

HARDWARE MANUAL

Synapse

Connector and Pin Descriptions of Synapse I/O Panels and
TRACS
Version 1.00 - April 2021



Connector Pin Description





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What's New?

In the Hardware Manual the icon **NEW !** has been added on the left margin to highlight information on updated features.

The changes linked to new features in version 1.00 are listed below.

New products added to BPH32

- See section "BPH32" on page 42.

New products added to BHX32

- See section "BHX32" on page 79.



1. General Information

ALWAYS disconnect your entire system from the AC mains before cleaning any component. The product frame (SFR18, SFR08 or SFR04) must be terminated with three-conductor AC mains power cord that includes an earth ground connection. To prevent shock hazard, all three connections must always be used.

NEVER use flammable or combustible chemicals for cleaning components.

NEVER operate this product if any cover is removed.

NEVER wet the inside of this product with any liquid.

NEVER pour or spill liquids directly onto this unit.

NEVER block airflow through ventilation slots.

NEVER bypass any fuse.

NEVER replace any fuse with a value or type other than those specified.

NEVER attempt to repair this product. If a problem occurs, contact your local EVS distributor.

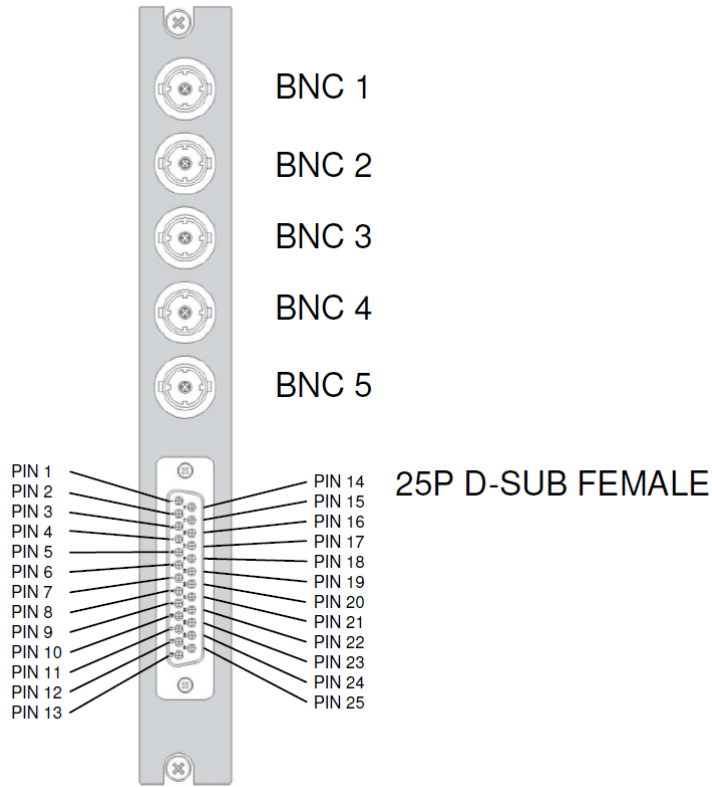
NEVER expose this product to extremely high or low temperatures.

NEVER operate this product in an explosive atmosphere.



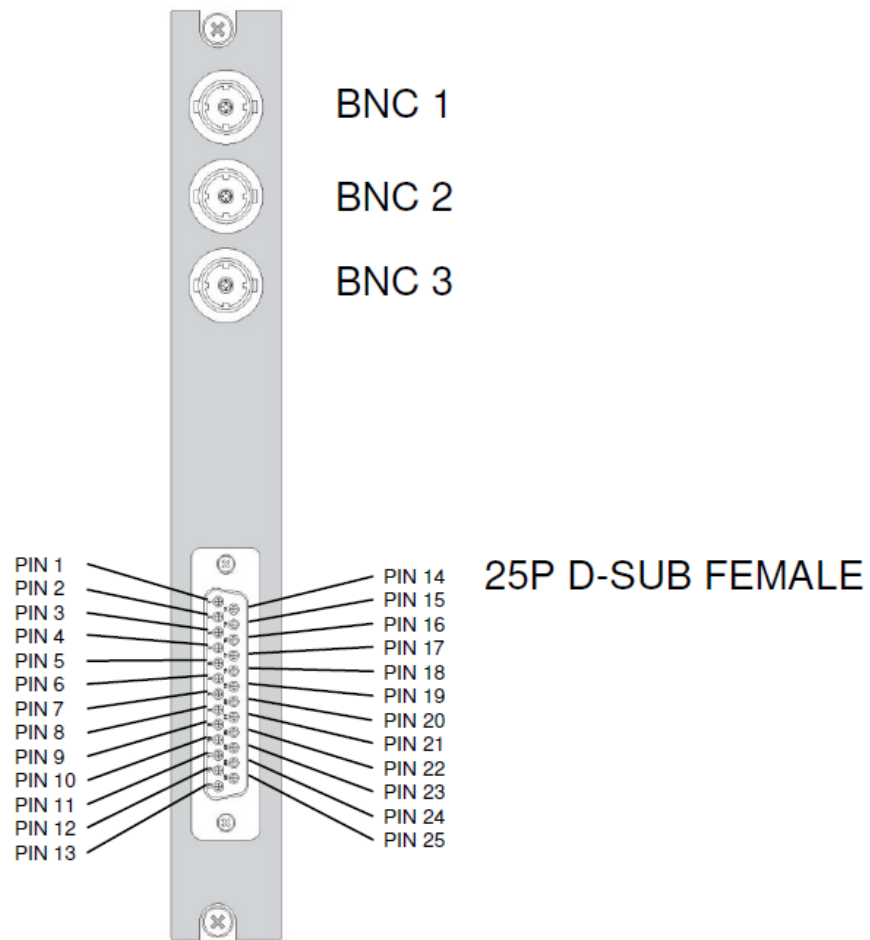
2. Audio and SD I-O Panel Overview

2.1. BPL02D



	ADC24	DAC20	DAC24	SEB15	SEB20	SDB15	SDB20
BNC 1	TRACKING			SDI IN	SDI IN	SDI IN	SDI IN
BNC 2	AES/EBU IN		AES/EBU IN	SDI + EMB. OUT	SDI + EMB. OUT	RECLK SDI OUT	RECLK SDI OUT
BNC 3	AES/EBU IN		AES/EBU IN	SDI + EMB. OUT	SDI + EMB. OUT	RECLK SDI OUT	RECLK SDI OUT
BNC 4	AES/EBU OUT		AES/EBU OUT			AES/EBU IN	AES/EBU OUT
BNC 5	AES/EBU OUT		AES/EBU OUT			AES/EBU IN	AES/EBU OUT
25P D-SUB FEMALE							
PIN 1							
PIN 2							
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	GND	GND	GND	GND	GND	GND	GND
PIN 5	GND	GND	GND	GND	GND	GND	GND
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7	A1neg IN	A1neg OUT	A1neg OUT	A1neg IN	A1neg IN	A1neg OUT	A1neg OUT
PIN 8	A1pos IN	A1pos OUT	A1pos OUT	A1pos IN	A1pos IN	A1pos OUT	A1pos OUT
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10	A3neg IN	A3neg OUT	A3neg OUT	A3neg IN	A3neg IN	A3neg OUT	A3neg OUT
PIN 11	A3pos IN	A3pos OUT	A3pos OUT	A3pos IN	A3pos IN	A3pos OUT	A3pos OUT
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15							
PIN 16							
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	GND	GND	GND	GND	GND	GND	GND
PIN 19	GND	GND	GND	GND	GND	GND	GND
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21	A2neg IN	A2neg OUT	A2neg OUT	A2neg IN	A2neg IN	A2neg OUT	A2neg OUT
PIN 22	A2pos IN	A2pos OUT	A2pos OUT	A2pos IN	A2pos IN	A2pos OUT	A2pos OUT
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24	A4neg IN	A4neg OUT	A4neg OUT	A4neg IN	A4neg IN	A4neg OUT	A4neg OUT
PIN 25	A4pos IN	A4pos OUT	A4pos OUT	A4pos IN	A4pos IN	A4pos OUT	A4pos OUT

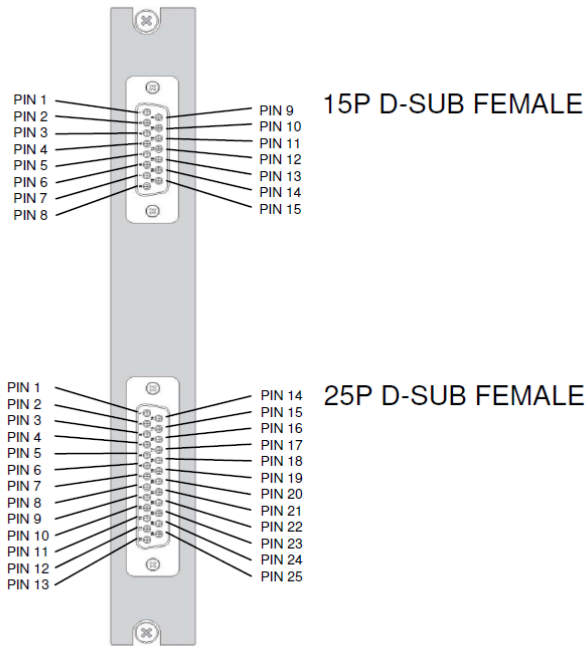
2.2. BPL03D



	ADC24	DAC24	SEB10	SEB11	SEB20	SDB10	SDB20
BNC 1	TRACKING		SDI IN	SDI IN	SDI IN	SDI IN	SDI IN
BNC 2	AES/EBU IN	AES/EBU IN	SDI + EMB OUT	SDI + EMB OUT	SDI + EMB OUT	RECLK SDI OUT	RECLK SDI OUT
BNC 3	AES/EBU IN	AES/EBU IN	SDI + EMB OUT	SDI + EMB OUT	SDI + EMB OUT	RECLK SDI OUT	RECLK SDI OUT
25P D-SUB FEMALE							
PIN 1	AES1- OUT	AES1- OUT	AES1- IN	AES1- IN	AES1- IN	AES1+ OUT	AES1+ OUT
PIN 2	AES1+ OUT	AES1+ OUT	AES1+ IN	AES1+ IN	AES1+ IN	AES1- OUT	AES2- OUT
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	GND	GND	GND	GND	GND	GND	GND
PIN 5	GND	GND	GND	GND	GND	GND	GND
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7	A1neg IN	A1neg OUT			A1neg IN		A1neg OUT
PIN 8	A1pos IN	A1pos OUT			A1pos IN		A1pos OUT
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10	A3neg IN	A3neg OUT			A3neg IN		A3neg OUT
PIN 11	A3pos IN	A3pos OUT			A3pos IN		A3pos OUT
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15	AES2+ OUT	AES2+ OUT	AES2- IN	AES2- IN	AES2- IN	AES2+ OUT	AES2+ OUT
PIN 16	AES2- OUT	AES2- OUT	AES2+ IN	AES2+ IN	AES2+ IN	AES2- OUT	AES2- OUT
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	GND	GND	GND	GND	GND	GND	GND
PIN 19	GND	GND	GND	GND	GND	GND	GND
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21	A2neg IN	A2neg OUT			A2neg IN		A2neg OUT
PIN 22	A2pos IN	A2pos OUT			A2pos IN		A2pos OUT
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24	A4neg IN	A4neg OUT			A4neg IN		A4neg OUT
PIN 25	A4pos IN	A4pos OUT			A4pos IN		A4pos OUT

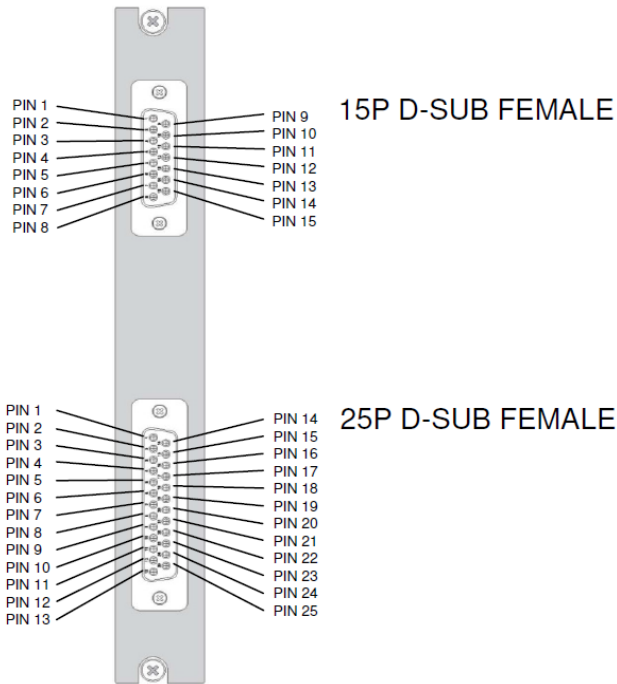


2.3. BPL05D (1/2)



	ADC20	ADC24	DAC20	DAC24	ADL24	ADP24	DAS24
15P D-SUB FEMALE							
PIN 1		GND		GND		GND	GND
PIN 2		GND		GND		GND	GND
PIN 3	TRACKING	TRACKING	TRACKING		TRACKING	GPI (VOICE-OVER)	
PIN 4							
PIN 5							
PIN 6							
PIN 7							
PIN 8							
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10							
PIN 11							
PIN 12							
PIN 13							
PIN 14							
PIN 15							
25P D-SUB FEMALE							
PIN 1	A1neg IN	AES1- IN		AES1- IN	A1neg IN	AES1- IN	AES1- IN
PIN 2	A1pos IN	AES1+ IN		AES1+ IN	A1pos IN	AES1+ IN	AES1+ IN
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	A3neg IN	AES1- OUT		AES1- OUT	A3neg IN	AES1- OUT	AES1- OUT
PIN 5	A3pos IN	AES1+ OUT		AES1+ OUT	A3pos IN	AES1+ OUT	AES1+ OUT
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7		A1neg IN	A1neg OUT	A1neg OUT	A1neg OUT		
PIN 8		A1pos IN	A1pos OUT	A1pos OUT	A1pos OUT		
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10		A3neg IN	A3neg OUT	A3neg OUT	A3neg OUT		
PIN 11		A3pos IN	A3pos OUT	A3pos OUT	A3pos OUT		
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15	A2neg IN	AES2- IN		AES2- IN	A2neg IN	AES2- IN	AES2- IN
PIN 16	A2pos IN	AES2+ IN		AES2+ IN	A2pos IN	AES2+ IN	AES2+ IN
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	A4neg IN	AES2+ OUT		AES2+ OUT	A4neg IN	AES2+ OUT	AES2+ OUT
PIN 19	A4pos IN	AES2- OUT		AES2- OUT	A4pos IN	AES2- OUT	AES2- OUT
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21		A2neg IN	A2neg OUT	A2neg OUT	A2neg OUT		
PIN 22		A2pos IN	A2pos OUT	A2pos OUT	A2pos OUT		
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24		A4neg IN	A4neg OUT	A4neg OUT	A4neg OUT		
PIN 25		A4pos IN	A4pos OUT	A4pos OUT	A4pos OUT		

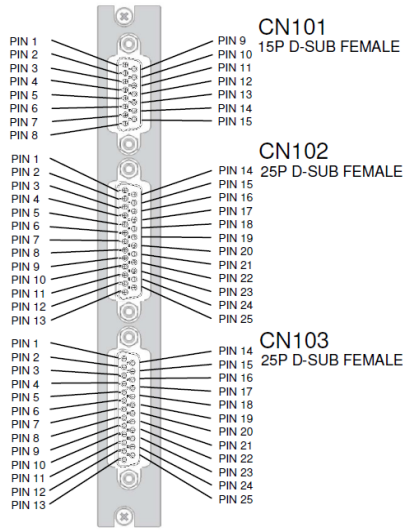
2.4. BPL05D (2/2)



	DIO24	DIO48	DAD08	DAD09	DAD26	2AI48
15P D-SUB FEMALE						
PIN 1	GND	GND	AES/EBU IN (+)	AES/EBU IN (+)		GND
PIN 2	GND	GND	AES/EBU IN (-)	AES/EBU IN (-)		GND
PIN 3	TRACKING	TRACKING			GPI I/O	TRACKING
PIN 4						
PIN 5						
PIN 6						
PIN 7						
PIN 8						
PIN 9	GND	GND	GND	GND	GND	GND
PIN 10						
PIN 11						
PIN 12						
PIN 13						
PIN 14						
PIN 15						
25P D-SUB FEMALE						
PIN 1	AES1- IN	AES1- IN	AES1+ OUT	AES1- OUT	AES1+ IN	AES1/2- IN
PIN 2	AES1+ IN	AES1+ IN	AES1- OUT	AES1+ OUT	AES1- IN	AES1/2+ IN
PIN 3	GND	GND	GND	GND	GND	GND
PIN 4	AES1- OUT	AES3- IN	AES3+ OUT	AES3- OUT	AES2+ OUT	AES5/6- IN
PIN 5	AES1+ OUT	AES3+ IN	AES3- OUT	AES3+ OUT	AES2- OUT	AES5/6+ IN
PIN 6	GND	GND	GND	GND	GND	GND
PIN 7		AES1+ OUT	AES5+ OUT	AES5- OUT	AES2+ IN	AES1/2+ OUT
PIN 8		AES1- OUT	AES5- OUT	AES5+ OUT	AES2- IN	AES1/2- OUT
PIN 9	GND	GND	GND	GND	GND	GND
PIN 10		AES3+ OUT	AES7+ OUT	AES7- OUT	AES5+ OUT	AES5/6+ OUT
PIN 11		AES3- OUT	AES7- OUT	AES7+ OUT	AES5- OUT	AES5/6- OUT
PIN 12	GND	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND	GND
PIN 15	AES2- IN	AES2- IN	AES2- OUT	AES2+ OUT	AES1+ OUT	AES3/4- IN
PIN 16	AES2+ IN	AES2+ IN	AES2+ OUT	AES2- OUT	AES1- OUT	AES3/4+ IN
PIN 17	GND	GND	GND	GND	GND	GND
PIN 18	AES2+ OUT	AES4- IN	AES4- OUT	AES4+ OUT	AES3+ OUT	AES7/8- IN
PIN 19	AES2- OUT	AES4+ IN	AES4+ OUT	AES4- OUT	AES3- OUT	AES7/8+ IN
PIN 20	GND	GND	GND	GND	GND	GND
PIN 21		AES2+ OUT	AES6- OUT	AES6+ OUT	AES4+ OUT	AES3/4+ OUT
PIN 22		AES2- OUT	AES6+ OUT	AES6- OUT	AES4- OUT	AES3/4- OUT
PIN 23	GND	GND	GND	GND	GND	GND
PIN 24		AES4+ OUT	AES8- OUT	AES8+ OUT	AES6+ OUT	AES7/8+ OUT
PIN 25		AES4- OUT	AES8+ OUT	AES8- OUT	AES6- OUT	AES7/8- OUT



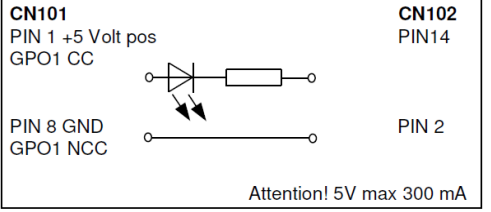
2.5. BPL06



GPI16 Connection Diagram

CN101
 PIN 15 MUST BE CONNECTED WITH GROUND PIN 8
 GPI (X)+ MUST BE CONNECTED BY A SWITCHING CONTACT TO +5V PIN 1 WHEN USED AS AN INPUT
 GPI 9- & GPI 10- MUST BE CONNECTED TO GROUND PIN 8

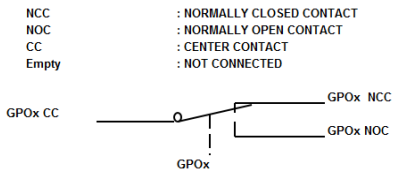
CN102 AND 103 (A POSSIBLE FIELD APPLICATION)



Attention! 5V max 300 mA

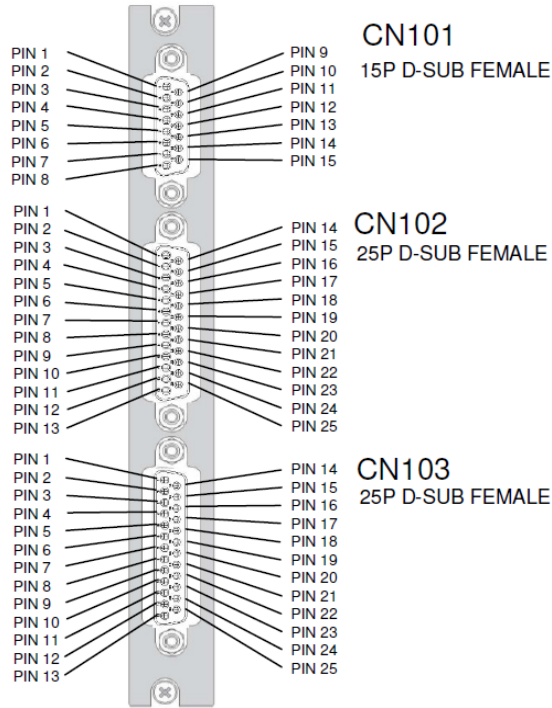
CC :CENTER CONTACT
 NCC :NORMALLY CLOSED CONTACT
 NOC :NORMALLY OPEN CONTACT
 NC :NOT CONNECTED

GPI16			AAD08		
15P D-SUB FEMALE CN101					
PIN 1	5 Volt pos	CHA- IN			
PIN 2	GPI 2 +	CHA+ IN			
PIN 3	GPI 4 +	GND			
PIN 4	GPI 6 +	GND			
PIN 5	GPI 8 +	GND			
PIN 6	GND (GPI 9-)	GND			
PIN 7	GND (GPI10 -)	CHB- LOOP			
PIN 8	GND	CHB+ LOOP			
PIN 9	GPI 1 +	GND			
PIN 10	GPI 3 +	CHA- LOOP			
PIN 11	GPI 5 +	CHA+ LOOP			
PIN 12	GPI 7 +	GND			
PIN 13	GPI 9 +	CHB- IN			
PIN 14	GPI 10 +	CHB+ IN			
PIN 15	COMMON (GPI 1 TO 8)	GND			
25P D-SUB FEMALE CN102					
		OUTPUT			
PIN 1	GPO1 NCC	CHA+			
PIN 2	GPO1 NOC	CHA-			
PIN 3	GPO2 CC	GND			
PIN 4	GPO3 NCC	CHB+			
PIN 5	GPO3 NOC	CHB-			
PIN 6	GPO4 CC	GND			
PIN 7	GPO5 NCC	CHA+			
PIN 8	GPO5 NOC	CHA-			
PIN 9	GPO6 CC	GND			
PIN 10	GPO7 NCC	CHB+			
PIN 11	GPO7 NOC	CHB-			
PIN 12	GPO8 CC	GND			
PIN 13	GND	GND			
PIN 14	GPO1 CC	GND			
PIN 15	GPO2 NCC	CHA+			
PIN 16	GPO2 NOC	CHA-			
PIN 17	GPO3 CC	GND			
PIN 18	GPO4 NCC	CHB+			
PIN 19	GPO4 NOC	CHB-			
PIN 20	GPO5 CC	GND			
PIN 21	GPO6 NCC	CHA+			
PIN 22	GPO6 NOC	CHA-			
PIN 23	GPO7 CC	GND			
PIN 24	GPO8 NCC	CHB+			
PIN 25	GPO8 NOC	CHB-			



GPI16			AAD08		
25P D-SUB FEMALE					
		OUTPUT			
PIN 1	GPO9 NCC	CHA+			
PIN 2	GPO9 NOC	CHA-			
PIN 3	GPO10 CC	GND			
PIN 4	GPO11 NCC	CHB+			
PIN 5	GPO11 NOC	CHB-			
PIN 6	GPO12 CC	GND			
PIN 7	GPO13 NCC	CHA+			
PIN 8	GPO13 NOC	CHA-			
PIN 9	GPO14 CC	GND			
PIN 10	GPO15 NCC	CHB+			
PIN 11	GPO15 NOC	CHB-			
PIN 12	GPO16 CC	GND			
PIN 13	GND	GND			
PIN 14	GPO9 CC	GND			
PIN 15	GPO10 NCC	CHA+			
PIN 16	GPO10 NOC	CHA-			
PIN 17	GPO11 CC	GND			
PIN 18	GPO12 NCC	CHB+			
PIN 19	GPO12 NOC	CHB-			
PIN 20	GPO13 CC	GND			
PIN 21	GPO14 NCC	CHA+			
PIN 22	GPO14 NOC	CHA-			
PIN 23	GPO15 CC	GND			
PIN 24	GPO16 NCC	CHB+			
PIN 25	GPO16 NOC	CHB-			

2.6. BPL06M

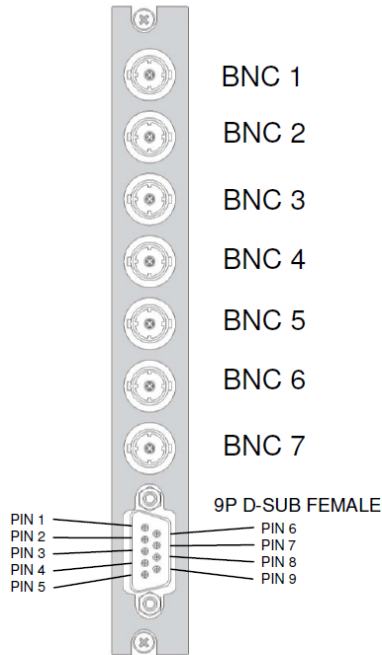


AAD08	
15P D-SUB FEMALE	
CN101	
PIN 1	CHA- IN
PIN 2	CHA+ IN
PIN 3	GND
PIN 4	GND
PIN 5	GND
PIN 6	GND
PIN 7	CHB- LOOP
PIN 8	CHB+ LOOP
PIN 9	GND
PIN 10	CHA- LOOP
PIN 11	CHA+ LOOP
PIN 12	GND
PIN 13	CHB- IN
PIN 14	CHB+ IN
PIN 15	GND
25P D-SUB FEMALE	OUTPUT
CN102	
PIN 1	CHA+
PIN 2	CHA-
PIN 3	GND
PIN 4	CHA+
PIN 5	CHA-
PIN 6	GND
PIN 7	CHA+
PIN 8	CHA-
PIN 9	GND
PIN 10	CHA+
PIN 11	CHA-
PIN 12	GND
PIN 13	GND
PIN 14	GND
PIN 15	CHA+
PIN 16	CHA-
PIN 17	GND
PIN 18	CHA+
PIN 19	CHA-
PIN 20	GND
PIN 21	CHA+
PIN 22	CHA-
PIN 23	GND
PIN 24	CHA+
PIN 25	CHA-

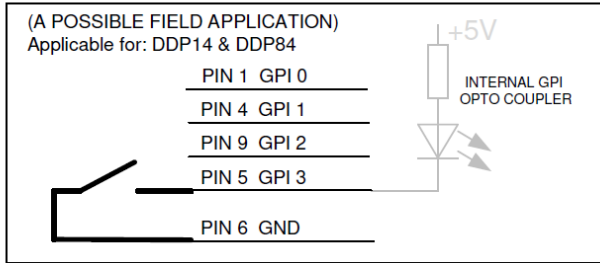
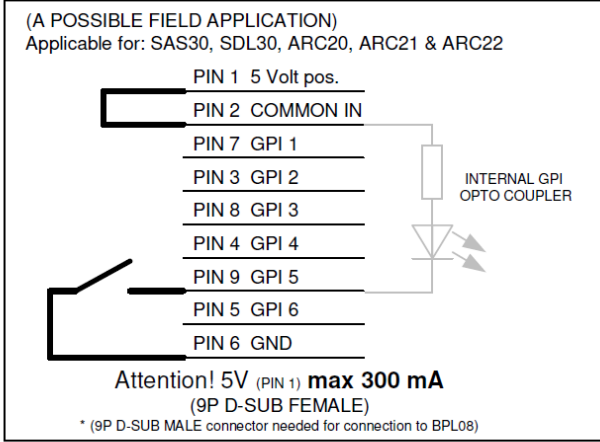
AAD08	
25P D-SUB FEMALE	
OUTPUT	
CN103	
PIN 1	CHB+
PIN 2	CHB-
PIN 3	GND
PIN 4	CHB+
PIN 5	CHB-
PIN 6	GND
PIN 7	CHB+
PIN 8	CHB-
PIN 9	GND
PIN 10	CHB+
PIN 11	CHB-
PIN 12	GND
PIN 13	GND
PIN 14	GND
PIN 15	CHB+
PIN 16	CHB-
PIN 17	GND
PIN 18	CHB+
PIN 19	CHB-
PIN 20	GND
PIN 21	CHB+
PIN 22	CHB-
PIN 23	GND
PIN 24	CHB+
PIN 25	CHB-



2.7. BPL08

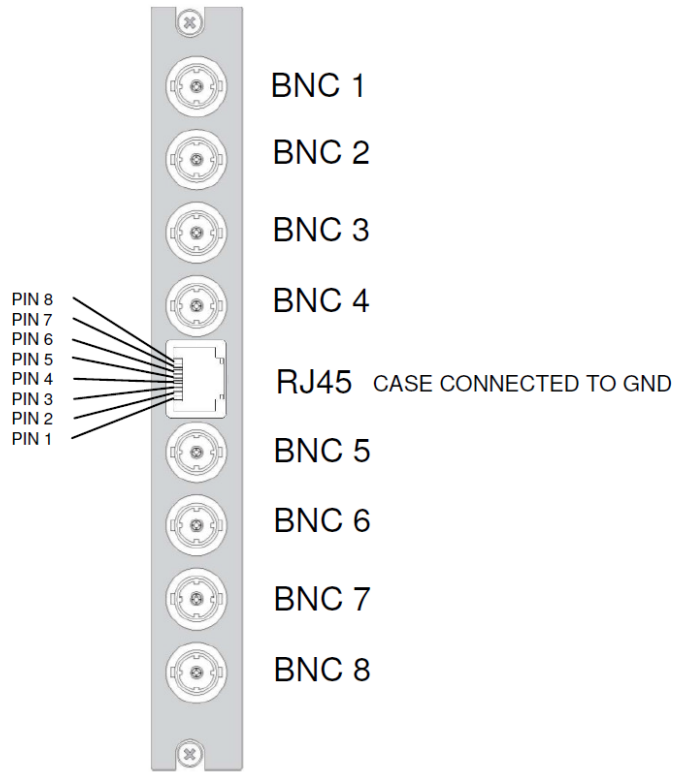


Connection Diagram



	SAS30	SDL30	SVD10	ARC 20	ARC 21	ARC 22	DBE08
BNC 1	SDI IN	SDI IN	SDI IN	SDI IN	SDI IN	SDI IN	DOLBY E IN
BNC 2	RECLK SDI OUT	RECLK SDI OUT	RECLK SDI OUT	RECLK SDI OUT	RECLK SDI OUT	RECLK SDI OUT	AES1 OUT
BNC 3	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	AES2 OUT
BNC 4	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	PROC SDI OUT	AES3 OUT
BNC 5		G/YCv	G/YCv	G/YCv	G/YCv	G/YCv	AES4 OUT
BNC 6		B/CbY	B/CbY	B/CbY	B/CbY	B/CbY	MONITOR OUT
BNC 7		R/CbC	R/CbC	R/CbC	R/CbC	R/CbC	LTC
9P_D_SUB FEMALE							
PIN 1	5 Volt pos.	5 Volt pos.		5 Volt pos.	5 Volt pos.	5 Volt pos.	GND
PIN 2	COMMON IN	COMMON IN		COMMON IN	COMMON IN	COMMON IN	
PIN 3	GPI 2	GPI 2		GPI 2	GPI 2	GPI 2	TXA 2(+) OUT (Meta Data)
PIN 4	GPI 4	GPI 4		GPI 4	GPI 4	GPI 4	GND
PIN 5	GPI 6	GPI 6		GPI 6	GPI 6	GPI 6	GND
PIN 6	GND	GND		GND	GND	GND	GND
PIN 7	GPI 1	GPI 1		GPI 1	GPI 1	GPI 1	
PIN 8	GPI 3	GPI 3		GPI 3	GPI 3	GPI 3	TXB 2(-) OUT (Meta Data)
PIN 9	GPI 5	GPI 5		GPI 5	GPI 5	GPI 5	GND
DBE08 DDE51 DDP14 DDP84							
BNC 1	DOLBY E OUT	DOLBY E OUT	AES1 IN	AES1 IN			
BNC 2	AES1 IN	AES1 IN	AES2 IN	AES2 IN			
BNC 3	AES2 IN	AES2 IN	AES3 IN	AES3 IN			
BNC 4	AES3 IN	AES3 IN	AES4 IN	AES4 IN			
BNC 5	AES4 IN	AES4 IN	DOLBY E IN	DOLBY E IN			
BNC 6	ALX OUT	ALX OUT	DOLBY OUT 1	DOLBY OUT 1			
BNC 7	LTC	LTC	DOLBY OUT 2	DOLBY OUT 2			
9P_D_SUB FEMALE							
PIN 1	GND	GND	GPI 0	GPI 0			
PIN 2		TXA 2(+) OUT	TXA 2(+) OUT	TXA 2(+) OUT			
PIN 3	RXA 2(+) IN (Meta Data)	RXA 2(+) IN	RXA 2(+) IN	RXA 2(+) IN			
PIN 4	GND	GND	GPI 1	GPI 1			
PIN 5			GPI 3	GPI 3			
PIN 6	GND	GND	GND	GND			
PIN 7		TXB 2(-) OUT	TXB 2(-) OUT	TXB 2(-) OUT			
PIN 8	RXB 2(-) IN (Meta Data)	RXB 2(-) IN	RXB 2(-) IN	RXB 2(-) IN			
PIN 9	GND	GND	GPI 2	GPI 2			

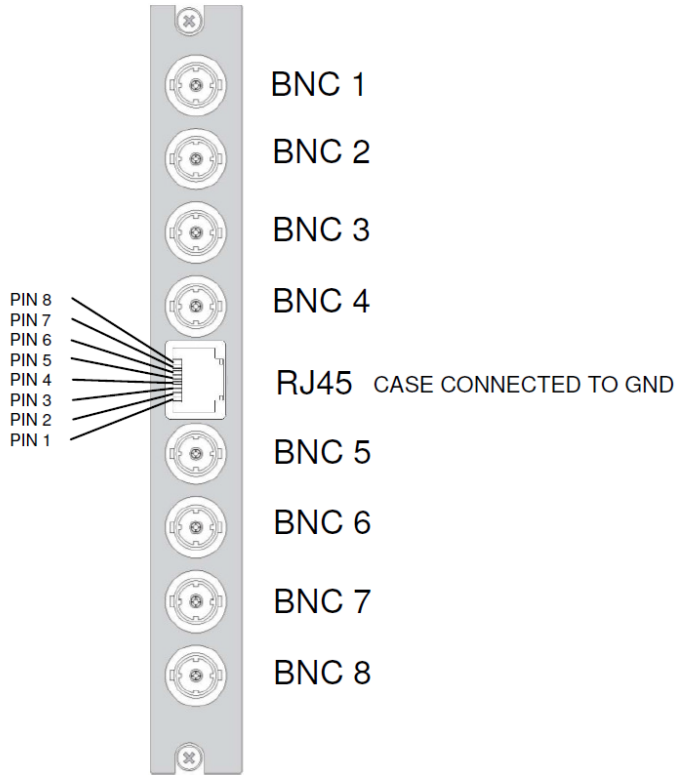
2.8. BPL11 (1/2)



