```
ATEM switcher interface for GVG1x0 control panel

(C) 2016 Baz Leffler - version 02.00
UNAUTHORISED UNIT! - re-testing... fail 01
Request authorise code? (y/n)
```

PRESS any other key to enter the 'activation code' and 'y' to get a new 'authorisation code' *(new email required).*
If any other key is pressed the following message appears -

```
Paste 22 digit Activation code
```

Copy the 22 digit activation code (including the spaces) and paste into the terminal *(PuTTY uses right mouse click).*
If the numbers do not paste correctly press the ESC key and try again. It may take a few attempts.
Failing that you can manually type them in.
Once they are correct, press ENTER. If there was an error in the activation code it will display -

```
***validation error***
```

… and lets you try again starting with "Request authorise code? (y/n)".
If the activation code is correct it will display a small 'work in progress' icon on the screen and then it will display -

```
Activated. Serial Number 310004
local ip =
```

(the serial number above is for example only)
Now you have to type in the ip address you want to use for the GVG panel Controller.
This requires a '.' *(period)* **between each of the 4 characters.**
Once you have entered the local ip address it displays -

```
New local ip = 192.168.2.234

ATEM ip =
```

(the local ip address above is for example only)
Now you have to type in the ip address you want to use for the ATEM.
This requires a '.' (period) between each of the 4 characters.
Once you have entered the ATEM ip address it displays -

```
New ATEM ip = 192.168.2.240

ATEM switcher interface for GVG1x0 control panel

and away we go.....

(C) 2016 Baz Leffler - version 02.00
local ip = 192.168.2.234
ATEM ip = 192.168.2.240
SDcard OK
```

(the ip addresses above are for example only)
After this there may be some minor configurations to do but is permanently activated, until....

<u>WHAT TO DO IF IT DOES NOT ACTIVATE CORRECTLY</u> *(or you need to de-activate).*
Sometimes you may be required to deactivate the software such as if you are doing a serial number replacement etc.

DE-ACTIVATION

On start up the USB port displays -

```
ATEM switcher interface for GVG1x0 control panel

(C) 2016 Baz Leffler - version 02.00
local ip = 192.168.2.234
ATEM ip = 192.168.2.240
SDcard OK
```

as soon as you see *'SDcard OK'* press the ESC key ONCE and wait for the following message -

```
permanently do deactivation? y/n
```

Press 'y' to continue, any other key to abort. If 'y' pressed the following message -

```
ARE YOU SURE? (can not be undone!) Y/N
```

Press 'Y' to continue, any other key to abort. This needs to be a CAPITAL 'Y'
if 'Y' pressed it will display a small 'work in progress' icon on the screen and then it will display -

```
deactivation code confirmation =
214 104 321 205 123 26 188 222 77 78 28 987 69 4 17 136 106 209 114 175
copy deactivation code for proof
```

(the 21 digits above are for example only)
Copy the code and email it to jobstuff@lefflerpost.com.au to prove it has been deactivated.
The controller will now reboot displaying -

```
ATEM switcher interface for GVG1x0 control panel

(C) 2016 Baz Leffler - version 02.00
UNAUTHORISED UNIT! - re-testing... fail 01
Request authorise code? (y/n)
```

Once the deactivation code hase been verified a new version can be sent.

To test the installation of the software and the Arduino is not yet installed into your panel you can do the following...

Connect the configured Arduino to the ATEM via a LAN that has a computer and the ATEM connected.
Run PuTTY and set the *Telnet button* ON then set the *Port* to 23. Then you need to set the *Host Name* *(or IP address)* to the LOCAL IP address that you set for the Arduino (eg. `192.168.2.234`)**.**

Press *Open***.**

The TELNET should display the following -

```
ATEM switcher interface for GVG1x0 control panel
Software version 02.00

software license 310203
```

The software license will display your own unique serial number.
On the TELNET window enter -

```
n
```

then ENTER

The TELNET will display the NAMES of all the ATEM sources (as received from the ATEM).
You can test other functions as follows.

```
*P5
```

then ENTER

This will select what ever is allocated to input 5 on the PROGRAM BUSS

```
*V8
```

then ENTER

This will select what ever is allocated to input 8 on the PREVIEW BUSS

```
*X
```

then ENTER
This will do an AUTOTRANS

```
*S
```

then ENTER

This will SEQUENTIALLY switch the PROGRAM BUSS every 25 frames. Press ENTER to exit.
(use a number between 0 and 99 after the 'S' to alter the frames between cuts)

*F

then ENTER
This will create a manual transition every 25 frames. Press ENTER to exit.
(use a number between 0 and 9 after the 'F' to alter the frames between transitions)

Notes:

The software only works with ATEM version 4.2 and ABOVE and will only work with GVG100 and GVG110 panels that have been modified as per:

http://www.lefflerpost.com.au/ATEM/gvg110%20panel%20mods.pdf

The online User guide can be found here:

http://www.lefflerpost.com.au/gvg2atem/GVG 110 to ATEM user guide.pdf

You will need a 9 volt 2 amp (centre pin +) power unit.