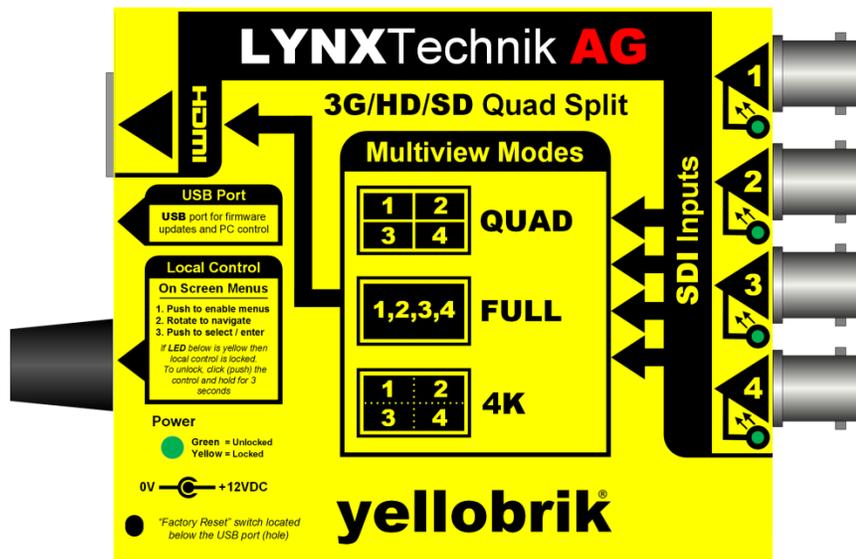


yellobrik®

Reference Manual



P MV 1841

3G/HD/SD Quad Split Multiviewer

Revision 1.0 – September 2015

LYNXTechnik **AG**®

Broadcast Television Equipment

| This Manual Supports Device Revisions: | |
|--|-----|
| P MV 1842 Firmware Revision | 699 |

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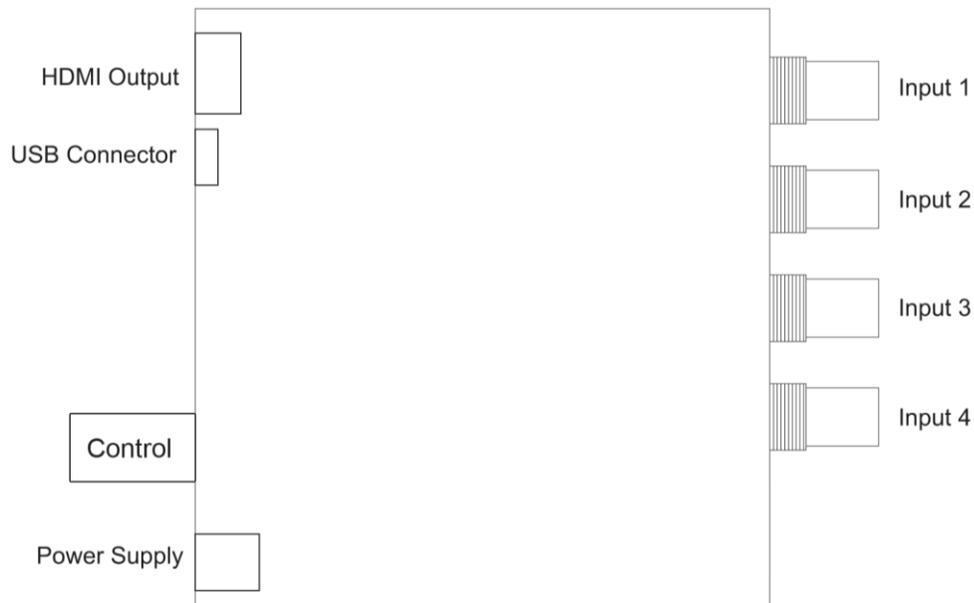
Product Description

The P MV 1841 is a 3G/HD/SD-SDI Quad Split MultiViewer with an HDMI output. In addition to the quad split functionality, the module can also accept a quad link 12G 4k.

The PMV 1841 is a compact quad split multiviewer ideal for applications needing basic quad split multiview capability into an HDMI monitor. Four SDI inputs are supported with a single HDMI output. The module has three basic modes of operation; Quad Split, Full Screen and 4K Monitoring.

The module is simple to setup and configure using the integrated local control and on screen menu system. All settings are automatically stored in flash RAM. USB is port is provided for firmware updates and also PC/MAC control using the yelloGUI application.