	2IX08/09/10	2IM08/09/10	2FS10	2AS11/12	ASI10	DLA41 DLA42 DLA43 DLA44 DSF66	DBD18
BNC 1	SDI IN A	SDI IN A	SDI IN A	CVBS IN A	ASI/DVB IN A	AES IN 1	AES IN 1
BNC 2	SDI OUT A-1	SDI OUT A-1	SDI OUT A-1	SDI OUT A-1		AES IN 2	AES IN 2
BNC 3	SDI OUT A-2	SDI OUT A-2	SDI OUT A-2	SDI OUT A-2	ASI/DVB OUT A-1	AES IN 3	AES IN 3
BNC 4	SDI OUT A-3	SDI OUT A-3	SDI OUT A-3	SDI OUT A-3	ASI/DVB OUT A-2	AES IN 4	AES IN 4
BNC 5	SDI IN B	SDI IN B	SDI IN B	CVBS IN B	ASI/DVB IN B	AES OUT 1	AES OUT 1
BNC 6	SDI OUT B-1	SDI OUT B-1	SDI OUT B-1	SDI OUT B-1		AES OUT 2	AES OUT 2
BNC 7	SDI OUT B-2	SDI OUT B-2	SDI OUT B-2	SDI OUT B-2	ASI/DVB OUT B-1	AES OUT 3	AES OUT 3
BNC 8	SDI OUT B-3	SDI OUT B-3	SDI OUT B-3	SDI OUT B-3	ASI/DVB OUT B-2	AES OUT 4	AES OUT 4
RJ45							
PIN 1	GPI 1 (InputSel: A=0 B=1)	GPI 1 (Not Applicable)	FREEZE 1		GPI 1 (InputSel: A=1 B=0)	GPI 1	
PIN 2	GND	GND	GND		GND	GPI 2	
PIN 3	GPI 2 (VWSS ins)	GPI 2 (VWSS ins)	FREEZE 2		GPI 2 ()	TX+ (META DATA)	Metadata (TXA+)
PIN 4	GND	GND	GND		GND	RX+ (META DATA)	
PIN 5	GPO 1 (Active_A: A=0 B=1)	GPO 1 (Not Applicable)	TRACKING 1		GPO 1 (Active_A: A=0 B=1)	RX- (META DATA)	
PIN 6	GND	GND	GND		GND	TX- (META DATA)	Metadata (TXA-)
PIN 7	GPO 2 ((inv)VWSS ins)	GPO 2 ((inv)VWSS ins)	TRACKING 2		GPO 2 (Active_B: A=0 B=1)	GPI 3	
PIN 8	GND	GND	GND		GND	GND	GND

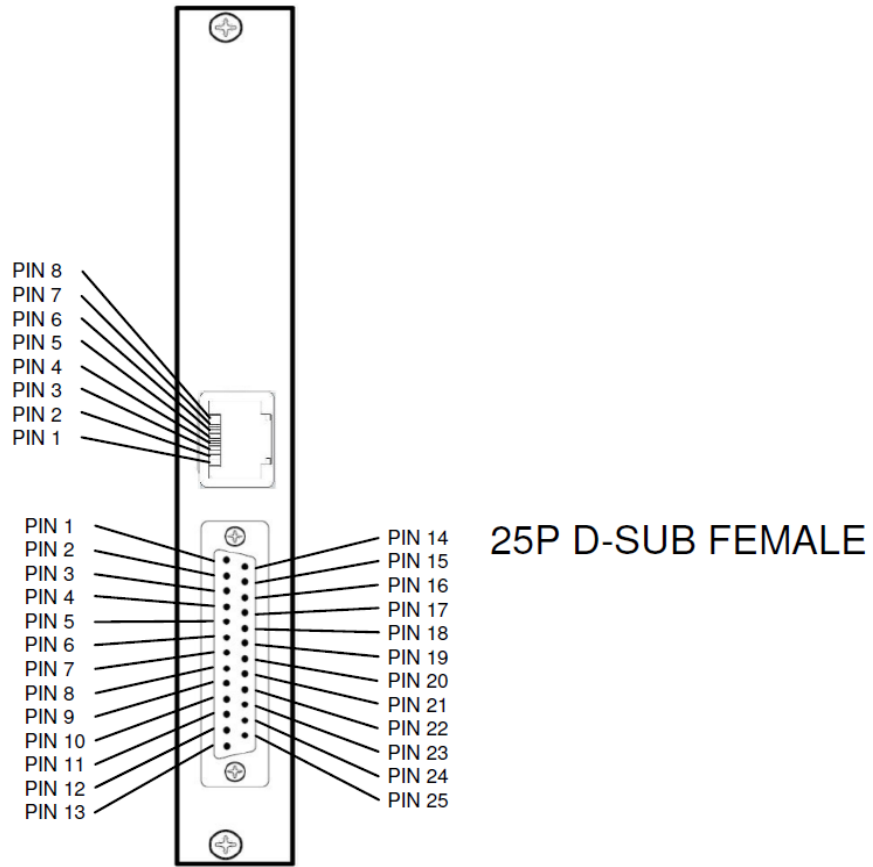


2.9. BPL11 (2/2)



	DAW77	DAW30	DEE28 4-IN/4-OUT	DEE28 2-IN/2-OUT	DEE28 6-IN/2-OUT		
BNC 1	AES/EBU IN 1/2	AES/EBU IN 1/2	IN 1/2	IN 1/2	IN 1/2		
BNC 2	AES/EBU IN 3/4	AES/EBU IN 3/4	IN 2/3	IN 2/3	IN 2/3		
BNC 3	AES/EBU IN 5/6	AES/EBU IN 5/6	IN 5/6	OUT 9/10	IN 5/6		
BNC 4	AES/EBU IN 7/8	AES/EBU IN 7/8	IN 7/8	OUT 11/12	IN 7/8		
BNC 5	AES/EBU OUT 1/2	AES/EBU OUT 1/2	OUT 5/6	OUT 5/6	IN 9/10		
BNC 6	AES/EBU OUT 3/4	AES/EBU OUT 3/4	OUT 7/8	OUT 7/8	IN 11/12		
BNC 7	AES/EBU OUT 5/6	AES/EBU OUT 5/6	OUT 1/2	OUT 1/2	OUT 1/2		
BNC 8	AES/EBU OUT 7/8	AES/EBU OUT 7/8	OUT 3/4	OUT 3/4	OUT 3/4		
RJ45							
PIN 1	GPI_0	GPI_0	GPI_1 =VOTrigger	GPI_1 =VOTrigger	GPI_1 =VOTrigger		
PIN 2	LTC(-)	LTC(-)	GPI_2 =PRGMEeoder	GPI_2 =PRGMEeoder	GPI_2 =PRGMEeoder		
PIN 3		GPO_0 (5V)	Tx(+) Metadata	Tx(+) Metadata	Tx(+) Metadata		
PIN 4			Rx(+) Metadata	Rx(+) Metadata	Rx(+) Metadata		
PIN 5		GPO_2 (5V)	Rx(-) Metadata	Rx(-) Metadata	Rx(-) Metadata		
PIN 6	GPO_1 (5V)	GPO_1 (5V)	Tx(-) Metadata	Tx(-) Metadata	Tx(-) Metadata		
PIN 7	LTC (+)	LTC (+)	GPI_3	GPI_3	GPI_3		
PIN 25	GND	GND	GND	GND	GND		

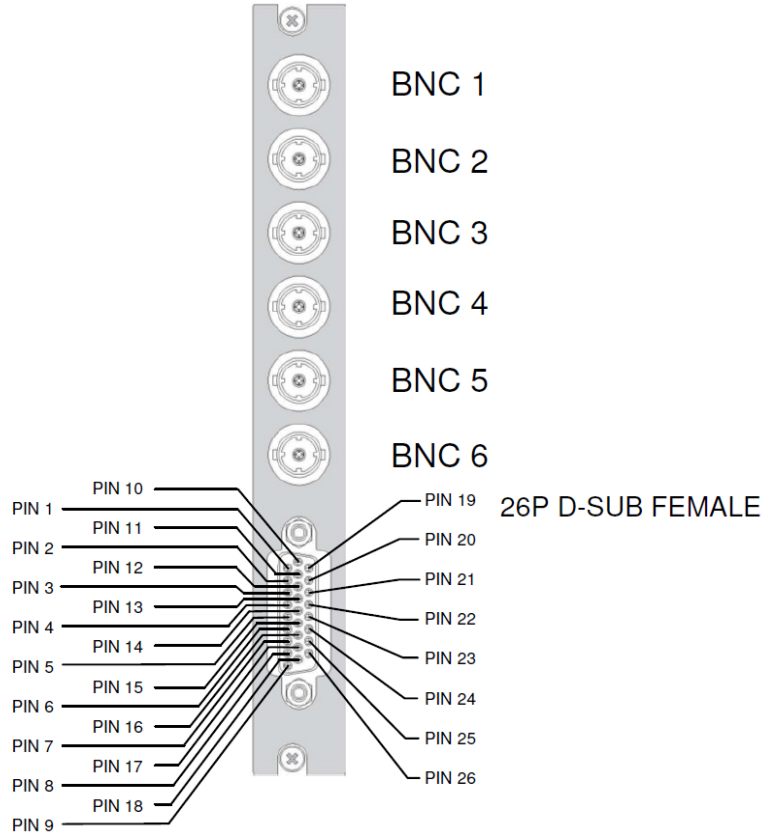
2.10. BPL11D



RJ45	DBD28 4 IN/4 OUT	DBD28 2 IN/6 OUT	DEE28 4 IN/4 OUT	DEE28 2 IN/6 OUT	DEE28 6 IN/2 OUT	DIO88
PIN 1	GPI 1 =VO trigger	GPI 1 =VO trigger	GPI 1 =VO trigger	GPI 1 =VO trigger	GPI 1 =VO trigger	
PIN 2	GPI 2	GPI 2	GPI 2 =PRGM E e oder	GPI 2 =PRGM E e oder	GPI 2 =PRGM E e oder	
PIN 3	Tx(+) Metadata	Tx(+) Metadata	Tx(+) Metadata	Tx(+) Metadata	Tx(+) Metadata	
PIN 4	Rx(+) Metadata	Rx(+) Metadata	Rx(+) Metadata	Rx(+) Metadata	Rx(+) Metadata	
PIN 5	Rx(-) Metadata	Rx(-) Metadata	Rx(-) Metadata	Rx(-) Metadata	Rx(-) Metadata	
PIN 6	Tx(-) Metadata	Tx(-) Metadata	Tx(-) Metadata	Tx(-) Metadata	Tx(-) Metadata	
PIN 7	GPI 3	GPI 3	GPI 3	GPI 3	GPI 3	
PIN 8	GND	GND	GND	GND	GND	
25P D-SUB FEMALE						
PIN 1	IN 1/2+	IN 1/2+	IN 1/2+	IN 1/2+	IN 1/2+	AES1/2+ IN/OUT
PIN 2	GND	GND	GND	GND	GND	GND
PIN 3	IN 3/4-	IN 3/4-	IN 3/4-	IN 3/4-	IN 3/4-	AES3/4- IN/OUT
PIN 4	OUT 1-2+	OUT 1/2+	IN 5/6+	OUT 9/10+	IN 5/6+	AES5/6+ IN/OUT
PIN 5	GND	GND	GND	GND	GND	GND
PIN 6	OUT 3/4-	OUT 3/4-	IN 7/8-	OUT 11/12-	IN 7/8-	AES7/8- IN/OUT
PIN 7	OUT 5/6+	OUT 5/6+	OUT 5/6+	OUT 5/6+	IN 9/10+	AES9/10+ IN/OUT
PIN 8	GND	GND	GND	GND	GND	GND
PIN 9	OUT 7/8-	OUT 7/8-	OUT 7/8-	OUT 7/8-	IN 11/12-	AES11/12- IN/OUT
PIN 10	IN 5/6+	OUT 9/10+	OUT 1/2+	OUT 1/2+	OUT 1/2+	AES13/14+ IN/OUT
PIN 11	GND	GND	GND	GND	GND	GND
PIN 12	IN 7/8-	OUT 11/12-	OUT 3/4-	OUT 3/4-	OUT 3/4-	AES15/16- IN/OUT
PIN 13						
PIN 14	IN 1/2-	IN 1/2-	IN 1/2-	IN 1/2-	IN 1/2-	AES1/2- IN/OUT
PIN 15	IN 3/4+	IN 3/4+	IN 3/4+	IN 3/4+	IN 3/4+	AES3/4+ IN/OUT
PIN 16	GND	GND	GND	GND	GND	GND
PIN 17	OUT 1/2-	OUT 1/2-	IN 5/6-	OUT 9/10-	IN 5/6-	AES5/6- IN/OUT
PIN 18	OUT 3/4+	OUT 3/4+	IN 7/8+	OUT 11/12+	IN 7/8+	AES7/8+ IN/OUT
PIN 19	GND	GND	GND	GND	GND	GND
PIN 20	OUT 5/6-	OUT 5/6-	OUT 5/6-	OUT 5/6-	IN 9/10-	AES9/10- IN/OUT
PIN 21	OUT 7/8+	OUT 7/8+	OUT 7/8+	OUT 7/8+	IN 11/12+	AES11/12+ IN/OUT
PIN 22	GND	GND	GND	GND	GND	GND
PIN 23	IN 5/6-	OUT 9/10-	OUT 1/2-	OUT 1/2-	OUT 1/2-	AES13/14- IN/OUT
PIN 24	IN 7/8+	OUT 11/12+	OUT 3/4+	OUT 3/4+	OUT 3/4+	AES15/16+ IN/OUT
PIN 25	GND	GND	GND	GND	GND	GND

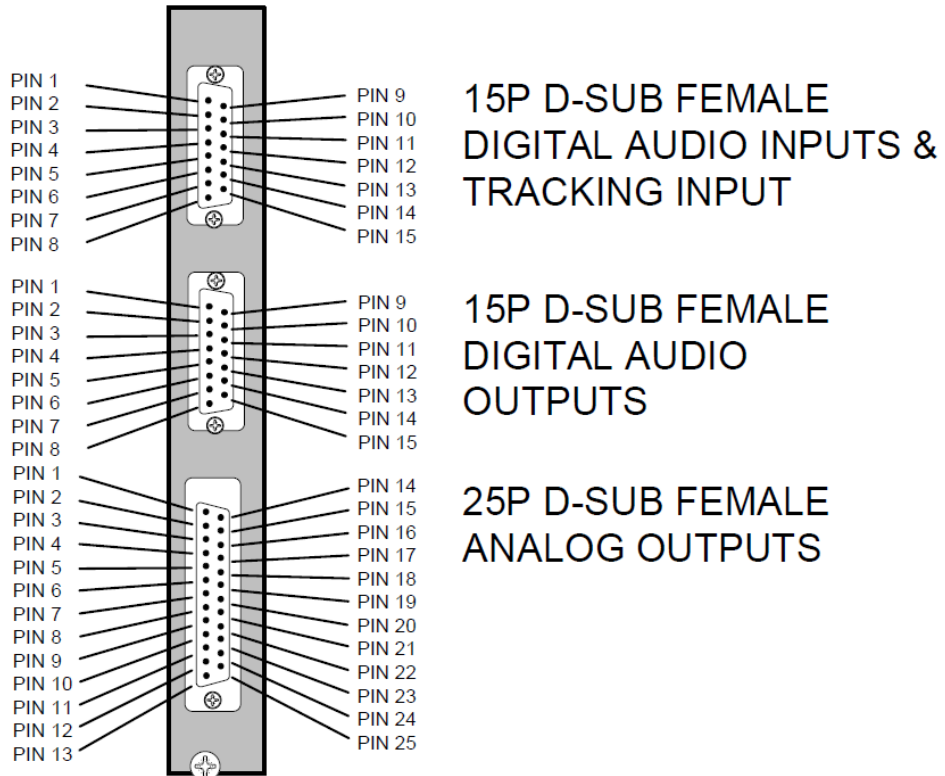


2.11. BPL12



	2EB22	2EB24	2DB22	2DB24	ASM10	INS21	SAM10
BNC 1	SDIINA	SDIINA	SDIINA	SDIINA	SDIIN	SDIIN	SDIIN
BNC 2	SDI+EMB. OUTA	SDI+EMB. OUTA	SDI RECLK OUTA	RECLK SDI OUT A	SDIOUT	SDIOUT	SDIOUT
BNC 3	SDI+EMB. OUTA	SDI+EMB. OUTA	SDI RECLK OUTA	RECLK SDI OUT A	SDIOUT	SDIOUT	SDIOUT
BNC 4	SDIINB	SDIINB	SDIINB	SDIINB	Y/CVBS	CVBS	Y/CVBS
BNC 5	SDI+EMB. OUTB	SDI+EMB. OUTB	RECLK SDI OUT B	RECLK SDI OUT B	Pr		Pb
BNC 6	SDI+EMB. OUTB	SDI+EMB. OUTB	RECLK SDI OUT B	RECLK SDI OUT B	Pb		Pr
26P HD-SUB FEMALE							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GND	GND	GND	GND	GND	GND	GND
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	GND	GND	GND	GND	GND	GND	GND
PIN 5	GND	GND	GND	GND	GND	GND	GND
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7	GND	GND	GND	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND	GND	GND	GND
PIN 9	TRACKING2	TRACKING2	TRACKING2	TRACKING2	TRACKING2		
PIN 10	AES1+ A IN	A1posIN	AES1+ A OUT	A1posOUT	AES1+ OUT		AES1+ IN
PIN 11	AES2+ A IN	A2posIN	AES2+ A OUT	A2posOUT	AES2+ OUT		AES2+ IN
PIN 12		A3posIN		A3posOUT	A1posIN		A1posOUT
PIN 13		A4posIN		A4posOUT	A2posIN		A2posOUT
PIN 14	AES1- B IN	B1posIN	AES1- B OUT	B1posOUT	A3posIN		A3posOUT
PIN 15	AES2- B IN	B2posIN	AES2- B OUT	B2posOUT	A4posIN		A4posOUT
PIN 16		B3posIN		B3posOUT			
PIN 17		B4posIN		B4posOUT			
PIN 18	TRACKING1	TRACKING1	TRACKING1	TRACKING1	TRACKING1		
PIN 19	AES1- A IN	A1negIN	AES1- A OUT	A1negOUT	AES1+ OUT		AES1- IN
PIN 20	AES2- A IN	A2negIN	AES2+ A OUT	A2negOUT	AES2+ OUT		AES2- IN
PIN 21		A3negIN		A3negOUT	A1negIN		A1negOUT
PIN 22		A4negIN		A4negOUT	A2negIN		A2negOUT
PIN 23	AES1- B IN	B1negIN	AES1+ B OUT	B1negOUT	A3negIN		A3negOUT
PIN 24	AES2- B IN	B2negIN	AES2+ B OUT	B2negOUT	A4negIN		A4negOUT
PIN 25		B3negIN		B3negOUT			
PIN 26		B4negIN		B4negOUT			

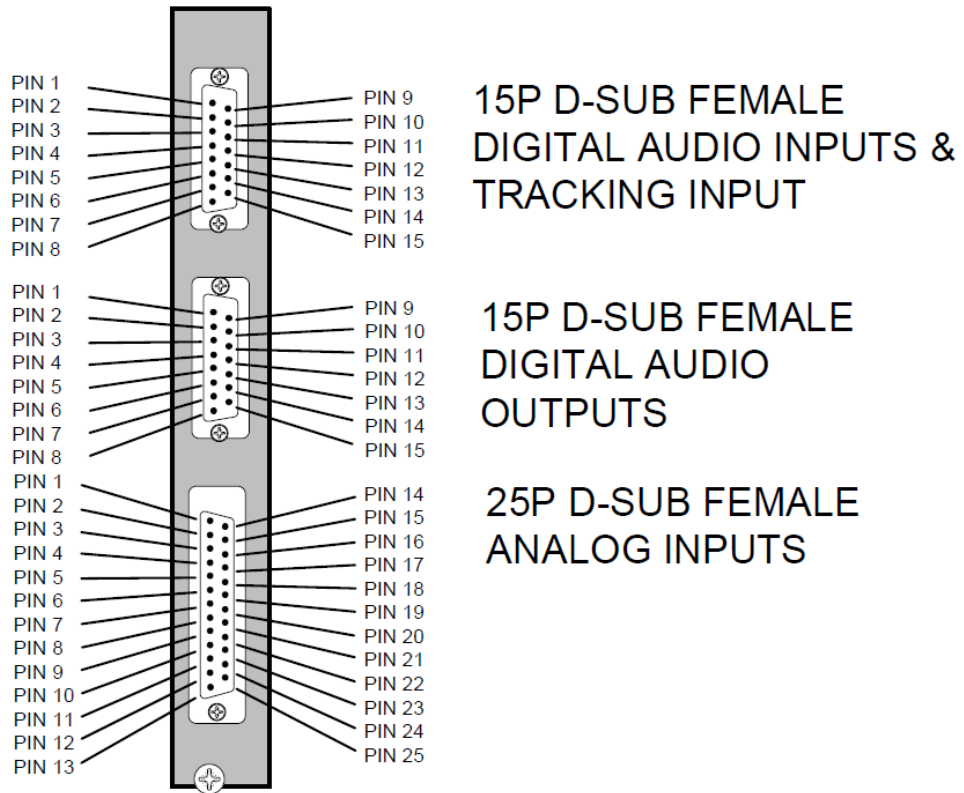
2.12. BPL13



15P D-SUB FEMALE			25P D-SUB FEMALE		
DAC48		DAC44	DAC48		DAC44
PIN 1	AES1+ IN	AES1+ IN	PIN 1	A1pos IN	A1pos IN
PIN 2	GND	GND	PIN 2	GND	GND
PIN 3	AES2- IN	AES2- IN	PIN 3	A2neg IN	A2neg IN
PIN 4	AES3+ IN	AES3+ IN	PIN 4	A3pos IN	A3pos IN
PIN 5	GND	GND	PIN 5	GND	GND
PIN 6	AES4- IN	AES4- IN	PIN 6	A4neg IN	A4neg IN
PIN 7	TRACKING 1 IN	TRACKING 1 IN	PIN 7	A5pos IN	
PIN 8	TRACKING 2 IN	TRACKING 2 IN	PIN 8	GND	GND
PIN 9	AES1- IN	AES1- IN	PIN 9	A6neg IN	
PIN 10	AES2+ IN	AES2+ IN	PIN 10	A7pos IN	
PIN 11	GND	GND	PIN 11	GND	GND
PIN 12	AES3- IN	AES3- IN	PIN 12	A8neg IN	
PIN 13	AES4- IN	AES4- IN	PIN 13		
PIN 14	GND	GND	PIN 14	A1neg IN	A1neg IN
PIN 15	GND	GND	PIN 15	A2pos IN	A2pos IN
15P D-SUB FEMALE			PIN 16	GND	GND
PIN 1	AES1+ OUT	AES1+ OUT	PIN 17	A3neg IN	A3neg IN
PIN 2	GND	GND	PIN 18	A4pos IN	A4pos IN
PIN 3	AES2- OUT	AES2- OUT	PIN 19	GND	GND
PIN 4	AES3+ OUT	AES3+ OUT	PIN 20	A5neg IN	A5neg IN
PIN 5	GND	GND	PIN 21	A6pos IN	A6pos IN
PIN 6	AES4- OUT	AES4- OUT	PIN 22	GND	GND
PIN 7	GND	GND	PIN 23	A7neg IN	A7neg IN
PIN 8	GND	GND	PIN 24	A8pos IN	A8pos IN
PIN 9	AES1- OUT	AES1- OUT	PIN 25	GND	GND
PIN 10	AES2+ OUT	AES2+ OUT			
PIN 11	GND	GND			
PIN 12	AES3- OUT	AES3- OUT			
PIN 13	AES4+ OUT	AES4+ OUT			
PIN 14	GND	GND			
PIN 15	GND	GND			



2.13. BPL14



15P D-SUB FEMALE			25P D-SUB FEMALE		
ADC48		ADC44	ADC48		ADC44
PIN 1	AES1+ IN	AES1+ IN	PIN 1	A1pos OUT	A1pos OUT
PIN 2	GND	GND	PIN 2	GND	GND
PIN 3	AES2- IN	AES2- IN	PIN 3	A2neg OUT	A2neg OUT
PIN 4	AES3+ IN	AES3+ IN	PIN 4	A3pos OUT	A3pos OUT
PIN 5	GND	GND	PIN 5	GND	GND
PIN 6	AES4- IN	AES4- IN	PIN 6	A4neg OUT	A4neg OUT
PIN 7	TRACKING 1 IN	TRACKING 1 IN	PIN 7	A5pos OUT	A5pos OUT
PIN 8	TRACKING 2 IN	TRACKING 2 IN	PIN 8	GND	GND
PIN 9	AES1- IN	AES1- IN	PIN 9	A6neg OUT	A6neg OUT
PIN 10	AES2+ IN	AES2+ IN	PIN 10	A7pos OUT	A7pos OUT
PIN 11	GND	GND	PIN 11	GND	GND
PIN 12	AES3- IN	AES3- IN	PIN 12	A8neg OUT	A8neg OUT
PIN 13	AES4- IN	AES4- IN	PIN 13		
PIN 14	GND	GND	PIN 14	A1neg OUT	A1neg OUT
PIN 15	GND	GND	PIN 15	A2pos OUT	A2pos OUT
15P D-SUB FEMALE			PIN 16	GND	GND
PIN 1	AES1+ OUT	AES1+ OUT	PIN 17	A3neg OUT	A3neg OUT
PIN 2	GND	GND	PIN 18	A4pos OUT	A4pos OUT
PIN 3	AES2- OUT	AES2- OUT	PIN 19	GND	GND
PIN 4	AES3+ OUT	AES3+ OUT	PIN 20	A5neg OUT	A5neg OUT
PIN 5	GND	GND	PIN 21	A6pos OUT	A6pos OUT
PIN 6	AES4- OUT	AES4- OUT	PIN 22	GND	GND
PIN 7	GND	GND	PIN 23	A7neg OUT	A7neg OUT
PIN 8	GND	GND	PIN 24	A8pos OUT	A8pos OUT
PIN 9	AES1- OUT	AES1- OUT	PIN 25	GND	GND
PIN 10	AES2+ OUT	AES2+ OUT			
PIN 11	GND	GND			
PIN 12	AES3- OUT	AES3- OUT			
PIN 13	AES4+ OUT	AES4+ OUT			
PIN 14	GND	GND			
PIN 15	GND	GND			

2.14. BPA09



BNC 1
 BNC 2
 BNC 3
 BNC 4
 BNC 5
 BNC 6
 BNC 7

PIN 1 Audio 1
 PIN 2
 PIN 3
 PIN 4 Audio 2
 PIN 5
 PIN 6

Onboard switch setting (twice)



+12dBu



+15dBu



+18dBu



+24dBu

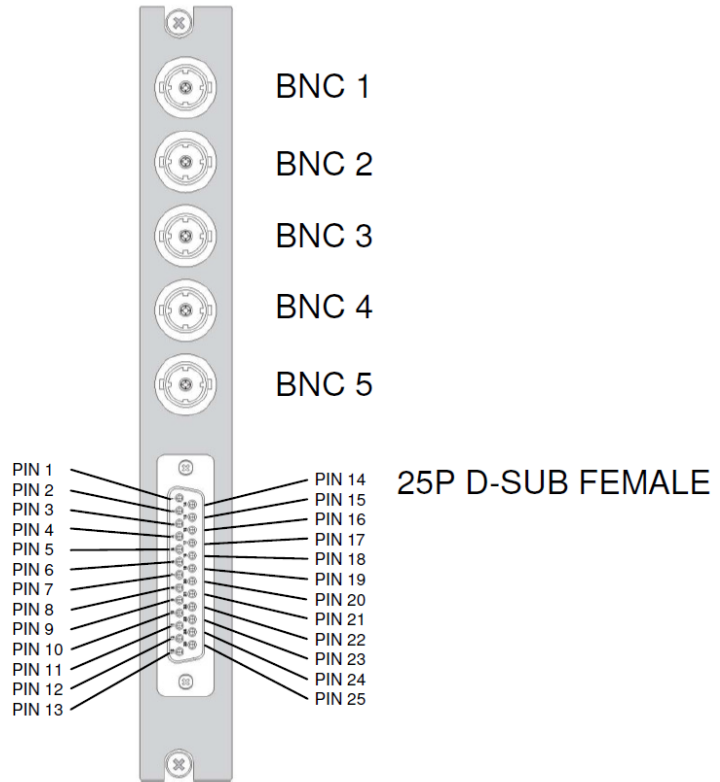
BNC output standard +6dBu

SAM08	
BNC1	SDIN
BNC2	SDIOUT1
BNC3	SDIOUT2
BNC4	SDIOUT3
BNC5	SDIOUT4
BNC6	CVBS/YOUT
BNC7	CVBS/YOUT
Terminal strips	Analog audio outputs
PIN1	Audio 1A
PIN2	Audio 1B
PIN3	GND
PIN4	Audio 2A
PIN5	Audio 2B
PIN6	GND



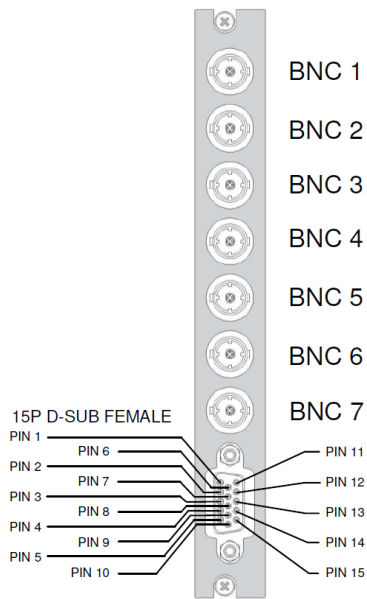
3. HD I-O Panel Overview

3.1. BPH02D

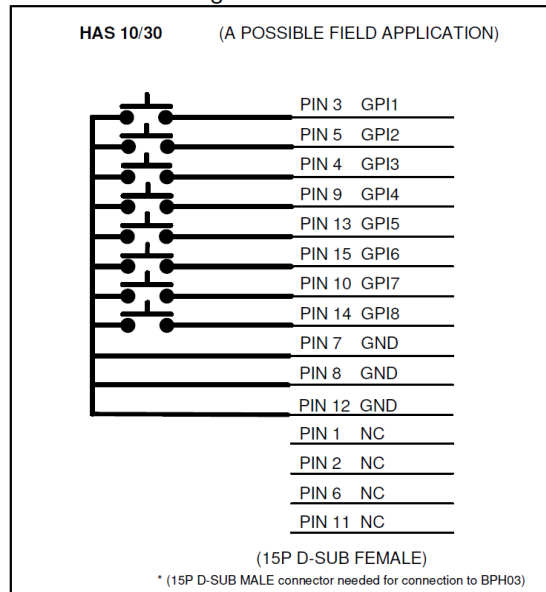


	HEB10	HEB05/20	HDB10	HDB05/20	HAS20	HVO10
BNC 1	HD SDI IN	SD/ HD SDI IN	HD SDI IN	HD SDI IN	SD/ HD SDI IN	HD SDI IN
BNC 2	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT
BNC 3	HD SDI + EMB. OUT	SD/ HD SDI + EMB. OUT		RECLK HD SDI OUT	SD/ HD SDI + EMB. OUT	HD SDI OUT
BNC 4	HD SDI + EMB. OUT	SD/ HD SDI + EMB. OUT		RECLK HD SDI OUT	SD/ HD SDI + EMB. OUT	HD SDI OUT
BNC 5		GPI				GPI
25P D-SUB FEMALE						
PIN 1						
PIN 2						
PIN 3	GND	GND	GND	GND	GND	GND
PIN 4	GND	GND	GND	GND	GND	GND
PIN 5	GND	GND	GND	GND	GND	GND
PIN 6	GND	GND	GND	GND	GND	GND
PIN 7	AES1- IN	AES1- IN	AES1- OUT	AES1- OUT	AES1- IN	AES1- IN
PIN 8	AES1+ IN	AES1+ IN	AES1+ OUT	AES1+ OUT	AES1+ IN	AES1+ IN
PIN 9	GND	GND	GND	GND	GND	GND
PIN 10	AES3- IN	AES3- IN	AES3- OUT	AES3- OUT	AES3- IN	AES3- IN
PIN 11	AES3+ IN	AES3+ IN	AES3+ OUT	AES3+ OUT	AES3+ IN	AES3+ IN
PIN 12	GND	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND	GND
PIN 15						
PIN 16						
PIN 17	GND	GND	GND	GND	GND	GND
PIN 18	GND	GND	GND	GND	GND	GND
PIN 19	GND	GND	GND	GND	GND	GND
PIN 20	GND	GND	GND	GND	GND	GND
PIN 21	AES2- IN	AES2- IN	AES2+ OUT	AES2- OUT	AES2- IN	AES2- IN
PIN 22	AES2+ IN	AES2+ IN	AES2- OUT	AES2+ OUT	AES2+ IN	AES2+ IN
PIN 23	GND	GND	GND	GND	GND	GND
PIN 24	AES4- IN	AES4- IN	AES4+ OUT	AES4- OUT	AES4- IN	AES4- IN
PIN 25	AES4+ IN	AES4+ IN	AES4- OUT	AES4+ OUT	AES4+ IN	AES4+ IN

