



maxsquare

MSQ-710P

1x8 12G/6G/3G/HD/SD SDI Reclocking Distribution Amplifier



MADE IN TAIWAN

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1. Introduction

The MSQ-710P 1x8 12G/6G/3G/HD/SD SDI Reclocking Distribution Amplifier takes one SDI input, duplicates it perfectly, and re-transmits eight SDI outputs for real-time multi-viewing. It is an ideal video device splitting an SDI, HD-SDI, 3G-SDI, 6G-SDI, or 12G-SDI video source to eight SDI compliant displays at the same time.

2. Features

- 12G/6G/3G/HD/SD-SDI distribution
- Provides automatic input cable equalization (Canare 12G-SDI BNC cable) up to 180m (594ft)@3G, 100m (330ft)@6G and 70m(230ft) @12G
- 8 separately buffered and reclocked outputs*
- Cable equalization and signal retiming
- LED indication of signal lock and video rate
- Passes ancillary data and embedded audio
- Reclocking SDI signals for cascading and thus longer transmission
- Inter-locked power supply for better fixedness

* Due to the super high frequency and lower jitter requirement for 12G SDI signals, to have the best performance, it is strongly recommended to use one 75 ohm terminator if the paired SDI is not in use.

Please see the following table for 12G SDI output pairing.

Table #1

	Output Port
Pair A	Output 1 & 2
Pair B	Output 3 & 4
Pair C	Output 5 & 6
Pair D	Output 7 & 8

3. Package Contents

- 1x MSQ-710P
- 1x 12V power adapter
- 1x BNC 75 ohm terminator
- 1x User Manual

4. Specifications

MSQ-710P

Technical	
SDI standard	SD/HD/3G/6G/12G-SDI
Multi-Rate Support	Auto detection of SD, HD, 3G, 6G or 12G Signals
SDI Compliance	SMPTE 424M, SMPTE 292M, SMPTE 344M, SMPTE 259M, DVB-ASI, ST-2081(6G), ST2082(12G)
SDI Data rates	1.485 / 2.97 / 5.94 / 11.88 Gbps
Video bandwidth	[11.88Gpbs & 11.88/1.001Gbps]
Output impedance	75Ω
Reclocking	Yes
Cable equalization	[12G] up to 70m (230ft) [6G] up to 100m (330ft) [3G] up to 180m (594ft)
Audio support	Yes
RP-198 pathological patterns	Immune
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 75Ω]
Input	1x BNC [SDI]
Output	8x BNC [SDI]
BNC connector	75Ω inter-locked socket
Eye pattern characteristics[12G]	Amplitude: Within 800mV (<10%) Timing jitter: <1.0 UI (10Hz to 1188MHz) Rise/Fall time: Less than 35ps Alignment jitter: <0.3 (100KHz to 1188MHz)
Mechanical	
Housing	Metal enclosure
Fixedness	Wall-mounting case
Power supply	12V DC
Power consumption	2.5 Watt [max]
Operation temperature	0~40°C [32~104°F]
Storage temperature	-20~60°C [-4~140°F]
Relative humidity	20~90% RH [no condensation]

 The measurement results are from Phabrix QX with SDI through 1m (3.3ft) long Belden 1694A.

5. Panel Description

Front Panel



1. 12V DC power jack
2. 12G/6G/3G/HD/SD-SDI input
3. Micro-USB for F/W update
4. 12G/6G/3G/HD/SD-SDI output

