

Q-Split

Modular Quad-Split System With Alarms

User's Guide

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Q-Split Version 1.3



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Introduction

The Chromatec Q-Split is a modular system that allows a 1U rack-mounting frame to accept up to four Q-Split modules, each of which can either switch or combine four 525 or 625 SDI sources.

When operated as a quad-splitter a Q-Split module will combine four independent serial digital video sources into a single video output so that each source occupies a quadrant when displayed. Any quadrant can then be shown as a full-screen image.



Output from one four-input Q-Split module

Each module has three outputs, SDI, analogue video and DVI-I, which are active simultaneously.

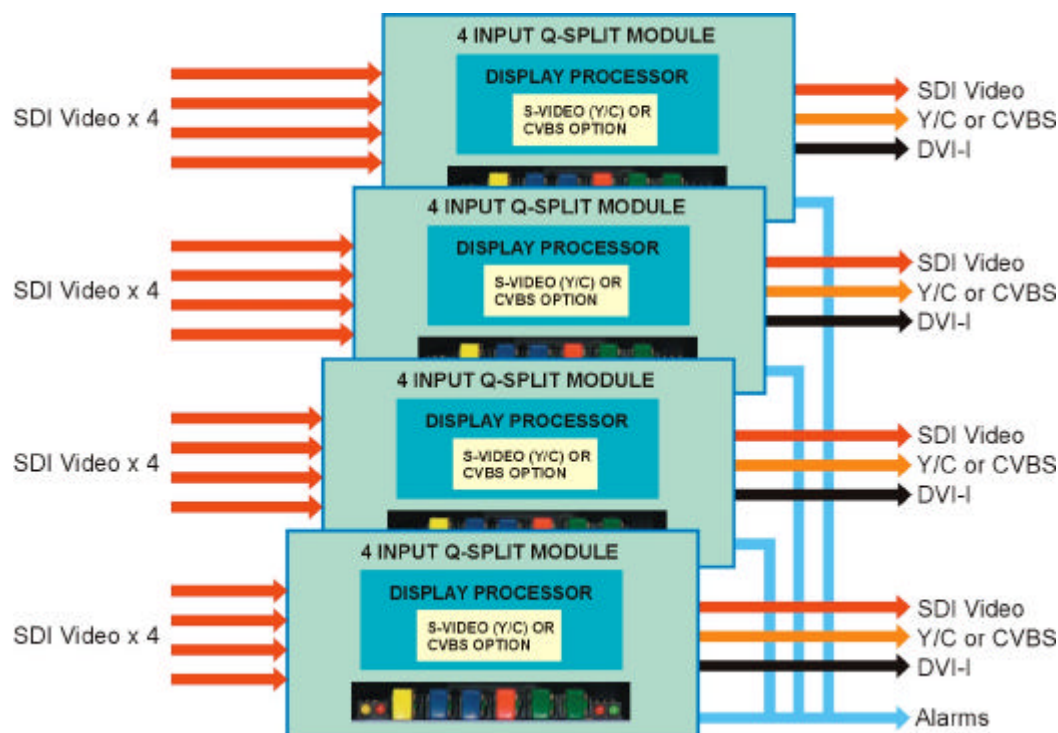
There are two types of analogue video output, Y/C (S-Video) or CVBS (select at time of order).

The DVI-I output supports both digital and analogue outputs up to 1280x1024. The DVI-I output also supports variable aspect ratio conversion for changing a 4:3 input to a 16:9 output or vice versa in all output resolutions above 800x600.

When operated as a 4x1 switcher, a Q-Split module can be used to display any of the four sources as a full screen image.

The quad display border may be selected in terms of width and colour and each quadrant can have its own caption text with selectable background colours.

A PS/2 connector is provided for labelling and switching individual sources to full screen. There are 16 user memories for storing all parameters, including quadrant labels accessible via a comprehensive on-screen menu for each module.



Up to four x 4 - input Q-Split modules in one 1U rack

Note: Q-Split modules should have either 525 or 625 inputs; conversion between line standards is not supported.

There are four programmable GPI alarm outputs that may be set to loss of video signal, video freeze detection and video motion detection. Borders may be flashed to indicate an alarm state. Four GPI inputs may be operated as either alarm indicators or tallies.

Main features

- Up to four Q-Split modules may be installed within one 1U frame
- Card edge controls with on-screen menu for each card
- 4 x SDI video 525/625 line inputs
- SDI, analogue video and DVI-I outputs
- Analogue video may be S-Video or CVBS (factory option)
- On-screen menu for setting all parameters via front panel keys (front panel keys also for quadrant label insert on / off and fade level)
- Operation mode – either a 4x1 switcher or Quad-split
- Adjustable aspect ratio conversion on DVI output (for converting 4:3 inputs to 16:9 output or vice versa) on all output resolutions above 800 x 600

- 4 x programmable alarm outputs and 4 x GPIs to operate as either alarm indicators or tallies
- Adjustable border widths and colours (or no borders) on the quad display
- Flashing borders to indicate alarm state
- On-screen labelling of each quadrant, selectable text and background colours
- PS/2 keyboard connector for labelling and switching individual sources to full screen
- 16 user memories for storing all parameters, including quadrant labels
- RS232 port for remote control and firmware update