Controls and Connections

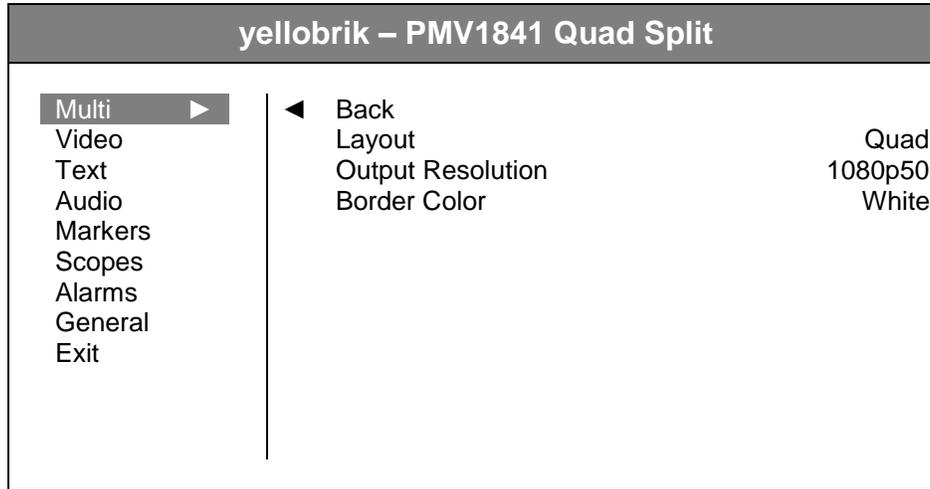


On Screen Menu

To access the on screen menu press the control knob on the side of the module (press and hold for 3 seconds if “lock” functionality is activated – see “General” for detailed description). Turn the control knob to navigate through the menu. To enter a desired menu press the knob again. To get back to the lower menu level, press the knob while the “back” entry is highlighted. The on screen menu will automatically switch off after 5 seconds if not used or you can use the Exit entry at the bottom of the root menu.

Multi

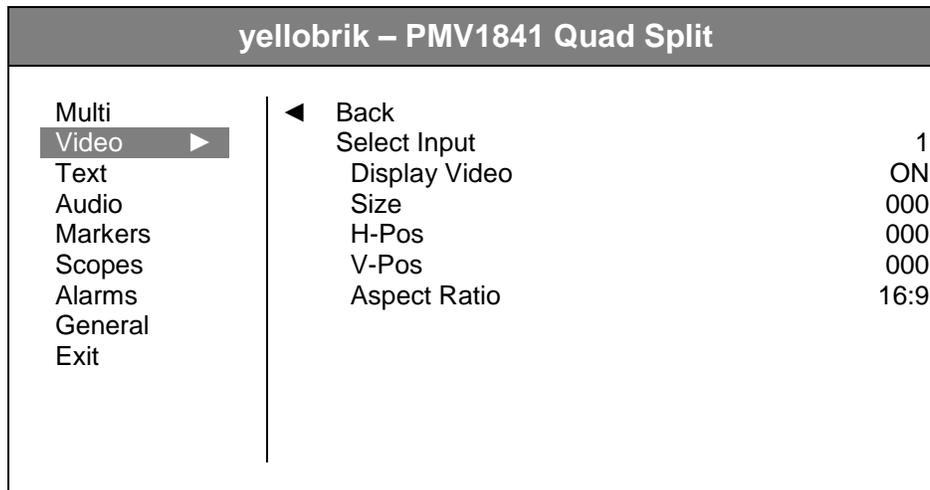
The settings for the multiview display can be adjusted in this menu.



- **Layout**
Sets the multiview layout and configuration.
 - **Quad**
Classical quad split layout with all four input signals shown simultaneously.
 - **Full 1-4**
Full image view of the selected input.
 - **4k**
Activating this mode will convert a quad link 12G 4k image to a 3G output image.
- **Output Resolution**
Sets the output resolution of the SDI and HDMI output.
 - 1080p 60 / 50 / 30 / 25
 - 1080i 60 / 50
 - 720p 60 / 50
- **Border Color**
Choose the color for the multiview borders (Black / Gray [1, 2, 3, 4, 5, 6, 7, 8] / White / Blue / Red / Magenta / Green / Cyan / Yellow).
- **Back**
Select “back” to return to the root menu.

