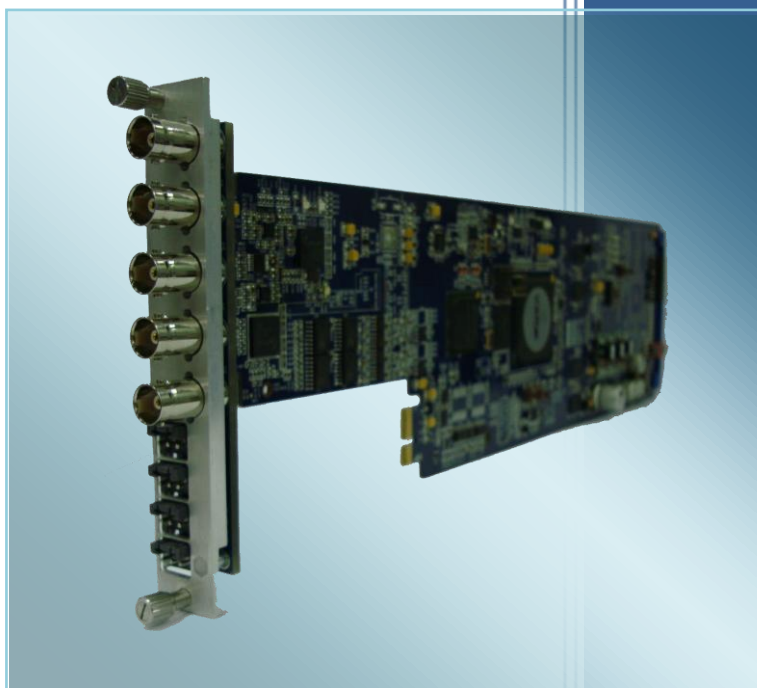




XIO 9040XC-4AUD HD/SD cross converter and audio de-embedder

User Manual V1.0



www.gefei-tech.com

March, 2011

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XIO 9040XC-4AUD

HD/SD cross converter and audio de-embedder

I Description

XIO 9040XC-4AUD is a HD/SD cross transition de-embedder 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 9040XC-4AUD is a de-embed module, which can convert one SD/HD video signal to 2 channels' SD/HD signal and 4 analog balanced audio signals, and supports synchronization(Analog composite or three levels sync. signals). 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 9040XC-4AUD Input & output

Input: 1 channel SD/HD

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

Output: 1 channel SD/HD loop out

2 channels SD-SDI

4 channels balanced analog audio

XIO 9040XC-4AUD supports the following formats:

SD: 525i60、625i50

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

1080i50、1080p30、1080p29.97、1080p25

XIO 9040XC-4AUD 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	625i50	720p50	1080i50	1080p25	525i60	720p59.94
PAL-BB	√	√	√	√	----	----
NTSC-BB	----	----	----	----	√	√
Three level	√	√	√	√	√	----

Signal format Sync. signal type	1080i59.94	1080p29.97	720p60	1080i60	1080p30	
PAL-BB	----	----	----	----	----	
NTSC-BB	√	√	----	----	----	
Three level	----	----	√	√	√	

“√” ——Support; “----” ——Not support.

XIO 9030HDEMB-4AUD-FS : the global external phase lock (matched with XIO NET) supports the following sync. signals.

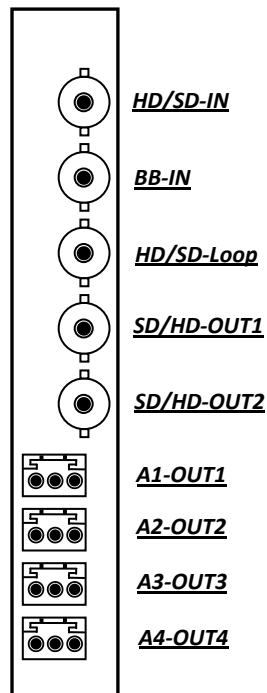
Signal format Sync. signal type	625i50	720p50	1080i50	1080p25	525i60	720p60
PAL-BB	✓	✓	✓	✓	----	----
NTSC-BB	----	----	----	----	✓	----
Three level	✓	✓	✓	✓	✓	✓

Signal format Sync. signal type	1080i60	1080p30				
PAL-BB	----	----				
NTSC-BB	----	----				
Three level	✓	✓				

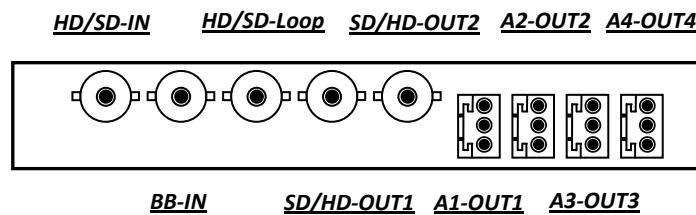
“✓” ——Support; “----” ——Not support.