Operation

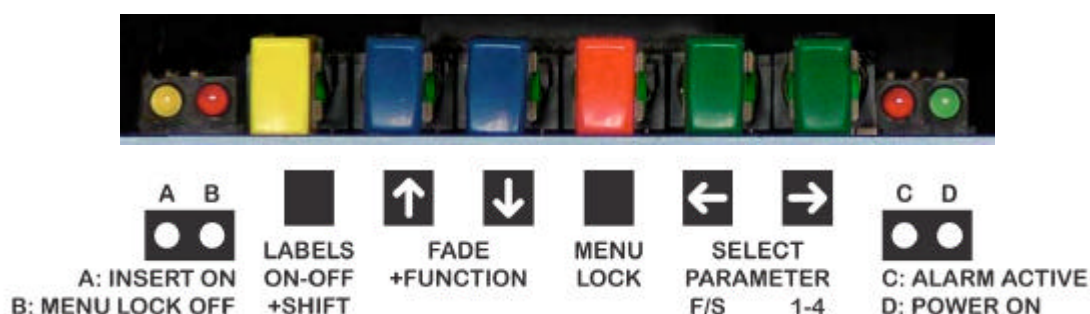
The card edge configuration interface consists of 6 buttons and four LEDs. The functions assigned to control buttons depend on the mode selected. There are two operational modes, Normal or 'Lock' and Configuration or 'Menu' mode.



Q-Split with front removed showing four cards

The operational mode is selected with the central red Menu/Lock button. If this button is held down for more than three seconds, on-screen configuration menus will appear superimposed on that card's video output. Normal operation is returned by holding the red Menu/Lock button down again.

The functions of each button and LED is shown on the inside of the front cover.



The Q-Split card edge legend (on inside of front cover)

Normal mode

In normal use, the configuration menu will be locked out to prevent inadvertent operation and configuration menus are not available.

The main 'normal' mode controls are as follows:

- Insert On – toggle display of source caption on and off
- Select Parameter buttons – left (F/S) key; toggle between Quad and Full Screen display modes, right (1-4) key; cycle between sources 1-4 when in full screen mode
- Fade + Function buttons – fade label text up or down
- Lock button enters 'menu' mode when held down for about three seconds

Menu mode
















To enter menu mode from normal mode (with the red Lock LED off) hold the Lock button down for about 3 seconds. On-screen menus will appear and the red Menu Lock Off LED will illuminate. If the Lock button is held down again, any changed settings will be saved and the quad-split module will return to normal mode.

The menu mode will return to the last menu item visited provided the unit has not been reset or switched off since a configuration menu was last accessed.

The main 'menu' mode controls are as follows:

- Function buttons scrolls menu cursor up and down to select function
- Select Parameter selects settings to apply to chosen parameter
- Insert On + Select Parameter selects extended settings in right hand column
- Lock button exits 'menu' mode and saves settings when held down

Control button summary

Button	Normal mode	Menu mode
Insert On 	Toggles label text ON or OFF. Amber LED is lit when ON.	No Function
Lock – pressed briefly 	Resets video alarms	No Function
Lock + Insert On  	No function	Confirm preset reset or copy
Fade /Function  	Fades the brightness of the on-screen labels	Scrolls cursor up and down menu to select function
Shift + Function   	No function	Scrolls menu page by page Shift + ↑ = page up Shift + ↓ = page down
Select Parameter  	Depressing both key toggles between full-screen and quad modes. Right key cycles between sources 1-4 in full screen mode	Selects settings to apply to parameter chosen with function buttons
Insert On + Select Parameter   	No Function	Selects extended settings
Lock – held down for 3 secs 	Accesses configuration menus. Red Menu Lock Off LED lit when ON	Saves settings and returns to normal mode

Note: Factory reset may be applied by holding down both Function/Fade buttons whilst performing a power cycle – see the Trouble Shooting for further details.

Menu commands

The menu or configuration mode is entered by holding the Lock button down for three seconds. This will allow three configuration menus to be accessed.

Use the Left and Right buttons to select parameters. If a menu has multiple parameters, select a parameter first and then enable or disable it with the right and left buttons whilst holding the yellow shift button down. Default values are shown in square brackets.

Menu page 1

Page 1	Options	Description
PRESET SELECT	[1] to 16	Select stored configurations 1 to 16.
PRESET RESET	[1] to 16	Reset selected configuration to default settings. Press Insert On + Lock to confirm.
PRESET COPY CURRENT TO:	[1] to 16, ALL	Copy current settings to another stored configuration or all configurations. Press Insert On + Lock to confirm.
BORDER WIDTH	OFF, [NARROW], WIDE	Select the width of quad borders or turn borders off.
BORDER COLOUR	BLACK, [BLUE], RED, MAGENTA, GREEN, CYAN, YELLOW, WHITE	
ALARM/TALLY BORDER COLOUR	BLACK, BLUE, [RED], MAGENTA, GREEN, CYAN, YELLOW, WHITE	Select colour that a quad's border is to be when an alarm condition occurs or tally state is asserted for that quad.
BORDER RESPONSE TO ALARM	NONE, STATIC, [FLASH]	Set border response when alarm occurs: No response, change to alarm colour, or flash between alarm colour and normal border colour
LABEL SIZE	SMALL, [LARGE]	Text size of on-screen labels
LABEL COLOUR	BLACK, BLUE, RED, MAGENTA, GREEN, CYAN, YELLOW, [WHITE]	
LABEL BACKGROUND COLOUR	BLACK, BLUE, RED, MAGENTA, GREEN, CYAN, YELLOW, WHITE, [TRANSPARENT]	

Note: On screen text accommodates 15 alphanumeric characters in both small and large sizes.

