



**Digital Forecast**

**Bridge"RS 16\*16**

*HD/SD/3G SDI Matrix Router*

***Instruction Manual***



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For such misuse, modification, or careless handling of the user of the product, Non-standard product is not responsible for warranty.

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Please be sure to read the following instructions before using the product.

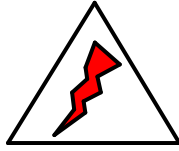
Designed and tested in accordance with the standards of this product.

## Safety

Please be sure to read the following instructions before using the product.

Designed and tested in accordance with the standards of this product.

### Safety Mark



symbol indicates a danger. product have high voltage that can cause concern to body electrical shock.

**DANGER**

DANGER symbol indicates a danger.

If do not attention to handling, concerns of personal injury can result.

Do not ignore the DANGER mark and treat them.

**WARNING**

WARNING symbol indicates a warning.

If you deal products negligence or abuse it cause adversely. Do not ignore the WARNING mark and treat them.

**CAUTION**

CAUTION symbol indicates a. caution.

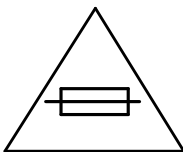
If treats products negligence or abuse it cause damaged. Do not ignore the CAUTION mark and treat them.

## Before operating



1. Check indicated voltage before you turn on product.

※ Use to Earth Ground for safety.



2. Use to rated Fuse.

3. Qualified person could be limited to maintenance, repair and replace of product.

## SERVICE

Bridge series order to satisfy technical requirements and compact size, it could be limit to repair of SMT(Surface-Mount Technical) and program on site, immediately.

Please request to repair if products have a problem

# Bridge RS 16x16

Bridge RS 16x16 is supporting 8x8 SDI input/output of video as "Routing Switcher".

A this model recognizes SD,HD and 3Gb/s SDI signal automatically change, It has the dual power supply and Reclocking function built-in.

And input state display. APC function(Control by RS422 communication of PC), button Lock function for the convenience of the user.

## 1. Feature

2. Support SMPTE 292M, SMPTE 344M, SMPTE 259M, SMPTE 424M
3. Re-clocking
4. Multi-Rate SDI (143M, 177M, 270M, 340M, 540M, 1.485G, 1.485/1.001G, 2.97G)
5. 3G/HD/SD-SDI 16 in x 16 out
6. Auto equalizing (HD grade : compensate for up to 100m, SD : up to 300m of Belden 1694 Cable )
7. RS-422 deck control ports (RJ45,)
8. DC12V 3.33A Power supply included
9. TCP/IP Network control ports (RJ45)

## 2. Name and function

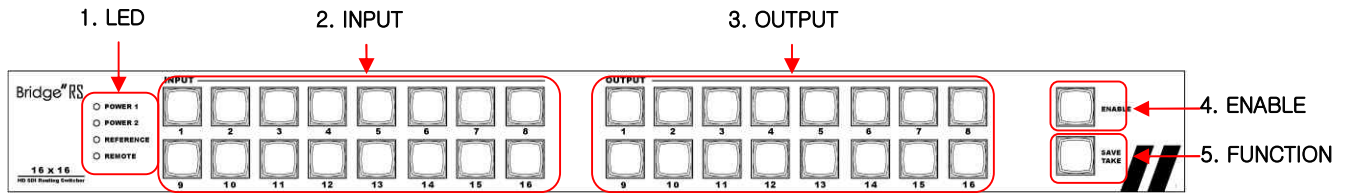


그림 2-1 전면부

1. **LED** : POWER1, POWER 2, REFERENCE, REMOTE
  - a. POWER1 : Power supply input status of Power1 is shown.
  - b. POWER2 : Power supply input status of Power2 is shown. .
  - c. REFERENCE : Reference input status is shown. (B.B , Tri-Level)
  - d. REMOTE : When controlling by communication, it's switched on and off.
2. **INPUT** : An input signal presence is shown by an LED by 16 of input select button.  
(Complete connection : LED ON, No connection : LED flicker)
3. **OUTPUT** : 16 of output select button
4. **ENABLE** : When it's pushed for more than 1 second, LED On.  
When lighting up, it's possible to control the item number 2,3  
When pushing it again, it's turned off.
5. **FUNCTION** : In Out setting is preserved or, when import, it's used.