III XIO 9040XC-4AUD rear panel

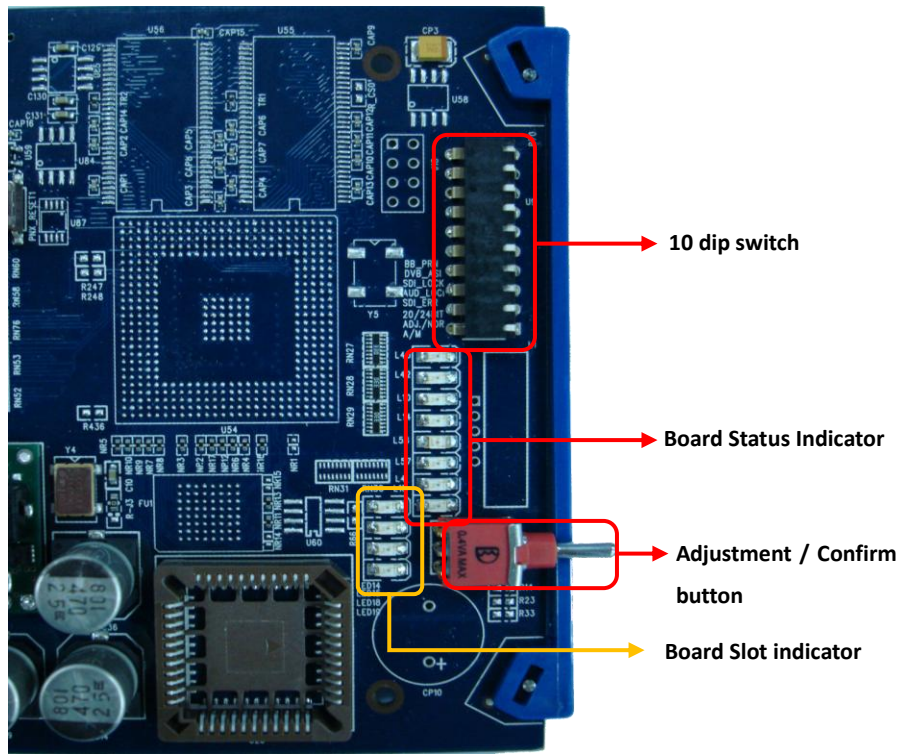
3.1 XIO 9040XC-4AUD 3U rear panel diagram



3.2 XIO 9040XC-4AUD 1U rear panel diagram



IV XIO 9040XC-4AUD detailed description



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.

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	De-embed audio from group 1	M/A	OFF	ON	OFF	OFF	OFF	+/-			Adj/Normal
9	De-embed audio from group 2	M/A	OFF	ON	OFF	OFF	ON	+/-			Adj/Normal
10	De-embed audio from group 3	M/A	OFF	ON	OFF	ON	OFF	+/-			Adj/Normal
11	De-embed audio from group 4	M/A	OFF	ON	OFF	ON	ON	+/-			Adj/Normal
12	Output 720p50	M/A	OFF	ON	ON	OFF	OFF	+/-			Adj/Normal
13	Output 720p60	M/A	OFF	ON	ON	OFF	ON	+/-			Adj/Normal
14	Output 1080i50	M/A	OFF	ON	ON	ON	ON	+/-			Adj/Normal
15	Output 1080i60	M/A	OFF	ON	ON	ON	OFF	+/-			Adj/Normal
16	Output 1080p25	M/A	ON	OFF	OFF	OFF	OFF	+/-			Adj/Normal
17	Output 1080p30	M/A	ON	OFF	ON	ON	OFF	+/-			Adj/Normal
18	Output 625i50	M/A	ON	OFF	ON	ON	ON	+/-			Adj/Normal
19	Output 525i59.94	M/A	ON	ON	OFF	ON	OFF	+/-			Adj/Normal
20	AFD (Auto)	M/A	ON	ON	OFF	ON	ON	+/-			Adj/Normal
21	Stretch	M/A	ON	OFF	OFF	OFF	ON	+/-			Adj/Normal
22	Bar	M/A	ON	OFF	OFF	ON	OFF	+/-			Adj/Normal
23	Crop	M/A	ON	OFF	ON	OFF	OFF	+/-			Adj/Normal
24	Save parameters	M/A	ON	ON	ON	ON	OFF	+/-			Adj/Normal
25	Access to users' parameters	M/A	ON	ON	ON	ON	ON	+/-			Adj/Normal
26	Set the serial number in auto mode	ON	X	X	X	X	OFF	OFF			Adj/Normal
27	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 need 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 0、V-phase is 0、De-embed audio from group 1、Output 625i50、AFD (Auto)

V XIO 9040XC-4AUD web control instruction

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 9040XC-4AUD 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:	SD: SMPTE 259M-C; 270Mb/s 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 $\pm$ 500mV

Analog video output:

Output interface: 4*3pin, balanced audio
Impedance: 600 Ω
Max input level: +24dBu (0dbFS)
Amplitude frequency: < $\pm$ 0.04dB @ 20Hz to 20KHz
SNR: >80dB
THD+N: -90dB @ 1KHz

VII Contact Us

Technical support

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