Video

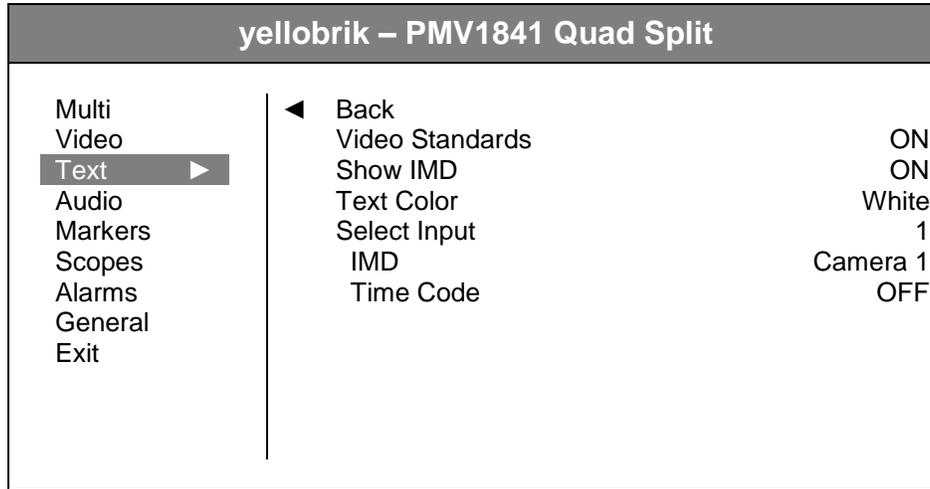
In this menu the individual input images can be configured.



- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **Display Video**
Turn the selected input ON or OFF. When turned OFF, the video won't be displayed even if a valid signal is connected.
- **Size**
Adjusts the size (255 – 150) of the image while maintaining the aspect ratio. The overlay features will not be scaled. The fixed position overlays (e.g. IMD, video standards display, time code, alarms etc.) will be moved outside of the image when scaling.
- **H-Pos**
Adjusts the horizontal position (0 – 105) of the image. This parameter depends on the size adjustment. If the image is full size, the H-Pos parameter does not have an effect. In addition to this, the range of this parameter that has an effect depends on the amount that the size has been reduced e.g. if the size has been reduced to 200 the range of the H-Pos that has an influence on the image is from 0-55.
- **V-Pos**
Adjusts the vertical position (0 – 105) of the image. The behavior and range of this parameter is the same as the H-Pos parameter.
- **Aspect Ratio**
Adjusts the aspect ratio (16:9 / 4:3) of the image.
- **Back**
Select "back" to return to the root menu.

Text

Activate and adjust the text overlays.



- **Video Standards**
Turn the video standard burn-in for all inputs ON or OFF.
- **Show IMD**
Turn the IMD (In Monitor Display) for all the inputs ON or OFF.
- **Text Color**
Choose the color of the text (Black / Gray [1, 2, 3, 4, 5, 6, 7, 8] / White / Blue / Red / Magenta / Green / Cyan / Yellow). The text color for all the inputs will be affected.
- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **IMD**
Edit the xx character IMD text for the selected input. The IMD provides up to 16 characters.
- **TimeCode**
Turn the ATC time code burn-in ON or OFF for the selected input.
- **Back**
Select “back” to return to the root menu.

Audio

This menu provides settings for the audio level meters for the individual inputs.

| yellobrik – PMV1841 Quad Split | |
|--------------------------------|--------------------|
| Multi | ◀ Back |
| Video | Select Input 1 |
| Text | Audio Meters ON |
| Audio ▶ | No. of Channels 8 |
| Markers | H-Pos 000 |
| Scopes | V-Pos 000 |
| Alarms | Meter Size Small |
| General | Test Level -18dBFS |
| Exit | PGM Level -9dBFS |

- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **Audio Meters**
Turn the audio level meters ON or OFF for the selected input.
- **No. of Channels**
Select the number of audio channels (4 / 8 / 16) for the audio level meter of the selected input.
- **H-Pos**
Adjusts the horizontal position (0 – 255) of the audio level meter.
- **V-Pos**
Adjusts the vertical position (0 – 255) of the audio level meter.
- **Meter Size**
Choose between a small or large size of the audio level meter.
- **Test Level**
Adjust the threshold of the yellow test level indication (-60dBFS – 0dBFS). This setting affects the audio level meters of all the inputs.
- **PGM Level**
Adjust the threshold of the red peak program level indication (-60dBFS – 0dBFS). This setting affects the audio level meters of all the inputs.
- **Back**
Select “back” to return to the root menu.