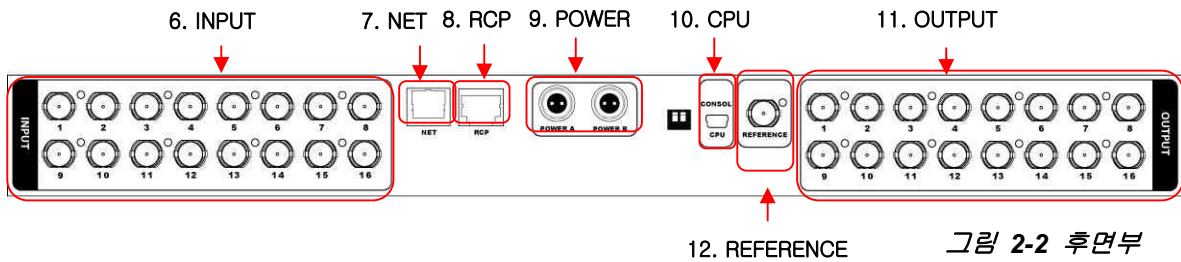
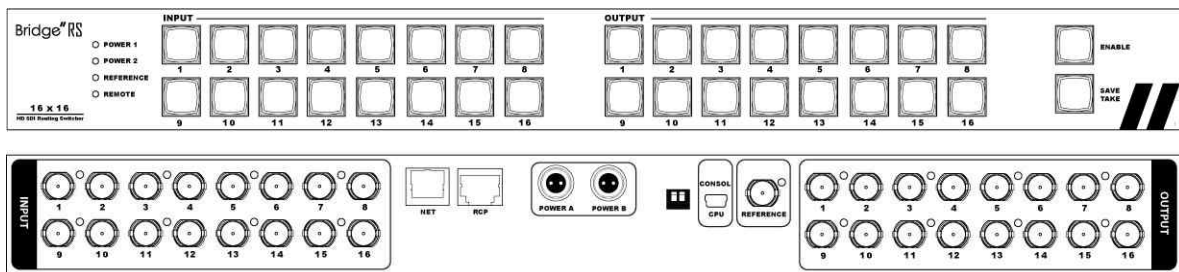


그림 2-2 후면부

6. **INPUT** : 16 of Input BNC
7. **NET** : Support to TCP/IP NETWORK
8. **RCP** : Support to RCP by RS-422 Communication(A protocol is in an attachment ..)
9. **POWER** : 2 of 12V adapter power supply input (can be spare)
10. **CPU** : CPU CONSOL MINI USB TYPE
11. **OUTPUT** : 16 of output BNC
12. **REFERENCE** : Tri-level or 1 of Black Burst input

### 3. Way of use



#### 1. Input / Output Setting

To connect the Video source to the INPUT BNC.

To connect the OUTPUT BNC to the input of the equipment that I want try to send the display equipment and source .

The ON cases the ENABLE button, press the ENABLE button for more than 1 second .

Select the same OUTPUT button and OUTPUT BNC number which is connected to the equipment that I want try to send the display equipment and source.

Screen output or by pressing the same button as the other INPUT BNC and concatenate number and transmitted to the appropriate equipment . If all of the settings are completed , ON causes the ENABLE button press again the ENABLE button.※ equipment seen has to be selected after selecting the input button the output button first in such a way as above because it is designed as an output reference .

#### 2. FUNCTION KEY Operating

As the ENABLE button state is on, and press the FUNCTION KEY, It means that four right buttons and four left buttons are ON.

(However, should a state of being turned ON ENABLE button.)

The left side is a save button, the right side data load button. Save and load data is possible up to four each. If select the left button to become saved in the appropriate number.

Press the right button to become loaded the value of the corresponding number, it changed into the initial state. (The input port is to the first port of loading values reveal.)

#### 3. Notices

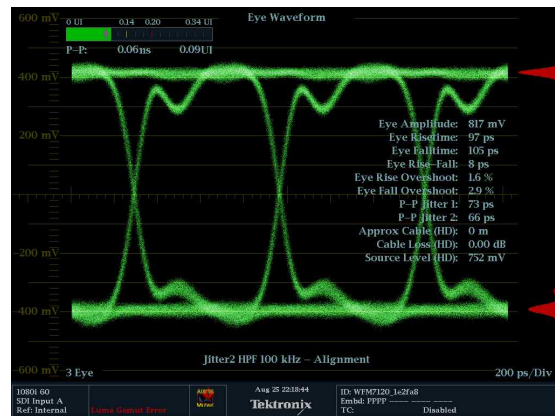
This device button after selecting the first output in the same way as above because it is designed to be output should be selected based on the input buttons . Additionally, If the ENABLE button is ON , it does not communicate.