Rear Panel

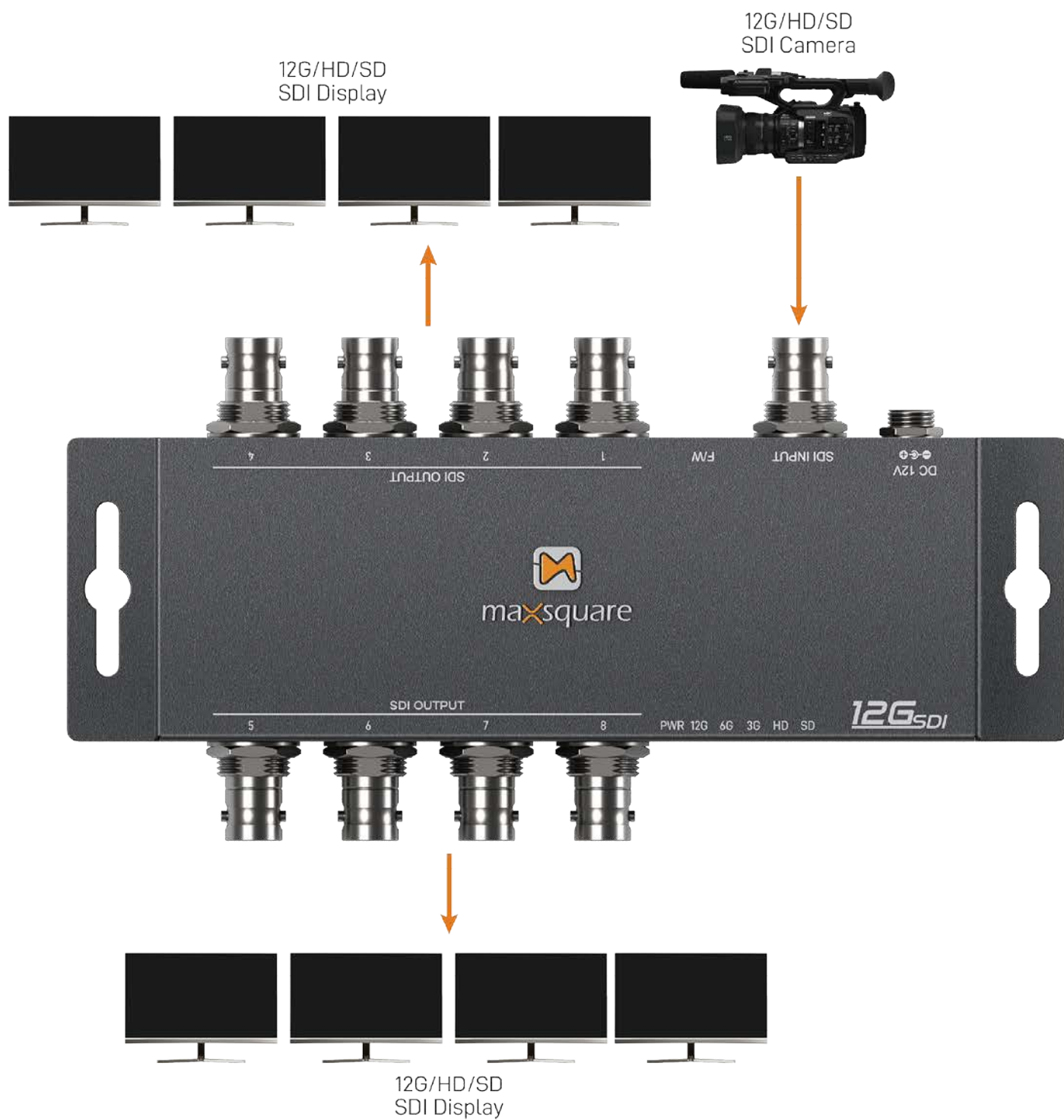


5. 12G/6G/3G/HD/SD-SDI output
6. Power LED indicator
7. 12G Signal LED indicator
8. 6G Signal LED indicator
9. 3G Signal LED indicator
10. HD Signal LED indicator
11. SD Signal LED indicator

