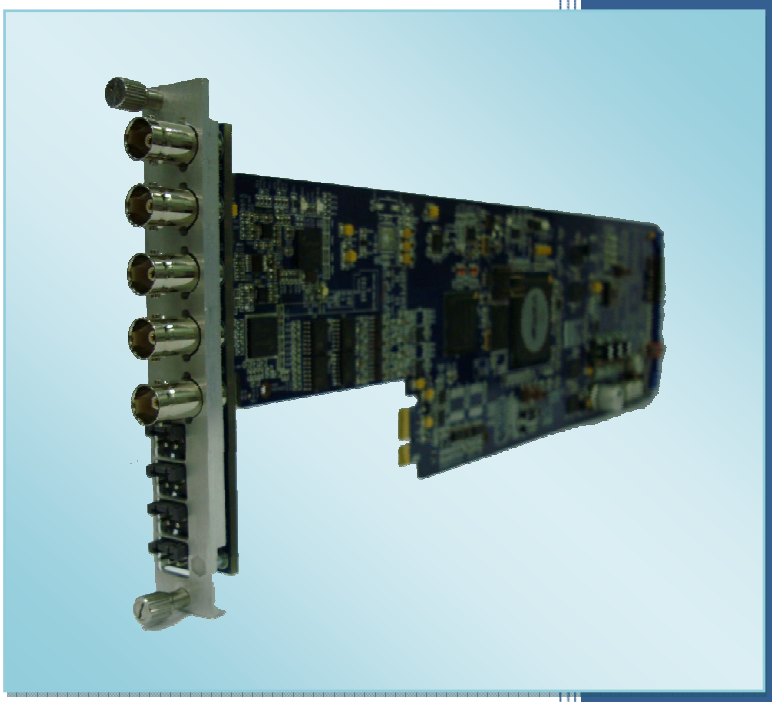
GeFei
WWW.GEFEI-TECH.COM

XIO 9040UC SD-SDI up converter

User Manual V1.0



www.gefei-tech.com

Nov, 2011

Copyright

Trademarks

Gefei-Tech, Magi, MIO, VIO, XIO, MVS, MRS are either registered trademarks or trademarks of Beijing Gefei Tech. Co., Ltd in China and/or other countries. Other trademarks used in this document are either registered trademarks or trademarks of the manufacturers or vendors of the associated products.

Disclaimer

Product options and specifications subject can be changed without notice. The information in this manual is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Beijing Gefei Tech. Co., Ltd .Beijing Gefei Tech. Co., Ltd assumes no responsibility or liability for any errors or inaccuracies that may appear in this publication.

Table of Content

XIO 9040UC SD-SDI up converter

I Description

XIO 9040XC is a SD-SDI up converter based on the newly XIO video & audio processing platform with high performance. The modular platform can be used to various processes, such as convert, display and distribution of 3G, SD/HD.

XIO 9040UC is a convertible module, which can convert one SD-SDI to 2 channels' HD-SDI, and supports synchronization(Analog composite or three levels sync. signals). It also can achieve the transformation between the HD-SDI format and frame frequency. The LED indicator shows signal information directly. The amplifier can be used together with XIO NET of managing network because of its inner setting SNMP protocol, it is also dedicated in real-time communication with third party monitoring via Ethernet to enable operator get working status easily.

II XIO 9040UC input & output

Input: 1 channel HD/SD-SDI

1 channel analog composite signal or Tri-level sync.signal

Output: 1 channel HD/SD-SDI loop out

2 channels HD-SDI

XIO 9040UC supports the following formats:

SD：525i60、625i50

HD：720p60、720p59.94、720p50、1080i60、1080i59.94、

1080i50、1080p30、1080p29.97、1080p25

XIO 9040UC supports synchronization. The V-phase and H-phase can be adjusted. the single external phase lock supports the following sync. signals.

Signal format / Sync.signal type	720p50	1080i50	1080p25	720p59.94	1080i59.94
PAL-BB	√	√	√	----	----
NTSC-BB	----	----	----	√	√
Three level	√	√	√	----	----

Signal format / Sync.signal type	1080p29.97	720p60	1080i60	1080p30	
PAL-BB	----	----	----	----	
NTSC-BB	√	----	----	----	
Three level	----	√	√	√	

"√"——Support ;"----"——Not support.