3.2. BPH03 (1/2)



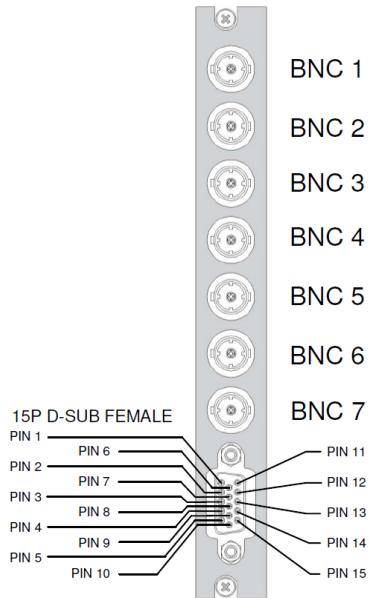
Connection Diagram



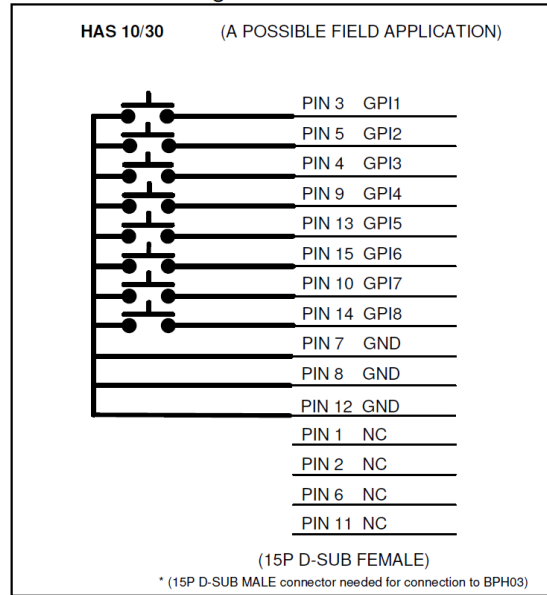
	HAS10/30 HSU05/10/11	HDS05/10	SVD20	HXH20/21 HXH30/31 HXH40/41	SXS20/21	HCL10	HDS20/21
BNC 1	HD SDI IN	HD/SD SDI IN	SD SDI IN	HD SDI IN	SD SDI IN	HD SDI IN	HD/SD SDI IN
BNC 2	HD SDI RECLK OUT	HD/SD RECLK OUT	SD SDI RECLK OUT	HD SDI RECLK OUT	SD SDI RECLK OUT	HD SDI RECLK OUT	HD/SD RECLK OUT
BNC 3	HD SDI PROC OUT	SD SDI OUT1	SD SDI OUT1	HD SDI PROC OUT	SD SDI PROC OUT	HD SDI PROC OUT	HD/SD SDI OUT1
BNC 4	HD SDI PROC OUT	SD SDI OUT2	SD SDI OUT2	HD SDI PROC OUT	SD SDI PROC OUT	HD SDI PROC OUT	HD/SD SDI OUT2
BNC 5							
BNC 6							
BNC 7							
15P HD-SUB FEMALE							
PIN 1				GPO2	GPO2	GPO2	GPO2
PIN 2				GPO4	GPO4	GPO4	GPO4
PIN 3	GP11	GP11	GP11	GP11	GP11	GP11	GP11
PIN 4	GP13	GP13	GP13	GP13	GP13	GP13	GP13
PIN 5	GP12	GP12	GP12	GP12	GP12	GP12	GP12
PIN 6				GPO1	GPO1	GPO1	GPO1
PIN 7	GND	GND	GND	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND	GND	GND	GND
PIN 9	GP14	GP14		GP14	GP14	GP14	GP14
PIN 10	GP17	GP17		GP17	GP17	GP17	GP17
PIN 11				GPO3	GPO3	GPO3	GPO3
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13	GP15	GP15		GP15	GP15	GP15	GP15
PIN 14	GP18	GP18		GP18	GP18	GP18	GP18
PIN 15	GP16	GP16		GP16	GP16	GP16	GP16



3.3. BPH03 (2/2)

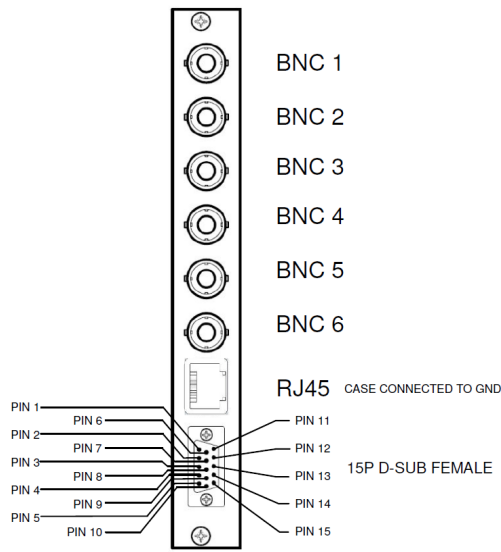


Connection Diagram

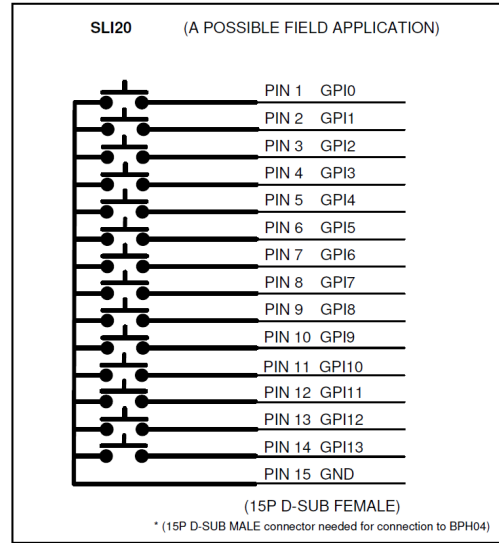


HSU20/21		HSU30/31	
BNC1	HD/SD SDI IN	HD/SD SDI IN	
BNC2	HD/SD RECLK OUT	HD/SD RECLK OUT	
BNC3	HD SDI OUT1	HD SDI OUT1	
BNC4	HD SDI OUT2	HD SDI OUT2	
BNC5			
BNC6			
BNC7			
15P HD-SUB FEMALE			
PIN 1	GPO2	GPO2	
PIN 2	GPO4	GPO4	
PIN 3	GP11	GP11	
PIN 4	GP13	GP13	
PIN 5	GP12	GP12	
PIN 6	GPO1	GPO1	
PIN 7	GND	GND	
PIN 8	GND	GND	
PIN 9	GP14	GP14	
PIN 10	GP17	GP17	
PIN 11	GPO3	GPO3	
PIN 12	GND	GND	
PIN 13	GP15	GP15	
PIN 14	GP18	GP18	
PIN 15	GP16	GP16	

3.4. BPH04 (1/2)



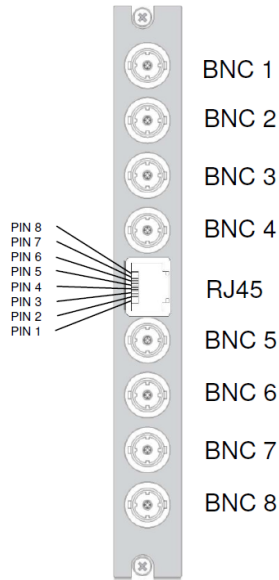
Connection Diagram



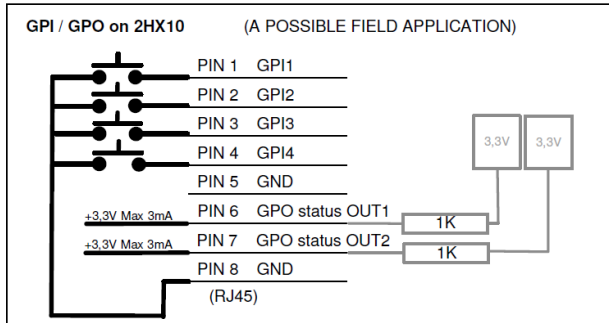
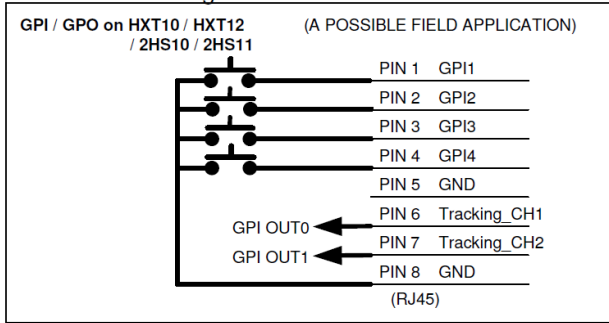
	HLI20	HTI10	HSI10	HSI11	HSI12	HSI20	HSS10
BNC 1	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN
BNC 2	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT
BNC 3	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1
BNC 4	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2
BNC 5							
BNC 6			CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT
RJ45	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection
15P HD-SUB FEMALE							
PIN 1	GPI0	GPI0	GPI0 (CLEAR CAPTION)	GPI0 (CLEAR CAPTION)	GPI0 (CLEAR CAPTION)	GPI0 ()	GPI0
PIN 2	GPI1	GPI1	GPI1 (BYPASS INSERTER)	GPI1 (BYPASS INSERTER)	GPI1 (BYPASS INSERTER)	GPI1 ()	GPI1
PIN 3	GPI2	GPI2				GPI2	GPI2
PIN 4	GPI3	GPI3				GPI3	GPI3
PIN 5	GPI4	GPI4				GPI4	GPI4
PIN 6	GPI5	GPI5				GPI5	GPI5
PIN 7	GPI6	GPI6				GPI6	GPI6
PIN 8	GPI7	GPI7				GPI7	GPI7
PIN 9	GPI8	GPI8			GPI8 (CUE IN 1)	GPI8	GPI8
PIN 10	GPI9	GPI9			GPI9 (CUE IN 2)	GPI9	GPI9
PIN 11	GPI10	GPI10			GPI10 (CUE IN 3)	GPI10	GPI10
PIN 12	GPI11	GPI11			GPI11 (CUE IN 4)	GPI11	GPI11
PIN 13	GPI12	GPI12			GPI12 (CUE IN 5)	GPI12	GPI12
PIN 14	GPI13	GPI13			GPI13 (CUE IN 6)	GPI13	GPI13
PIN 15	GND	GND	GND	GND	GND	GND	GND



3.5. BPH05

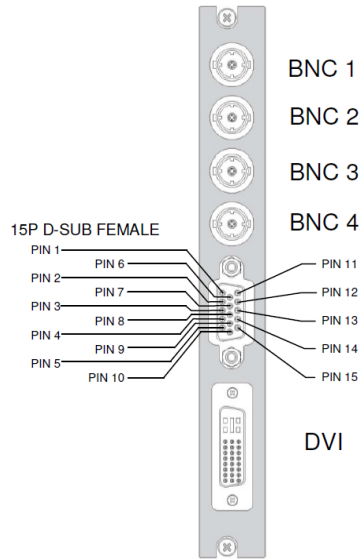


Connection Diagram

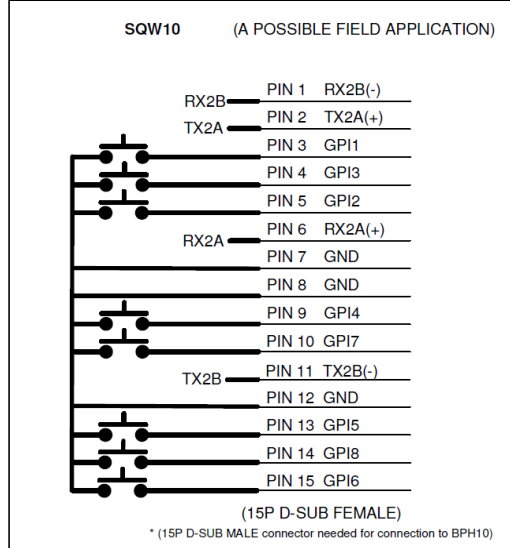


	HXT10/ 12	2HS10/ 11	2HX10
BNC1	SD/HD SDI IN	SD/HD SDI IN	SD/HD SDI IN1
BNC2	SD/HD PROC SDI OUT	SD/HD PROC SDI OUT	SD/HD SDI OUT1
BNC3	SD PROC SDI OUT	SD PROC SDI OUT	SD SDI OUTPUT
BNC4	COMPOSITE OUT	COMPOSITE OUT	CVBS OUTPUT
BNC5	SD/HD SDI IN	SD/HD SDI IN	SD/HD SDI IN2
BNC6	SD/HD PROC SDI OUT	SD/HD PROC SDI OUT	SD/HD SDI OUT2
BNC7	SD PROC SDI OUT	SD PROC SDI OUT	SD SDI OUTPUT
BNC8	COMPOSITE OUT	COMPOSITE OUT	CVBS OUTPUT
RJ45			
PIN 1	GPI1	GPI1	GPI1
PIN 2	GPI2	GPI2	GPI2
PIN 3	GPI3	GPI3	GPI3
PIN 4	GPI4	GPI4	GPI4
PIN 5	GND	GND	GND
PIN 6	TRACKING_CH1	TRACKING_CH1	GPO STATUS OUT1
PIN 7	TRACKING_CH2	TRACKING_CH2	GPO STATUS OUT2
PIN 8	GND	GND	GND

3.6. BPH10



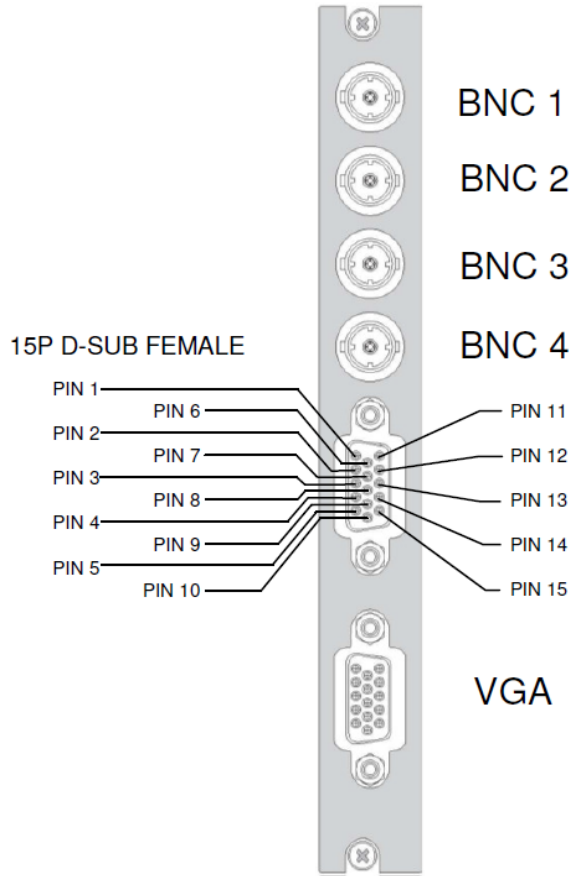
Connection Diagram



	SQW10	HQW10	SDW10	HDW10
BNC 1	SDI IN 1	SDI IN 1	SDI IN	SDI IN
BNC 2	SDI IN 2	SDI IN 2		
BNC 3	SDI IN 3	SDI IN 3		
BNC 4	SDI IN 4	SDI IN 4		
15P HD-SUB FEMALE				
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI 1	GPI 1		
PIN 4	GPI 3	GPI 3		
PIN 5	GPI 2	GPI 2		
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND
PIN 9	GPI 4	GPI 4		
PIN 10	GPI 7	GPI 7		
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	GND	GND	GND	GND
PIN 13	GPI 5	GPI 5		
PIN 14	GPI 8	GPI 8		
PIN 15	GPI 6	GPI 6		

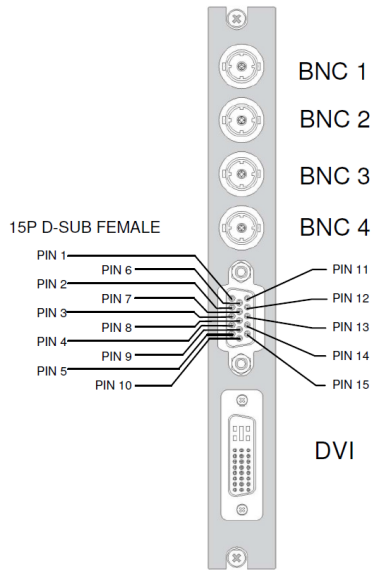


3.7. BPH11

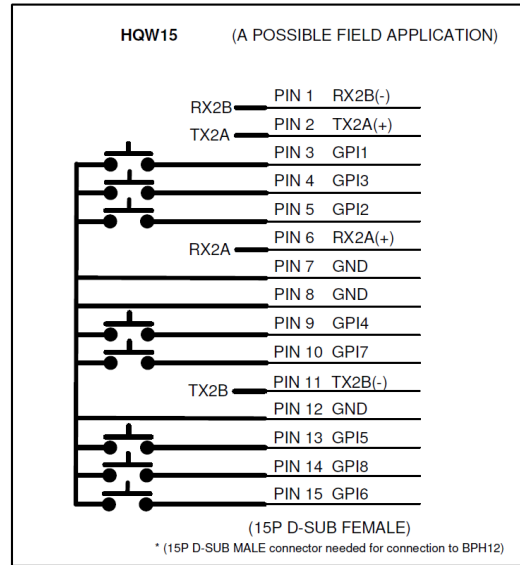


	SQW10	HQW10	SDW10	HDW10
BNC1	SDIIN1	SDIIN1	SDIIN	SDIIN
BNC2	SDIIN2	SDIIN2		
BNC3	SDIIN3	SDIIN3		
BNC4	SDIIN4	SDIIN4		
15P HD- SUB FEMALE				
PIN1	R	R	R	R
PIN2	G	G	G	G
PIN3	B	B	B	B
PIN4				
PIN5				
PIN6	GND	GND	GND	GND
PIN7	GND	GND	GND	GND
PIN8	GND	GND	GND	GND
PIN9				
PIN10	GND	GND	GND	GND
PIN11				
PIN12	SDA	SDA	SDA	SDA
PIN13	VGA HSY	VGA HSY	VGA HSY	VGA HSY
PIN14	VGA VSY	VGA VSY	VGA VSY	VGA VSY
PIN15	SCL	SCL	SCL	SCL

3.8. BPH12



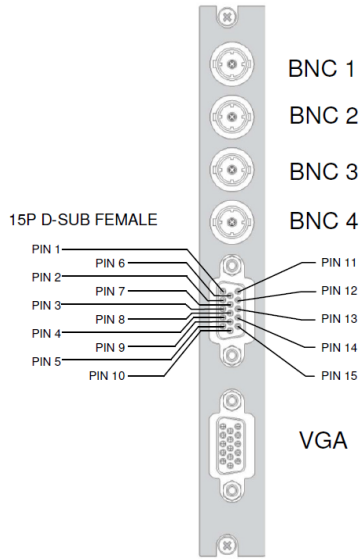
Connection Diagram



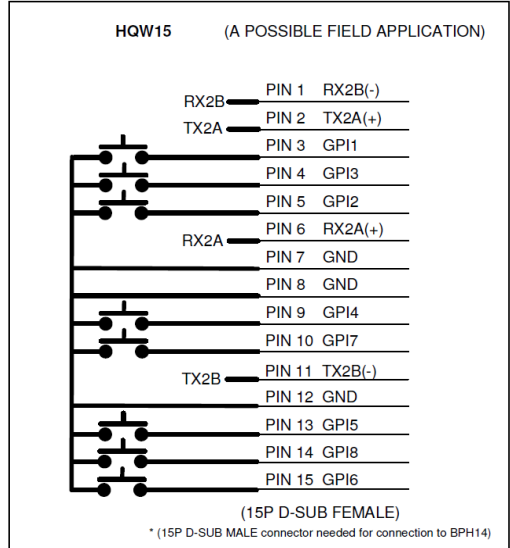
HQW15	
BNC1	SD/HD SDI IN 1
BNC2	SD/HD SDI IN 2
BNC3	SD/HD SDI IN 3
BNC4	SD/HD SDI IN 4
15P HD-SUB FEMALE	
PIN 1	RX2B(-)
PIN 2	TX2A(+)
PIN 3	GPI1
PIN 4	GPI3
PIN 5	GPI2
PIN 6	RX2A(+)
PIN 7	GND
PIN 8	GND
PIN 9	GPI4
PIN 10	GPI7
PIN 11	TX2B(-)
PIN 12	GND
PIN 13	GPI5
PIN 14	GPI8
PIN 15	GPI6



3.9. BPH14

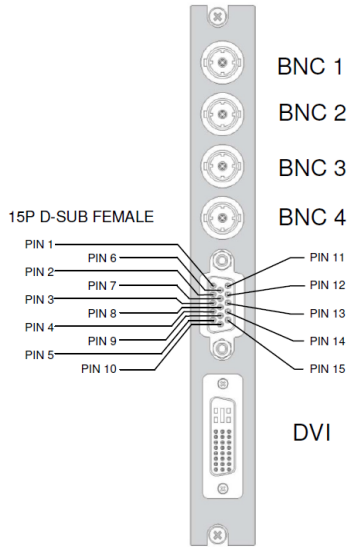


Connection Diagram

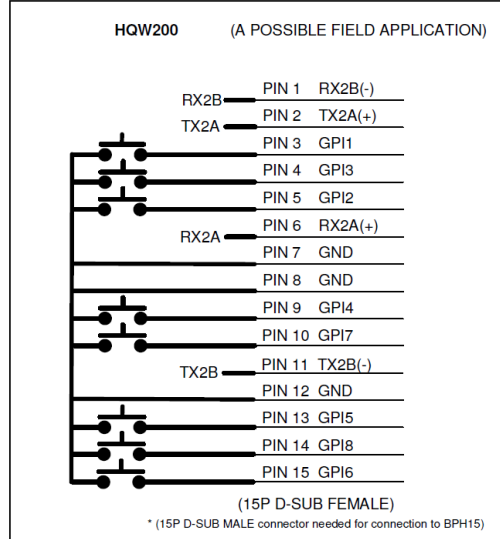


HQW15	
BNC1	SD/ HDSDIIN1
BNC2	SD/ HDSDIIN2
BNC3	SD/ HDSDIIN3
BNC4	SD/ HDSDIIN4
15P HD-SUB FEMALE	
PIN 1	RX2B(-)
PIN 2	TX2A(+)
PIN 3	GPI1
PIN 4	GPI3
PIN 5	GPI2
PIN 6	RX2A(+)
PIN 7	GND
PIN 8	GND
PIN 9	GPI4
PIN 10	GPI7
PIN 11	TX2B(-)
PIN 12	GND
PIN 13	GPI5
PIN 14	GPI8
PIN 15	GPI6

3.10. BPH15



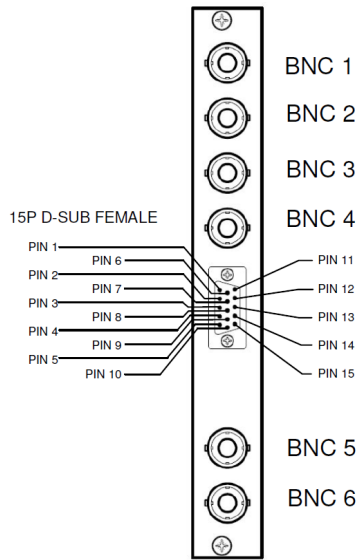
Connection Diagram



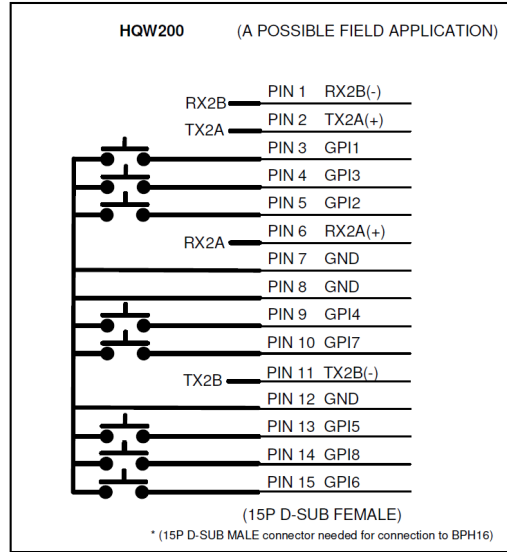
	HQW200	GQW200	HMV200	GMV200	SMV200
BNC 1	SD/HD SDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1
BNC 2	SD/HD SDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2
BNC 3	SD/HD SDI IN 3	SD/HD/3GSDI IN 3	SD/HD/3GSDI IN 3	SD/HD/3GSDI IN 3	SD/HD/3GSDI IN 3
BNC 4	SD/HD SDI IN 4	SD/HD/3GSDI IN 4	SD/HD/3GSDI IN 4	SD/HD/3GSDI IN 4	SD/HD/3GSDI IN 4
15P HD-SUB FEMALE					
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI1	GPI1	GPI1	GPI1	GPI1
PIN 4	GPI3	GPI3	GPI3	GPI3	GPI3
PIN 5	GPI2	GPI2	GPI2	GPI2	GPI2
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND	GND
PIN 9	GPI4	GPI4	GPI4	GPI4	GPI4
PIN 10	GPI7	GPI7	GPI7	GPI7	GPI7
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	GND	GND	GND	GND	GND
PIN 13	GPI5	GPI5	GPI5	GPI5	GPI5
PIN 14	GPI8	GPI8	GPI8	GPI8	GPI8
PIN 15	GPI6	GPI6	GPI6	GPI6	GPI6



3.11. BPH16

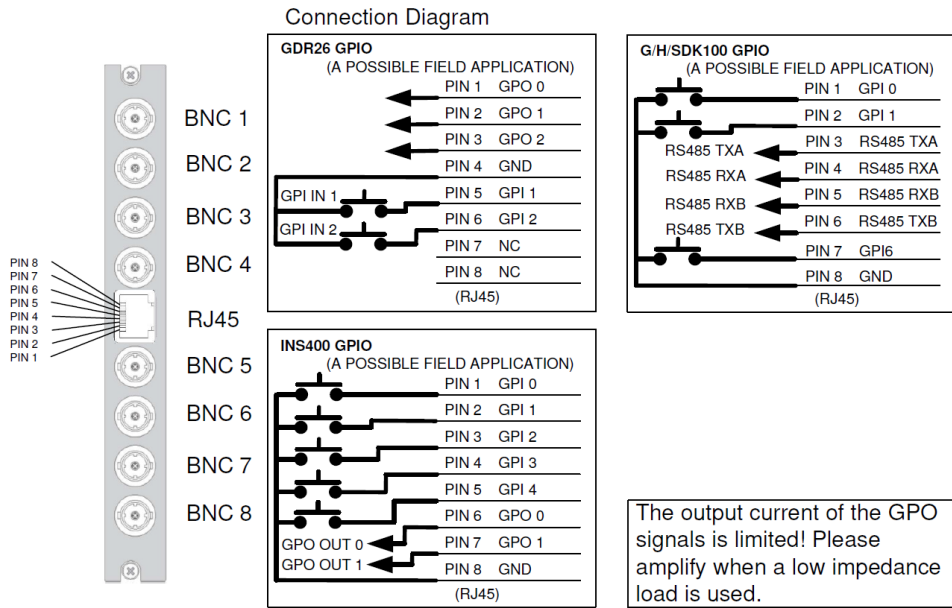


Connection Diagram



	HQW200	GQW200	HMV200	GMV200	SMV200
BNC1	SD/HD SDI IN1	SD/HD/3GSDI IN1	SD/HD/3GSDI IN1	SD/HD/3GSDI IN1	SD/HD/3GSDI IN1
BNC2	SD/HD SDI IN2	SD/HD/3GSDI IN2	SD/HD/3GSDI IN2	SD/HD/3GSDI IN2	SD/HD/3GSDI IN2
BNC3	SD/HD SDI IN3	SD/HD/3GSDI IN3	SD/HD/3GSDI IN3	SD/HD/3GSDI IN3	SD/HD/3GSDI IN3
BNC4	SD/HD SDI IN4	SD/HD/3GSDI IN4	SD/HD/3GSDI IN4	SD/HD/3GSDI IN4	SD/HD/3GSDI IN4
BNC5	SD/HD SDI OUT1	SD/HD/3GSDI OUT1	SD/HD/3GSDI OUT1	SD/HD/3GSDI OUT1	SD/HD/3GSDI OUT1
BNC6	SD/HD SDI OUT2	SD/HD/3GSDI OUT2	SD/HD/3GSDI OUT2	SD/HD/3GSDI OUT2	SD/HD/3GSDI OUT2
15P HD-SUB FEMALE					
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI1	GPI1	GPI1	GPI1	GPI1
PIN 4	GPI3	GPI3	GPI3	GPI3	GPI3
PIN 5	GPI2	GPI2	GPI2	GPI2	GPI2
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND	GND
PIN 9	GPI4	GPI4	GPI4	GPI4	GPI4
PIN 10	GPI7	GPI7	GPI7	GPI7	GPI7
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	GND	GND	GND	GND	GND
PIN 13	GPI5	GPI5	GPI5	GPI5	GPI5
PIN 14	GPI8	GPI8	GPI8	GPI8	GPI8
PIN 15	GPI6	GPI6	GPI6	GPI6	GPI6

3.12. BPH17 (1/2)

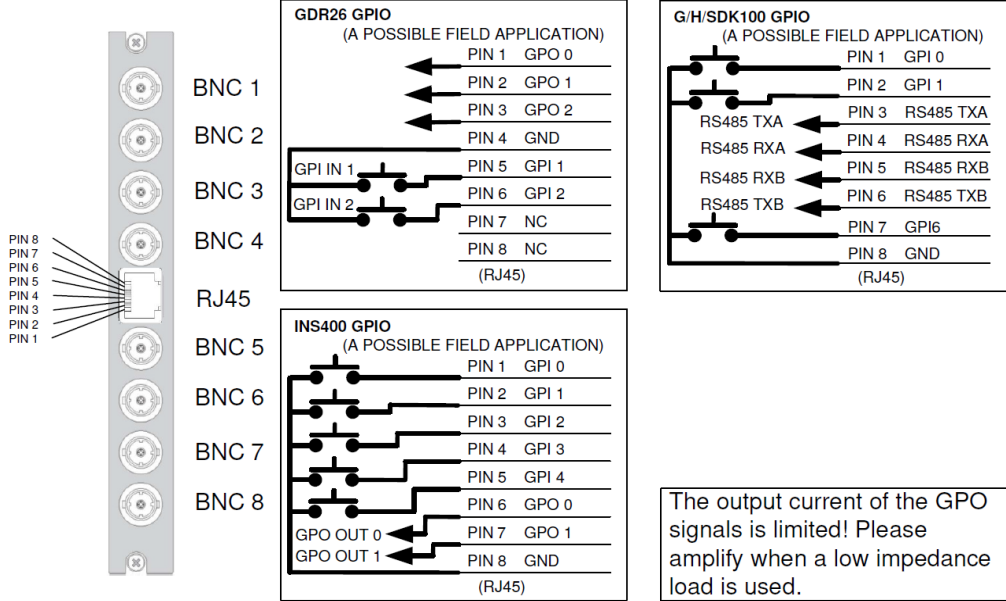


	GDR26	INS400 HNS400	G/HDL100/200	G/H/SDK100 G/H/SDK200/300	GSU150/160 GXG150/160 2GU100/110 2XG100/110 2GS100/110 2GF100/110 HSU150/160 HXH150/160 2HU100/110 2XH100/110 2HS100/110 2HF100/110 2SF100/110	GSU100/110 GXG150/160 GDS100/110 HSU100/110 HXH100/110 HDS100/110 HFS100/110 SFS100/110	HXT010/100/110/150 GXT010/100/110
BNC1	SD/HD/3GSDI OUT A3	SDSDI IN1	SD/HD/3GSDI IN1	SD/HD/3GSDI IN1	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	HD/SDSDI IN1
BNC2	SD/HD/3GSDI OUT A2	SDSDI IN2	SD/HD/3GSDI IN2	SD/HD/3GSDI IN2	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	HD/SDSDI IN2
BNC3	SD/HD/3GSDI OUT A1	SDSDI OUT1	SD/HD/3GSDI OUT1	SD/HD/3GSDI OUT1	SD/HD/3GSDI OUT A1	SD/HD/3GSDI OUT A1	SDSDI OUT1
BNC4	SD/HD/3GSDI IN A	SDSDI OUT2	SD/HD/3GSDI OUT2	SD/HD/3GSDI OUT2	SD/HD/3GSDI OUT A2	SD/HD/3GSDI OUT A2	SDSDI OUT2
BNC5	SD/HD/3GSDI IN B	SDSDI OUT3	SD/HD/3GSDI OUT3	SD/HD/3GSDI OUT3	SD/HD/3GSDI OUT B1	SD/HD/3GSDI OUT A3	SDSDI OUT3
BNC6	SD/HD/3GSDI OUT B1	SDSDI OUT4	SD/HD/3GSDI OUT4	SD/HD/3GSDI OUT4	SD/HD/3GSDI OUT B2	SD/HD/3GSDI OUT A4	SDSDI OUT4
BNC7	SD/HD/3GSDI OUT B2			SD/HD/3GSDI IN3			
BNC8	SD/HD/3GSDI OUT B3	CVBS IN		SD/HD/3GSDI IN4	CVBS IN	CVBS IN	
RJ45							
PIN 1	GPO0	GPI0		GPI0	GPI0	GPI0	GPI0
PIN 2	GPO1	GPI1		GPI1	GPI1	GPI1	GPI1
PIN 3	GPO2	GPI2		RS485 TXA	GPI2	GPI2	GPI2
PIN 4	GND	GPI3		RS485 RXA	GPI3	GPI3	GPI3
PIN 5	GPI1	GPI4		RS485 RXB	GPI4	GPI4	GPI4
PIN 6	GPI2	GPO0		RS485 TXB	GPO0	GPO0	GPI5
PIN 7		GPO1		GPI6	GPO1	GPO1	GPI6
PIN 8		GND		GND	GND	GND	GND



3.13. BPH17 (2/2)

Connection Diagram



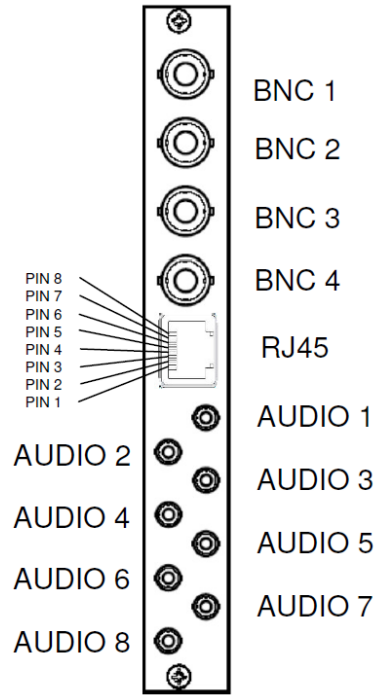
	G/HDS010 G/H/SFS010 G/H/SU010 GXG/HX010	G/H3D100	2TG100	G/HIX010	G/HIX100/110
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN 1		SD/HD/3G SDI IN 1	SD/HD/3G SDI IN 1
BNC 2		SD/HD/3G SDI IN 2		SD/HD/3G SDI IN 2	SD/HD/3G SDI IN 2
BNC 3	SD/HD/3G SDI OUT A1	SD/HD/3G SDI OUT 1	SD/HD/3G SDI OUT A1	SD/HD/3G SDI MAIN OUT 1	SD/HD/3G SDI MAIN OUT 1
BNC 4	SD/HD/3G SDI OUT A2	SD/HD/3G SDI OUT 2	SD/HD/3G SDI OUT A2	SD/HD/3G SDI MAIN OUT 2	SD/HD/3G SDI MAIN OUT 2
BNC 5	SD/HD/3G SDI OUT A3	SD/HD/3G SDI OUT 3	SD/HD/3G SDI OUT A3	SD/HD/3G SDI BACKUP OUT 1	SD/HD/3G SDI BACKUP OUT 1
BNC 6	SD/HD/3G SDI OUT A4	SD/HD/3G SDI OUT 4	SD/HD/3G SDI OUT A4	SD/HD/3G SDI BACKUP OUT 2	SD/HD/3G SDI BACKUP OUT 2
BNC 7		SD/HD/3G SDI IN 3			SD/HD/3G SDI IN 3
BNC 8		SD/HD/3G SDI IN 4			SD/HD/3G SDI IN 4
RJ 45					
PIN 1	GPI 0	GPI 0		GPI 0	GPI 0
PIN 2	GPI 1	GPI 1		GPI 1	GPI 1
PIN 3	GPI 2	GPI 2		GPI/O 2	GPI/O 2
PIN 4	GPI 3	GPI 3		GPI/O 3	GPI/O 3
PIN 5	GPI 4	GPI 4		GPI/O 4	GPI/O 4
PIN 6	GPO 0	GPI 5		GPI/O 5	GPI/O 5
PIN 7	GPO 1	GPI 6		GPI 6	GPI 6
PIN 8	GND	GND		GND	GND