Menu page 2

Page 3	Options	Description
GPI MODE	[TALLY IN], ALARM IN	Determines GPI inputs function – tally inputs or external alarm inputs.
VIDEO STANDARD	[AUTO DETECT], 525 LINES, 625 LINES	Video input standard
DVI RESOLUTION	[800 x 600], 1024 x 768, 1280 x 1024, 1280 x 720 1280 x 768 1366 x 768	DVI output resolution
DVI OUTPUT CONVERSION	[NONE], 4:3 TO 16:9, 16:9 TO 4:3	DVI output aspect ratio conversion when displaying 4:3 video on a 16:9 monitor (or vice versa).
DVI FRAME RATE	[60Hz], LOCK TO I/P	Frame rate conversion (only applicable for 625 line / 50Hz video input).
FULL SCREEN MODE	QUAD 1, QUAD 2, QUAD 3, QUAD 4, [OFF]	Display input 1, 2, 3, or 4 in full screen mode or set to OFF to display in normal quad mode.
QUAD 1+3 LABEL POSITION	L JUSTIFY, C JUSTIFY, R JUSTIFY	Set the label position/justification for quads 1 and 3 (2 left hand quadrants)
QUAD 2+4 LABEL POSITION	L JUSTIFY, C JUSTIFY, R JUSTIFY	Set the label position/justification for quads 2 and 4 (2 right hand quadrants)

Note: The Autodetect function will attempt to lock to the first input in the order, 1, 2, 3 and 4. Some monitors will not accept a 50Hz frame rate, in which case the output can be converted to 60Hz. If the monitor does accept 50Hz then use the LOCK TO I/P option to avoid frame rate conversion artefacts.

DVI Conversion is not applicable to 800 x 600 and the menu item is not displayed when that screen resolution is selected.

Menu page 3

Page 2	Options	Description
ALARM, QUAD 1 ASSIGN	[ANY], DISABLED, VIDEO LOSS, VID FRZ/MOT, ALARM IN 1	Assign alarm trigger events for input 1
ALARM, QUAD 2 ASSIGN	[ANY], DISABLED, VIDEO LOSS, VID FRZ/MOT, ALARM IN 2, ANY	Assign alarm trigger events for input 2
ALARM, QUAD 3 ASSIGN	[ANY], DISABLED, VIDEO LOSS, VID FRZ/MOT, ALARM IN 3, ANY	Assign alarm trigger events for input 3
ALARM, QUAD 4 ASSIGN	[ANY], DISABLED, VIDEO LOSS, VID FRZ/MOT, ALARM IN 4, ANY	Assign alarm trigger events for input 4
ALARM, AUTO RESET	[OFF], 1 SEC, 5 SEC, 10 SEC, 30 SEC, 1 MIN, 5 MIN, 10 MIN, 30 MIN	Set the auto-reset period, which is the time period after the cessation of an alarm event before the triggered alarm will be automatically turned off. Use this setting to prevent frequent event triggers from holding alarms on
ALARM, INPUTS ENABLE	[ALL]: [OFF], ON 1: [OFF], ON 2: [OFF], ON 3: [OFF], ON 4: [OFF], ON	Enable the alarm inputs (external GPI alarms). L/R buttons select alarm. <i>Use Shift (yellow button) + L/R to enable/disable alarm</i>
ALARM, VIDEO LOSS	[OFF], ON	
ALARM, VID FREEZE/MOTION	[OFF], VID FREEZE, VID MOTION	Select the alarm event type that will trigger the video freeze/motion alarm.
VID FRZ/MOTION SENSITIVITY	LOW, [MEDIUM], HIGH	Set the sensitivity to noise or motion within the video when detecting video freeze or motion.

Note: When the video frozen alarm is set to detect motion, the higher the sensitivity the less motion is required to trigger the alarm. If the picture is required to be absolutely (or "digitally") frozen to trigger the alarm then set the sensitivity to high. To allow for noise present in the picture and still detect a frozen image, set the sensitivity to low or medium.

Keyboard control

Q-split can be controlled with a standard PC keyboard attached to the PS/2 connector.