Markers

Activate and adjust the markers for the individual inputs.

| yellobrik – PMV1841 Quad Split | |
|--------------------------------|--------------------------|
| Multi | ◀ Back |
| Video | Select Input 1 |
| Text | Center Cross ON |
| Audio | Safe Area 85 |
| Markers ▶ | Aspect Ratio User |
| Scopes | Horizontal Markers 000 |
| Alarms | Vertical Markers 000 |
| General | Markers Color White |
| Exit | Curtain Transparency Med |

- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **Center Cross**
Turn the center cross ON or OFF.
- **Safe Area**
Activate the safe area display. Choose between various safe area markers (80 / 85 / 88 / 90 / 93).
- **Aspect Ratio**
Choose between a long list of displayable aspect ratio markers (16:9 / 4:3 / 15:9 / 14:9 / 13:9 / 1.85:1 / 2.35:1 / 1.85:1 + 4:3 / User)
- **Horizontal Markers**
Adjusts the position (0 – 255) of the horizontal user markers. Aspect Ratio needs to be set to “User” for this adjustment to have an effect.
- **Vertical Markers**
Adjusts the position (0 – 255) of the vertical user markers. Aspect Ratio needs to be set to “User” for this adjustment to have an effect.
- **Markers Color**
Choose the color of the markers (Black / Gray [1, 2, 3, 4, 5, 6, 7, 8] / White / Blue / Red / Magenta / Green / Cyan / Yellow). The markers color of all the inputs will be affected.
- **Curtain Transparency**
This control adjusts the transparency of the area outside of the markers (Full / Max / Med / Min). This adjustment of the curtain transparency will affect all inputs.
- **Back**
Select “back” to return to the root menu.

Scopes

This menu provides settings for the waveform and vector scope displays for each input individually.

| yellobrik – PMV1841 Quad Split | | |
|--------------------------------|--------------|-------|
| Multi | ◀ Back | |
| Video | Select Input | 1 |
| Text | Waveform | ON |
| Audio | Type | RGB |
| Markers | H-Pos | 000 |
| Scopes ▶ | V-Pos | 000 |
| Alarms | Size | Small |
| General | Vectorscope | OFF |
| Exit | H-Pos | 000 |
| | V-Pos | 000 |
| | Size | Small |
| | Transparency | OFF |

- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **Waveform**
Turn the waveform display ON or OFF for the selected input.
- **Type**
Select the type of waveform (RGB / R / G / B / YCbCr / Y / Cb / Cr) that is to be displayed.
- **H-Pos**
Adjusts the horizontal position (0 – 255) of the waveform display.
- **V-Pos**
Adjusts the vertical position (0 – 255) of the waveform display.
- **Size**
Choose between a small or large size of the waveform display.
- **Vector**
Turn the vector scope display ON or OFF for the selected input.
- **H-Pos**
Adjusts the horizontal position (0 – 255) of the vector scope display.
- **V-Pos**
Adjusts the vertical position (0 – 255) of the vector scope display.
- **Size**
Choose between a small or large size of the vector scope display.

- **Scope Transparency**
Adjust the transparency (OFF / Min / Med / Max) of the scopes.
- **Back**
Select “back” to return to the root menu.

Alarms

This menu provides settings for alarm indications for each individual input.

| yellobrik – PMV1841 Quad Split | | |
|--------------------------------|-------------------|---------|
| Multi | ◀ Back | |
| Video | Select Input | 1 |
| Text | No Input | OFF |
| Audio | Black | OFF |
| Markers | No Audio | OFF |
| Scopes | Silence Audio Ch. | 1 |
| Alarms ▶ | No Input Color | Red |
| General | Black Color | Red |
| Exit | Black Duration | 5s |
| | Audio Color | Red |
| | Silence Duration | 5s |
| | Silence Threshold | -30dBFS |

- **Select Input**
Choose the input (1 – 4) which the following should affect.
- **No Input**
Turn the “No Input” alarm indication ON or OFF for the selected input. This alarm indicates a missing SDI input signal.
- **Black**
Turn the “Black” alarm indication ON or OFF for the selected input. This alarm indicates if the content of the video is black.
- **No Audio**
Turn the “No Audio” alarm indication ON or OFF for the selected input. This alarm indicates if no audio is embedded in the SDI input.
- **Silence Audio Ch.**
Activate the “Silence Audio Ch.” alarm indication for the selected input by selecting the audio channel that is to be monitored (1 – 16).
- **No Input Color**
Choose the color of the “No Input” alarm (White / Yellow / Cyan / Green / Magenta / Red / Blue / Black). This setting will affect all inputs.