	G/HIX170	2HU101	U4U100	U4B100
BNC 1	SD/HD/3G SDI IN 1	SD/HD/3G SDI IN A	3G SDI IN	3G SDI IN LEFT-TOP
BNC 2	SD/HD/3G SDI IN 2	SD/HD/3G SDI IN B		3G SDI IN RIGHT-TOP
BNC 3	SD/HD/3G SDI OUT 1	SD/HD/3G SDI OUT A1	3G SDI OUT LEFT-TOP	3G SDI OUT 1
BNC 4	SD/HD/3G SDI OUT 2	SD/HD/3G SDI OUT A2	3G SDI OUT RIGHT-TOP	3G SDI OUT 2
BNC 5	SD/HD/3G SDI OUT 3	SD/HD/3G SDI OUT B1	3G SDI OUT LEFT-BOTTOM	3G SDI OUT 3
BNC 6	SD/HD/3G SDI OUT 4	SD/HD/3G SDI OUT B2	3G SDI OUT RIGHT-BOTTOM	3G SDI OUT 4
BNC 7	SD/HD/3G SDI IN 3			3G SDI IN LEFT-BOT
BNC 8	SD/HD/3G SDI IN 4			3G SDI IN RIGHT-BOT
RJ 45				
PIN 1		GPI 0		
PIN 2		GPI 1		
PIN 3		GPI 2		
PIN 4		GPI 3		
PIN 5		GPI 4		
PIN 6		GPO 0		
PIN 7		GPO 1		
PIN 8		GND		

Application Example GPIO G/HIX010/100/110:

- PIN 1 GPI 0 Video preset switch 0
- PIN 2 GPI 1 Video preset switch 1
- PIN 3 GPO 2 Probe-A error
- PIN 4 GPO 3 Probe-B error
- PIN 5 GPO 4 Active input for output-A
- PIN 6 GPO 5 Active input for output-B
- PIN 7 GPI 6 Audio preset switch 0
- PIN 8 GND

3.14. BPH18 (1/3)

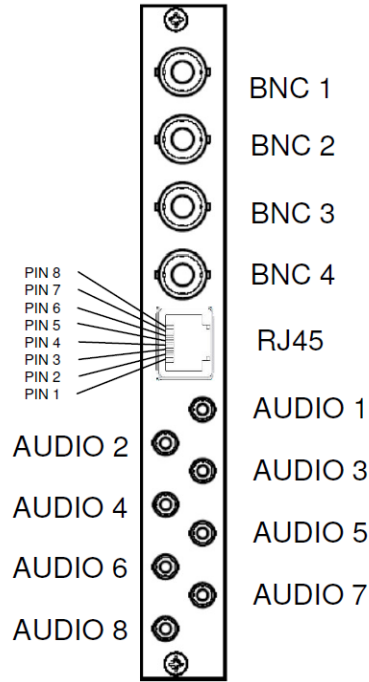


	G/HEB400 G/HEB500	G/HEB440 G/HEB550	G/HDB400 G/HDB500	G/HDB440 G/HDB550	G/HRB550 G/HRF550	G/HRB590 G/HRF590	G/HEB800 G/HEB900
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A
BNC 2	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B
BNC 3	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A
BNC 4	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1
PIN 3	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2
PIN 4	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3
PIN 5	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)
PIN 6	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)
PIN 7	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)
PIN 8	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)
ANALOG AUDIO INPUTS							
AUDIO 1	A1pos IN / GND	A1pos IN / GND	A1pos OUT / GND	A1pos OUT / GND	A1pos IN / GND	A1pos IN / GND	D1 IN
AUDIO 2	A2pos IN / GND	A2pos IN / GND	A2pos OUT / GND	A2pos OUT / GND	A2pos IN / GND	A2pos IN / GND	D2 IN
AUDIO 3	A3pos IN / GND	A3pos IN / GND	A3pos OUT / GND	A3pos OUT / GND	A3pos IN / GND	A3pos IN / GND	D3 IN
AUDIO 4	A4pos IN / GND	A4pos IN / GND	A4pos OUT / GND	A4pos OUT / GND	A4pos IN / GND	A4pos IN / GND	D4 IN
AUDIO 5		A5pos IN / GND		A5pos OUT / GND	A1pos OUT / GND		D1 OUT
AUDIO 6		A6pos IN / GND		A6pos OUT / GND	A2pos OUT / GND		D2 OUT
AUDIO 7		A7pos IN / GND		A7pos OUT / GND	A3pos OUT / GND		D3 OUT
AUDIO 8		A8pos IN / GND		A8pos OUT / GND	A4pos OUT / GND		D4 OUT
	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BPH18D instead



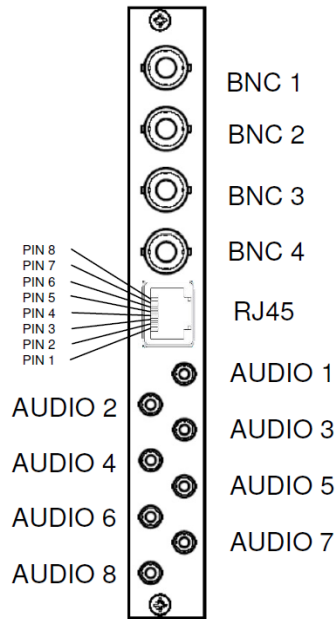
3.15. BPH18 (2/3)



	G/HEB840 G/HEB950	G/HEB880 G/HEB990	G/HDB800 G/HDB900	G/HDB840 G/HDB950	G/HDB880 G/HDB990	G/HRB950 G/HRF950	G/HRB990 G/HRF990
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A
BNC 2	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B
BNC 3	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A
BNC 4	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1
PIN 3	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2
PIN 4	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3
PIN 5	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)
PIN 6	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)
PIN 7	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)
PIN 8	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)
ANALOG AUDIO INPUTS							
AUDIO 1	D1 IN	D1 IN	D1 OUT	D1 OUT	D1 OUT	D1 IN	D1 IN
AUDIO 2	D2 IN	D2 IN	D2 OUT	D2 OUT	D2 OUT	D2 IN	D2 IN
AUDIO 3	D3 IN	D3 IN	D3 OUT	D3 OUT	D3 OUT	D3 IN	D3 IN
AUDIO 4	D4 IN	D4 IN	D4 OUT	D4 OUT	D4 OUT	D4 IN	D4 IN
AUDIO 5	A1pos IN / GND	D5 IN		A1pos OUT / GND	D5 OUT	A1pos OUT / GND	D1 OUT
AUDIO 6	A2pos IN / GND	D6 IN		A2pos OUT / GND	D6 OUT	A2pos OUT / GND	D2 OUT
AUDIO 7	A3pos IN / GND	D7 IN		A3pos OUT / GND	D7 OUT	A3pos OUT / GND	D3 OUT
AUDIO 8	A4pos IN / GND	D8 IN		A4pos OUT / GND	D8 OUT	A4pos OUT / GND	D4 OUT
	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BPH18D instead

3.16. BPH18 (3/3)

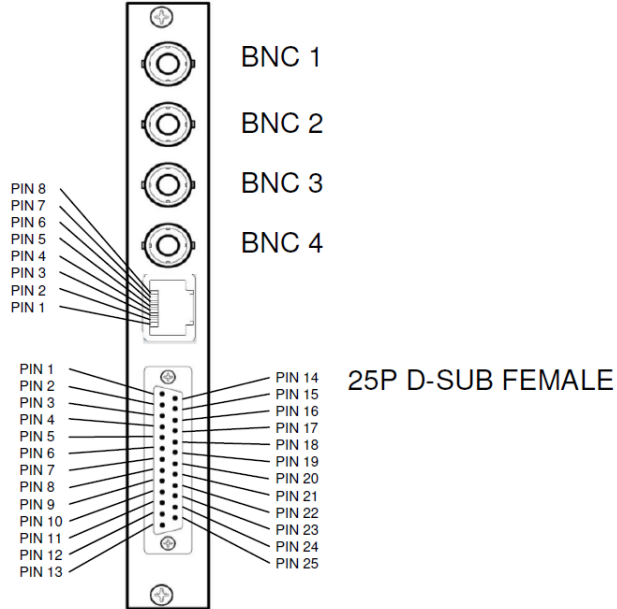


	G/HAF500 G/HRF500	G/HAF900 G/HRF900	G/HRF050	G/HRF090
BNC 1	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A
BNC 2	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B
BNC 3	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A
BNC 4	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B
RJ 45				
PIN 1	GND	GND	GND	GND
PIN 2	GPIO 1	GPIO 1	GPIO 1	GPIO 1
PIN 3	GPIO 2	GPIO 2	GPIO 2	GPIO 2
PIN 4	GPIO 3	GPIO 3	GPIO 3	GPIO 3
PIN 5	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)
PIN 6	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)
PIN 7	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)
PIN 8	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)
Coaxial				
AUDIO 1	A1pos IN / GND	D1 IN		
AUDIO 2	A2pos IN / GND	D2 IN		
AUDIO 3	A3pos IN / GND	D3 IN		
AUDIO 4	A4pos IN / GND	D4 IN		
AUDIO 5			A1pos OUT / GND	D1 OUT
AUDIO 6			A2pos OUT / GND	D2 OUT
AUDIO 7			A3pos OUT / GND	D3 OUT
AUDIO 8			A4pos OUT / GND	D4 OUT
	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BPH18D instead

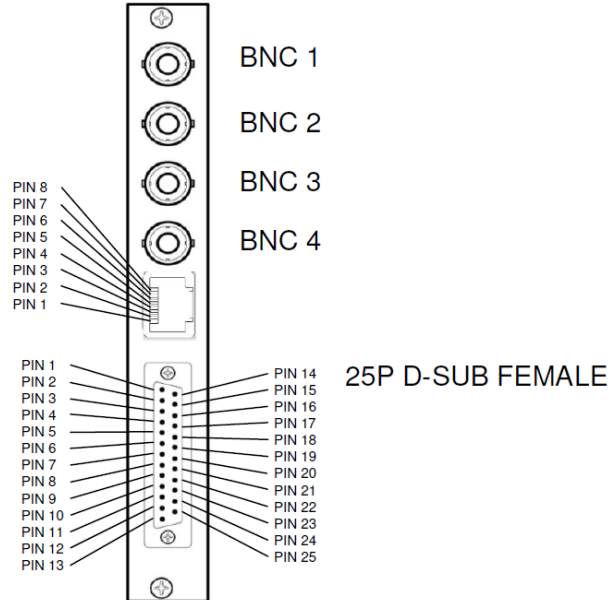


3.17. BPH18D (1/3)



	G/HEB400 G/HEB500	G/HEB440 G/HEB550	G/HDB400 G/HDB500	G/HDB440 G/HDB550	G/HRB550 G/HRF550	G/HRB590 G/HRF590	G/HEB800 G/HEB900
BNC1	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA
BNC2	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB
BNC3	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA
BNC4	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB
25P D-SUB FEMALE							
PIN 1	A1neg IN	A1neg IN	A1neg OUT	A1neg OUT	A1neg IN	A1neg IN	D1neg IN
PIN2	A1pos IN	A1pos IN	A1pos OUT	A1pos OUT	A1pos IN	A1pos IN	D1pos IN
PIN3	GND	GND	GND	GND	GND	GND	GND
PIN4	A3neg IN	A3neg IN	A3neg OUT	A3neg OUT	A3neg IN	A3neg IN	D3neg IN
PIN5	A3pos IN	A3pos IN	A3pos OUT	A3pos OUT	A3pos IN	A3pos IN	D3pos IN
PIN6	GND	GND	GND	GND	GND	GND	GND
PIN7		A5neg IN		A5neg OUT	A5neg OUT	D5neg OUT	
PIN8		A5pos IN		A5pos OUT	A5pos OUT	D5pos OUT	
PIN9	GND	GND	GND	GND	GND	GND	GND
PIN10		A7neg IN		A7neg OUT	A7neg OUT	D7neg OUT	
PIN11		A7pos IN		A7pos OUT	A7pos OUT	D7pos OUT	
PIN12	GND	GND	GND	GND	GND	GND	GND
PIN13							
PIN14	GND	GND	GND	GND	GND	GND	GND
PIN15	A2neg IN	A2neg IN	A2neg OUT	A2neg OUT	A2neg IN	A2neg IN	D2neg IN
PIN16	A2pos IN	A2pos IN	A2pos OUT	A2pos OUT	A2pos IN	A2pos IN	D2pos IN
PIN17	GND	GND	GND	GND	GND	GND	GND
PIN18	A4neg IN	A4neg IN	A4neg OUT	A4neg OUT	A4neg IN	A4neg IN	D4neg IN
PIN19	A4pos IN	A4pos IN	A4pos OUT	A4pos OUT	A4pos IN	A4pos IN	D4pos IN
PIN20	GND	GND	GND	GND	GND	GND	GND
PIN21		A6neg IN		A6neg OUT	A6neg OUT	D6neg OUT	
PIN22		A6pos IN		A6pos OUT	A6pos OUT	D6pos OUT	
PIN23	GND	GND	GND	GND	GND	GND	GND
PIN24		A8neg IN		A8neg OUT	A8neg OUT	D8neg OUT	
PIN25		A8pos IN		A8pos OUT	A8pos OUT	D8pos OUT	
RJ45							
PIN1	GND	GND	GND	GND	GND	GND	GND
PIN2	GPI/O1	GPI/O1	GPI/O1	GPI/O1	GPI/O1	GPI/O1	GPI/O1
PIN3	GPI/O2	GPI/O2	GPI/O2	GPI/O2	GPI/O2	GPI/O2	GPI/O2
PIN4	GPI/O3	GPI/O3	GPI/O3	GPI/O3	GPI/O3	GPI/O3	GPI/O3
PIN5	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)
PIN6	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)
PIN7	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)
PIN8	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)

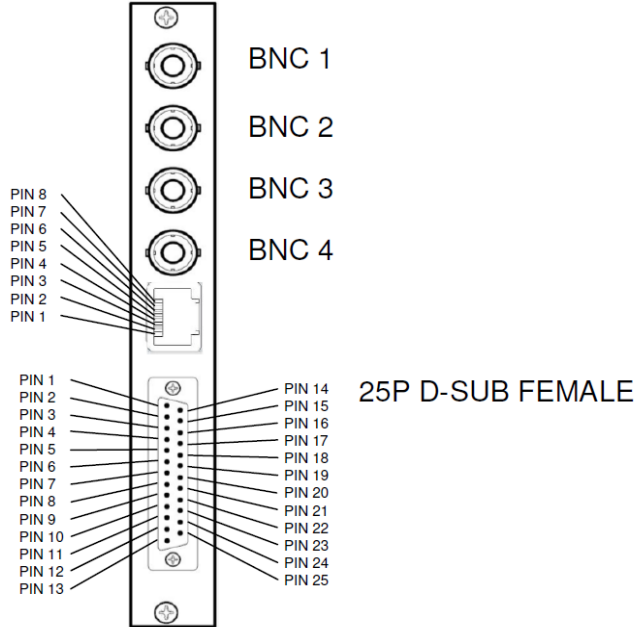
3.18. BPH18D (2/3)



	G/HEB840 G/HEB950	G/HEB880 G/HEB990	G/HDB800 G/HDB900	G/HDB840 G/HDB950	G/HDB880 G/HDB990	G/HRB950 G/HRF950	G/HRB990 G/HRF990
BNC 1	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A
BNC 2	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B
BNC 3	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A
BNC 4	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B
25P D-SUB FEMALE							
PIN 1	D1neg IN	D1neg IN	D1neg OUT	D1neg OUT	D1neg OUT	D1neg IN	D1neg IN
PIN 2	D1pos IN	D1pos IN	D1pos OUT	D1pos OUT	D1pos OUT	D1pos IN	D1pos IN
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	D3neg IN	D3neg IN	D3neg OUT	D3neg OUT	D3neg OUT	D3neg IN	D3neg IN
PIN 5	D3pos IN	D3pos IN	D3pos OUT	D3pos OUT	D3pos OUT	D3pos IN	D3pos IN
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7	A1neg IN	D5neg IN		A1neg OUT	D5neg OUT	A5neg OUT	D5neg OUT
PIN 8	A1pos IN	D5pos IN		A1pos OUT	D5pos OUT	A5pos OUT	D5pos OUT
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10	A3neg IN	D7neg IN		A3neg OUT	D7neg OUT	A7neg OUT	D7neg OUT
PIN 11	A3pos IN	D7pos IN		A3pos OUT	D7pos OUT	A7pos OUT	D7pos OUT
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13							
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15	D2neg IN	D2neg IN	D2neg OUT	D2neg OUT	D2neg OUT	D2neg IN	D2neg IN
PIN 16	D2pos IN	D2pos IN	D2pos OUT	D2pos OUT	D2pos OUT	D2pos IN	D2pos IN
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	D4neg IN	D4neg IN	D4neg OUT	D4neg OUT	D4neg OUT	D4neg IN	D4neg IN
PIN 19	D4pos IN	D4pos IN	D4pos OUT	D4pos OUT	D4pos OUT	D4pos IN	D4pos IN
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21	A2neg IN	D6neg IN		A2neg OUT	D6neg OUT	A6neg OUT	D6neg OUT
PIN 22	A2pos IN	D6pos IN		A2pos OUT	D6pos OUT	A6pos OUT	D6pos OUT
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24	A4neg IN	D8neg IN		A4neg OUT	D8neg OUT	A8neg OUT	D8neg OUT
PIN 25	A4pos IN	D8pos IN		A4pos OUT	D8pos OUT	A8pos OUT	D8pos OUT
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1
PIN 3	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2
PIN 4	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3
PIN 5	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)
PIN 6	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)
PIN 7	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)
PIN 8	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)

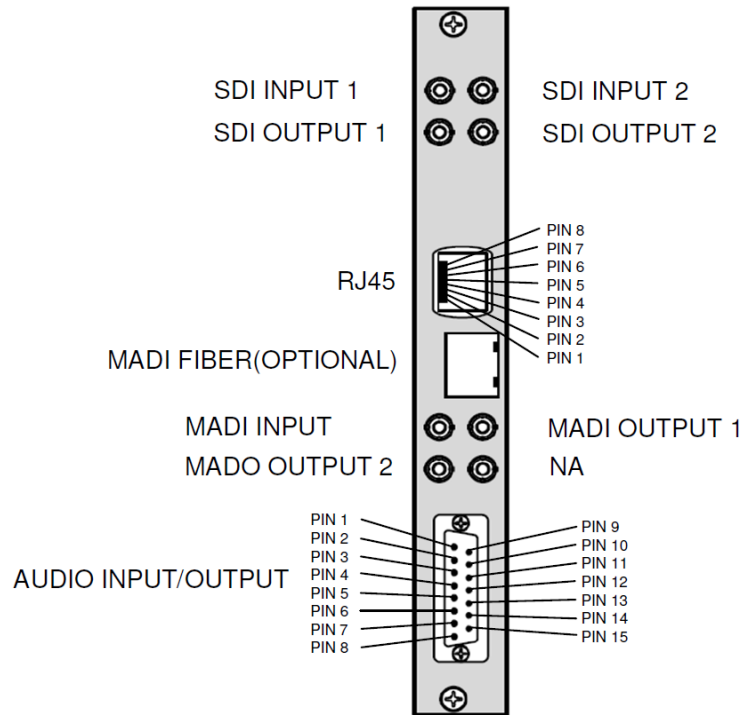


3.19. BPH18D (3/3)



	G/HAF500 G/HRF500	G/HAF900 G/HRF900	G/HRB100 G/HEP100/130 G/HPD100/130 G/HED100/130 G/HJA420/440 G/HJA840/880	GAW010/100/110/300 HAW010/100/110/300 SAW010/100/110/300	G/HRF050 G/HRF090	G/HEE200 G/HEE230
BNC1	SD/HD/3GSDIINA	SD/HD/3GSDIINA	SD/HD/3GSDIINA	SD/HD/3GSDIINA	SD/HD/3GSDIINA	SD/HD/3GSDIINA
BNC2	SD/HD/3GSDIINB	SD/HD/3GSDIINB	SD/HD/3GSDIINB	SD/HD/3GSDIINB	SD/HD/3GSDIINB	SD/HD/3GSDIINB
BNC3	SD/HD/3GSDIOUTA	SD/HD/3GSDIOUTA	SD/HD/3GSDIOUTA	SD/HD/3GSDIOUTA	SD/HD/3GSDIOUTA	SD/HD/3GSDIOUTA
BNC4	SD/HD/3GSDIOUTB	SD/HD/3GSDIOUTB	SD/HD/3GSDIOUTB	SD/HD/3GSDIOUTB	SD/HD/3GSDIOUTB	SD/HD/3GSDIOUTB
25P D-SUB FEMALE						
PIN1	A1negIN	D1negIN				
PIN2	A1posIN	D1posIN				
PIN3	GND	GND	GND	GND	GND	GND
PIN4	A3negIN	D3negIN				
PIN5	A3posIN	D3posIN				
PIN6	GND	GND	GND	GND	GND	GND
PIN7					A5negOUT	
PIN8					A5posOUT	
PIN9	GND	GND	GND	GND	GND	GND
PIN10					A7negOUT	
PIN11					A7posOUT	
PIN12	GND	GND	GND	GND	GND	GND
PIN13						
PIN14	GND	GND	GND	GND	GND	GND
PIN15	A2negIN	D2negIN				
PIN16	A2posIN	D2posIN				
PIN17	GND	GND	GND	GND	GND	GND
PIN18	A4negIN	D4negIN				
PIN19	A4posIN	D4posIN				
PIN20	GND	GND	GND	GND	GND	GND
PIN21					A8negOUT	
PIN22					A8posOUT	
PIN23	GND	GND	GND	GND	GND	GND
PIN24					A8negOUT	
PIN25					A8posOUT	
RJ45						
PIN1	GND	GND	GND	GND	GND	GND
PIN2	GP1/O1	GP1/O1	GP1/O1	GP01	GP1/O1	GP1/O1
PIN3	GP1/O2	GP1/O2	GP1/O2	GP02	GP1/O2	GP1/O2
PIN4	GP1/O3	GP1/O3	GP1/O3		GP1/O3	GP1/O3
PIN5	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)		GP1/O4/ TXA(+)	GP1/O4/ TXA(+)
PIN6	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)		GP1/O5/ TXB(-)	GP1/O5/ TXB(-)
PIN7	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	LTCIN(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)
PIN8	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	LTCIN(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)

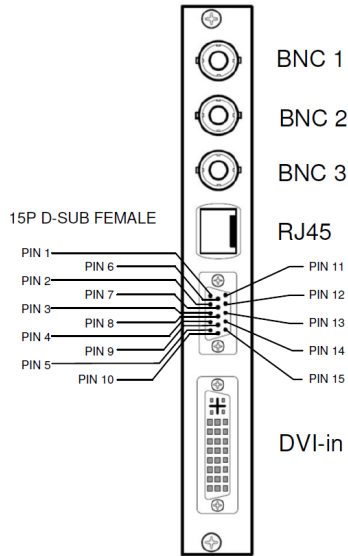
3.20. BPH18M



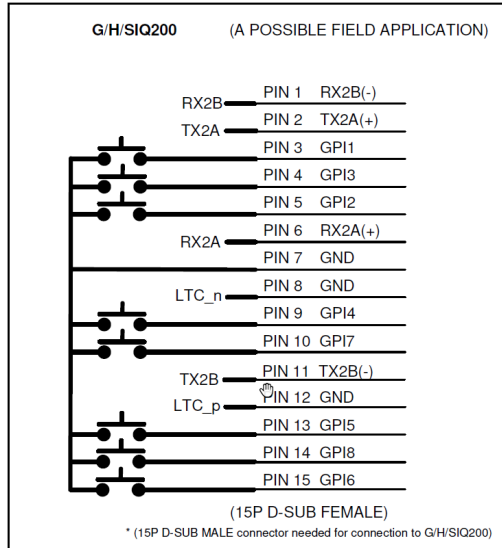
	GMA 100 HMA 100	GMA 110 HMA 110	GMA 120 HMA 120	GMA 130 HMA 130	GMA 140 HMA 140
15P D-SUB FEMALE					
PIN 1		A1negIN	A1negOUT	D1negIN	D1negOUT
PIN 2		A1posIN	A1posOUT	D1posIN	D1posOUT
PIN 3		A2negIN	A2negOUT	D2negIN	D2negOUT
PIN 4		A2posIN	A2posOUT	D2posIN	D2posOUT
PIN 5		A3negIN	A3negOUT	D3negIN	D3negOUT
PIN 6		A3posIN	A3posOUT	D3posIN	D3posOUT
PIN 7		A4negIN	A4negOUT	D4negIN	D4negOUT
PIN 8		A4posIN	A4posOUT	D4posIN	D4posOUT
PIN 9	GND	GND	GND	GND	GND
PIN 10	GND	GND	GND	GND	GND
PIN 11	GND	GND	GND	GND	GND
PIN 12	GND	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND	GND
PIN 15	GND	GND	GND	GND	GND
RJ 45					
PIN 1	GND	GND	GND	GND	GND
PIN 2	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1
PIN 3	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2
PIN 4	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3
PIN 5	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)
PIN 6	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)
PIN 7	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)
PIN 8	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)



3.21. BPH20

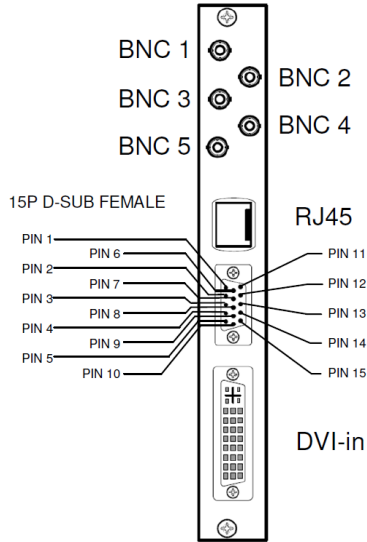


Connection Diagram

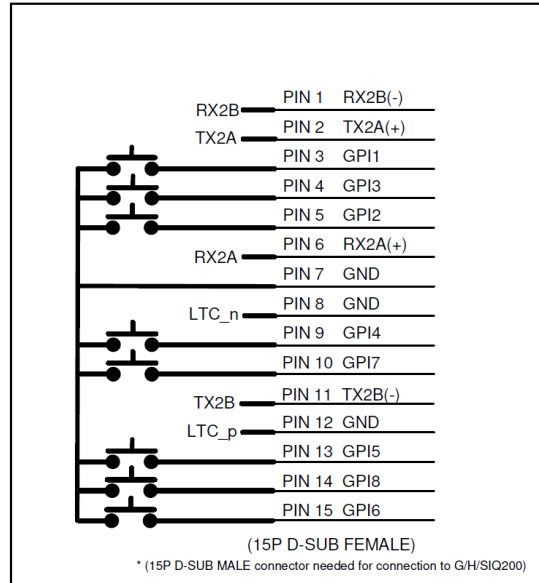


G/H/SIQ200	
BNC 1	SD/HD/3GSDI IN 1
BNC 2	SD/HD/3GSDI IN 2
BNC 3	SD/HD/3GSDI IN 3
15P HD-SUB FEMALE	
PIN 1	RX2B(-)
PIN 2	TX2A(+)
PIN 3	GPI1
PIN 4	GPI3
PIN 5	GPI2
PIN 6	RX2A(+)
PIN 7	GND
PIN 8	LTC_n
PIN 9	GPI4
PIN 10	GPI7
PIN 11	TX2B(-)
PIN 12	LTC_p
PIN 13	GPI5
PIN 14	GPI8
PIN 15	GPI6

3.22. BPH21



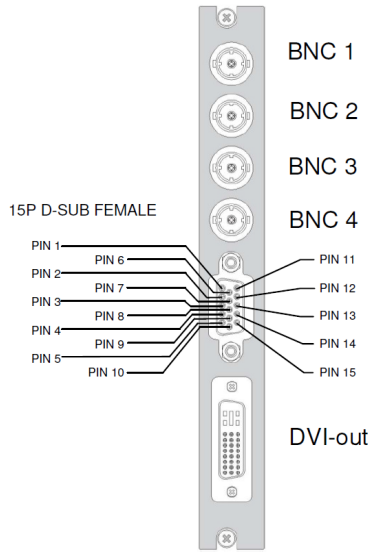
Connection Diagram



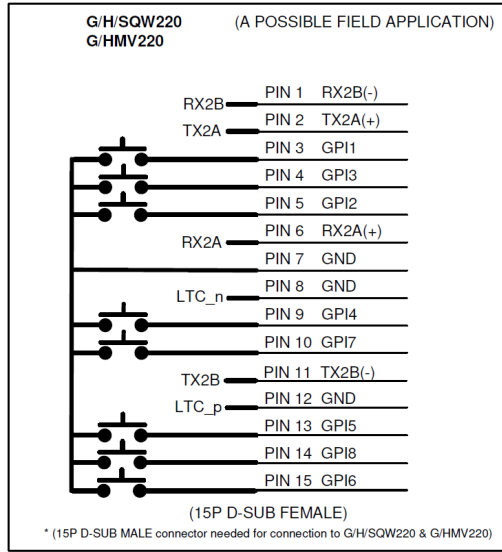
G/H/SIQ200	
BNC 1	SD/HD/3GSDI IN 1
BNC 2	SD/HD/3GSDI IN 2
BNC 3	SD/HD/3GSDI IN 3
BNC 4	SD/HD/3GSDI OUT 1
BNC 5	SD/HD/3GSDI OUT 2
15P HD-SUB FEMALE	
PIN 1	RX2B(-)
PIN 2	TX2A(+)
PIN 3	GPI1
PIN 4	GPI3
PIN 5	GPI2
PIN 6	RX2A(+)
PIN 7	GND
PIN 8	LTC_n
PIN 9	GPI4
PIN 10	GPI7
PIN 11	TX2B(-)
PIN 12	LTC_p
PIN 13	GPI5
PIN 14	GPI8
PIN 15	GPI6



3.23. BPH23

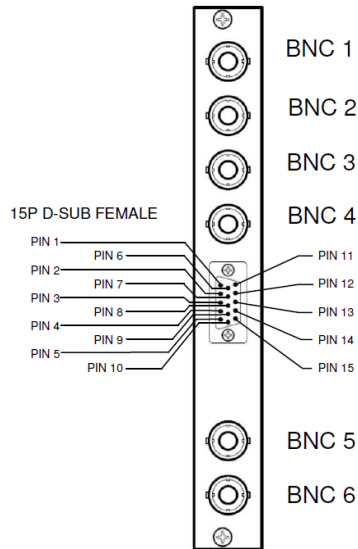


Connection Diagram

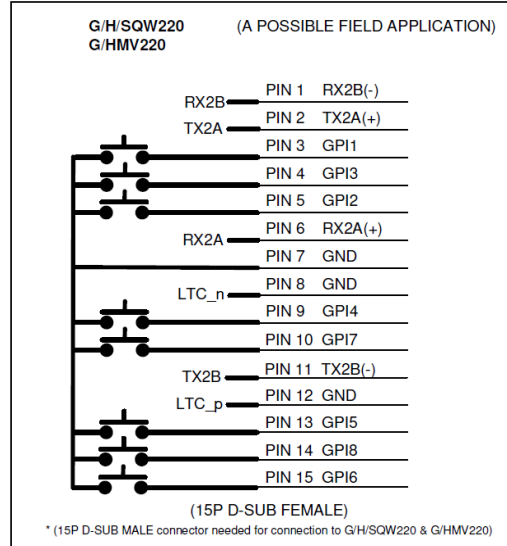


	G/H/SQW220	G/HMV220	G/HMW100	G/H/SQW200	G/HMV200
BNC 1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN1
BNC 2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN2
BNC 3	SD/HD/3GSDIIN3	SD/HD/3GSDIIN3		SD/HD/3GSDIIN3	SD/HD/3GSDIIN3
BNC 4	SD/HD/3GSDIIN4	SD/HD/3GSDIIN4		SD/HD/3GSDIIN4	SD/HD/3GSDIIN4
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI1	GPI1	GPI1	GPI1	GPI1
PIN 4	GPI3	GPI3		GPI3	GPI3
PIN 5	GPI2	GPI2	GPI2	GPI2	GPI2
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND	GND	GND
PIN 8	LTC_n	LTC_n	LTC(-)		
PIN 9	GPI4	GPI4		GPI4	GPI4
PIN 10	GPI7	GPI7	GPI7	GPI7	GPI7
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	LTC_p	LTC_p	LTC(+)		
PIN 13	GPI5	GPI5	GPI5	GPI5	GPI5
PIN 14	GPI8	GPI8	GPI8	GPI8	GPI8
PIN 15	GPI6	GPI6	GPI6	GPI6	GPI6