Key functions

Mode	Key or button	Notes
ALL MODES	F1 to F4	Enter label edit mode for cards 1 to 4
EDIT MODE	TAB, cursor keys, PgUp, PgDn, Home, End	Move the cursor around within labels and from one label to another.
	Delete and Backspace keys.	As normal text edit
	Alphanumeric keys	Enter label text
	ESC key	Exits edit mode (when one card has entered edit mode, no other card can be edited until the one in edit mode has exited)
	Shift F1 to Shift F4	Display menu for cards 1 to 4
MENU MODE	Cursor Down	Cursor up scroll the menu
	Cursor Left/Right	Change current setting
	F5 to F8	Display full screen mode of inputs 1 to 4 on card 1 and reinstate QUAD mode
	F9 to F12	Display full screen mode of inputs 1 to 4 on card 2 and reinstate QUAD mode
	Shift F5 to Shift F8	Display full screen mode of inputs 1 to 4 on card 3 and reinstate QUAD mode
	Shift F9 to Shift F12	Display full screen mode of inputs 1 to 4 on card 4 and reinstate QUAD mode
	ESC key	Exit menu or reinstate QUAD mode from full screen mode

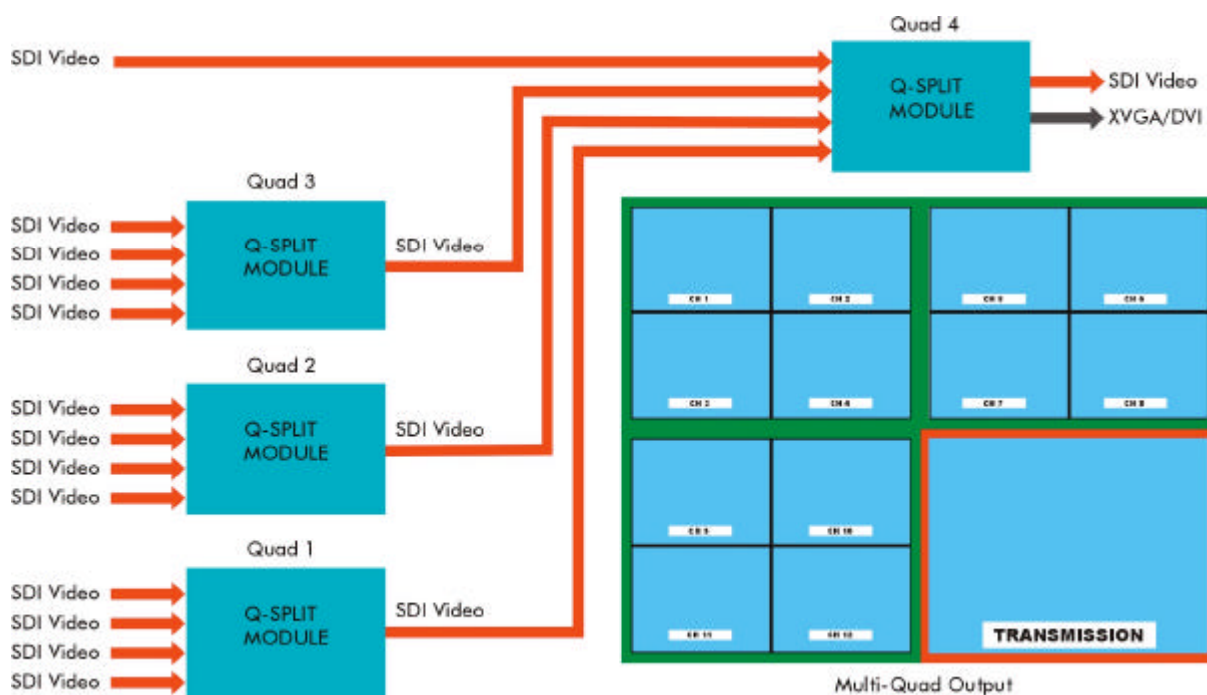
Note: Selecting an input in MENU mode that is already in full screen mode puts the display back in quad mode (pressing ESC once also puts the display back in quad mode).
When entering EDIT MODE, the on-screen label settings will default to "Insert On" and full brightness.

Q-Split applications

The Chromatec Q-Split has many applications for monitoring SDI video sources ranging from broadcast control rooms to OB truck installations. Although it is primarily intended for combining four independent SDI sources into a single video output, it can also be used for source switching and aspect ratio conversion.

Q-Split is also ideal for use with the Chromatec E-Series in-picture audio meter system, since four Q-Split modules allow the SDI outputs from 16 Eurocards to be displayed on four monitors.

In fact Q-Split applications are only limited by the imagination of system designers and users who deploy it. For example, a single Q-Split 1U rack with four modules could be used to create a multi-quad monitoring solution by simply feeding the outputs of three modules into one module as shown below:



Q-Split wiring for a '12 + 1' video tile layout

Note: Passing video through two or more Q-Split modules may degrade video quality.

Changing labels via the RS232 port

The labels can be changed using TSL's UMD protocol V3.1 via the RS232 port.

The addressing used is as follows:

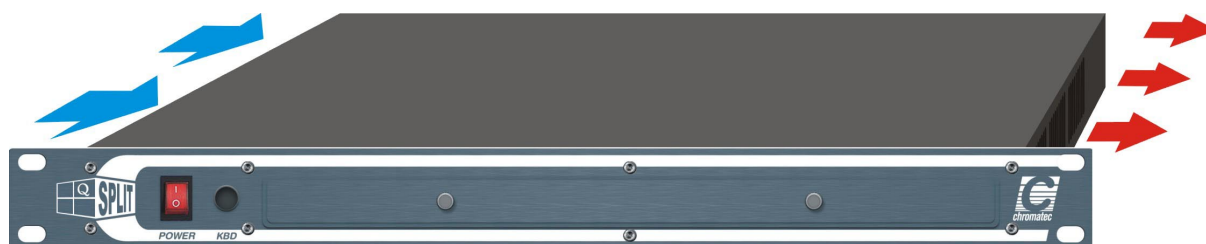
0x80 to 0x83	addresses quads 1 to 4 on card 1
0x84 to 0x87	addresses quads 1 to 4 on card 2
0x88 to 0x8B	addresses quads 1 to 4 on card 3
0x8C to 0x8F	addresses quads 1 to 4 on card 4

Please see TSL UMD V3.1 protocol for more details.