- **Black Color**
Choose the color of the “Black” alarm (Black / Blue / Green / Red / Cyan / Magenta / Yellow / White). This setting will affect all inputs.
- **Black Duration**
Setup the time (0s – 60s) that the module should wait until it triggers the “Black” alarm. This setting will affect all inputs.
- **Audio Color**
Choose the color of the Audio alarms (No Audio and Silence) (Black / Blue / Green / Red / Cyan / Magenta / Yellow / White). This setting will affect all inputs.
- **Silence Duration**
Setup the time (0s – 60s) that the module should wait until it triggers the “Silence” alarm. This setting will affect all inputs.
- **Threshold**
Define the audio level threshold (-60dBFS – 0dBFS) for the “Silence” alarm. This setting will affect all inputs.
- **Back**
Select “back” to return to the root menu.

General

This menu provides general settings and information for the device.

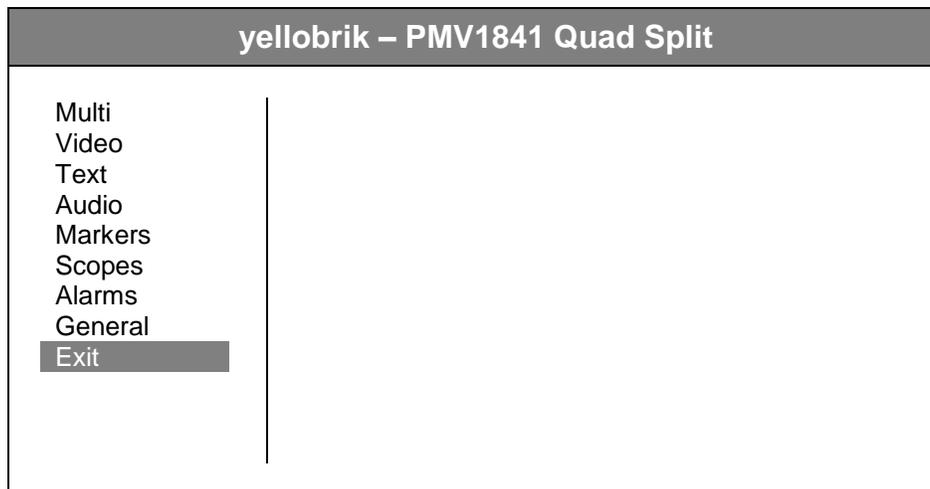
| yellobrik – PMV1841 Quad Split | | |
|--------------------------------|------------------|-----|
| Multi | ◀ Back | |
| Video | OSD H-Pos | 000 |
| Text | OSD V-Pos | 000 |
| Audio | OSD Transparency | OFF |
| Markers | OSD Lock | ON |
| Scopes | Factory Reset | |
| Alarms | Serial Number | 999 |
| General ▶ | SW Version | 699 |
| Exit | | |

- **OSD H-Pos**
Adjusts the horizontal position (0 – 255) of the on screen display.
- **OSD V-Pos**
Adjusts the vertical position (0 – 255) of the on screen display.
- **OSD Transp**
Adjust the transparency (OFF / Min / Med / Max) of the on screen display.

- **OSD Lock**
Activating this function will lock the OSD to avoid accidentally turning the menu on by knocking the control encoder. To indicate the activated “Lock” functionality the general status LED of the module will be amber.
To access the “locked” menu press and hold the control encoder for 3 seconds.
- **Factory Reset**
Reset the module to the factory default configuration.
- **Serial Number**
Displays the serial number of the module.
- **SW Version**
This entry will display the software version that the module is running on. To update the software, download the latest yelloGUI software from our homepage (www.lynx-technik.com) and connect the module via USB to the computer running the software (the module needs to be powered in order to update).
- **Back**
Select “back” to return to the root menu.

Exit

Pressing this entry will turn the on screen menu off.