3.24. BPH24

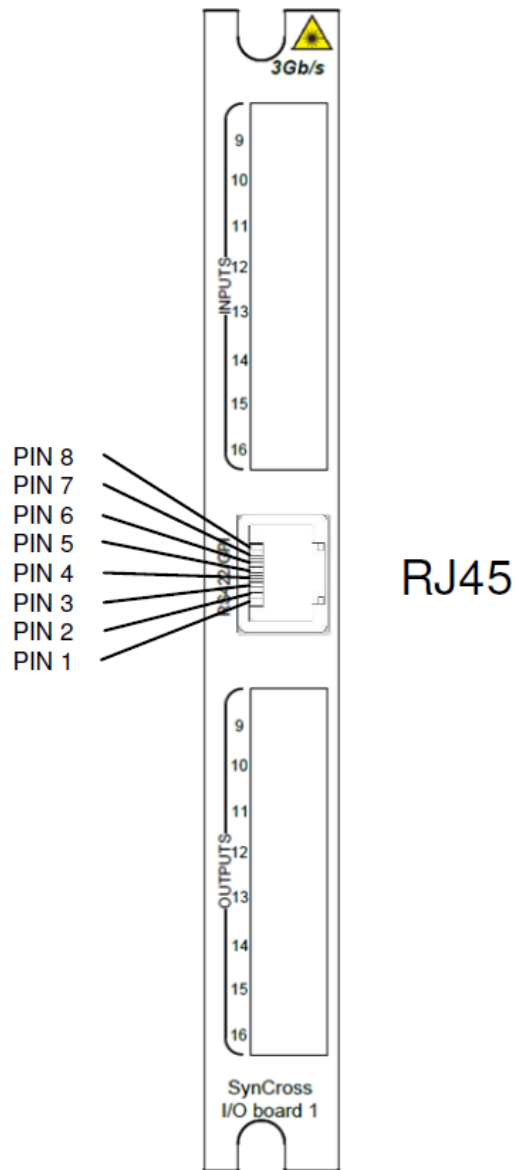


Connection Diagram



	G/H/SQW220	G/HMV220	G/HMV200		
BNC 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1	SD/HD/3GSDI IN 1
BNC 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2	SD/HD/3GSDI IN 2
BNC 3	SD/HD/3GSDI IN 3	SD/HD/3GSDI IN 3		SD/HD/3GSDI IN 3	SD/HD/3GSDI IN 3
BNC 4	SD/HD/3GSDI IN 4	SD/HD/3GSDI IN 4		SD/HD/3GSDI IN 4	SD/HD/3GSDI IN 4
BNC 5	SD/HD/3GSDI OUT 1	SD/HD/3GSDI OUT 1	SD/HD/3GSDI OUT 1	SD/HD/3GSDI OUT 1	SD/HD/3GSDI OUT 1
BNC 6	SD/HD/3GSDI OUT 2	SD/HD/3GSDI OUT 2	SD/HD/3GSDI OUT 2	SD/HD/3GSDI OUT 2	SD/HD/3GSDI OUT 2
15P D-SUB FEMALE					
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI1	GPI1	GPI1	GPI1	GPI1
PIN 4	GPI3	GPI3		GPI3	GPI3
PIN 5	GPI2	GPI2	GPI2	GPI2	GPI2
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND	GND	GND
PIN 8	LTC_n	LTC_n	LTC(-)		
PIN 9	GPI4	GPI4		GPI4	GPI4
PIN 10	GPI7	GPI7	GPI7	GPI7	GPI7
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	LTC_p	LTC_p	LTC(+)		
PIN 13	GPI5	GPI5		GPI5	GPI5
PIN 14	GPI8	GPI8	GPI8	GPI8	GPI8
PIN 15	GPI6	GPI6	GPI6	GPI6	GPI6

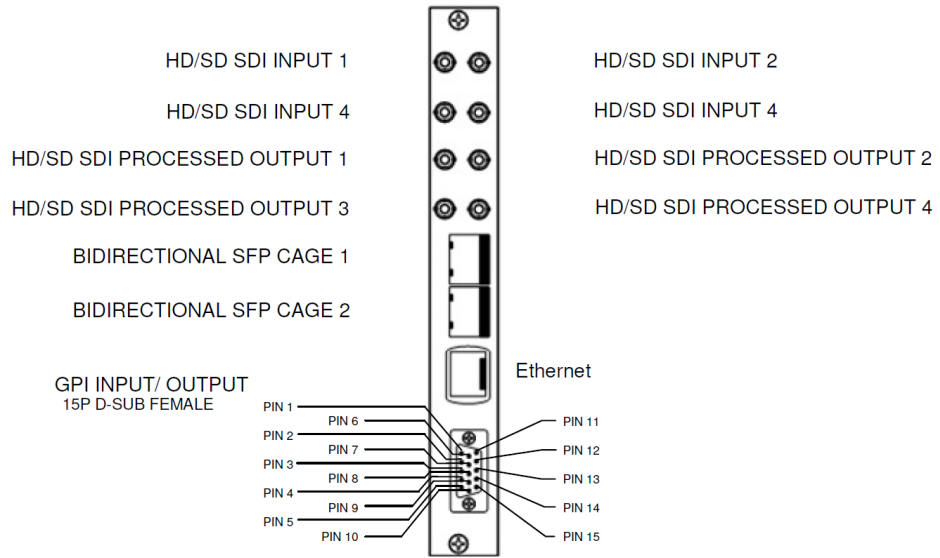
3.25. BPH26



SYROSS	
RJ45	
PIN 1	GP17/ RXB
PIN 2	GP16/ RXA
PIN 3	GP15/ TXB
PIN 4	GP14/ TXA
PIN 5	GP1/ O3
PIN 6	GP1/ O2
PIN 7	GP1/ O1
PIN 8	GND

3.26. BPH32

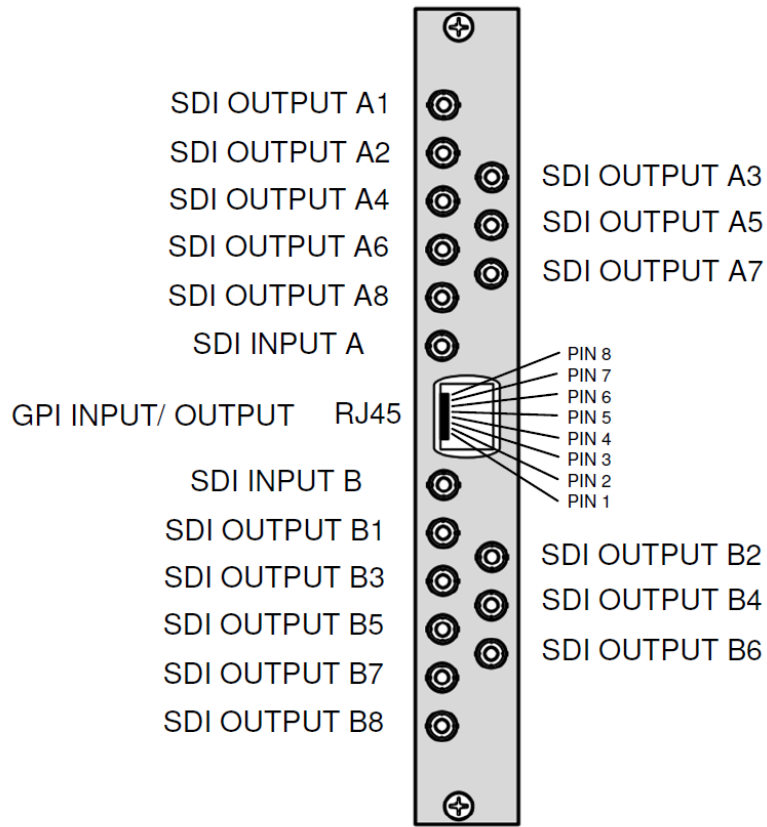
NEW !



	GXG400/410	GMD100	U4T100/140	GXG500/510	UXU500/510
RJ45					
PIN 1	Metadata RX B	Metadata RX B	Metadata RX B	Metadata RX B	Metadata RX B
PIN 2	Metadata TX A	Metadata TX A	Metadata TX A	Metadata TX A	Metadata TX A
PIN 3	GPVO 0	GPVO 0	GPI 1	GPI 1	GPI 1
PIN 4	GPVO 1	GPVO 1	GPI 3	GPI 3	GPI 3
PIN 5	GPVO 2	GPVO 2	GPI 2	GPI 2	GPI 2
PIN 6	Metadata RX A	Metadata RX A	Metadata RX A	Metadata RX A	Metadata RX A
PIN 7	GND	GND	GND	GND	GND
PIN 8	LTC n	LTC n	LTC n	LTC n	LTC n
PIN 9	GPVO 3	GPVO 3	GPI 4	GPI 4	GPI 4
PIN 10	GPVO 6	GPVO 6	GPI 7	GPI 7	GPI 7
PIN 11	Metadata TX B	Metadata TX B	Metadata TX B	Metadata TX B	Metadata TX B
PIN 12	LTC p	LTC p	LTC p	LTC p	LTC p
PIN 13	GPVO 4	GPVO 4	GPI 5	GPI 5	GPI 5
PIN 14	GPVO 7	GPVO 7	GPI 8	GPI 8	GPI 8
PIN 15	GPVO 5	GPVO 5	GP 6	GP 6	GP 6

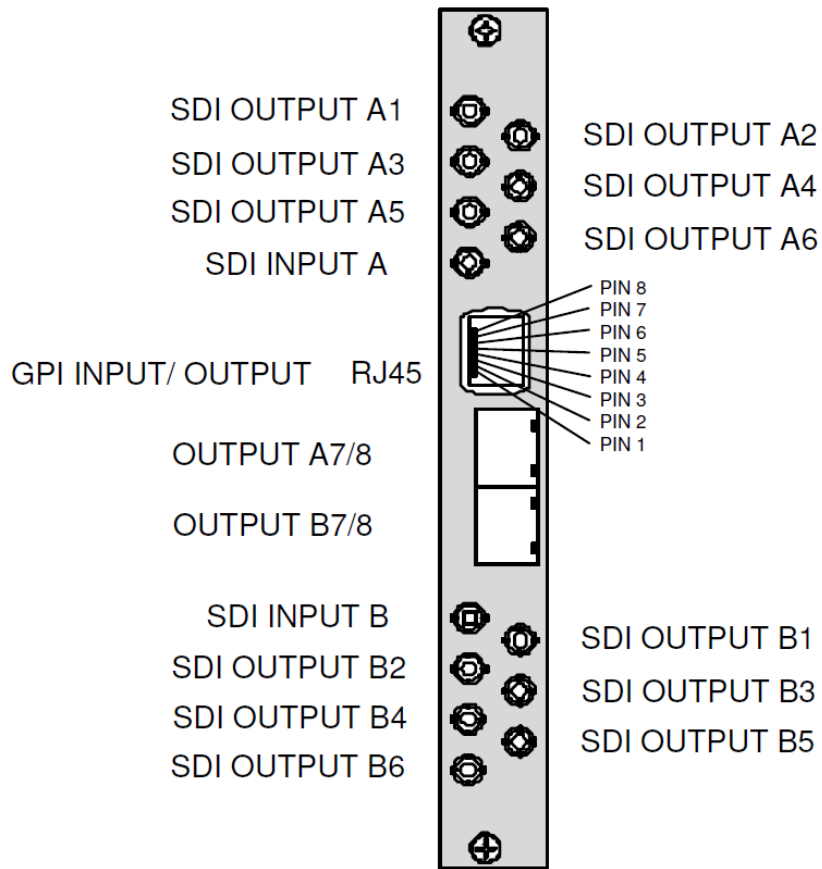


3.27. BPH37



GDR216	
RJ45	
PIN1	GPIO1
PIN2	GPIO2
PIN3	GPIO3
PIN4	GND
PIN5	GPIO4
PIN6	GPIO5
PIN7	GPIO6
PIN8	GPIO7

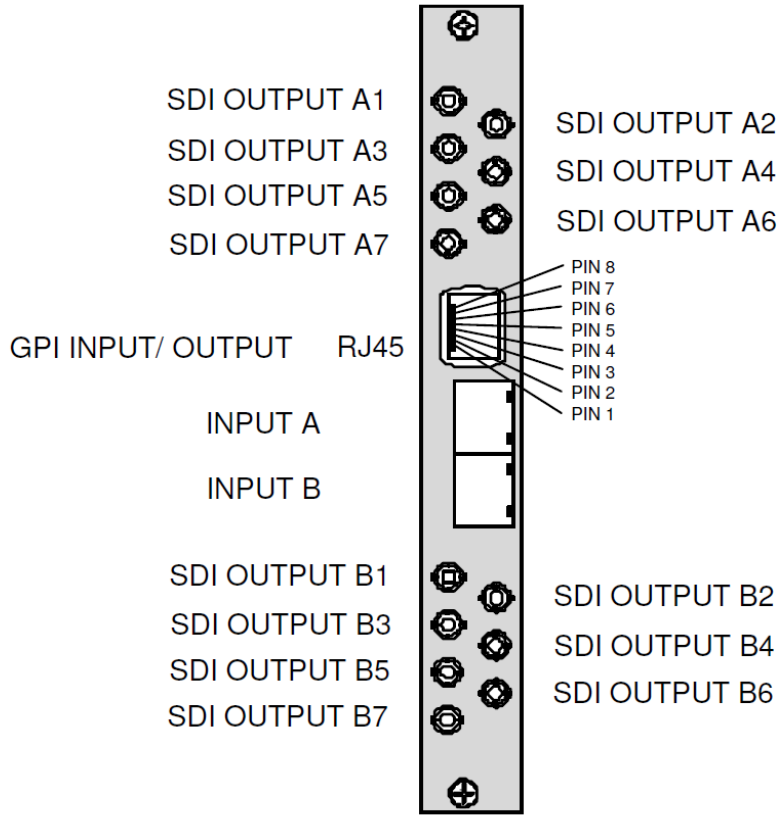
3.28. BPH38



GDR216	
RJ45	
PIN 1	GPI01
PIN 2	GPI02
PIN 3	GPI03
PIN 4	GND
PIN 5	GPI04
PIN 6	GPI05
PIN 7	GPI06
PIN 8	GPI07

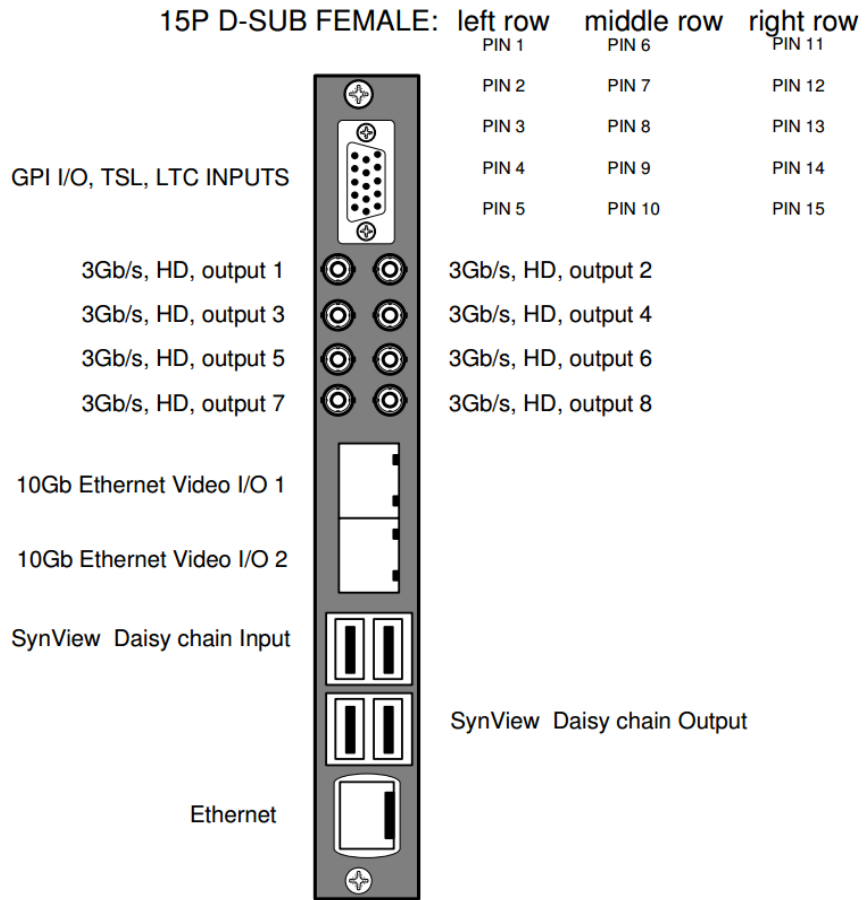


3.29. BPH39



GDR216	
RJ45	
PIN 1	GPI O1
PIN 2	GPI O2
PIN 3	GPI O3
PIN 4	GND
PIN 5	GPI O4
PIN 6	GPI O5
PIN 7	GPI O6
PIN 8	GPI O7

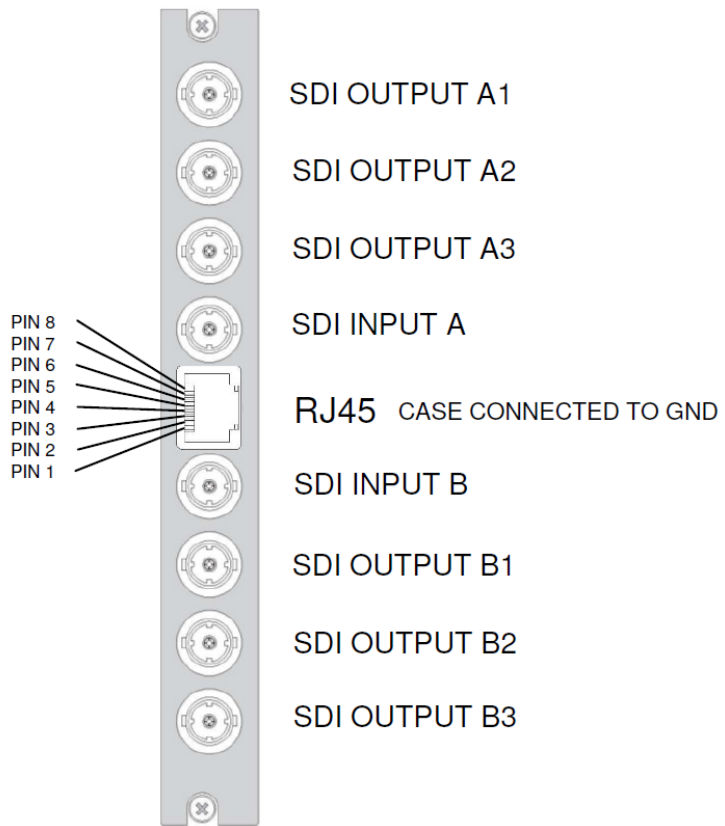
3.30. BPH41



15P HD-SUB FEMALE		MNU100	MNG100
PIN 1	RXB		RXB
PIN 2	TXA		TXA
PIN 3	GPI/O 1		GPI/O 1
PIN 4	GPI/O 3		GPI/O 3
PIN 5	GPI/O 2		GPI/O 2
PIN 6	RXA		RXA
PIN 7	GND		GND
PIN 8	TC 1		TC 1
PIN 9	GPI/O 4		GPI/O 4
PIN 10	GPI/O 7		GPI/O 7
PIN 11	TXB		TXB
PIN 12	TC 2		TC 2
PIN 13	GPI/O 5		GPI/O 5
PIN 14	GPI/O 8		GPI/O 8
PIN 15	GPI/O 6		GPI/O 6

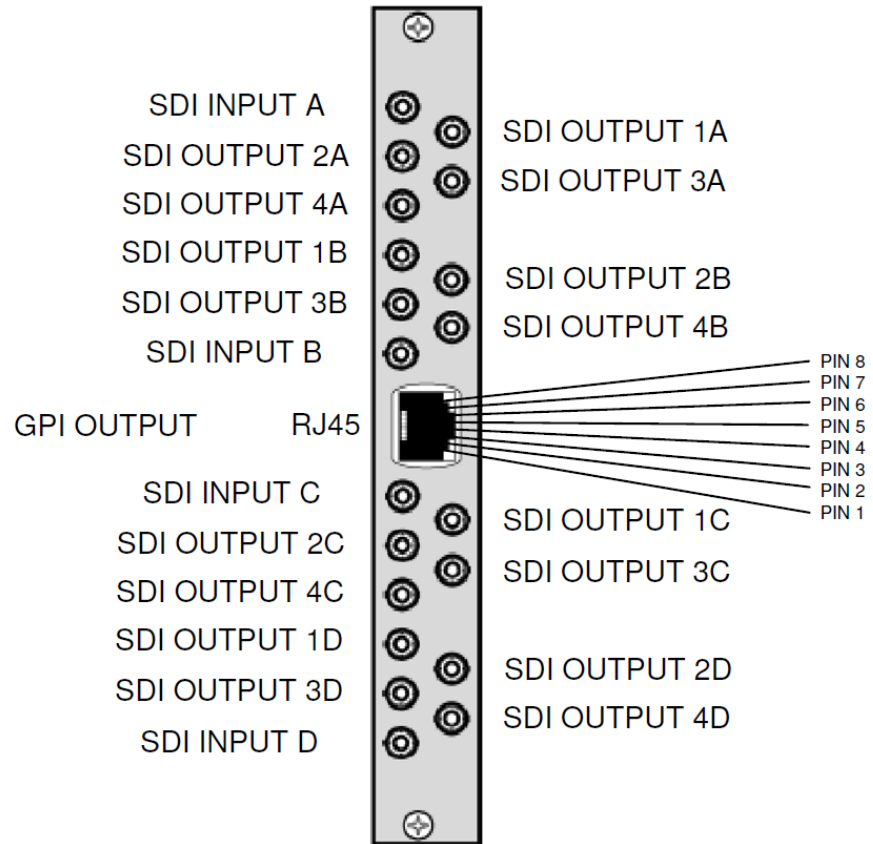


3.31. BPH42



GDR216	
RJ45	
PIN 1	GPIO1
PIN 2	GPIO2
PIN 3	GPIO3
PIN 4	GND
PIN 5	GPIO4
PIN 6	GPIO5
PIN 7	GPIO6
PIN 8	GPIO7

3.32. BPH43

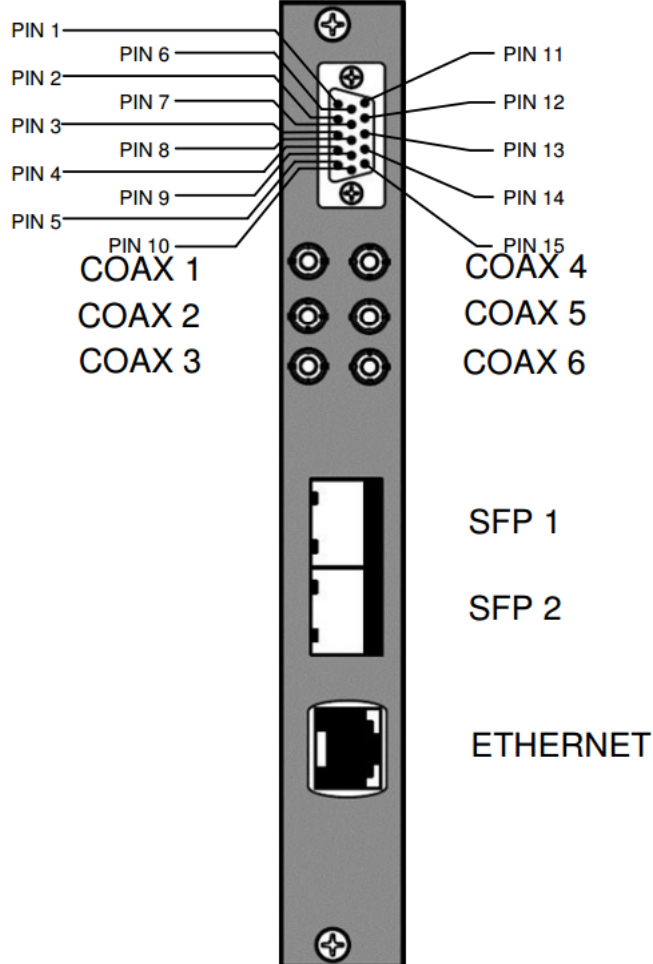


GDR416	
RJ45	
PIN 1	GPO0 (INPUT A)
PIN 2	GPO1 (INPUT B)
PIN 3	GPO2 (INPUT C)
PIN 4	GND
PIN 5	GPO3 (INPUT D)
PIN 6	
PIN 7	
PIN 8	



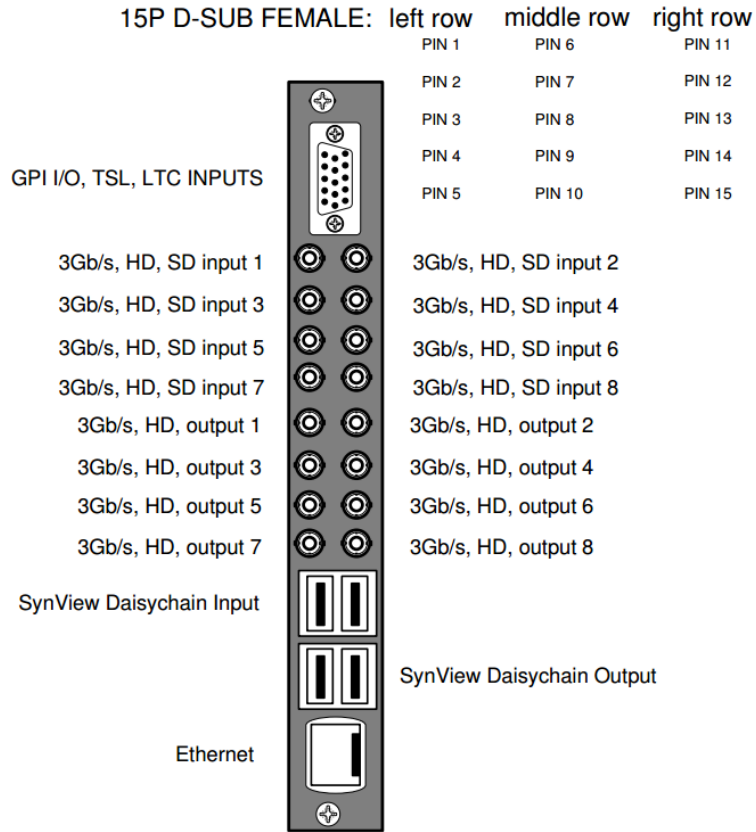
3.33. BPH45

15P D-SUB FEMALE



	GL1100	TSX20	TSX30
COAX 1	SDI IN 1	ASI/DVB IN 1	ASI/DVB IN 1
COAX 2	NC	ASI/DVB IN 2	ASI/DVB IN 2
COAX 3	SDI OUT 3 (CLEAN)		ASI/DVB IN 3
COAX 4	SDI OUT 1	ASI/DVB OUT 1	ASI/DVB OUT 1
COAX 5	SDI OUT 2	ASI/DVB OUT 2	ASI/DVB OUT 2
COAX 6	SDI OUT 4 (PREVIEW)	ASI/DVB OUT 3	ASI/DVB OUT 3
15P HD-SUB FEMALE			
PIN 1	RX2B		
PIN 2	TX2A		
PIN 3	GPIO 1	GPO 0	GPO 0
PIN 4	GPIO 3	GPO 2	GPO 2
PIN 5	GPIO 2	GPO 1	GPO 1
PIN 6	RX2A		
PIN 7	GND	GND	GND
PIN 8	LTC -		
PIN 9	GPIO 4	GPO 3	GPO 3
PIN 10	GPIO 7	GPI 6	GPI 6
PIN 11	TX2B		
PIN 12	LTC +		
PIN 13	GPIO 5	GPO 4	GPO 4
PIN 14	GPIO 8	GPI 7	GPI 7
PIN 15	GPIO 6	GPO 5	GPO 5

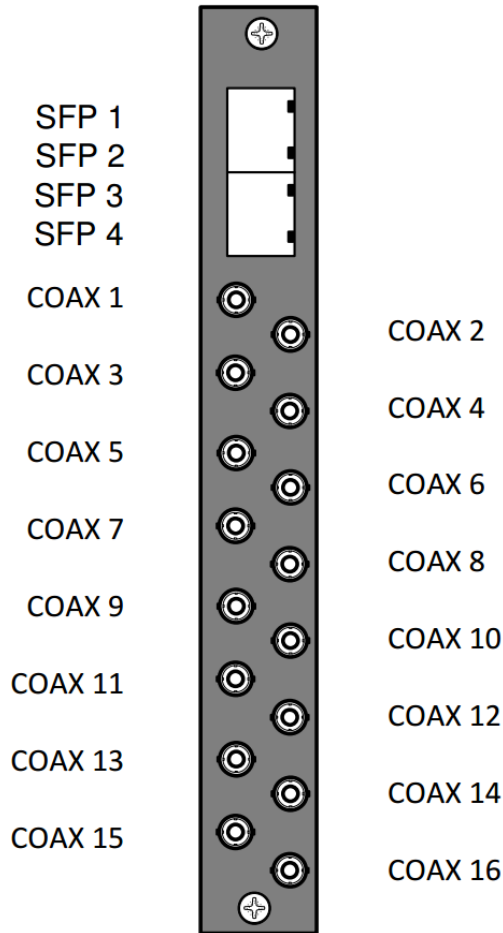
3.34. BPH47



15P HD-SUB FEMALE	MGU	MNU	MGG	MNG
PIN 1	RXB	RXB	RXB	RXB
PIN 2	TXA	TXA	TXA	TXA
PIN 3	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1
PIN 4	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3
PIN 5	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2
PIN 6	RXA	RXA	RXA	RXA
PIN 7	GND	GND	GND	GND
PIN 8	TC 1	TC 1	TC 1	TC 1
PIN 9	GPI/O 4	GPI/O 4	GPI/O 4	GPI/O 4
PIN 10	GPI/O 7	GPI/O 7	GPI/O 7	GPI/O 7
PIN 11	TXB	TXB	TXB	TXB
PIN 12	TC 2	TC 2	TC 2	TC 2
PIN 13	GPI/O 5	GPI/O 5	GPI/O 5	GPI/O 5
PIN 14	GPI/O 8	GPI/O 8	GPI/O 8	GPI/O 8
PIN 15	GPI/O 6	GPI/O 6	GPI/O 6	GPI/O 6

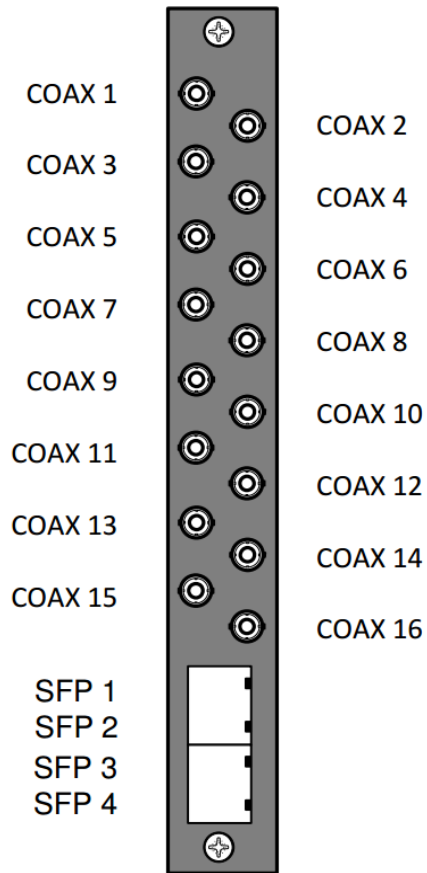


3.35. BPH48R



GDR416	
SFP1	SDI INPUT A
SFP2	SDI INPUT B
SFP3	SDI INPUT C
SFP4	SDI INPUT D
COAX 1	SDI OUTPUT A1
COAX 2	SDI OUTPUT A2
COAX 3	SDI OUTPUT A3
COAX 4	SDI OUTPUT A4
COAX 5	SDI OUTPUT B1
COAX 6	SDI OUTPUT B2
COAX 7	SDI OUTPUT B3
COAX 8	SDI OUTPUT B4
COAX 9	SDI OUTPUT C1
COAX 10	SDI OUTPUT C2
COAX 11	SDI OUTPUT C3
COAX 12	SDI OUTPUT C4
COAX 13	SDI OUTPUT D1
COAX 14	SDI OUTPUT D2
COAX 15	SDI OUTPUT D3
COAX 16	SDI OUTPUT D4

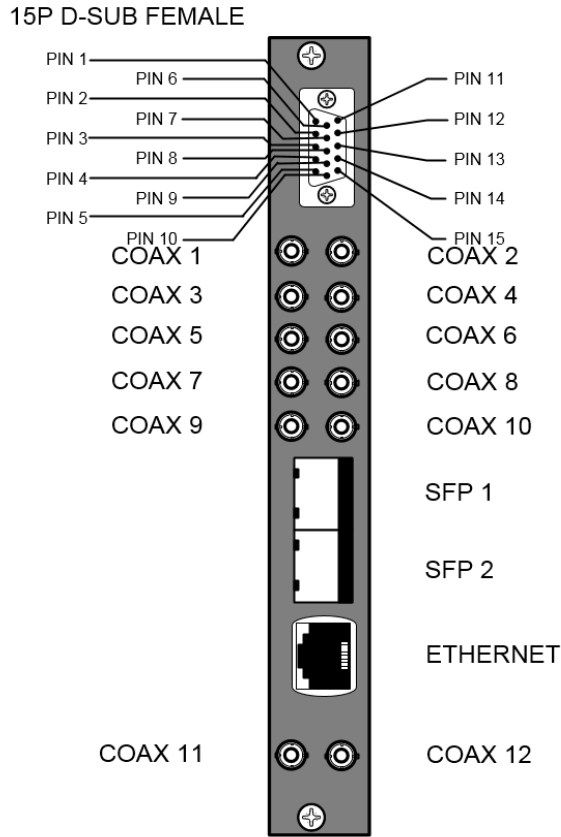
3.36. BPH48T



GDR416	
COAX 1	SDI INPUT A1
COAX 2	SDI OUTPUT A1
COAX 3	SDI OUTPUT A2
COAX 4	SDI OUTPUT A3
COAX 5	SDI INPUT B
COAX 6	SDI OUTPUT B1
COAX 7	SDI OUTPUT B2
COAX 8	SDI OUTPUT B3
COAX 9	SDI INPUT C
COAX 10	SDI OUTPUT C1
COAX 11	SDI OUTPUT C2
COAX 12	SDI OUTPUT C3
COAX 13	SDI INPUT D
COAX 14	SDI OUTPUT D1
COAX 15	SDI OUTPUT D2
COAX 16	SDI OUTPUT D3
SFP1	SDI OUTPUT A4
SFP2	SDI OUTPUT B4
SFP3	SDI OUTPUT C4
SFP4	SDI OUTPUT D4