Installation

The Chromatec Q-Split 1U frame may be installed in 19 inch bays with 260mm depth. Ventilation is produced in each frame with three exhaust fans on the right hand side (viewed from front) with intake grilles at the left.

Frames should be installed into bays such that airflow through these apertures is not impeded.



The 1U Q-Split frame showing main side to side ventilation

Note: The front rack ears are intended to provide a means of retaining the unit in the rack.

To ensure adequate support the unit **MUST** also be supported at the rear of the frame. Please ensure that ventilation is not impaired when selecting suitable supports.

Health and safety considerations

The Installation and Maintenance of the Chromatec Modular Quad-Split System with On-Screen Alarms and any associated equipment must be carried out by PERSONS SUITABLY QUALIFIED to work with equipment that may be connected to the mains supply.

The Q-Split frame **MUST BE DISCONNECTED & ISOLATED FROM THE MAINS INPUT** and from other product outputs before undertaking maintenance.

ELECTRIC SHOCK HAZARDS exist if conductive instruments, neck chains or fingers etc are placed within the Q-Split frame or in close proximity of the input/output terminals/connectors.

Incorrect installation can cause internal components to rupture and particles to be ejected from the product.

TOXIC FUME HAZARDS exist if the unit is subjected to direct flames or excessive temperature of above 100 Degrees Centigrade ambient.

The mounting and installation of the unit must be arranged by the user to comply with all safety regulations by the indigenous authority.

Disposal

Do not incinerate, as explosive and toxic fume hazards exist. Disposal must be by dismantling the product to component level and disposing of each component by an approved method.

Connector I/O

All connections are provided on the rear panel of the frame. Remote/alarm connections use a 36 way MDR connector, SDI, S-Video and composite video I/O use BNC connectors and SXGA and DVI outputs use a DVI-I connector.



Q-Split 1U frame connector I/O

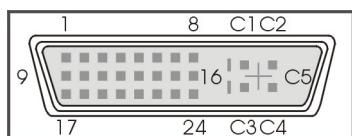
Fuse location



The main and spare 2 Amp fuses should be located underneath the IEC mains connector. Lift flap for fuses

DVI-I connector

The RGBHS/DVI output uses a standard DVI-I connector, which supports digital and analogue RGB video.

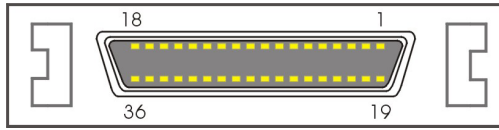


A DVI-I to VGA adapter (not supplied) will be required to connect display devices with standard High Density 15 pin 'D' connectors.

DVI Signals	Pin
DATA 2+	1
DATA 2-	2
DATA 2/4 SHIELD	3
DATA 4-	4
DATA 4+	5
DDC CLOCK	6
DDC DATA	7
Vert Sync	8
DATA 1-	9
DATA 1+	10
DATA 1/3 SHIELD	11
DATA 3-	12
DATA 3+	13
+ 5V Power	14
DATA GND	15

DVI Signals	Pin
Hot Plug Detect	16
DATA 0-	17
DATA 0+	18
DATA 0/5 SHIELD	19
DATA 5-	20
DATA 5+	21
CLOCK SHIELD	22
CLOCK+	23
CLOCK-	24
Red Video	C1
Green Video	C2
Blue Video	C3
Horiz Sync	C4
Analogue Ground	C5

GPI and alarm connector



GPI and Alarm I/O use a 36-way MDR (IEEE 1284-C) connector.

A mating MDR plug connector is supplied with the unit.

Card signals	Card 1	Card 2	Card 3	Card 4	All cards
Quad/Full screen GPI	15	11	7	3	
Tally/Inp Select/Alarm In 1	16	12	8	4	
Tally/Inp Select/Alarm In 2	32	30	24	22	
Tally/Inp Select/Alarm In 3	17	13	9	5	
Tally/Inp Select/Alarm In 4	35	31	27	23	
Tally/Inp Select/Alarm In GND	18	14	10	6	
Reset Alarms	33	29	25	21	
Global alarm out 1					1
Global alarm out 2					19
Global alarm out 3					2
Global alarm out 4					20
Ground					26,28
+5V					34,36

Card signal assignments	Description
Quad/Full screen GPI	Toggles between quad mode and full screen mode. Wire a momentary switch between this pin and the +5V pin to activate.
Tally/Inp Select/Alarm In 1/2/3/4	The GPI inputs accept up to 20V. In quad mode GPIs are either tally inputs or alarm inputs as chosen in the menu. In full screen mode they select which input to view in full screen.
Tally/Input Select/Alarm In GND	GPI ground.
Reset Alarms	Used for remotely resetting all alarms that have been triggered. Short to the ground to activate.
Global alarm out 1/2/3/4	Open collector outputs driven when an alarm that has been assigned to the relevant output is triggered.
Ground	The unit's ground.
+5V	Current limited 5V supply for use with GPIs only.