XIO 9040UC: the global external phase lock (matched with XIO NET) supports the following sync. signals.

Signal format / Sync.signal type	720p50	1080i50	1080p25	720p60	1080i60	1080p30

PAL-BB	√	√	√	----	----	----
NTSC-BB	----	----	----	----	----	----
Three level	√	√	√	√	√	√

"√"——Support ;"----"——Not support.

III XIO 9040UC rear panel

3.1 XIO 9040UC 3U rear panel diagram

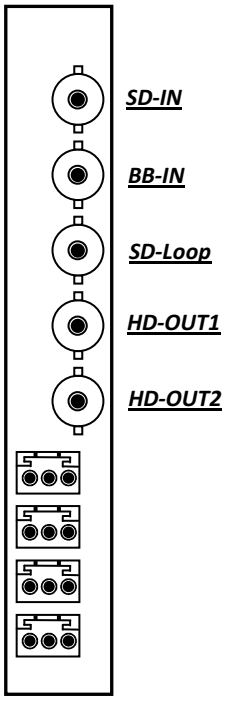


Figure 3-1 XIO 9040UC 3U rear panel diagram

3.2 XIO 9040UC 1U rear panel diagram

SD-IN ***SD-Loop*** ***HD-OUT2***

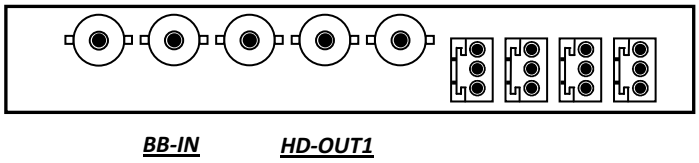


Figure 3-1 XIO 9040UC 1U rear panel diagram

3.3 1U、3U instruction of rear panel interfaces

SD-IN: HD/SD-SDI input interface. Input HD/SD-SDI signal. BNC connector, 1 channel.

BB-IN: sync signal input interface. Input the sync signal. BNC connector, 1 channel.

SD-Loop: HD/SD-SDI loop-out interface. Output the input signal. BNC connector, 1 channel.

HD-OUT1, 2: HD-SDI output interface. It can output HD-SDI , which format is converted . BNC connector, 2 channels.