Warranty

LYNX Technik AG warrants that the product will be free from defects in materials and workmanship for a period of two (3) years from the date of shipment. If this product proves defective during the warranty period, LYNX Technik AG at its option will either repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, customer must notify LYNX Technik of the defect before expiration of the warranty period and make suitable arrangements for the performance of service. Customer shall be responsible for packaging and shipping the defective product to the service center designated by LYNX Technik, with shipping charges prepaid. LYNX Technik shall pay for the return of the product to the customer if the shipment is within the country which the LYNX Technik service center is located. Customer shall be responsible for payment of all shipping charges, duties, taxes and any other charges for products returned to any other locations.

This warranty shall not apply to any defect, failure, or damage caused by improper use or improper or inadequate maintenance and care. LYNX Technik shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than LYNX Technik representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of non LYNX Technik supplies; or d) to service a product which has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty servicing the product.

THIS WARRANTY IS GIVEN BY LYNX TECHNIK WITH RESPECT TO THIS PRODUCT IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. LYNX TECHNIK AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. LYNX TECHNIK'S RESPONSIBILITY TO REPAIR AND REPLACE DEFECTIVE PRODUCTS IS THE SOLE AND EXCLUSIVE REMEDY PROVIDED TO THE CUSTOMER FOR BREACH OF THIS WARRANTY. LYNX TECHNIK AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER LYNX TECHNIK OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

Regulatory information

Europe

Declaration of Conformity

| | |
|--|--|
| We | LYNX Technik AG Brunnenweg 3 D-64331 Weiterstadt Germany |
| <i>Declare under our sole responsibility that the product</i> | |
| TYPE: P MV 1841 | |
| <i>To which this declaration relates is in conformity with the following standards (environments E1-E3):</i> | |
| EN 55103-1 /1996 | |
| EN 55103-2 /1996 | |
| EN 60950-1 /2006 | |
| <i>Following the provisions of 89/336/EEC and 73/23/EEC directives.</i> | |
| | Winfried Deckelmann |
| Weiterstadt, August 2015 |  |
| <i>Place and date of issue</i> | <i>Legal Signature</i> |

USA

FCC 47 Part 15

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to the part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Specifications

| SDI Video Input | |
|---------------------------|---|
| Number of Inputs | 4x SDI video on 75 Ohm BNC connector |
| Supported Standards | SMPTE ST 259M (SDTV) SMPTE ST 292-1 (HDTV 1,5 Gb/s) SMPTE 424 M (3Gb/s) supporting ST 425-1 Level A |
| Return Loss | > 15dB to 1.5GHz and > 10dB up to 3GHz |
| Cable Length | Automatic cable EQ (Belden 1694A cable) 340m @ 270Mbit/s, 150m @ 1.5Gbit/s, 120m @ 3Gbit/s |
| HDMI Video Outputs | |
| Number of Outputs | 1x HDMI on Type A connector |
| HDMI Standard | 1.4a |
| Embedded Audio | 2 Channels of selected Input for full view |
| Local Control | |
| Type of control | On Screen Menu |
| Control | Rotary Push Encoder |
| Processing | |
| Input to Output Delay | 1 Frame |
| USB | |
| Connector | Standard USB port for yelloGUI interface and firmware updates (Mini Type "B" plug) |
| Physical | |
| Size | 138mm x 90mm x 22mm (5.13" x 3.54" x 0.86") including connectors |
| Weight | 230g (8.11oz) |
| Power | |
| Consumption | +12VDC @ 4.9W nominal |
| Power Input Range | supports 10 - 14VDC |
| Ambient | |
| Temperature | 5 – 40°C (41 – 104°F) |
| Humidity | 90% Humidity (non condensing) |

Getting Help

Support Contact

If the module isn't working as expected, or have questions please contact your local distributor, authorized dealer or reseller for more details. Please do not return products to LYNX without an RMA.

For FAQs and Technical support visit

<http://support.lynx-technik.com>

LYNX Technik Knowledge Base

Frequently asked questions

General Product Info

General product information is available on

<http://www.lynx-technik.com>

Contact Information

Please contact your local distributor; this is your local and fastest method for obtaining support and sales information.

LYNX Technik can be contacted directly using the information below.

| | |
|----------------|---|
| Address | LYNX Technik AG Brunnenweg 3 D-64331 Weiterstadt Germany |
| Website | www.lynx-technik.com |
| E-Mail | info@lynx-technik.com |

LYNX Technik manufactures a complete range of high quality modular products for broadcast and Professional markets, please contact your local representative or visit our web site for more product information.

LYNXTechnik **AG**

Broadcast Television Equipment