Note: The GPI ground accepts the ground of the remote unit that the tally or alarm signals come from. When used for the full-screen input select, the tally ground can be wired locally to the normal ground pin, and the 4 GPI signals wired to 4 momentary switches. The other side of the momentary switches can then be wired to the +5V pin.

Fitting additional Q-Split modules

Q-Split can accommodate up to four quad-split in-vision monitoring channels in a 1U rack.

The electronics for each channel is comprised of the main Q-Split module and a smaller daughter board. The main board provides control, alarms and SDI input processing, whilst the daughter board provides the SDI, analogue video and DVI-I outputs.

A Q-Split upgrade kit consists of the following:

Qty	Description
1	Q-Split module with I/O daughter board
6	Fixing screws (short)
1	Hexagonal post (long)
6	Nuts for BNC connectors
2	Hexagonal posts (short) for alarm D-Sub connector plug retaining screws

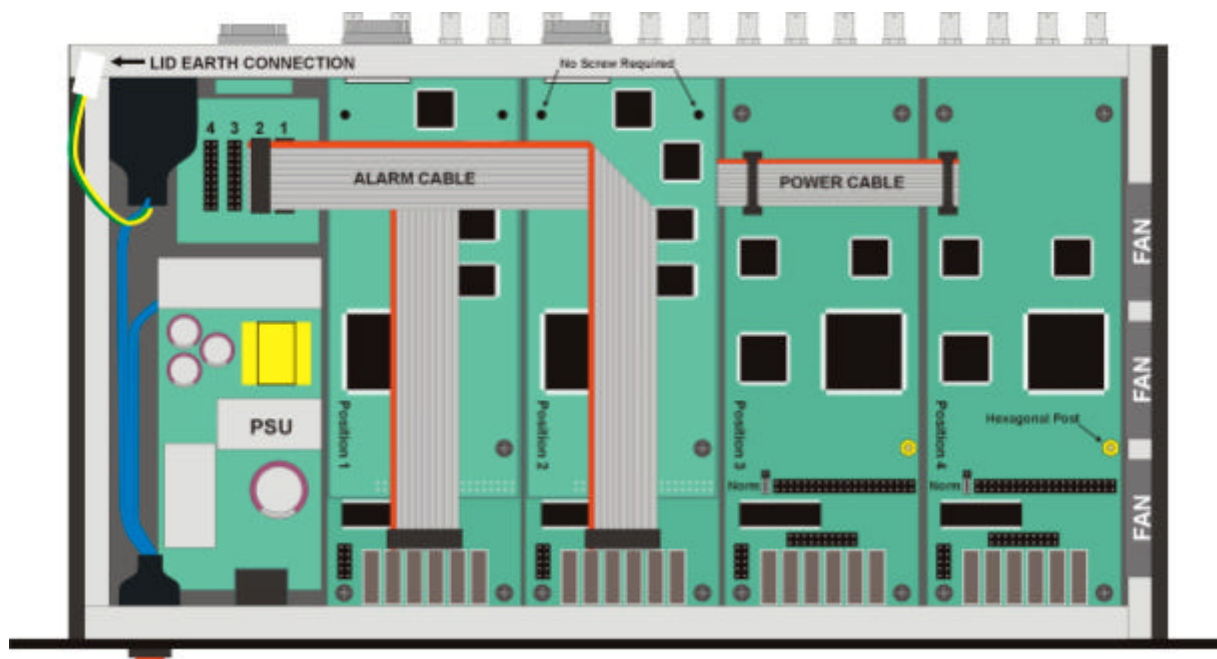
Note: Before ordering additional modules, remove the front access panel to check that free slots are available.

It will be necessary to remove the unit from the installation to carry out the upgrade.

Additional modules are always fitted to the next available position on the right.

Power is distributed to the main boards via a multi-drop ribbon cable with connectors for each board. The power cable normally lies under the output daughter boards.

Each main board also has its own alarm ribbon cable connected to the appropriate header socket to combine alarms for all boards.



Q-Split module and associated cables - 3^d and 4^h daughter boards and alarm cables omitted for clarity

Module upgrade procedure

The main board and daughter boards are fitted separately. To fit an additional module proceed as follows:

Preparation

- Ensure that the Q-Split is unpowered and that the mains lead is disconnected
- Remove the top cover and retain the screws – the earthing strap will need to be removed to remove the cover completely
- Locate a vacant module position - position 4 will require the complete removal of the front panel by releasing 8 socket head screws
- Remove the rear blanking panel from the required module location

Fitting main boards

- Fit the main board into position with the 4 BNC connectors protruding through the rear of the frame and with the holes in the board lined up with the screw positions.
- Retain the board in place using 4 of the short screws at the 2 rear and 2 front holes of the board.
- In the middle right-hand hole, screw in the hexagonal spacer provided.
- Fit the appropriate power cable to the rear left header (CN11) of the main board. It will already be cut to length and fitted to the power hub board near the power supply
- Ensure that the jumper on the main board is fitted to the 2 pins labelled NORM (the 2 pins closest to the socketed 42 pin IC).