Ⅳ XIO 9040UC detailed description

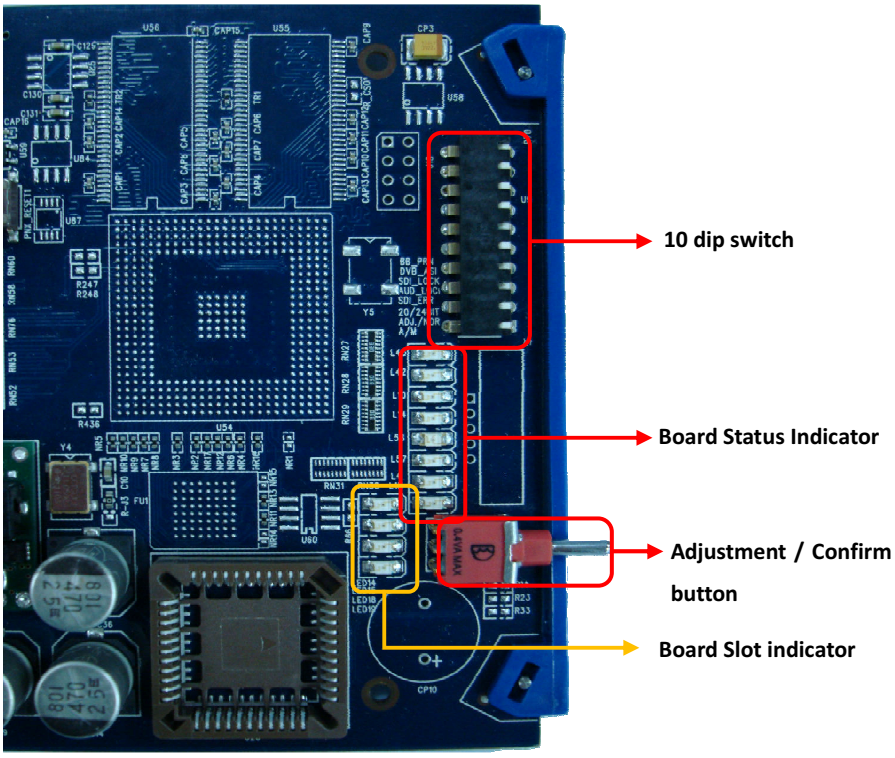


Figure 4-1 XIO 9040XC card function

4.1 Board status indicator

Name	Color	Meaning
BB_PRN	**Green**	On: The external sync. signal is working Off: The external sync. signal is not connect, or the working status is internal sync.
DVB_ASI	**Green**	On: Global external synchronous signal (need matching XIO asp.net) accesses and the board work status is external sync Off: Global external synchronous signal (need matching XIO asp.net) is not access and the board work status is internal sync
SDI_LOCK	**Green**	On: the access of digital signal is normal Off: the access of digital signal is abnormal
AUD_LOCK	**Green**	On: the embedded audio works normal Off: the embedded audio works abnormal
SDI_ERR	**Red**	On: the access of SD is normal On: the access of HD is normal, or there is no input signal

20/24BIT	**Green**	On: Output SDI locked Off: Output SDI unlocked
ADJ./NOR	**Green**	On: the tenth dialed switch is on “ON”(Adjustment status) Off: the tenth dialed switch is on “OFF”(Working status)
A/M	**Green**	On: the first dialed switch is on “ON”(Auto status) Off: the first dialed switch is on “OFF”(Manually status)

4.2 Board slot indicator

Name	Color	Meaning
LED14	**Green**	On: 8; Off: 0
LED15	**Green**	On: 4; Off: 0
LED18	**Green**	On: 2; Off: 0
LED19	**Green**	On: 1; Off: 0

Remark: This indicator sequence is used to indicate the current module in the specific slots. It displays up to 16 slots by the combination of the “ON” and “OFF”. Add up these values which LED are “ON”, and add 1 at last. It’s the place slot of the board card。

4.3 10 dip switch and adjustment / confirm button

To accomplish every function by apply the combination of these two switches.

10 dip switch: To choose different function by set the various combination of “ON” &“OFF”. Press-“ON”, Up-“OFF”

Adjustment/confirm button: makes sure the setting is done by click the switch upward or downward. Click upward for continuous settings, click downward clicked for single-step settings.

10 Dip Switch Function setting:

序号	**DIP** Switch:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	**Step length is 1**	M/A	**OFF**	**OFF**	**OFF**	**OFF**	**OFF**	+/-			Adj/Normal