3.37. BPH50

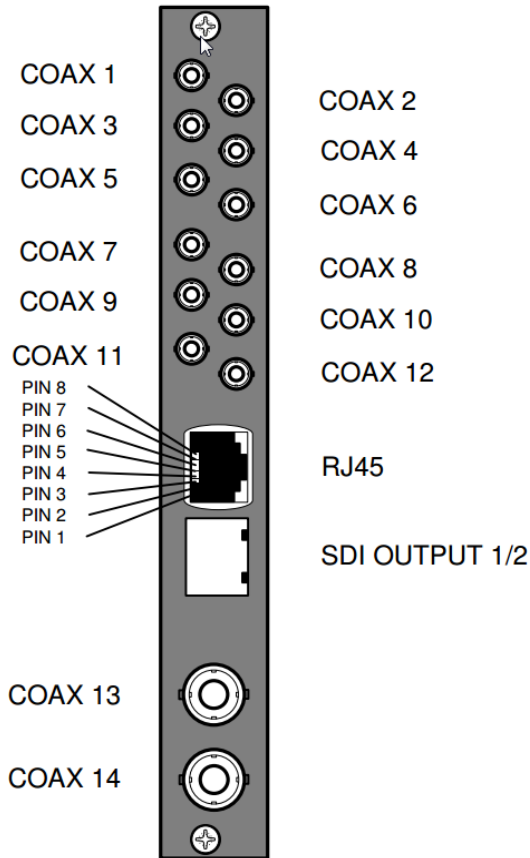


	NGU220	NUG220
COAX 1	3Gb/s, HD.SD SDI I/O 1	3Gb/s, HD.SD SDI I/O 1
COAX 2	3Gb/s, HD.SD SDI I/O 2	3Gb/s, HD.SD SDI I/O 2
COAX 3	3Gb/s, HD.SD SDI I/O 3	3Gb/s, HD.SD SDI I/O 3
COAX 4	3Gb/s, HD.SD SDI I/O 4	3Gb/s, HD.SD SDI I/O 4
COAX 5	3Gb/s, HD.SD SDI I/O 5	3Gb/s, HD.SD SDI I/O 5
COAX 6	3Gb/s, HD.SD SDI I/O 6	3Gb/s, HD.SD SDI I/O 6
COAX 7	3Gb/s, HD.SD SDI I/O 7	3Gb/s, HD.SD SDI I/O 7
COAX 8	3Gb/s, HD.SD SDI I/O 8	3Gb/s, HD.SD SDI I/O 8
COAX 9	3Gb/s, HD.SD SDI I/O 9	3Gb/s, HD.SD SDI I/O 9
COAX 10	3Gb/s, HD.SD SDI I/O 10	3Gb/s, HD.SD SDI I/O 10
COAX 11	3Gb/s, HD.SD SDI I/O 11	3Gb/s, HD.SD SDI I/O 11
COAX 12	3Gb/s, HD.SD SDI I/O 12	3Gb/s, HD.SD SDI I/O 12
15P D-SUB FEMALE		
PIN 1	Metadata RX B	Metadata RX B
PIN 2	Metadata TX A	Metadata TX A
PIN 3	GPI/O 0	GPI/O 0
PIN 4	GPI/O 2	GPI/O 2
PIN 5	GPI/O 1	GPI/O 1
PIN 6	Metadata RX A	Metadata RX A
PIN 7	GND	GND
PIN 8	LTC -	LTC -
PIN 9	GPI/O 3	GPI/O 3
PIN 10	GPI/O 6	GPI/O 6
PIN 11	Metadata TX B	Metadata TX B
PIN 12	LTC +	LTC +
PIN 13	GPI/O 4	GPI/O 4
PIN 14	GPI/O 7	GPI/O 7
PIN 15	GPI/O 5	GPI/O 5



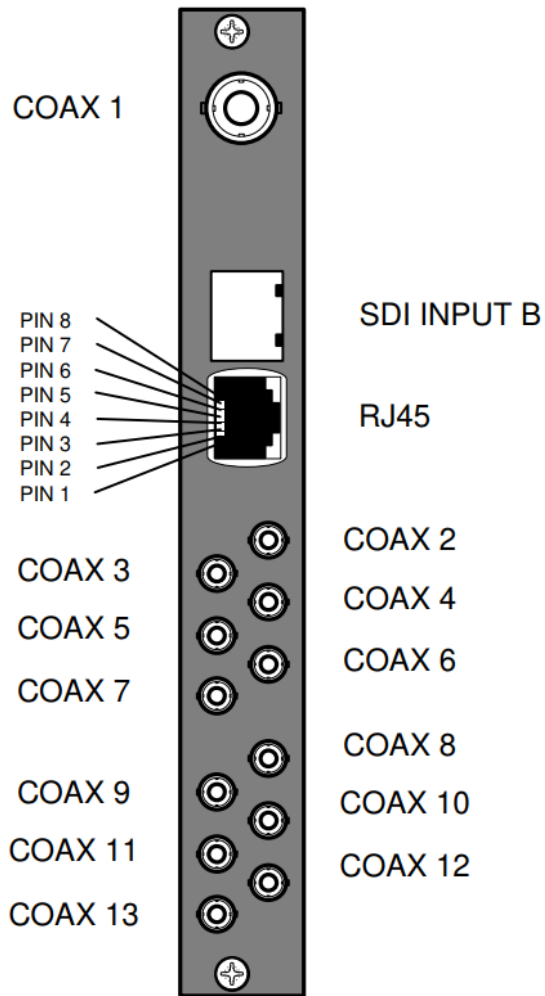
4. UHD I-O Panel Overview

4.1. BPU01



UDR416	
COAX 1	SDI INPUT A (QL1)
COAX 2	SDI OUTPUT A1
COAX 3	SDI OUTPUT A2
COAX 4	SDI OUTPUT B1
COAX 5	SDI OUTPUT B2
COAX 6	SDI INPUT B (QL2)
COAX 7	SDI INPUT C (QL3)
COAX 8	SDI OUTPUT C1
COAX 9	SDI OUTPUT C2
COAX 10	SDI OUTPUT D1
COAX 11	SDI OUTPUT D2
COAX 12	SDI INPUT B (QL4)
COAX 13	12Gb/s SDI OUTPUT3
COAX 14	12Gb/s SDI OUTPUT4
RJ45	
PIN 1	GPO0 (INPUT A)
PIN 2	GPO1 (INPUT B)
PIN 3	GPO2 (INPUT C)
PIN 4	GND
PIN 5	GPO3 (INPUT D)
PIN 6	
PIN 7	
PIN 8	

4.2. BPU02

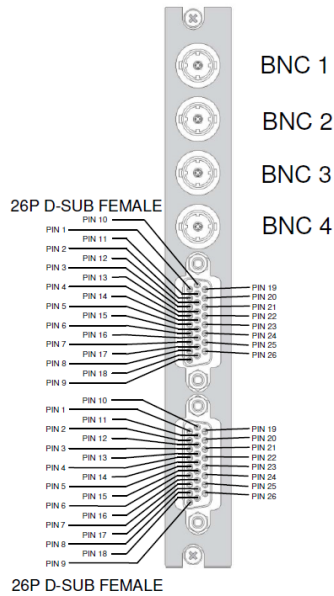


UDR416	
COAX 1	12Gb/s SDI INPUT A
COAX 2	SDI OUTPUT A1 (QL1)
COAX 3	SDI OUTPUT A2 (QL1)
COAX 4	SDI OUTPUT A3 (QL1)
COAX 5	SDI OUTPUT B1 (QL2)
COAX 6	SDI OUTPUT B2 (QL2)
COAX 7	SDI OUTPUT B3 (QL2)
COAX 8	SDI OUTPUT A1 (QL1)
COAX 9	SDI OUTPUT A2 (QL1)
COAX 10	SDI OUTPUT A3 (QL1)
COAX 11	SDI OUTPUT B1 (QL2)
COAX 12	SDI OUTPUT B2 (QL2)
COAX 13	SDI OUTPUT B3 (QL2)
RJ45	
PIN 1	GPO0 (INPUT A)
PIN 2	GPO1 (INPUT B)
PIN 3	GPO2 (INPUT C)
PIN 4	GND
PIN 5	GPO3 (INPUT D)
PIN 6	
PIN 7	
PIN 8	

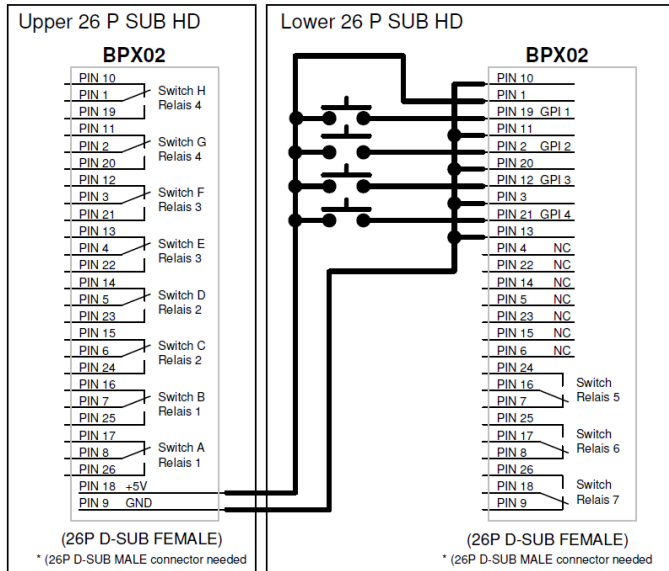


5. Relay I-O Panel Overview

5.1. BPX02



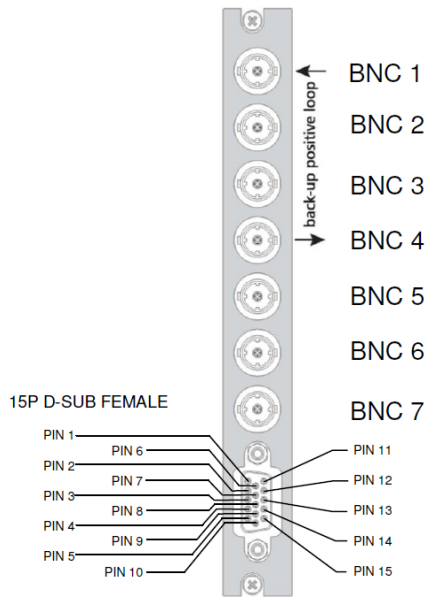
Connection Diagram



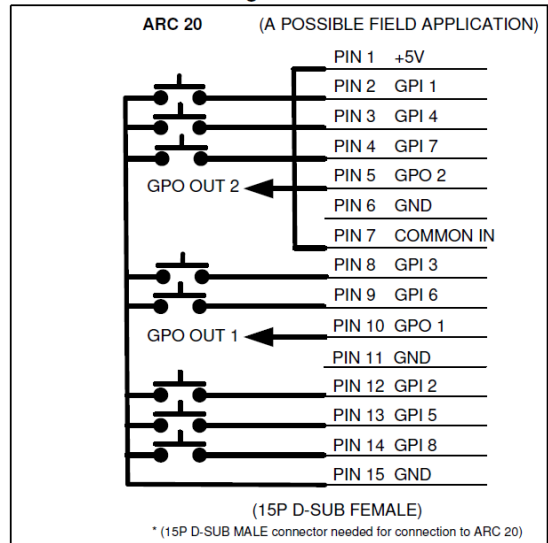
PBS03	
BNC1	CHANNEL 1IN
BNC2	CHANNEL 2IN
BNC3	CHANNEL 2OUT
BNC4	CHANNEL 1OUT
UPPER 26P HD-SUB	
PIN 1	HCC
PIN 2	GCC
PIN 3	FCC
PIN 4	ECC
PIN 5	DCC
PIN 6	CCC
PIN 7	BCC
PIN 8	ACC
PIN 9	GND
PIN 10	HNCC
PIN 11	GNCC
PIN 12	FNCC
PIN 13	ENCC
PIN 14	DNCC
PIN 15	CNCC
PIN 16	BNCC
PIN 17	ANCC
PIN 18	5 Volt pos
PIN 19	HNOC
PIN 20	GNOC
PIN 21	FNOC
PIN 22	ENOC
PIN 23	DNOC
PIN 24	CNOC
PIN 25	BNOC
PIN 26	ANOC
LOWER 26P HD-SUB	
PIN 1	5 Volt pos
PIN 2	GPI 2+
PIN 3	GPI 3-
PIN 4	
PIN 5	
PIN 6	
PIN 7	ACTIVECHNCC
PIN 8	CHANNEL 1NCC
PIN 9	CHANNEL 2NCC
PIN 10	GND
PIN 11	GPI 1-
PIN 12	GPI 3+
PIN 13	GPI 4-
PIN 14	
PIN 15	
PIN 16	ACTIVECHCC
PIN 17	CHANNEL 1CC
PIN 18	CHANNEL 2CC
PIN 19	GPI 1+
PIN 20	GPI 2-
PIN 21	GPI 4+
PIN 22	
PIN 23	
PIN 24	ACTIVECHNOC
PIN 25	CHANNEL 1NOC
PIN 26	CHANNEL 2NOC

CC : center contact
 NCC : normally closed contact
 NOC : normally open contact

5.2. BPX03



Connection Diagram

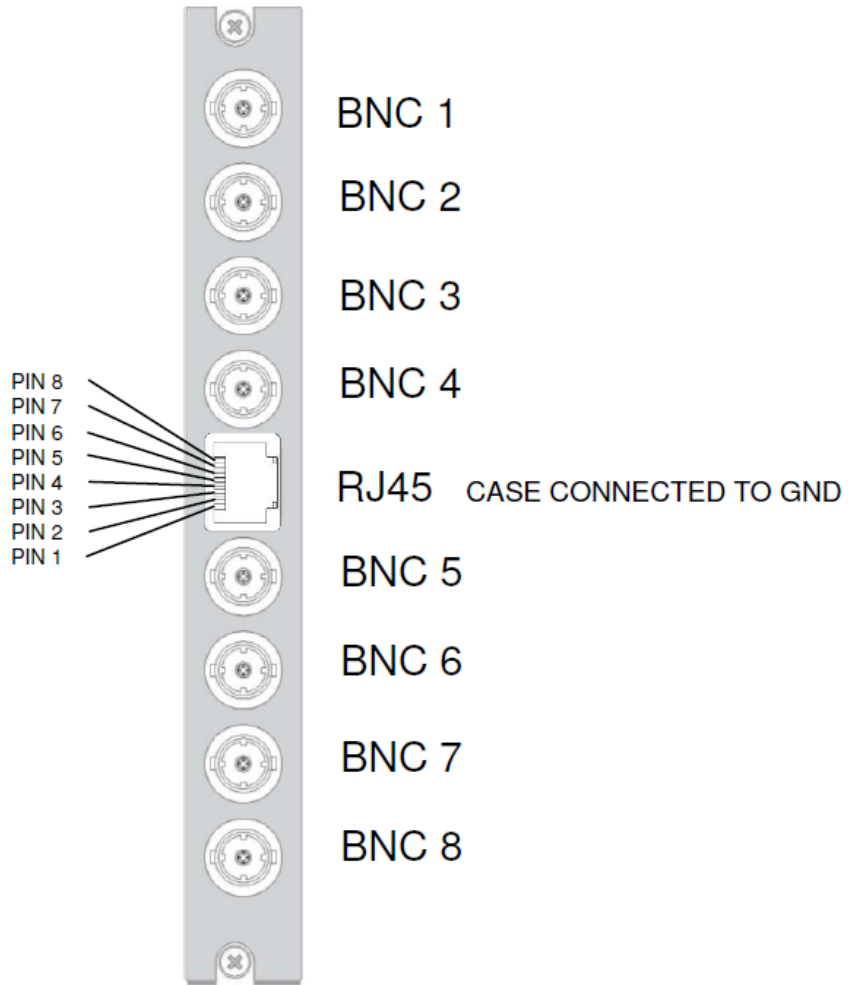


The output current of the GPO signals is limited! Please amplify when a low impedance load is used.

	SAS30	ARC20	ARC21	ARC22	SDL30	SVD10
BNC1	SDIIN	SDIIN	SDIIN	SDIIN	SDIIN	SDIIN
BNC2	RECLK SDIOUT	RECLK SDIOUT	RECLK SDIOUT	RECLK SDIOUT	RECLK SDIOUT	RECLK SDIOUT
BNC3	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT
BNC4	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT	PROC SDIOUT
BNC5		G/Y/C	G/Y/C	G/Y/C	G/Y/C	G/Y/C
BNC6		B/Pb/Y	B/Pb/Y	B/Pb/Y	B/Pb/Y	B/Pb/Y
BNC7		R/Pr/C	R/Pr/C	R/Pr/C	R/Pr/C	R/Pr/C
15P HD-SUB FEMALE						
PIN 1	5 Volt pos.	5 Volt pos.	5 Volt pos.	5 Volt pos.	5 Volt pos.	
PIN 2	GPI1	GPI1	GPI1	GPI1	GPI1	
PIN 3	GPI4	GPI4	GPI4	GPI4	GPI4	
PIN 4	GPI7	GPI7	GPI7	GPI7	GPI7	
PIN 5		GPO2	GPO2	GPO2	GPO2	
PIN 6	GND	GND	GND	GND	GND	
PIN 7	COMMON IN	COMMON IN	COMMON IN	COMMON IN	COMMON IN	
PIN 8	GPI3	GPI3	GPI3	GPI3	GPI3	
PIN 9	GPI6	GPI6	GPI6	GPI6	GPI6	
PIN 10		GPO1	GPO1	GPO1	GPO1	
PIN 11	GND	GND	GND	GND	GND	
PIN 12	GPI2	GPI2	GPI2	GPI2	GPI2	
PIN 13	GPI5	GPI5	GPI5	GPI5	GPI5	
PIN 14	GPI8	GPI8	GPI8	GPI8	GPI8	
PIN 15	GND	GND	GND	GND	GND	

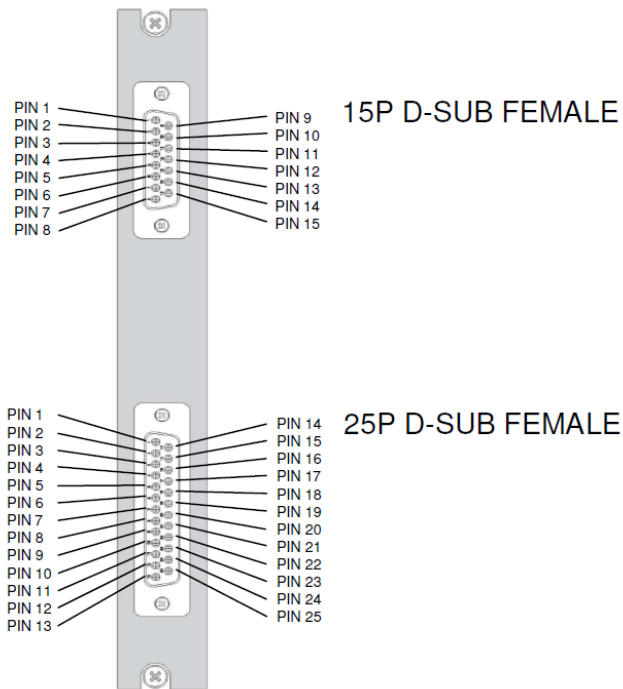


5.3. BPX04



	21X08/09/10	21M08/09/10	2FS10	ASI10
BNC1	SDIINA	SDIINA	SDIINA	ASI/DVBINA
BNC2	SDIOUTA-1	SDIOUTA-1	SDIOUTA-1	
BNC3	SDIOUTA-2	SDIOUTA-2	SDIOUTA-2	ASI/DVBOUTA-1
BNC4	SDIOUTA-3	SDIOUTA-3	SDIOUTA-3	ASI/DVBOUTA-2
BNC5	SDIINB	SDIINB	SDIINB	ASI/DVBINB
BNC6	SDIOUTB-1	SDIOUTB-1	SDIOUTB-1	
BNC7	SDIOUTB-2	SDIOUTB-2	SDIOUTB-2	ASI/DVBOUTB-1
BNC8	SDIOUTB-3	SDIOUTB-3	SDIOUTB-3	ASI/DVBOUTB-2
RJ45	GPI/O	GPI/O	GPI/O	GPI/O
PIN1	GPI1(Input Sel:A=0 B=1)	GPI1(Not Applicable)	FREEZE1	GPI1(Input Sel:A=1 B=0)
PIN2	GND	GND	GND	GND
PIN3	GPI2(W/WSS ins)	GPI2(W/WSS ins)	FREEZE2	GPI2()
PIN4	GND	GND	GND	GND
PIN5	GPO1(Active_A:A=0 B=1)	GPO1(Not Applicable)	TRACKING1	GPO1(Active_A:A=0 B=1)
PIN6	GND	GND	GND	GND
PIN7	GPO2((inv)V/WSS ins)	GPO2((inv)V/WSS ins)	TRACKING2	GPO2(Active_B:A=0 B=1)
PIN8	GND	GND	GND	GND

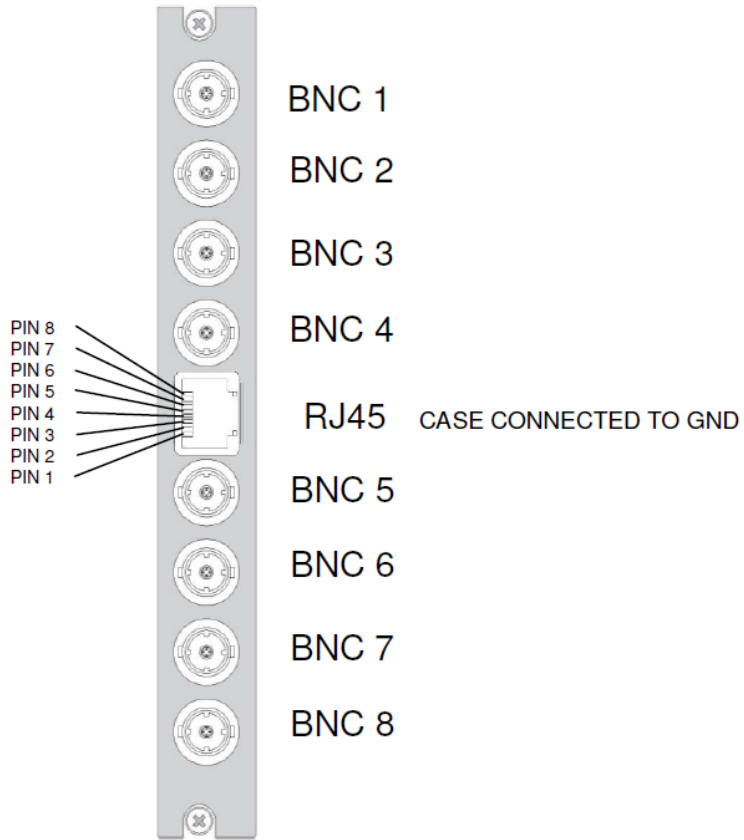
5.4. BPX05D



2A148	
15P D-SUB FEMALE	
PIN 1	GND
PIN 2	GND
PIN 3	TRACKING
PIN 4	
PIN 5	
PIN 6	
PIN 7	
PIN 8	
PIN 9	GND
PIN 10	
PIN 11	
PIN 12	
PIN 13	
PIN 14	
PIN 15	
25P D-SUB FEMALE	
PIN 1	AES1/2- IN
PIN 2	AES1/2+ IN
PIN 3	GND
PIN 4	AES5/6- IN
PIN 5	AES5/6+ IN
PIN 6	GND
PIN 7	AES1/2+ OUT
PIN 8	AES1/2- OUT
PIN 9	GND
PIN 10	AES5/6+ OUT
PIN 11	AES5/6- OUT
PIN 12	GND
PIN 13	GND
PIN 14	GND
PIN 15	AES3/4- IN
PIN 16	AES3/4+ IN
PIN 17	GND
PIN 18	AES7/8- IN
PIN 19	AES7/8+ IN
PIN 20	GND
PIN 21	AES3/4+ OUT
PIN 22	AES3/4- OUT
PIN 23	GND
PIN 24	AES7/8+ OUT
PIN 25	AES7/8- OUT

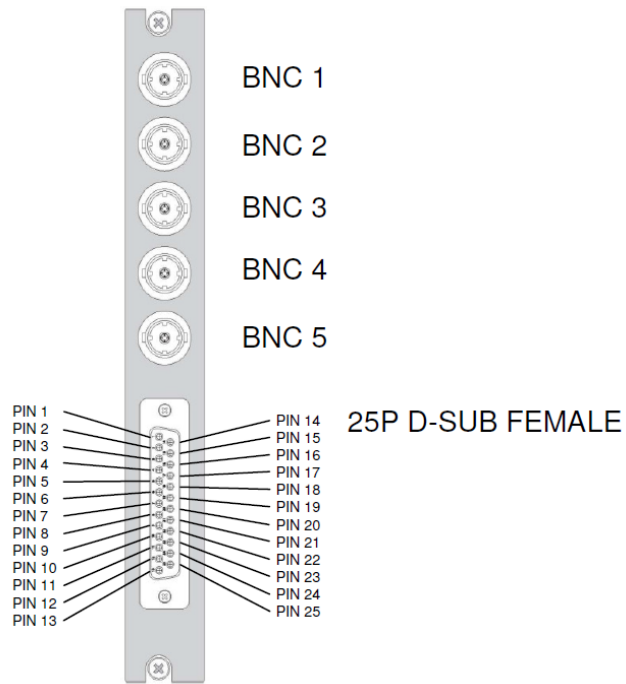


5.5. BPX11



	DLA41 DLA42 DLA43 DLA44 DSF66	DBD18	DAW77 DAW88 DAW99	DAW30
BNC1	AES IN 1	AES IN 1	AES / EBUIN 1 / 2	AES / EBUIN 1 / 2
BNC2	AES IN 2	AES IN 2	AES / EBUIN 3 / 4	AES / EBUIN 3 / 4
BNC3	AES IN 3	AES IN 3	AES / EBUIN 5 / 6	AES / EBUIN 5 / 6
BNC4	AES IN 4	AES IN 4	AES / EBUIN 7 / 8	AES / EBUIN 7 / 8
BNC5	AES OUT 1	AES OUT 1	AES / EBUOUT 1 / 2	AES / EBUOUT 1 / 2
BNC6	AES OUT 2	AES OUT 2	AES / EBUOUT 3 / 4	AES / EBUOUT 3 / 4
BNC7	AES OUT 3	AES OUT 3	AES / EBUOUT 5 / 6	AES / EBUOUT 5 / 6
BNC8	AES OUT 4	AES OUT 4	AES / EBUOUT 7 / 8	AES / EBUOUT 7 / 8
RJ45	GPI/O	GPI/O	GPI/O	GPI/O
PIN 1	GPI 1			GPI0
PIN 2	GPI 2		LTC (-)	LTC (-)
PIN 3	TXA (META DATA OUT)	Metadat a (TXA-)	GPO0 (5V)	GPO0 (5V)
PIN 4	RXB (META DATA IN)			
PIN 5	RXB (META DATA INnot)			GPO2 (5V)
PIN 6	TXB (META DATA OUT not)	Metadat a (TXA-)	GPO1 (5V)	GPO1 (5V)
PIN 7	GPI 3		LTC (+)	LTC (+)
PIN 8	GND	GND	GND	GND

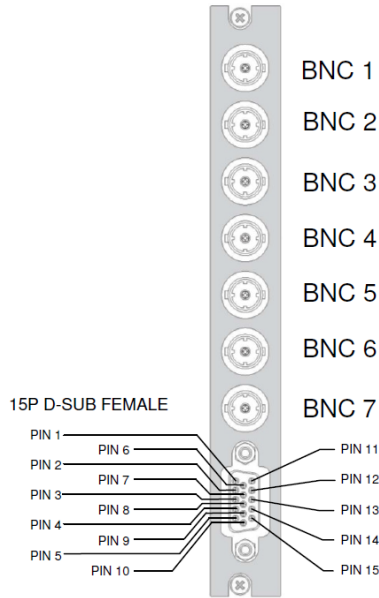
5.6. BHX02D



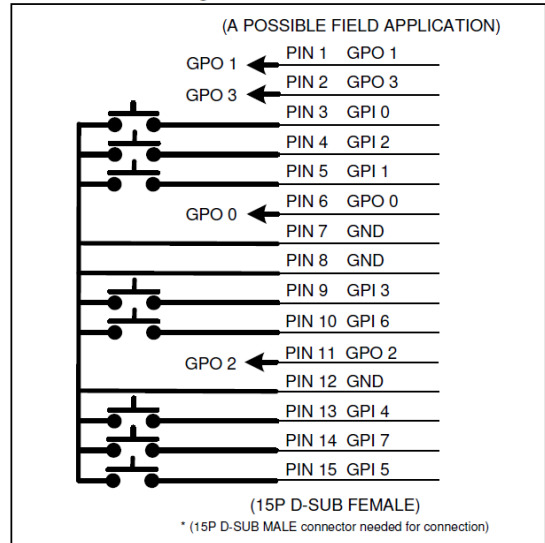
	HEB05/20	HDB05/20	HAS20	HVO10
BNC 1	SD'HD SDI IN	HD SDI IN	SD'HD SDI IN	HD SDI IN
BNC 2	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT	RECLK HD SDI OUT
BNC 3	SD'HD SDI - EMB. OUT	RECLK HD SDI OUT	SD'HD SDI - EMB. OUT	HD SDI OUT
BNC 4	SD'HD SDI - EMB. OUT	RECLK HD SDI OUT	SD'HD SDI - EMB. OUT	HD SDI OUT
BNC 5	GPI	GPI		GPI
25P D-SUB FEMALE				
PIN 1				
PIN 2				
PIN 3	GND	GND	GND	GND
PIN 4	GND	GND	GND	GND
PIN 5	GND	GND	GND	GND
PIN 6	GND	GND	GND	GND
PIN 7	AES1- IN	AES1- OUT	AES1- IN	AES1- IN
PIN 8	AES1+ IN	AES1+ OUT	AES1+ IN	AES1+ IN
PIN 9	GND	GND	GND	GND
PIN 10	AES3- IN	AES3- OUT	AES3- IN	AES3- IN
PIN 11	AES3+ IN	AES3+ OUT	AES3+ IN	AES3+ IN
PIN 12	GND	GND	GND	GND
PIN 13	GND	GND	GND	GND
PIN 14	GND	GND	GND	GND
PIN 15				
PIN 16				
PIN 17	GND	GND	GND	GND
PIN 18	GND	GND	GND	GND
PIN 19	GND	GND	GND	GND
PIN 20	GND	GND	GND	GND
PIN 21	AES2- IN	AES2- OUT	AES2- IN	AES2- IN
PIN 22	AES2+ IN	AES2+ OUT	AES2+ IN	AES2+ IN
PIN 23	GND	GND	GND	GND
PIN 24	AES4- IN	AES4- OUT	AES4- IN	AES4- IN
PIN 25	AES4+ IN	AES4+ OUT	AES4+ IN	AES4+ IN



5.7. BHX03



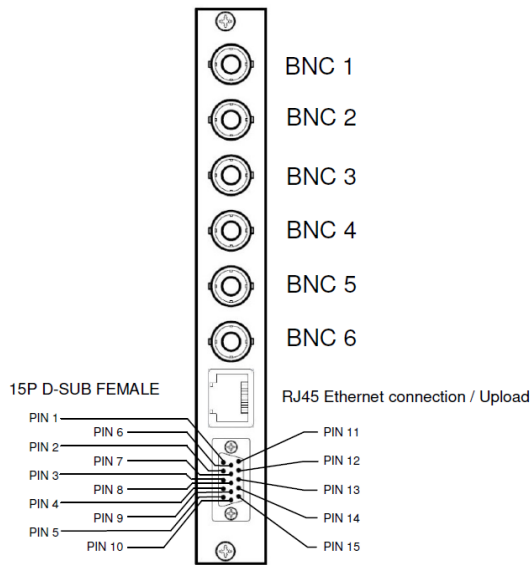
Connection Diagram



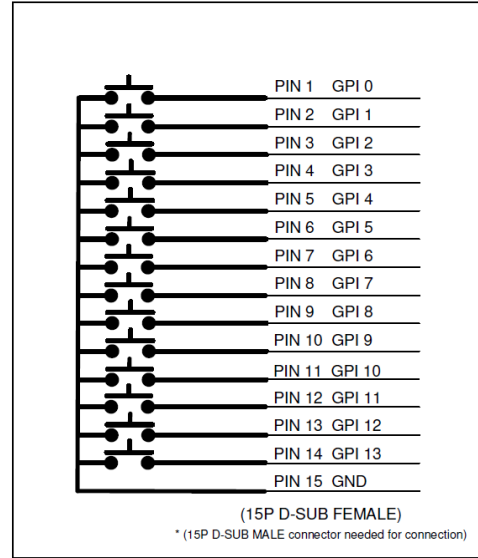
The output current of the GPO signals is limited! Please amplify when a low impedance load is used.