## 4. Signal Characteristic

### 1. HD-SDI Properties



HD-SDI IN SIGNAL

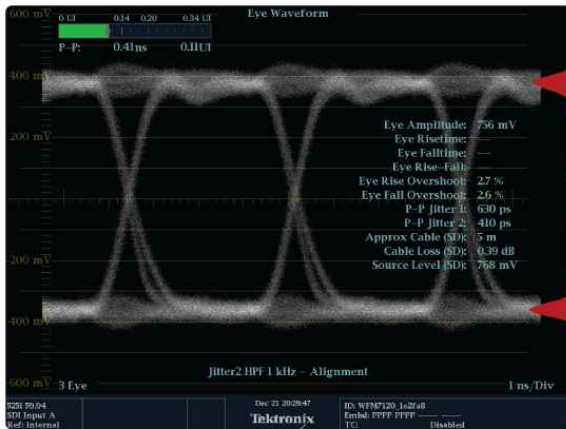


HD-SDI OUT SIGNAL

### HD-SDI Serial Digital Video

Connector	75Ω BNC
Signal level	800mV ± 10%
DC offset	0V ± 0.5V
Rise and fall time	< 270ps (20% to 80% amplitude)
Overshoot	<10% of amplitude
Timing Jitter	<1 UI
Alignment Jitter	<0.2UI

## 2. SD-SDI Properties



SD-SDI IN SIGNAL



SD-SDI OUT SIGNAL

### SD-SDI Serial Digital Video

Connector	75Ω BNC
Signal level	800mV ± 10%
DC offset	0V ± 0.5V
Rise and fall time	400~800ps(20% to 80% amplitude)
Overshoot	<10% of amplitude
Timing Jitter	<0.2 UI
Alignment Jitter	<0.2UI

## 5. Specification

### Connections

SDI Video Input	SD/HD-SDI, 3Gb/s SDI and ASI. X16 (BNC)
SDI Video Output	SD/HD-SDI, 3Gb/s SDI and ASI with SDI re-clocking. X16 (BNC)
Remote Control	RS-422 (RJ45)
Reference Input	B.B , TRI x1 (BNC)
NET	TCP/IP (RJ45)

### Electrical

Voltage	90 ~ 240V AC 50/60Hz
Power Dissipation	< 28W(12V DC, 3.33A)
Temperature	0 ~ 40°C

### Physical

Size	481mm x 43mm x 133mm(W x H x D)
Weight	1.85Kg

### Standards

**SD Format** 625/25 PAL and 525/29.97 NTSC.

#### Support

**HD Format Support** 1080p23.98, 1080PsF23.98, 1080p24, 1080PsF24, 1080p25, 1080PsF25, 1080p29.97, 1080PsF29.97, 1080p30, 1080PsF30, 1080i50, 1080i59.94, 1080i60, 1080p50, 1080p59.94, 1080p60, 720p23.98, 720p24, 720p25, 720p29.97, 720p30, 720p50, 720p59.94, 720p60.

**SDI Compliance** SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 310M, SMPTE 425M-A, SMPTE 425M-B

**SDI Video Sampling** 4:2:2 and 4:4:4.

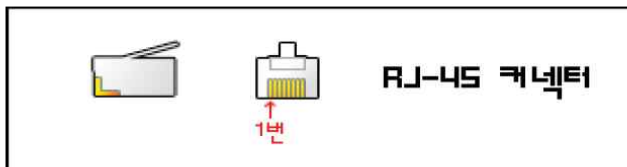
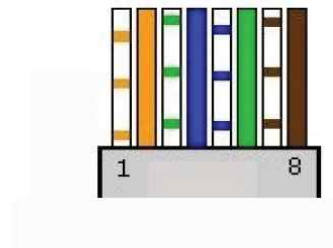
**SDI Video Rates** SDI video connections are switchable between standard definition, high definition and 2K. SDI switches between 270 Mb/s standard definition SDI, 1.5 Gb/s HD-SDI and 3 Gb/s HD SDI.

**SDI Auto Switching** Automatically selects between SD-SDI, HD-SDI, 3 Gb/s SDI and DVB-ASI on each input so that each input can be running a different television standard.

## 6. Attach

### Cable connection

#### RJ-45 PIN 설명



RJ-45

1 TX+	7 RX+
2 TX-	8 RX-

※ It consists of PIN MAP like the top, when connecting with RCP, you should manufacture a LAN cable by 1:1

※ When ENABLE is, the main body can't make ENABLE RCP.

If the main body will be ENABLE even if RCP ENABLE will be, RCP will be a disable.

※ REMOTE LED of RCP is flicker every time when data is received by the main body.