2	**Step length is 20**	M/A	**OFF**	**OFF**	**OFF**	**OFF**	**ON**	+/-			Adj/Normal
3	**Global external phase lock**	M/A	**OFF**	**OFF**	**OFF**	**ON**	**ON**	+/-			Adj/Normal
4	**Internal phase lock**	M/A	**OFF**	**OFF**	**ON**	**OFF**	**OFF**	+/-			Adj/Normal
5	**Single external phase lock**	M/A	**OFF**	**OFF**	**ON**	**OFF**	**ON**	+/-			Adj/Normal
6	**H-phase adjustment**	M/A	**OFF**	**OFF**	**ON**	**ON**	**OFF**	+/-			Adj/Normal
7	**V-phase adjustment**	M/A	**OFF**	**OFF**	**ON**	**ON**	**ON**	+/-			Adj/Normal
8	**Output 720p50**	M/A	**OFF**	**ON**	**ON**	**OFF**	**OFF**	+/-			Adj/Normal
9	**Output 720p60**	M/A	**OFF**	**ON**	**ON**	**OFF**	**ON**	+/-			Adj/Normal
10	**Output 1080i50**	M/A	**OFF**	**ON**	**ON**	**ON**	**ON**	+/-			Adj/Normal
11	**Output 1080i60**	M/A	**OFF**	**ON**	**ON**	**ON**	**OFF**	+/-			Adj/Normal
12	**Output 1080p25**	M/A	**ON**	**OFF**	**OFF**	**OFF**	**OFF**	+/-			Adj/Normal
13	**Output 1080p30**	M/A	**ON**	**OFF**	**ON**	**ON**	**OFF**	+/-			Adj/Normal
14	**AFD (Auto)**	M/A	**ON**	**ON**	**OFF**	**ON**	**ON**	+/-			Adj/Normal
15	**Stretch**	M/A	**ON**	**OFF**	**OFF**	**OFF**	**ON**	+/-			Adj/Normal
16	**Bar**	M/A	**ON**	**OFF**	**OFF**	**ON**	**OFF**	+/-			Adj/Normal
17	**Crop**	M/A	**ON**	**OFF**	**ON**	**OFF**	**OFF**	+/-			Adj/Normal
18	**Save parameters**	M/A	**ON**	**ON**	**ON**	**ON**	**OFF**	+/-			Adj/Normal
19	**Access to users' parameters**	M/A	**ON**	**ON**	**ON**	**ON**	**ON**	+/-			Adj/Normal
20	**Set the serial number in auto mode**	**ON**	X	X	X	X	**OFF**	**OFF**			Adj/Normal
21	**Initial setting**	**ON**	X	X	X	X	**ON**	**OFF**			Adj/Normal

Remarks: ⅰ Set the "Bit 1" at "ON", Bit 0（10）at "Off", at the external network automatic management mode（Parameters can be adjusted by network control）;

ⅱ Set the Bit 10 at "ON", the module at adjustment mode;

ⅲ Set Bit 10 at "OFF" when it is working, or the signal stability will be influenced.

ⅳ "Set the serial number in auto mode" is used for internal debugging. User nedd not set.

ⅴ " Initial setting" will revert to the board factory defaults state. The default state is: Step length is 1, Single external phase lock, H-phase is 483, V-phase is 284, Output 625i50, AFD (Auto)

V XIO 9040UC web control instruction

XIO 9040UC can be used together with XIO NET of managing network because of its inner setting SNMP protocol, it is also dedicated in real-time communication with third party monitoring via Ethernet to enable operator get working status easily. Global external synchronous signal need matching XIO NET. It can set parameters by IE browser, and can communicate with third-party monitoring equipment.

VI XIO 9040UC Technical specification

Digital video input:

Input interface:	1*SDI, BNC connection
Impedance:	75Ω
Format:	SD：SMPTE 259M-C; 270Mb/s
	HD：SMPTE 292M; 1.485Gb/s
	Self-adaptive of following: SD：525i60、625i50 HD：720p60、720p59.94、720p50、1080i60、1080i59.94、1080i50、1080p30、1080p29.97、1080p25
Return loss:	> 15dB，5MHz to 1.5GHz
Max cable length:	SD: < 200m (Belden 1694A)
	HD: < 100m (Belden 1694A)

Reference input:

Signal type：	Analog composite sync.signal
Input interface:	1*CVBS / Tri-level, BNC
Type:	PAL / NTSC / Tri-level
Impedance:	75Ω

Digital video output：

Output interface:	3* SDI, including 1 SDI loop out, BNC connection
Impedance:	75Ω
Format:	HD：SMPTE 292M; 1.485Gb/s
Return loss:	> 15dB, 5MHz to 1.5GHz
Signal amplitude:	800mV±10%
Overshoot:	< 80mV
Jitter:	< 135ps (100KHz)
Risen and fallen time:	< 270ps
Differential of risen and fallen time:	< 100ps
DC level displacement:	0V±500mV

Ⅶ Contact Us

7.1 Technical support

Tel: 010-58858188

Fax: 010-58858189

7.2 Website

www.gefei-tech.com

E-mail：support@gefei-tech.com

7.3 Address

Beijing Gefei Tech. Co., Ltd

A-603 Power Creative Plaza

NO.1 Shangdi E.Rd.

Haidian District Beijing 100085

To find more information, please visit www.gefei-tech.com