	HCL 10 HXH20/ 21 HXH30/ 31 HXH40/ 41	HDS 10	HDS20/ 21	SXS20/ 21	HSU05/ 10/ 11 HSU20/ 21 HSU30/ 31	HAS 10/ 30
BNC 1	HD SDI IN	HD/SD SDI IN	HD/SD SDI IN	SD SDI IN	HD/SD SDI IN	HD/SD SDI IN
BNC 2	HD SDI RECLK OUT	HD/SD RECLK OUT	HD/SD RECLK OUT	SD RECLK OUT	HD/SD RECLK OUT	HD/SD RECLK OUT
BNC 3	HD SDI PROC OUT	SD SDI OUT1	HD/SD SDI OUT1	SD SDI OUT1	HD SDI OUT1	HD/SD SDI OUT1
BNC 4	HD SDI PROC OUT	SD SDI OUT2	HD/SD SDI OUT2	SD SDI OUT2	HD SDI OUT2	HD/SD SDI OUT2
BNC 5						
BNC 6						
BNC 7						
15P HD-SUB FEMALE						
PIN 1	GPO1	GPO1	GPO1	GPO1	GPO1	GPO1
PIN 2	GPO3	GPO3	GPO3	GPO3	GPO3	GPO3
PIN 3	GPI0	GPI0	GPI0	GPI0	GPI0	GPI0
PIN 4	GPI2	GPI2	GPI2	GPI2	GPI2	GPI2
PIN 5	GPI1	GPI1	GPI1	GPI1	GPI1	GPI1
PIN 6	GPO0	GPO0	GPO0	GPO0	GPO0	GPO0
PIN 7	GND	GND	GND	GND	GND	GND
PIN 8	GND	GND	GND	GND	GND	GND
PIN 9	GPI3	GPI3	GPI3	GPI3	GPI3	GPI3
PIN 10	GPI6	GPI6	GPI6	GPI6	GPI6	GPI6
PIN 11	GPO2	GPO2	GPO2	GPO2	GPO2	GPO2
PIN 12	GND	GND	GND	GND	GND	GND
PIN 13	GPI4	GPI4	GPI4	GPI4	GPI4	GPI4
PIN 14	GPI7	GPI7	GPI7	GPI7	GPI7	GPI7
PIN 15	GPI5	GPI5	GPI5	GPI5	GPI5	GPI5

5.8. BHX04 (1/2)



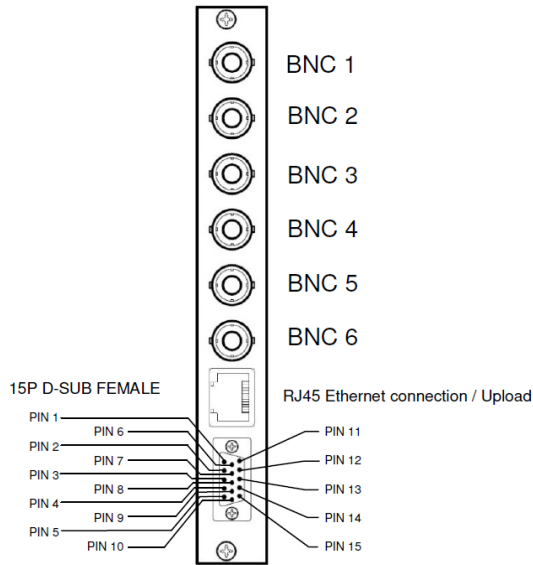
Connection Diagram



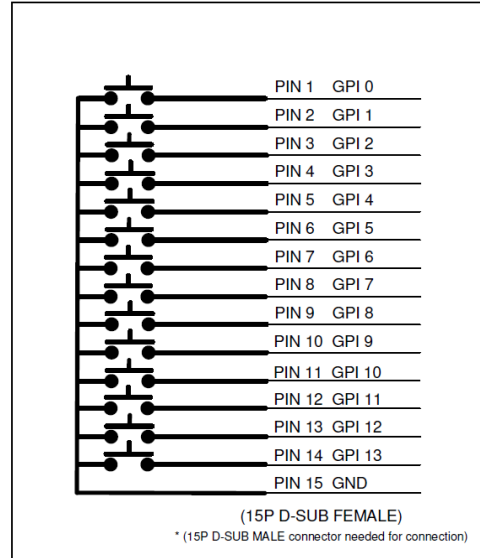
	HLI20	HTI10	HSI10	HSI11	HSI12	HSI20	HSS10
BNC 1	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN	HD/SD SDI IN
BNC 2	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT	HD/SD PREVIEW SDI OUT
BNC 3	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1	HD/SD PROC SDI OUT 1
BNC 4	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2	HD/SD PROC SDI OUT 2
BNC 5							
BNC 6			CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT
RJ45	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection	Ethernet connection
15P D-SUB FEMALE							
PIN 1	GPI0	GPI0	GPI0 (CLEAR CAPTION)	GPI0 (CLEAR CAPTION)	GPI0 (CLEAR CAPTION)	GPI0 ()	GPI0
PIN 2	GPI1	GPI1	GPI1 (BYPASS INSERTER)	GPI1 (BYPASS INSERTER)	GPI1 (BYPASS INSERTER)	GPI1 ()	GPI1
PIN 3	GPI2	GPI2				GPI2	GPI2
PIN 4	GPI3	GPI3				GPI3	GPI3
PIN 5	GPI4	GPI4				GPI4	GPI4
PIN 6	GPI5	GPI5				GPI5	GPI5
PIN 7	GPI6	GPI6				GPI6	GPI6
PIN 8	GPI7	GPI7				GPI7	GPI7
PIN 9	GPI8	GPI8			GPI8 (CUE IN 1)	GPI8	GPI8
PIN 10	GPI9	GPI9			GPI9 (CUE IN 2)	GPI9	GPI9
PIN 11	GPI10	GPI10			GPI10 (CUE IN 3)	GPI10	GPI10
PIN 12	GPI11	GPI11			GPI11 (CUE IN 4)	GPI11	GPI11
PIN 13	GPI12	GPI12			GPI12 (CUE IN 5)	GPI12	GPI12
PIN 14	GPI13	GPI13			GPI13 (CUE IN 6)	GPI13	GPI13
PIN 15	GND	GND	GND	GND	GND	GND	GND



5.9. BHX04 (2/2)

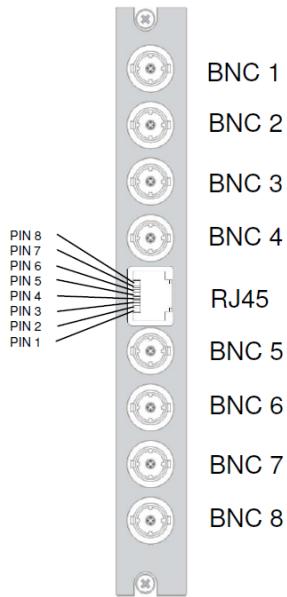


Connection Diagram

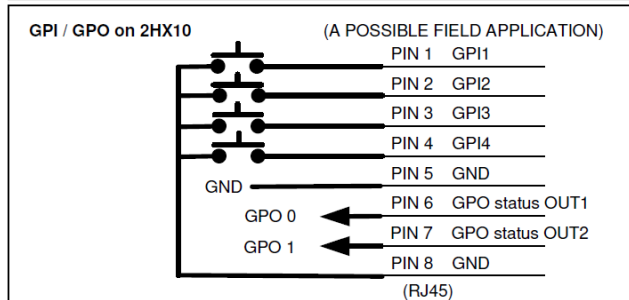
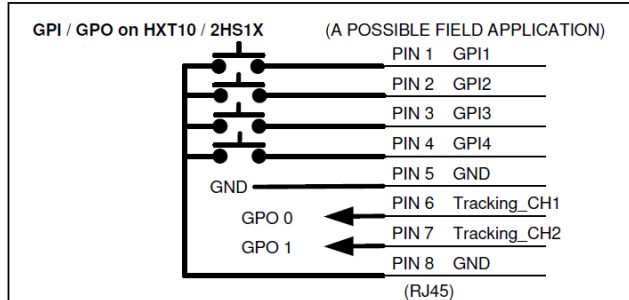


	INS30	SLI20	HSI21
BNC 1	SD SDI IN	SD SDI IN	SD SDI IN
BNC 2	SD PREVIEWSDI OUT	SD PREVIEWSDI OUT	SD PREVIEWSDI OUT
BNC 3	SD SDI PROC OUT1	SD PROC SDI OUT 1	SD PROC SDI OUT 1
BNC 4	SD SDI PROC OUT2	SD PROC SDI OUT 2	SD PROC SDI OUT 2
BNC 5			
BNC 6	CVBS PREVIEW OUT	CVBS PREVIEW OUT	CVBS PREVIEW OUT
RJ45	Ethernet connection	Ethernet connection	Ethernet connection
15P HD-SUB FEMALE			
PIN 1	GPI0 (CLEAR CAPTION)	GPI0	GPI0 ()
PIN 2	GPI1 (BYPASS INSERTER)	GPI1	GPI1 (Eoder Bypass)
PIN 3		GPI2	GPI2 (Decoder Bypass)
PIN 4		GPI3	GPI3 ()
PIN 5		GPI4	GPI4 ()
PIN 6		GPI5	GPI5 ()
PIN 7		GPI6	GPI6 ()
PIN 8		GPI7	GPI7 ()
PIN 9		GPI8	GPI8 (CUEin 1)
PIN 10		GPI9	GPI9 (CUEin 2)
PIN 11		GPI10	GPI10 (CUEin 3)
PIN 12		GPI11	GPI11 (CUEin 4)
PIN 13		GPI12	GPI12 (CUEin 5)
PIN 14		GPI13	GPI13 (CUEin 6)
PIN 15	GND	GND	GND

5.10. BHX05



Connection Diagram

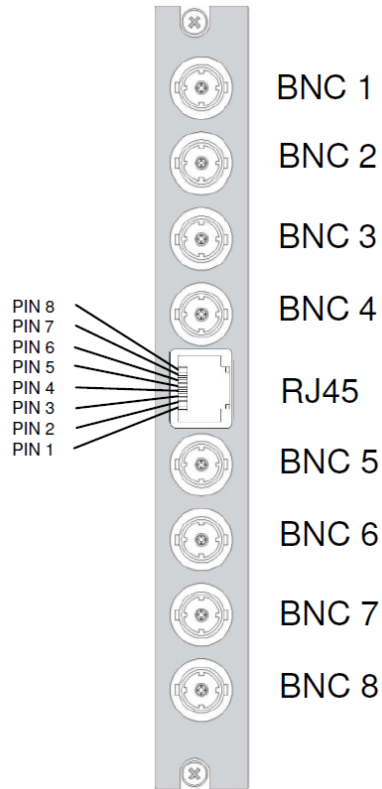


The output current of the GPO signals is limited!
Please amplify when a low impedance load is used.

	HXT10/ 12	2HS 10/ 11	2HX10
BNC 1	SD' HD SDI IN	SD' HD SDI IN A	SD' HD SDI IN 1
BNC 2	SD' HD PROC SDI OUT	SD' HD PROC SDI OUT A	SD' HD SDI OUT 1
BNC 3	SD PROC SDI OUT	SD PROC SDI OUT A	SD SDI OUTPUT
BNC 4	COMPOSITE OUT	COMPOSITE OUT A	CVBS OUTPUT
BNC 5	SD' HD SDI IN	SD' HD SDI IN B	SD' HD SDI IN 2
BNC 6	SD' HD PROC SDI OUT	SD' HD PROC SDI OUT B	SD' HD SDI OUT 2
BNC 7	SD PROC SDI OUT	SD PROC SDI OUT B	SD SDI OUTPUT
BNC 8	COMPOSITE OUT	COMPOSITE OUT B	CVBS OUTPUT
RJ 45			
PIN 1	GPI 1	GPI 1	GPI 1
PIN 2	GPI 2	GPI 2	GPI 2
PIN 3	GPI 3	GPI 3	GPI 3
PIN 4	GPI 4	GPI 4	GPI 4
PIN 5	GND	GND	GND
PIN 6	TRACKING_CH1	TRACKING_CH1	GPOSTATUS OUT1
PIN 7	TRACKING_CH2	TRACKING_CH2	GPOSTATUS OUT2
PIN 8	GND	GND	GND

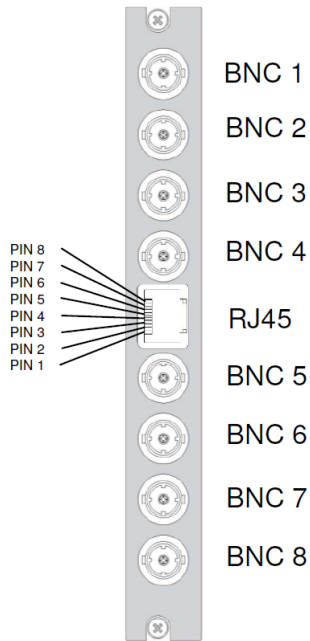


5.11. BHX17

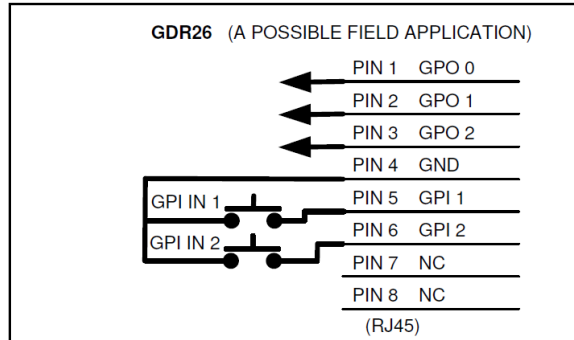


HDR07	
BNC 1	SD/HD/SDI IN
BNC 2	SD/HD/SDI OUT
BNC 3	SD/HD/SDI OUT
BNC 4	SD/HD/SDI OUT
BNC 5	SD/HD/SDI OUT
BNC 6	SD/HD/SDI OUT
BNC 7	SD/HD/SDI OUT
BNC 8	SD/HD/SDI OUT
RJ45	GPI I/O
PIN 1	GND
PIN 2	GND
PIN 3	GND
PIN 4	GND
PIN 5	GND
PIN 6	GND
PIN 7	GND
PIN 8	GND

5.12. BHX17A



Connection Diagram



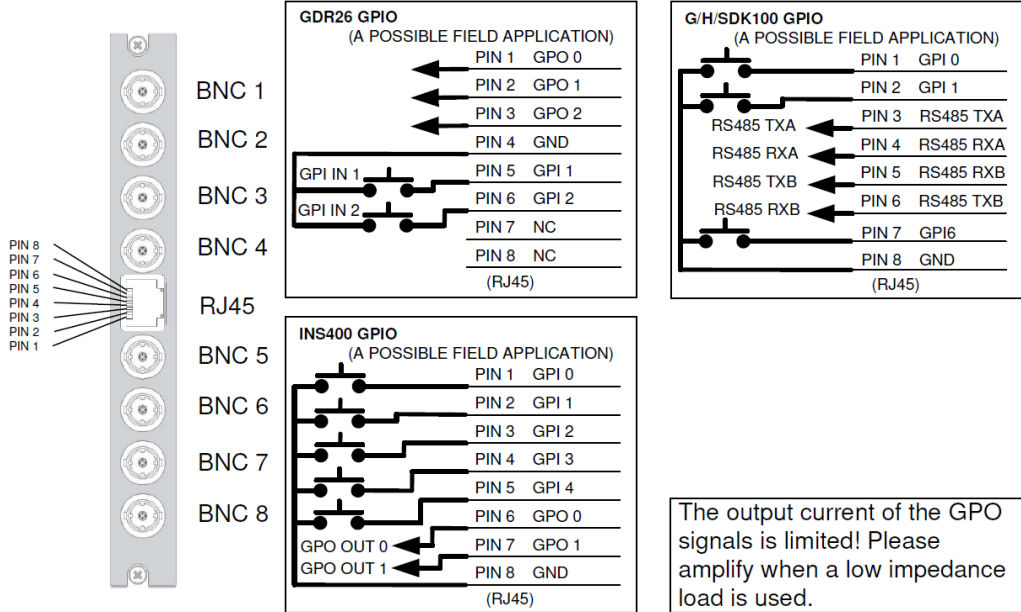
The output current of the GPO signals is limited! Please amplify when a low impedance load is used.

GDR26	
BNC1	SD/HD/3GSDI OUT A3
BNC2	SD/HD/3GSDI OUT A2
BNC3	SD/HD/3GSDI OUT A1
BNC4	SD/HD/3GSDI IN A
BNC5	SD/HD/3GSDI IN B
BNC6	SD/HD/3GSDI OUT B1
BNC7	SD/HD/3GSDI OUT B2
BNC8	SD/HD/3GSDI OUT B3
RJ45	
PIN1	GPI/O
PIN2	GPO0
PIN3	GPO1
PIN4	GPO2
PIN5	GND
PIN6	GPI1
PIN7	GPI2
PIN8	



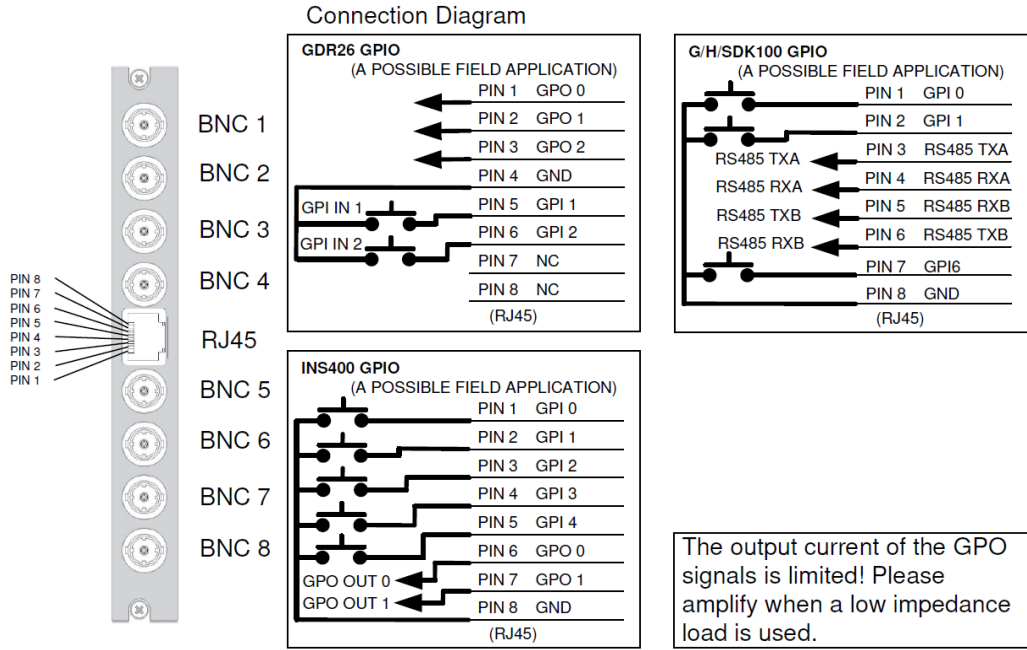
5.13. BHX17B (1/2)

Connection Diagram



	GDR26	INS400 HNS400	G/HDL100/200	G/H/SDK100/150 G/H/SDK200/300	GSU150/160 GXG150/160 2GU100/110 2XG100/110 2GS100/110 2GF100/110 HSU150/160 HXH150/160 2HU100/110 2XH100/110 2HS100/110 2HF100/110 2SF100/110	GSU100/110 GXG100/110 GDS100/110 HSU100/110 HXH100/110 HDS100/110 HFS100/110 SFS100/110	HXT010/100/110/150 GXT010/100/110
BNC 1	SD/HD/3GSDIOUT A3	SDSDIIN1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN1	SD/HD/3GSDIIN A	SD/HD/3GSDIIN A	HD/SDSDIIN1
BNC 2	SD/HD/3GSDIOUT A2	SDSDIIN2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN2	SD/HD/3GSDIIN B	SD/HD/3GSDIIN B	HD/SDSDIIN2
BNC 3	SD/HD/3GSDIOUT A1	SDSDIOUT1	SD/HD/3GSDIOUT1	SD/HD/3GSDIOUT1	SD/HD/3GSDIOUT A1	SD/HD/3GSDIOUT A1	SDSDIOUT1
BNC 4	SD/HD/3GSDIIN A	SDSDIOUT2	SD/HD/3GSDIOUT2	SD/HD/3GSDIOUT2	SD/HD/3GSDIOUT A2	SD/HD/3GSDIOUT A2	SDSDIOUT2
BNC 5	SD/HD/3GSDIIN B	SDSDIOUT3	SD/HD/3GSDIOUT3	SD/HD/3GSDIOUT3	SD/HD/3GSDIOUT B1	SD/HD/3GSDIOUT A3	SDSDIOUT3
BNC 6	SD/HD/3GSDIOUT B1	SDSDIOUT4	SD/HD/3GSDIOUT4	SD/HD/3GSDIOUT4	SD/HD/3GSDIOUT B2	SD/HD/3GSDIOUT A4	SDSDIOUT4
BNC 7	SD/HD/3GSDIOUT B2			SD/HD/3GSDIIN3			
BNC 8	SD/HD/3GSDIOUT B3	CVBS IN		SD/HD/3GSDIIN4	CVBS IN	CVBS IN	
RJ45					GPI/O	GPI/O	GPI/O
PIN 1	GPO0	GPI0		GPI0	GPI0	GPI0	GPI0
PIN 2	GPO1	GPI1		GPI1	GPI1	GPI1	GPI1
PIN 3	GPO2	GPI2		RS485 TXA	GPI2	GPI2	GPI2
PIN 4	GND	GPI3		RS485 RXA	GPI3	GPI3	GPI3
PIN 5	GPI1	GPI4		RS485 RXB	GPI4	GPI4	GPI4
PIN 6	GPI2	GPO0		RS485 TXB	GPO0	GPO0	GPI5
PIN 7		GPO1		GPI6	GPO1	GPO1	GPI6
PIN 8		GND		GND	GND	GND	GND

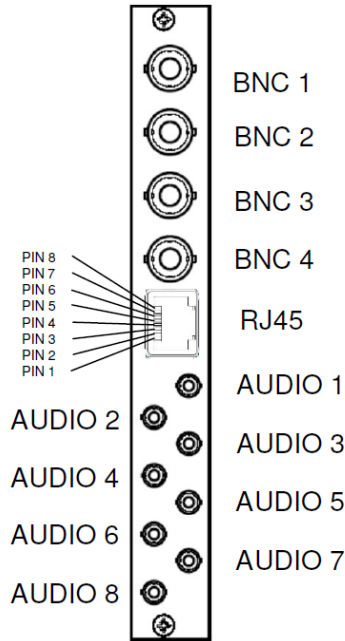
5.14. BHX17B (2/2)



G/H/S010 G/H/SFS010 G/H/SU010 G/G/H/H010		G/H3D100		G/HIX010		G/HIX100/110	
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN 1	SD/HD/3G SDI IN 1	SD/HD/3G SDI IN 1	SD/HD/3G SDI IN 1		
BNC 2		SD/HD/3G SDI IN 2	SD/HD/3G SDI IN 2	SD/HD/3G SDI IN 2	SD/HD/3G SDI IN 2		
BNC 3	SD/HD/3G SDI OUT A1	SD/HD/3G SDI OUT 1	SD/HD/3G SDI MAIN OUT 1	SD/HD/3G SDI MAIN OUT 1	SD/HD/3G SDI MAIN OUT 1		
BNC 4	SD/HD/3G SDI OUT A2	SD/HD/3G SDI OUT 2	SD/HD/3G SDI MAIN OUT 2	SD/HD/3G SDI MAIN OUT 2	SD/HD/3G SDI MAIN OUT 2		
BNC 5	SD/HD/3G SDI OUT A3	SD/HD/3G SDI OUT 3	SD/HD/3G SDI BACKUP OUT 1	SD/HD/3G SDI BACKUP OUT 1	SD/HD/3G SDI BACKUP OUT 1		
BNC 6	SD/HD/3G SDI OUT A4	SD/HD/3G SDI OUT 4	SD/HD/3G SDI BACKUP OUT 2	SD/HD/3G SDI BACKUP OUT 2	SD/HD/3G SDI BACKUP OUT 2		
BNC 7		SD/HD/3G SDI IN 3			SD/HD/3G SDI IN 3		
BNC 8		SD/HD/3G SDI IN 4			SD/HD/3G SDI IN 4		
RJ45	GPI I/O		GPI I/O		GPI I/O		
PIN 1	GPI 0	GPI 0	GPI 0	GPI 0	GPI 0		
PIN 2	GPI 1	GPI 1	GPI 1	GPI 1	GPI 1		
PIN 3	GPI 2	GPI 2	GPI 2	GPI 2	GPI 2		
PIN 4	GPI 3	GPI 3	GPI 3	GPI 3	GPI 3		
PIN 5	GPI 4	GPI 4	GPI 4	GPI 4	GPI 4		
PIN 6	GPO 0	GPI 5	GPI 5	GPI 5	GPI 5		
PIN 7	GPO 1	GPI 6	GPI 6	GPI 6	GPI 6		
PIN 8	GND	GND	GND	GND	GND		
G/HIX170		2HU101					
BNC 1	SD/HD/3G SDI IN 1	SD/HD/3G SDI IN A		Application Example GPIO G/HIX010/100/100: PIN 1 GPI 0 Video preset switch 0 PIN 2 GPI 1 Video preset switch 1 PIN 3 GPO 2 Probe-A error PIN 4 GPO 3 Probe-B error PIN 5 GPO 4 Active input for output-A PIN 6 GPO 5 Active input for output-B PIN 7 GPI 6 Audio preset switch 0 PIN 8 GND			
BNC 2	SD/HD/3G SDI IN 2	SD/HD/3G SDI IN B					
BNC 3	SD/HD/3G SDI OUT 1	SD/HD/3G SDI OUT A1					
BNC 4	SD/HD/3G SDI OUT 2	SD/HD/3G SDI OUT A2					
BNC 5	SD/HD/3G SDI OUT 3	SD/HD/3G SDI OUT B1					
BNC 6	SD/HD/3G SDI OUT 4	SD/HD/3G SDI OUT B2					
BNC 7	SD/HD/3G SDI IN 3						
BNC 8	SD/HD/3G SDI IN 4						
RJ45		GPI I/O					
PIN 1		GPI 0					
PIN 2		GPI 1					
PIN 3		GPI 2					
PIN 4		GPI 3					
PIN 5		GPI 4					
PIN 6		GPO 0					
PIN 7		GPO 1					
PIN 8		GND					



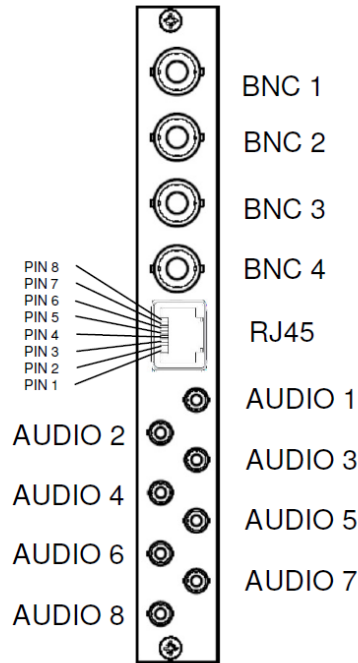
5.15. BHX18 (1/3)



	G/HEB400 G/HEB500	G/HEB440 G/HEB550	G/HDB400 G/HDB500	G/HDB440 G/HDB550	G/HRB550 G/HRF550	G/HRB590 G/HRF590	G/HEB800 G/HEB900
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A
BNC 2	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B
BNC 3	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A
BNC 4	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1
PIN 3	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2
PIN 4	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3
PIN 5	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)
PIN 6	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)
PIN 7	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)
PIN 8	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)
ANALOG AUDIO INPUTS							
AUDIO 1	A1pos IN / GND	A1pos IN / GND	A1pos OUT / GND	A1pos OUT / GND	A1pos IN / GND	A1pos IN / GND	D1 IN
AUDIO 2	A2pos IN / GND	A2pos IN / GND	A2pos OUT / GND	A2pos OUT / GND	A2pos IN / GND	A2pos IN / GND	D2 IN
AUDIO 3	A3pos IN / GND	A3pos IN / GND	A3pos OUT / GND	A3pos OUT / GND	A3pos IN / GND	A3pos IN / GND	D3 IN
AUDIO 4	A4pos IN / GND	A4pos IN / GND	A4pos OUT / GND	A4pos OUT / GND	A4pos IN / GND	A4pos IN / GND	D4 IN
AUDIO 5		A5pos IN / GND		A5pos OUT / GND	A1pos OUT / GND	D1 OUT	
AUDIO 6		A6pos IN / GND		A6pos OUT / GND	A2pos OUT / GND	D2 OUT	
AUDIO 7		A7pos IN / GND		A7pos OUT / GND	A3pos OUT / GND	D3 OUT	
AUDIO 8		A8pos IN / GND		A8pos OUT / GND	A4pos OUT / GND	D4 OUT	
	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BHX18D instead

5.16. BHX18 (2/3)

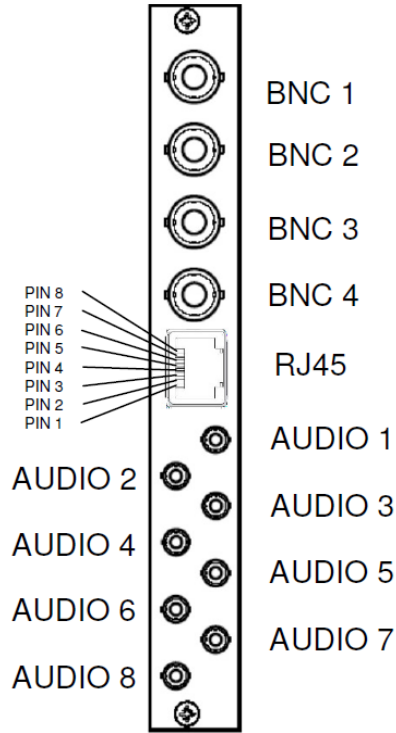


	G/HEB840 G/HEB950	G/HEB880 G/HEB990	G/HDB800 G/HDB900	G/HDB840 G/HDB950	G/HDB880 G/HDB990	G/HRB950 G/HRF950	G/HRB990 G/HRF990
BNC 1	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A	SDI/HD/3G SDI IN A
BNC 2	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B	SDI/HD/3G SDI IN B
BNC 3	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A	SDI/HD/3G SDI OUT A
BNC 4	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B	SDI/HD/3G SDI OUT B
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1	GPI/O 1
PIN 3	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2	GPI/O 2
PIN 4	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3	GPI/O 3
PIN 5	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)	GPI/O 4 / TXA(+)
PIN 6	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)	GPI/O 5 / TXB(-)
PIN 7	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)	GPI/O 6 / RXA(+)
PIN 8	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)	GPI/O 7 / RXB(-)
ANALOG AUDIO INPUTS							
AUDIO 1	D1 IN	D1 IN	D1 OUT	D1 OUT	D1 OUT	D1 IN	D1 IN
AUDIO 2	D2 IN	D2 IN	D2 OUT	D2 OUT	D2 OUT	D2 IN	D2 IN
AUDIO 3	D3 IN	D3 IN	D3 OUT	D3 OUT	D3 OUT	D3 IN	D3 IN
AUDIO 4	D4 IN	D4 IN	D4 OUT	D4 OUT	D4 OUT	D4 IN	D4 IN
AUDIO 5	A1pos IN / GND	D5 IN		A1pos OUT / GND	D5 OUT	A1pos OUT / GND	D1 OUT
AUDIO 6	A2pos IN / GND	D6 IN		A2pos OUT / GND	D6 OUT	A2pos OUT / GND	D2 OUT
AUDIO 7	A3pos IN / GND	D7 IN		A3pos OUT / GND	D7 OUT	A3pos OUT / GND	D3 OUT
AUDIO 8	A4pos IN / GND	D8 IN		A4pos OUT / GND	D8 OUT	A4pos OUT / GND	D4 OUT
	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BHX18D instead



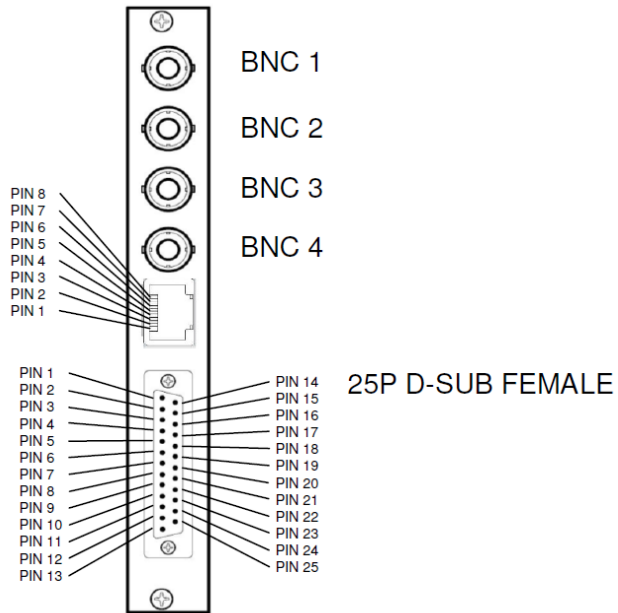
5.17. BHX18 (3/3)



	G/HAF500 G/HRF500	G/HAF900 G/HRF900	G/HRF050	G/HRF090
BNC 1	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A	SD/HD/3G SDI IN A
BNC 2	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B	SD/HD/3G SDI IN B
BNC 3	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A	SD/HD/3G SDI OUT A
BNC 4	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B	SD/HD/3G SDI OUT B
RJ 45				
PIN 1	GND	GND	GND	GND
PIN 2	GPIO 1	GPIO 1	GPIO 1	GPIO 1
PIN 3	GPIO 2	GPIO 2	GPIO 2	GPIO 2
PIN 4	GPIO 3	GPIO 3	GPIO 3	GPIO 3
PIN 5	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)	GPIO 4 / TXA(+)
PIN 6	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)	GPIO 5 / TXB(-)
PIN 7	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)	GPIO 6 / RXA(+)
PIN 8	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)	GPIO 7 / RXB(-)
Coaxial				
AUDIO 1	A1pos IN / GND	D1 IN		
AUDIO 2	A2pos IN / GND	D2 IN		
AUDIO 3	A3pos IN / GND	D3 IN		
AUDIO 4	A4pos IN / GND	D4 IN		
AUDIO 5			A1pos OUT / GND	D1 OUT
AUDIO 6			A2pos OUT / GND	D2 OUT
AUDIO 7			A3pos OUT / GND	D3 OUT
AUDIO 8			A4pos OUT / GND	D4 OUT
	*See note below	*See note below	*See note below	*See note below

NOTE: Analog unbalanced inputs/outputs give 6dB signal level reduction, for correct usage of analog audio signals use BHX18D instead

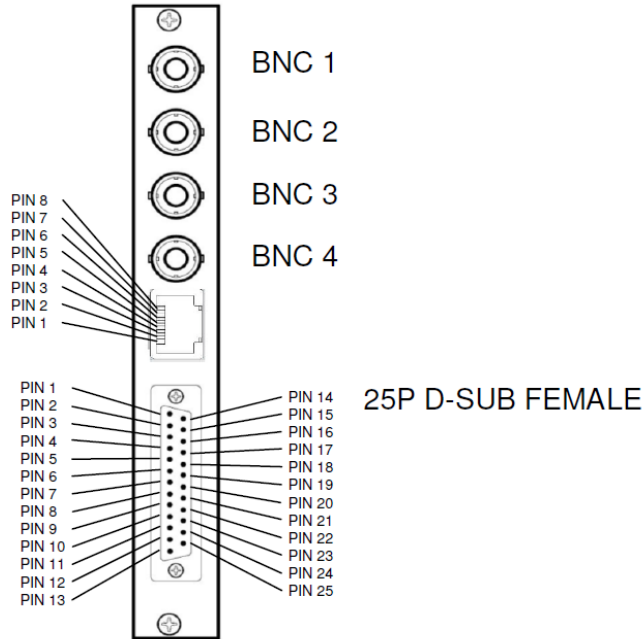
5.18. BHX18D (1/3)



	G/HEB400 G/HEB500	G/HEB440 G/HEB550	G/HDB400 G/HDB500	G/HDB440 G/HDB550	G/HRB550 G/HRF550	G/HRB590 G/HRF590	G/HEB800 G/HEB900
BNC1	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A
BNC2	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B
BNC3	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A
BNC4	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B
25P D-SUB FEMALE							
PIN 1	A1neg IN	A1neg IN	A1neg OUT	A1neg OUT	A1neg IN	A1neg IN	D1neg IN
PIN 2	A1pos IN	A1pos IN	A1pos OUT	A1pos OUT	A1pos IN	A1pos IN	D1pos IN
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	A3neg IN	A3neg IN	A3neg OUT	A3neg OUT	A3neg IN	A3neg IN	D3neg IN
PIN 5	A3pos IN	A3pos IN	A3pos OUT	A3pos OUT	A3pos IN	A3pos IN	D3pos IN
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7		A5neg IN		A5neg OUT	A5neg OUT	D5neg OUT	
PIN 8		A5pos IN		A5pos OUT	A5pos OUT	D5pos OUT	
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10		A7neg IN		A7neg OUT	A7neg OUT	D7neg OUT	
PIN 11		A7pos IN		A7pos OUT	A7pos OUT	D7pos OUT	
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13							
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15	A2neg IN	A2neg IN	A2neg OUT	A2neg OUT	A2neg IN	A2neg IN	D2neg IN
PIN 16	A2pos IN	A2pos IN	A2pos OUT	A2pos OUT	A2pos IN	A2pos IN	D2pos IN
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	A4neg IN	A4neg IN	A4neg OUT	A4neg OUT	A4neg IN	A4neg IN	D4neg IN
PIN 19	A4pos IN	A4pos IN	A4pos OUT	A4pos OUT	A4pos IN	A4pos IN	D4pos IN
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21		A8neg IN		A8neg OUT	A8neg OUT	D8neg OUT	
PIN 22		A8pos IN		A8pos OUT	A8pos OUT	D8pos OUT	
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24		A8neg IN		A8neg OUT	A8neg OUT	D8neg OUT	
PIN 25		A8pos IN		A8pos OUT	A8pos OUT	D8pos OUT	
RJ 45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GP/I/O 1	GP/I/O 1	GP/I/O 1	GP/I/O 1	GP/I/O 1	GP/I/O 1	GP/I/O 1
PIN 3	GP/I/O 2	GP/I/O 2	GP/I/O 2	GP/I/O 2	GP/I/O 2	GP/I/O 2	GP/I/O 2
PIN 4	GP/I/O 3	GP/I/O 3	GP/I/O 3	GP/I/O 3	GP/I/O 3	GP/I/O 3	GP/I/O 3
PIN 5	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)	GP/I/O 4/ TXA (+)
PIN 6	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)	GP/I/O 5/ TXB (-)
PIN 7	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)	GP/I/O 6/ RXA (+)
PIN 8	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)	GP/I/O 7/ RXB (-)