Fitting daughter boards

- Fit the daughter board into position with its connectors protruding through the rear of the frame and then attach it to header CN3 of the main board, taking care to align it correctly.
- The only internal retaining screw for the daughter board is for the hole that meets the hexagonal post that was placed on the main board. Attach this using one of the screws provided.
- Fit the supplied BNC nuts and the D-sub connector hexagonal posts to the rear panel.

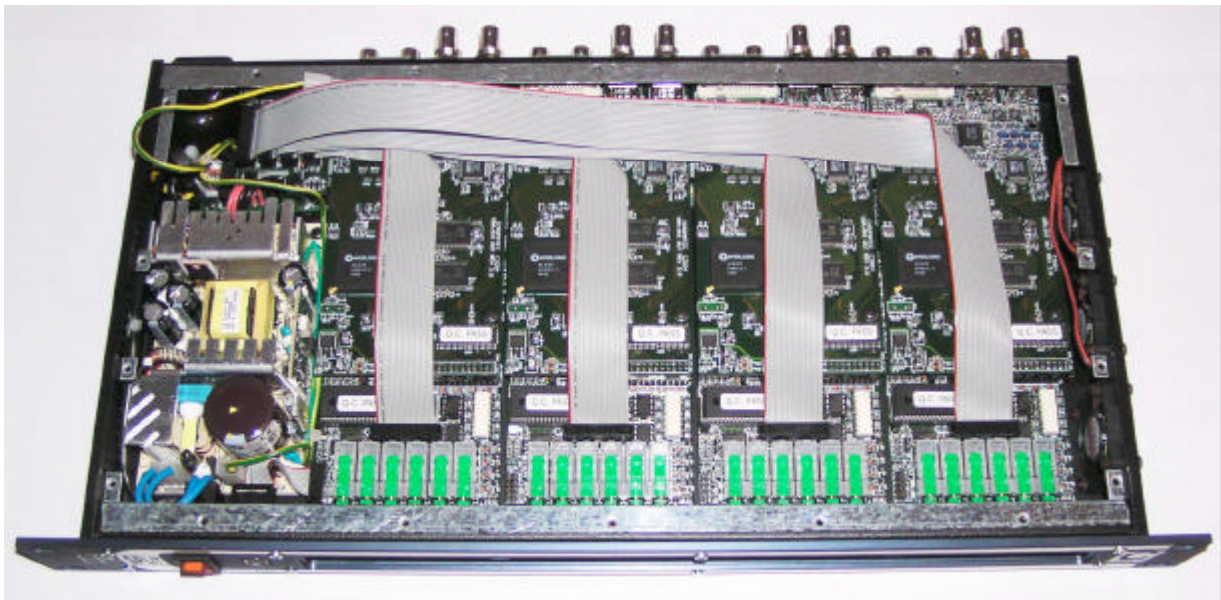
Fitting alarm cables

Each module has a specified header to use on the I/O board for alarms- module 1 uses IOC5, module 2 uses IOC4, module 3 uses IOC3, and module 4 uses IOC2.

- ? Attach the alarm ribbon cable from the appropriate I/O board header to the main module board.
- ? Check that the alarm cable is correctly aligned - the red wire on the ribbon cable should be closest to the rear of the box at the IO board end. On the main board the red wire should be on the left side of the header (as viewed from the front of the board).

Finish up and test

- Refit the frame cover using the retained screws, taking care to refit the earthing strap
- Plug in the mains cable and test the unit



Q-Split inside view showing four quad-channels and associated wiring

Now that the additional module is fitted, power up the unit and set the required parameters on the new module with reference to the Operation chapter.

Note: Cables will already be plugged into the hub card ready to be extended to any additional modules if vacant positions exist. Take care that ribbon cables remain parallel and are not twisted – except for the single twist in the alarm cables as shown.

The power cable normally lies under the daughter boards.

Module header can be located by referring to the illustrations provided.

Tip: If difficulty is experienced installing a new module, remember that modules are always fitted from the top and that the front controls need to be accessible from the front of the frame. Move the module forwards through the front frame aperture until the connectors on the rear edge pass below the lip at the top of the rear panel. Then lower the rear of the module into the frame and move it towards the back of the frame until the connectors are aligned with the rear panel holes.

Updating firmware

The update software, QUpload (available from www.q-split.com, or your Chromatec supplier), is used to update Q-Split firmware via the RS232 port. The cable required is a 9 pin D female (PC end) to 9 pin D male (Q-Split end), wired pin to pin - all wires attached. No internal access is required.

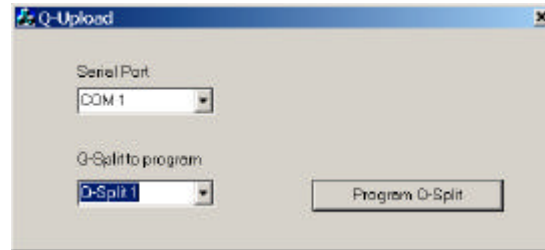
Update procedure

To update module firmware proceed as follows:

- Connect the serial cable from a spare serial port on a PC to the unit's serial port
- Power up the box and wait for the boards to power up (the LOCK LED goes off)
- Run QUpload by clicking on QUpload.exe

Note: The firmware update itself should be contained in the QUpload.exe file.