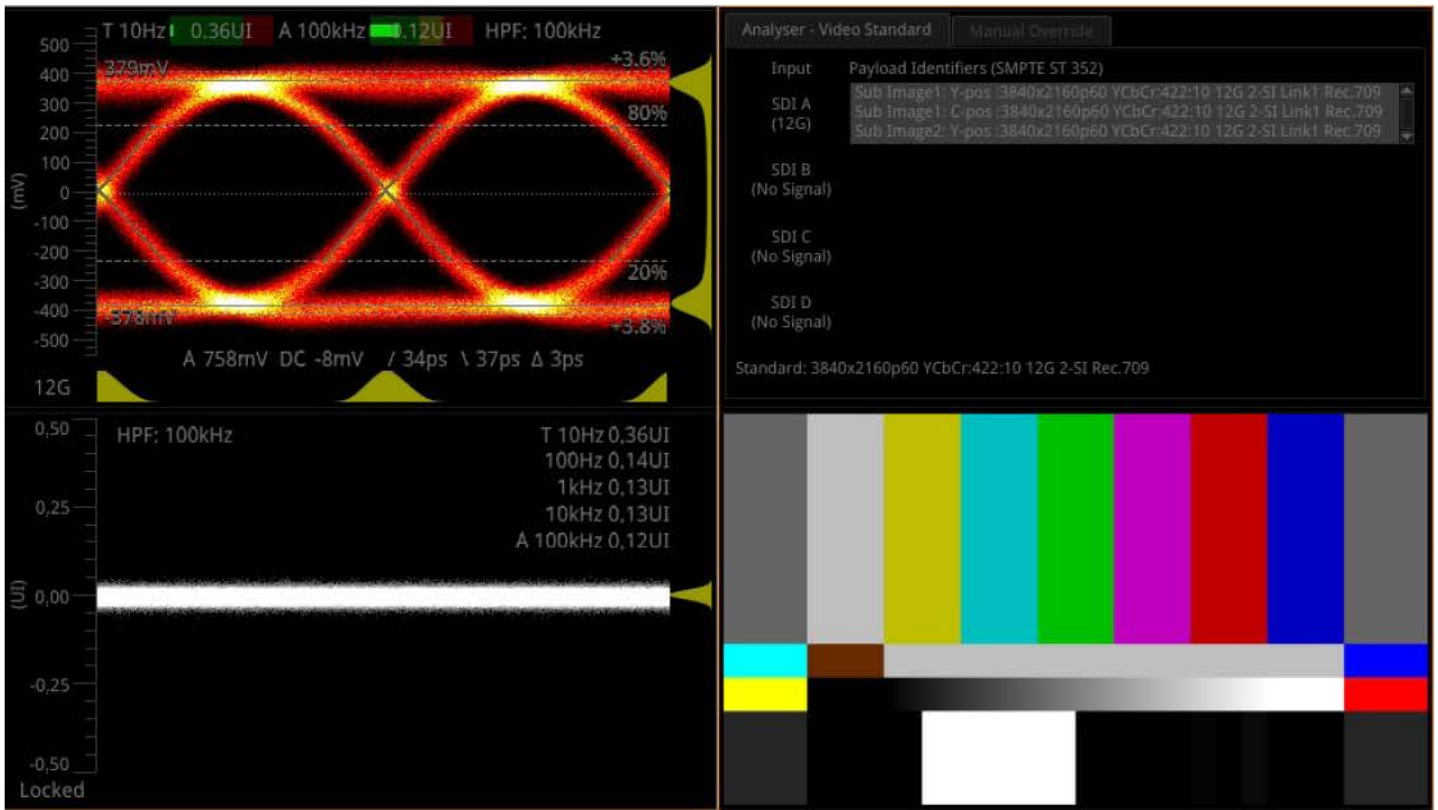
6. Hardware Installation

1. Connect a camera or other devices equipped with 12G/6G/3G/HD/SD-SDI outputs to MSQ-710P 12G/6G/3G/HD/SD-SDI input.
2. Connect devices equipped with 12G/6G/3G/HD/SD-SDI inputs (e.g. monitors or video processors) to MSQ-710P 12G/6G/3G/HD/SD-SDI outputs.
3. Plug power adapter cable into 12V DC power jack.

7. Connection Diagram



8. Signal Measurement



9. Warranty

Maxsquare warrants the MSQ-710P 1x8 12G/6G/3G/HD/SD SDI Reclocking Distribution Amplifier for one year from the date of purchase from Maxsquare or an authorized dealer from defects in material and workmanship. If this product fails to function properly within the first year of its warranty, Maxsquare may repair or replace it at its discretion, provided that the device has not been subjected to accident, disaster, abuse, or other unauthorized modifications, including static discharge and power surge. Maxsquare provides this warranty to its BUYER solely in the case of a direct transaction. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. These repairs are warranted by a 90-day warranty from the date of reshipment to the buyer. Customers agree to insure the unit or incur the risk of loss or damage in transit if the unit is delivered by mail. A unit will not be accepted if it does not have a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of purchase may be required to claim the warranty. Customers outside of Taiwan must pay for shipping to and from Maxsquare. Cables and power adapters have a 30-day warranty and must be free of any markings or scratches, as well as neatly coiled.

This manual's material has been carefully reviewed and is believed to be accurate. Maxsquare, on the other hand, takes no responsibility for any inaccuracies or omissions in this manual. Even if advised of the possibility of such losses, Maxsquare will not be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual. Furthermore, the technical information contained in documents on the MSQ-710P's features and specifications is subject to change without further notice.