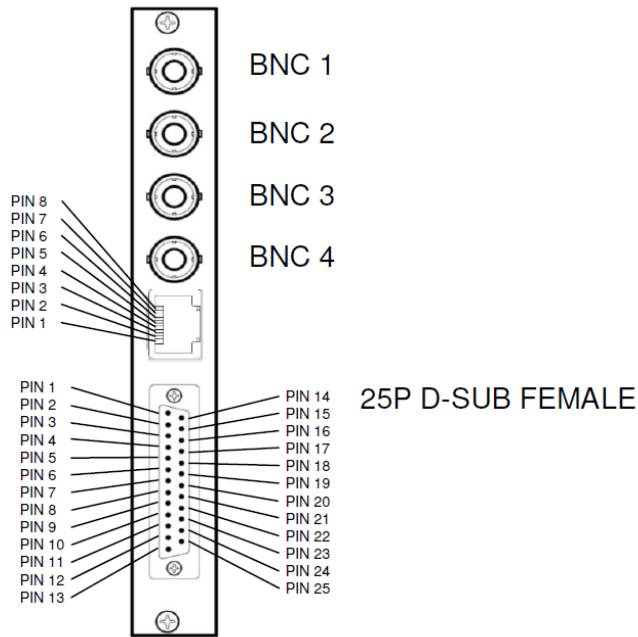


5.19. BHX18D (2/3)



	G/HEB840 G/HEB950	G/HEB880 G/HEB990	G/HDB800 G/HDB900	G/HDB840 G/HDB950	G/HDB880 G/HDB990	G/HRB950 G/HRF950	G/HRB990 G/HRF990
BNC1	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA	SD/HD/3GSDI INA
BNC2	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB	SD/HD/3GSDI INB
BNC3	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA	SD/HD/3GSDI OUTA
BNC4	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB	SD/HD/3GSDI OUTB
25P D-SUB FEMALE							
PIN 1	D1neg IN	D1neg IN	D1neg OUT	D1neg OUT	D1neg OUT	D1neg IN	D1neg IN
PIN 2	D1pos IN	D1pos IN	D1pos OUT	D1pos OUT	D1pos OUT	D1pos IN	D1pos IN
PIN 3	GND	GND	GND	GND	GND	GND	GND
PIN 4	D3neg IN	D3neg IN	D3neg OUT	D3neg OUT	D3neg OUT	D3neg IN	D3neg IN
PIN 5	D3pos IN	D3pos IN	D3pos OUT	D3pos OUT	D3pos OUT	D3pos IN	D3pos IN
PIN 6	GND	GND	GND	GND	GND	GND	GND
PIN 7	A1neg IN	D5neg IN		A1neg OUT	D5neg OUT	A5neg OUT	D5neg OUT
PIN 8	A1pos IN	D5pos IN		A1pos OUT	D5pos OUT	A5pos OUT	D5pos OUT
PIN 9	GND	GND	GND	GND	GND	GND	GND
PIN 10	A3neg IN	D7neg IN		A3neg OUT	D7neg OUT	A7neg OUT	D7neg OUT
PIN 11	A3pos IN	D7pos IN		A3pos OUT	D7pos OUT	A7pos OUT	D7pos OUT
PIN 12	GND	GND	GND	GND	GND	GND	GND
PIN 13							
PIN 14	GND	GND	GND	GND	GND	GND	GND
PIN 15	D2neg IN	D2neg IN	D2neg OUT	D2neg OUT	D2neg OUT	D2neg IN	D2neg IN
PIN 16	D2pos IN	D2pos IN	D2pos OUT	D2pos OUT	D2pos OUT	D2pos IN	D2pos IN
PIN 17	GND	GND	GND	GND	GND	GND	GND
PIN 18	D4neg IN	D4neg IN	D4neg OUT	D4neg OUT	D4neg OUT	D4neg IN	D4neg IN
PIN 19	D4pos IN	D4pos IN	D4pos OUT	D4pos OUT	D4pos OUT	D4pos IN	D4pos IN
PIN 20	GND	GND	GND	GND	GND	GND	GND
PIN 21	A2neg IN	D6neg IN		A2neg OUT	D6neg OUT	A6neg OUT	D6neg OUT
PIN 22	A2pos IN	D6pos IN		A2pos OUT	D6pos OUT	A6pos OUT	D6pos OUT
PIN 23	GND	GND	GND	GND	GND	GND	GND
PIN 24	A4neg IN	D8neg IN		A4neg OUT	D8neg OUT	A8neg OUT	D8neg OUT
PIN 25	A4pos IN	D8pos IN		A4pos OUT	D8pos OUT	A8pos OUT	D8pos OUT
RJ45							
PIN 1	GND	GND	GND	GND	GND	GND	GND
PIN 2	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1	GP1/O1
PIN 3	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2	GP1/O2
PIN 4	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3	GP1/O3
PIN 5	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)	GP1/O4/ TXA(+)
PIN 6	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)	GP1/O5/ TXB(-)
PIN 7	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)	GP1/O6/ RXA(+)
PIN 8	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)	GP1/O7/ RXB(-)

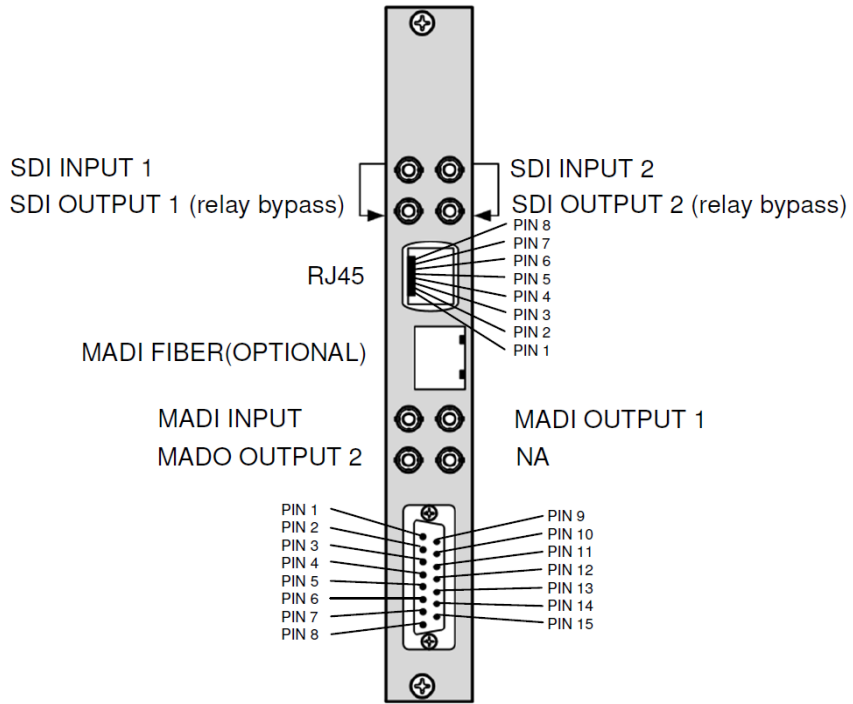
5.20. BHX18D (3/3)



	G/HAF500 G/HRF500	G/HAF900 G/HRF900	G/HRB100 G/HEP100/130 G/HPD100/130 G/HED100/130 G/HJA420/440 G/HJA840/880	GAW010/100/110/300 HAW010/100/110/300 SAW010/100/110/300	G/HRF050 G/HRF090	G/HEE200 G/HEE230
BNC 1	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A	SD/HD/3GSDI IN A
BNC 2	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B	SD/HD/3GSDI IN B
BNC 3	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A	SD/HD/3GSDI OUT A
BNC 4	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B	SD/HD/3GSDI OUT B
25P D-SUB FEMALE						
PIN 1	A1neg IN	D1neg IN				
PIN 2	A1pos IN	D1pos IN				
PIN 3	GND	GND	GND	GND	GND	GND
PIN 4	A3neg IN	D3neg IN				
PIN 5	A3pos IN	D3pos IN				
PIN 6	GND	GND	GND	GND	GND	GND
PIN 7					A5neg OUT	
PIN 8					A5pos OUT	
PIN 9	GND	GND	GND	GND	GND	GND
PIN 10					A7neg OUT	
PIN 11					A7pos OUT	
PIN 12	GND	GND	GND	GND	GND	GND
PIN 13						
PIN 14	GND	GND	GND	GND	GND	GND
PIN 15	A2neg IN	D2neg IN				
PIN 16	A2pos IN	D2pos IN				
PIN 17	GND	GND	GND	GND	GND	GND
PIN 18	A4neg IN	D4neg IN				
PIN 19	A4pos IN	D4pos IN				
PIN 20	GND	GND	GND	GND	GND	GND
PIN 21					A6neg OUT	
PIN 22					A6pos OUT	
PIN 23	GND	GND	GND	GND	GND	GND
PIN 24					A8neg OUT	
PIN 25					A8pos OUT	
RJ 45						
PIN 1	GND	GND	GND	GND	GND	GND
PIN 2	GPI/O1	GPI/O1	GPI/O1	GPO1	GPI/O1	GPI/O1
PIN 3	GPI/O2	GPI/O2	GPI/O2	GPO2	GPI/O2	GPI/O2
PIN 4	GPI/O3	GPI/O3	GPI/O3		GPI/O3	GPI/O3
PIN 5	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)		GPI/O4/ TXA(+)	GPI/O4/ TXA(+)
PIN 6	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)		GPI/O5/ TXB(-)	GPI/O5/ TXB(-)
PIN 7	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	LTC IN(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)
PIN 8	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	LTC IN(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)

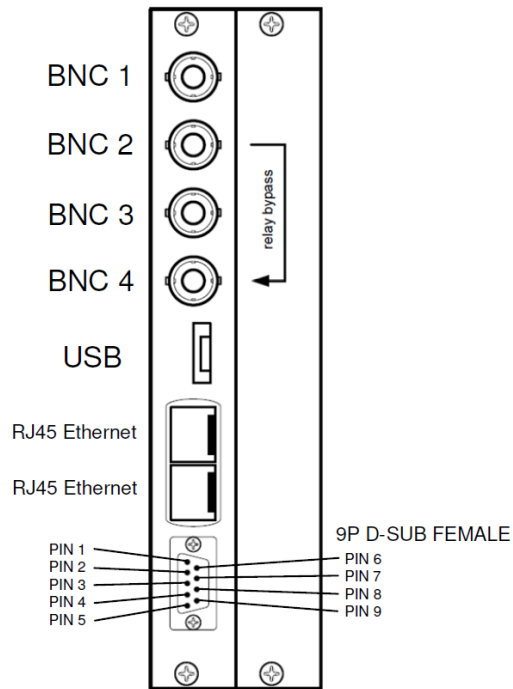


5.21. BHX18M



	GMA100 HMA100	GMA110 HMA110	GMA120 HMA120	GMA130 HMA130	GMA140 HMA140
15P D-SUB FEMALE					
PIN 1		A1negIN	A1negOUT	D1negIN	D1negOUT
PIN2		A1posIN	A1posOUT	D1posIN	D1posOUT
PIN3		A2negIN	A2negOUT	D2negIN	D2negOUT
PIN4		A2posIN	A2posOUT	D2posIN	D2posOUT
PIN5		A3negIN	A3negOUT	D3negIN	D3negOUT
PIN6		A3posIN	A3posOUT	D3posIN	D3posOUT
PIN7		A4negIN	A4negOUT	D4negIN	D4negOUT
PIN8		A4posIN	A4posOUT	D4posIN	D4posOUT
PIN9	GND	GND	GND	GND	GND
PIN10	GND	GND	GND	GND	GND
PIN11	GND	GND	GND	GND	GND
PIN12	GND	GND	GND	GND	GND
PIN13	GND	GND	GND	GND	GND
PIN14	GND	GND	GND	GND	GND
PIN15	GND	GND	GND	GND	GND
RJ45					
PIN 1	GND	GND	GND	GND	GND
PIN2	GPI/O1	GPI/O1	GPI/O1	GPI/O1	GPI/O1
PIN3	GPI/O2	GPI/O2	GPI/O2	GPI/O2	GPI/O2
PIN4	GPI/O3	GPI/O3	GPI/O3	GPI/O3	GPI/O3
PIN5	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)	GPI/O4/ TXA(+)
PIN6	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)	GPI/O5/ TXB(-)
PIN7	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)	GPI/O6/ RXA(+)
PIN8	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)	GPI/O7/ RXB(-)

5.22. BHX27

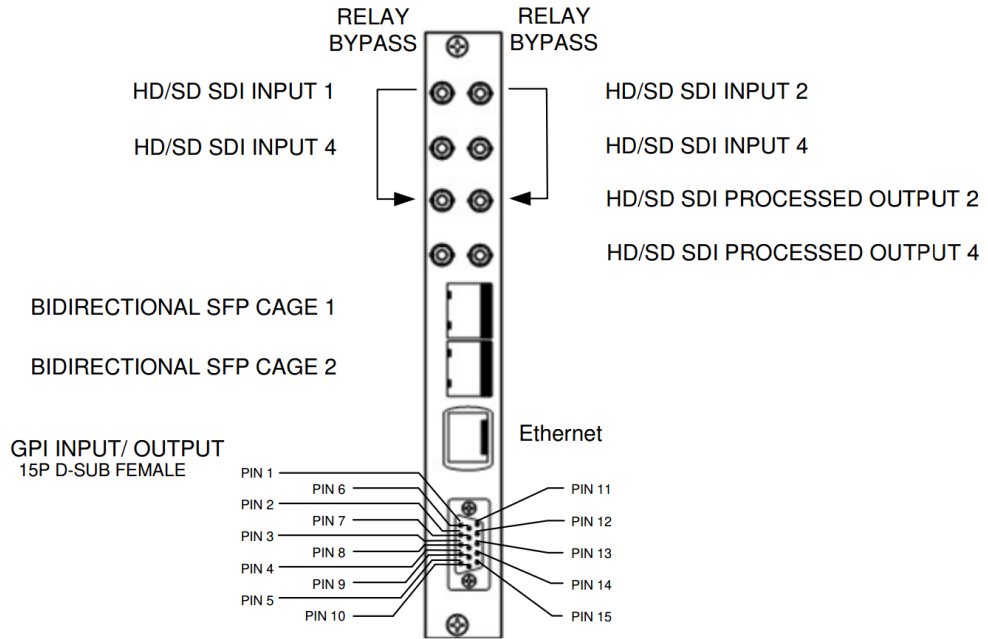


	HLD100 HLD120	SLD100/120 SLD200/220	HCS100 HCS120
BNC1	SD IN 1	SD IN 1	SD IN 1
BNC2	SD IN 2 (RELAYBYPASS)	SD IN 2 (RELAYBYPASS)	SD IN 2 (RELAYBYPASS)
BNC3	SD OUT 1	SD OUT 1	SD OUT 1
BNC4	SD OUT 2 (RELAYBYPASS)	SD OUT 2 (RELAYBYPASS)	SD OUT 2 (RELAYBYPASS)
15P D-SUB FEMALE			
PIN 1	RX2B(-)	RX2B(-)	RX2B(-)
PIN 2	TX2A(+)	TX2A(+)	TX2A(+)
PIN 3	GPI1	GPI1	GPI1
PIN 4	GPI3	GPI3	GPI3
PIN 5	GPI2	GPI2	GPI2
PIN 6	RX2A(+)	RX2A(+)	RX2A(+)
PIN 7	GND	GND	GND
PIN 8	LTC_n	LTC_n	LTC_n
PIN 9	GPI4	GPI4	GPI4
PIN 10	GPI7	GPI7	GPI7
PIN 11	TX2B(-)	TX2B(-)	TX2B(-)
PIN 12	LTC_p	LTC_p	LTC_p
PIN 13	GPI5	GPI5	GPI5
PIN 14	GPI8	GPI8	GPI8
PIN 15	GPI6	GPI6	GPI6



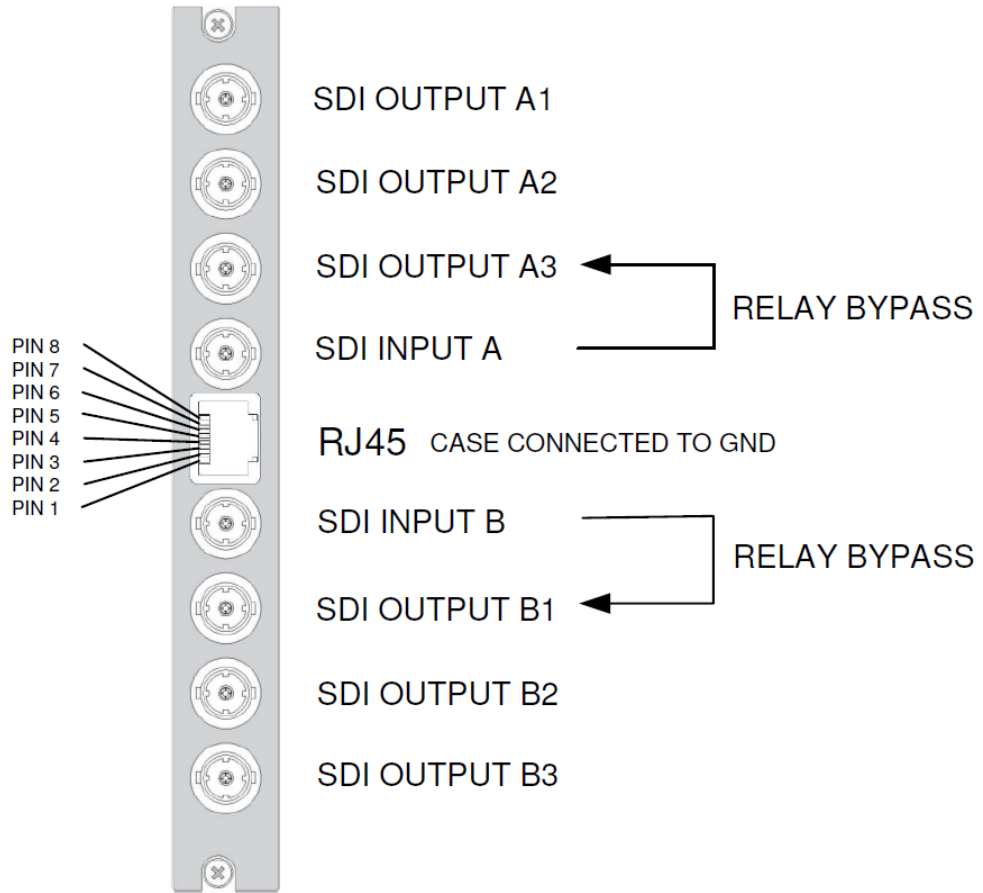
5.23. BHX32

NEW !



RJ45	GXG400/410	GMD100	U4T100/140	GXG500/510	UXU500/510
PIN 1	Metadata RX B	Metadata RX B	Metadata RX B	Metadata RX B	Metadata RX B
PIN 2	Metadata TX A	Metadata TX A	Metadata TX A	Metadata TX A	Metadata TX A
PIN 3	GPVO 0	GPVO 0	GPI 1	GPI 1	GPI 1
PIN 4	GPVO 1	GPVO 1	GPI 3	GPI 3	GPI 3
PIN 5	GPVO 2	GPVO 2	GPI 2	GPI 2	GPI 2
PIN 6	Metadata RX A	Metadata RX A	Metadata RX A	Metadata RX A	Metadata RX A
PIN 7	GND	GND	GND	GND	GND
PIN 8	LTC n	LTC n	LTC n	LTC n	LTC n
PIN 9	GPVO 3	GPVO 3	GPI 4	GPI 4	GPI 4
PIN 10	GPVO 6	GPVO 6	GPI 7	GPI 7	GPI 7
PIN 11	Metadata TX B	Metadata TX B	Metadata TX B	Metadata TX B	Metadata TX B
PIN 12	LTC p	LTC p	LTC p	LTC p	LTC p
PIN 13	GPVO 4	GPVO 4	GPI 5	GPI 5	GPI 5
PIN 14	GPVO 7	GPVO 7	GPI 8	GPI 8	GPI 8
PIN 15	GPVO 5	GPVO 5	GP 6	GP 6	GP 6

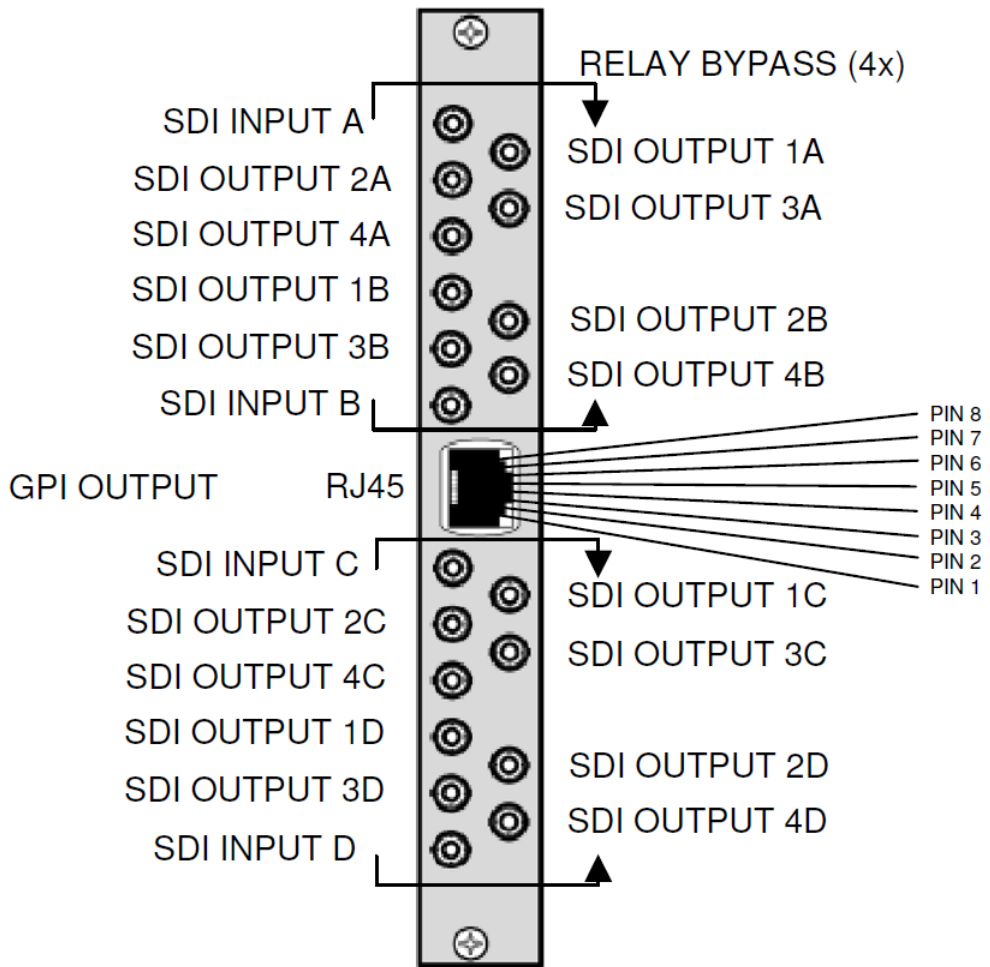
5.24. BHX42



GDR216	
RJ45	
PIN 1	GPIO1
PIN 2	GPIO2
PIN 3	GPIO3
PIN 4	GND
PIN 5	GPIO4
PIN 6	GPIO5
PIN 7	GPIO6
PIN 8	GPIO7

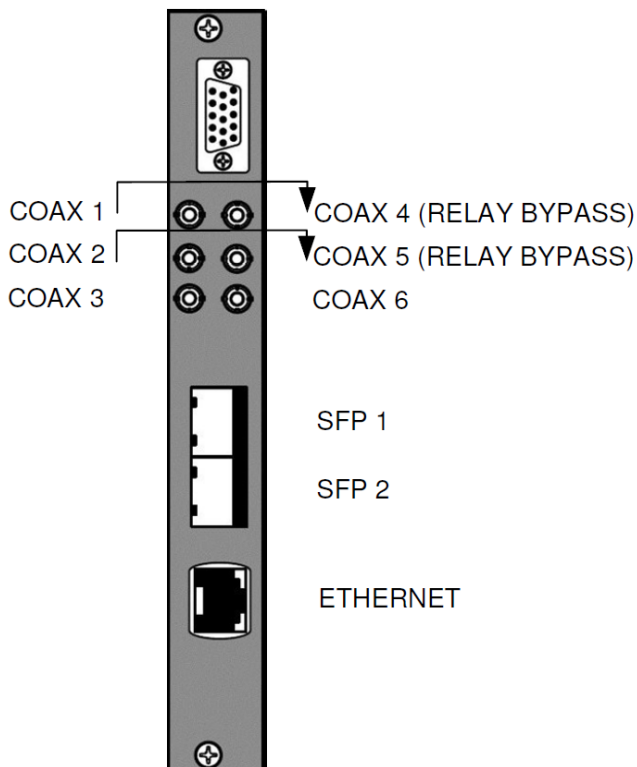


5.25. BHX43



GDR416	
RJ45	
PIN 1	SPO0 (INPUT A)
PIN 2	GPO1 (INPUT B)
PIN 3	GPO2 (INPUT C)
PIN 4	GND
PIN 5	GPO3 (INPUT D)
PIN 6	
PIN 7	
PIN 8	

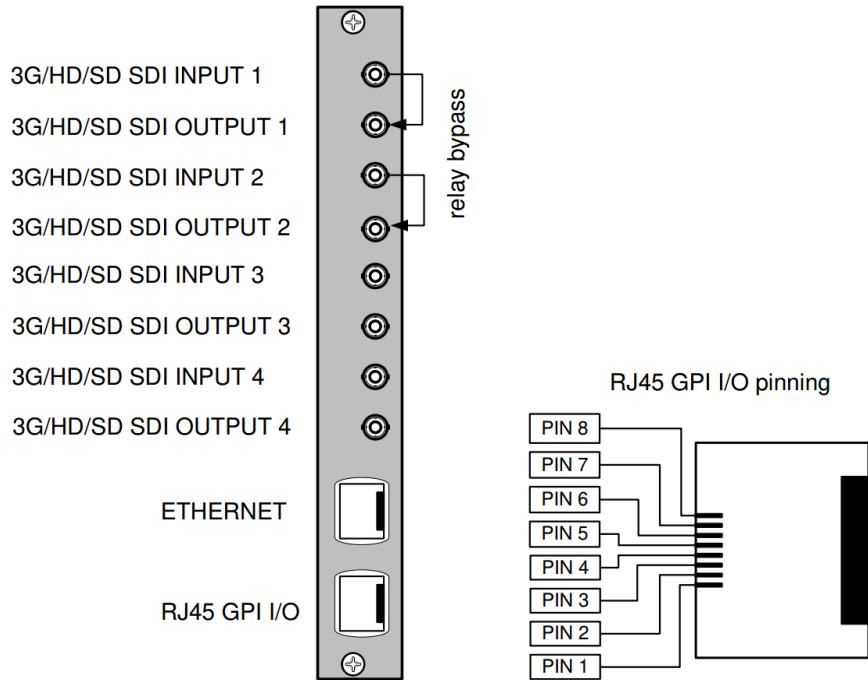
5.26. BHX45



GL1100		TSX20	TSX30
COAX1	SDI IN1	ASI/ DVB IN 1	ASI/ DVB IN 1
COAX2	NC	ASI/ DVB IN 2	ASI/ DVB IN 2
COAX3	SDI OUT3 (CLEAN)		ASI/ DVB IN 3
COAX4	SDI OUT 1	ASI/ DVB OUT 1	ASI/ DVB OUT 1
COAX5	SDI OUT 2	ASI/ DVB OUT 2	ASI/ DVB OUT 2
COAX6	SDI OUT 4 (PREVIEW)	ASI/ DVB OUT 3	ASI/ DVB OUT 3
ISPD-SUB FEMALE			
PIN 1	RX2B		
PIN 2	TX2A		
PIN 3	GP1/O1	GPO0	GPO0
PIN 4	GP1/O3	GPO2	GPO2
PIN 5	GP1/O2	GPO1	GPO1
PIN 6	RX2A		
PIN 7	GND	GND	GND
PIN 8	LTC-		
PIN 9	GP1/O4	GPO3	GPO3
PIN 10	GP1/O7	GPI6	GPI6
PIN 11	TX2B		
PIN 12	LTC+		
PIN 13	GP1/O5	GPO4	GPO4
PIN 14	GP1/O8	GPI7	GPI7
PIN 15	GP1/O6	GPO5	GPO5

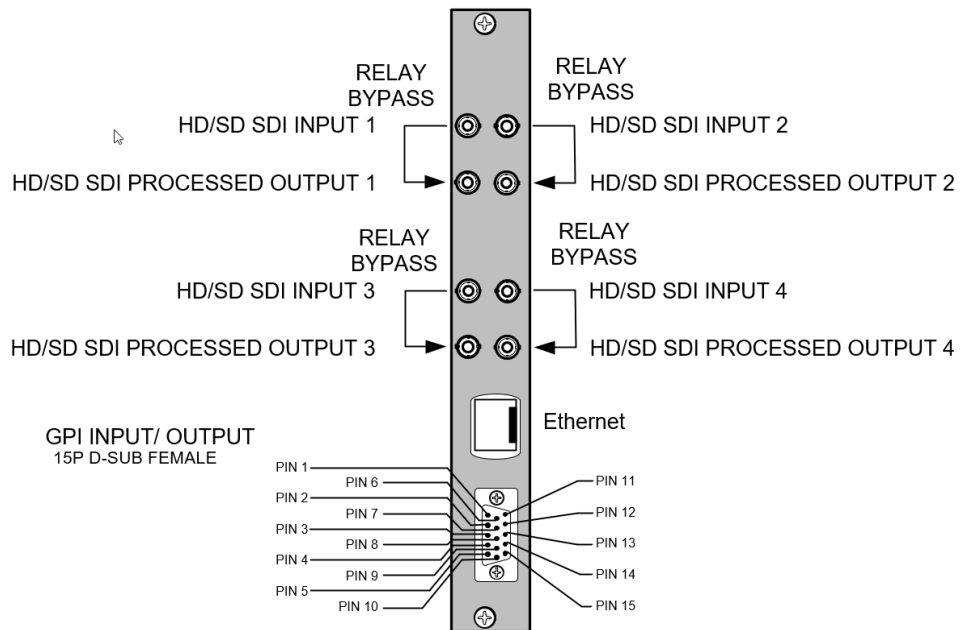


5.27. BHX46



GNS600	
RJ45 GP I/O	
PIN1	GPI input 0
PIN2	GPI input 1
PIN3	GPI input 2 or GPO output 0
PIN4	GPI input 3 or GPO output 1
PIN5	GPI input 4 or GPO output 2
PIN6	GPI input 5 or GPO output 3
PIN7	GPI input 6
PIN8	GND

5.28. BHX54

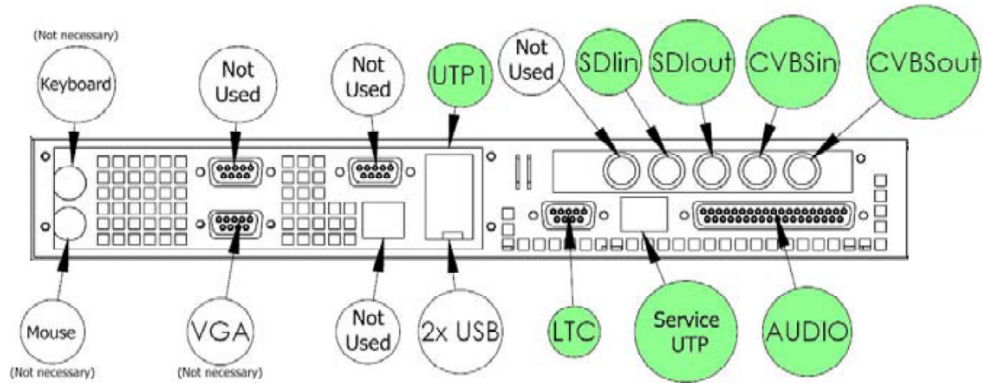


U4Txxx	
RJ45	
PIN 1	Metadata RX B
PIN 2	Metadata TX A
PIN 3	GPI/O 0
PIN 4	GPI/O 1
PIN 5	GPI/O 2
PIN 6	Metadata RX A
PIN 7	GND
PIN 8	LTC n
PIN 9	GPI/O 3
PIN 10	GPI/O 6
PIN 11	Metadata TX B
PIN 12	LTC p
PIN 13	GPI/O 4
PIN 14	GPI/O 7
PIN 15	GPI/O 5



6. TRACS Pin Description

6.1. TRACS2



Audio		LTC	
25P D-SUB FEMALE		9P D-SUB FEMALE	
PIN 1	AES_1_IN+	PIN 1	GND
PIN 2	GND	PIN 2	
PIN 3	AES_2_IN-	PIN 3	
PIN 4	AUDIO_1_IN+	PIN 4	
PIN 5	GND	PIN 5	
PIN 6	AUDIO_2_IN-	PIN 6	
PIN 7	AUDIO_3_IN+	PIN 7	LTC_IN+
PIN 8	GND	PIN 8	LTC_IN-
PIN 9	AUDIO_4_IN-	PIN 9	GND
PIN 10	Not connected		
PIN 11	AES_1_OUT-		
PIN 12	AES_2_OUT+		
PIN 13	GND		
PIN 14	AUDIO_1_OUT-		
PIN 15	AUDIO_2_OUT+		
PIN 16	GND		
PIN 17	AUDIO_3_OUT-		
PIN 18	AUDIO_4_OUT+		
PIN 19	GND		
PIN 20	AES_1_IN-		
PIN 21	AES_2_IN+		
PIN 22	GND		
PIN 23	AUDIO_1_IN-		
PIN 24	AUDIO_2_IN+		
PIN 25	GND		
PIN 26	AUDIO_3_IN-		
PIN 27	AUDIO_4_IN+		
PIN 28	GND		
PIN 29	AES_1_OUT+		
PIN 30	GND		
PIN 31	AES_2_OUT-		
PIN 32	AUDIO_1_OUT+		
PIN 33	GND		
PIN 34	AUDIO_2_OUT-		
PIN 35	AUDIO_3_OUT+		
PIN 36	GND		
PIN 37	AUDIO_4_OUT-		

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