When QUpdate loads, it will ask which comm port and which of the four Q-Split modules to update:



Press 'Programme Q-Split' when ready. A warning will be given to cable and power up the unit. Press OK to dismiss the warning and carry out the update of the selected module.

If no communication with the board can be established a message will be given to check cabling, power and comm port/module selection.

If communication with the selected module is successful a progress bar will be displayed. Press OK when complete.

- Repeat the process for additional Q-Split modules
- Check the version number of each module to ensure that the upgrade has taken place

Note: The procedure for updating more than one module is different with early (dbupdate) versions of the update software that programs the modules sequentially. If anything goes wrong when programming boards 2, 3, or 4, or if only selected modules are to be programmed, the modules that do not need updating must be skipped by running the update software with the unit powered down.

For example, if module 1 is programmed and module 2 needs to be programmed, start the program with the unit powered down. Let it try to find board 1 – a message will appear saying it cannot find it. Power the unit back up, wait for boards to start up and select Cancel. It will now try and program the second module.

Problem solving

The power switch should illuminate red whenever mains power is supplied. Always ensure that power is connected before using the problem solving guide. An extra fuse is supplied in the spare fuse drawer in the IEC mains connector before the unit leaves the factory. Always replace the fuse with one of the correct value as shown in the Installation section.

Sample problems and their solutions

There is no video output from a fitted module

Check that there is power to the unit and that it is turned on.
An output should be seen within a few seconds of switching on.

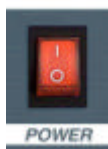
One or more modules fail to respond to commands

Check that the module link/power cable is connected correctly as explained in the 'Fitting additional Q-Split modules' section.
Power cycle the unit and/or perform a Master Reset for affected modules.

The firmware update procedure fails or a check sum error is displayed

Check that a straight pin-to-pin serial cable is connected properly between the PC and the Q-Split unit.
Check that the correct serial port and module have been selected.
Check that the Q-Split unit is powered up, and the lock light is out.
Try using a different QUpload program.

How can a module be reset to factory settings?



In the unlikely event that a module fails to respond correctly, a **Master Reset** may be applied to restore all settings (except label text) to the factory default. Turn off the power for a few seconds, then turn it back on while pressing both Fade/Function buttons until the video output appears. This may take up to ten seconds. Follow any required configuration steps after any reset.

No colour information can be seen on the analogue output

Check that the correct TV standard has been selected.
Check the colour assignments in the configuration.

One or more quadrants will not lock vertically to a connected video source

Check that all module inputs are of the same line standard.

One or more modules fail to generate alarms

Check that alarm triggers have been enabled in the module's configuration.
Check that the module's alarm ribbon cable is correctly attached to the main module alarm header as explained in the 'Fitting additional Q-Split modules' section.

The video freeze alarm keeps being asserted on normal video

Try adjusting the video freeze sensitivity to medium or low.

Alarms remain active long after a triggering alarm event has been cleared

Try adjusting the alarm auto-reset to a lower time period.

Why is there no menu item for changing the DVI-I output aspect ratio?

The output conversion option to convert the DVI-I output format to or from 4:3 or 16:9 only appears for output resolutions above 800 x 600.

Can the analogue video output aspect ratio be changed to match the DVI-I output?

No, format conversion is only supported on the DVI-I output.

An SXGA 15 pin High Density output connector cannot be found

A DVI-I to VGA adaptor (not supplied) must be used to provide an SXGA output.

Specification

Video inputs per module	4 x SDI video 525 or 625 line inputs, 75 Ohm BNC connectors
Video outputs per module	1 x SDI video; 75 Ohm BNC 1 x CVBS or S-Video output (hardware option); 75 Ohm BNC 1 x DVI-I output (both digital and analogue outputs of up to 1280x1024 resolution, refresh rate as per video source or locked to 60Hz)
Alarm outputs	
Per card:	4 x programmable alarm outputs (alarms include loss of video signal, black video, video freeze detection, video motion detection) Quad/Full screen I/P 1 toggle and Reset Alarms 4 x GPIs to operate as either global alarm indicators or tallies
Housing	19" Rack Mount: 1U high. Outline Dimensions: 484mm(W) x 260mm(D) x 44.5mm(H)
Power	90 – 264VAC 47 - 63 Hz, autoselect. Fuse 2A. (12W per module)
Environmental	Temperature 0°C to 30°C Humidity 70% max
Front panel	Power on/off, 1 x PS2 keyboard connector, 6 configuration buttons per module under removable cover
Rear panel	Per module: 4 x SDI Video Inputs, 1 x SDI Video Output, 1 x CVBS or Y/C output (depending on option), 1 combined DVI/RGBHS (DVI-I) output. Per frame: 1 x IEC mains connector (Mains cord supplied with unit) 1 x 36 way 36-way MDR (IEEE 1284-C) connector for GPI/Alarms (Mating MDR connector plug supplied with unit)