Passive Breakout box

for Series 61 MOST Controllers

User Manual
(Translation of Original docu)
Document Version 1.2

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1 Concept of the Device

The Breakout box for 6161 provides on extra connectors access to the signals of the connected GOEPEL electronic hardware (PXI 6161 or basic MOST 6161). The signals might be different according to the connected device.

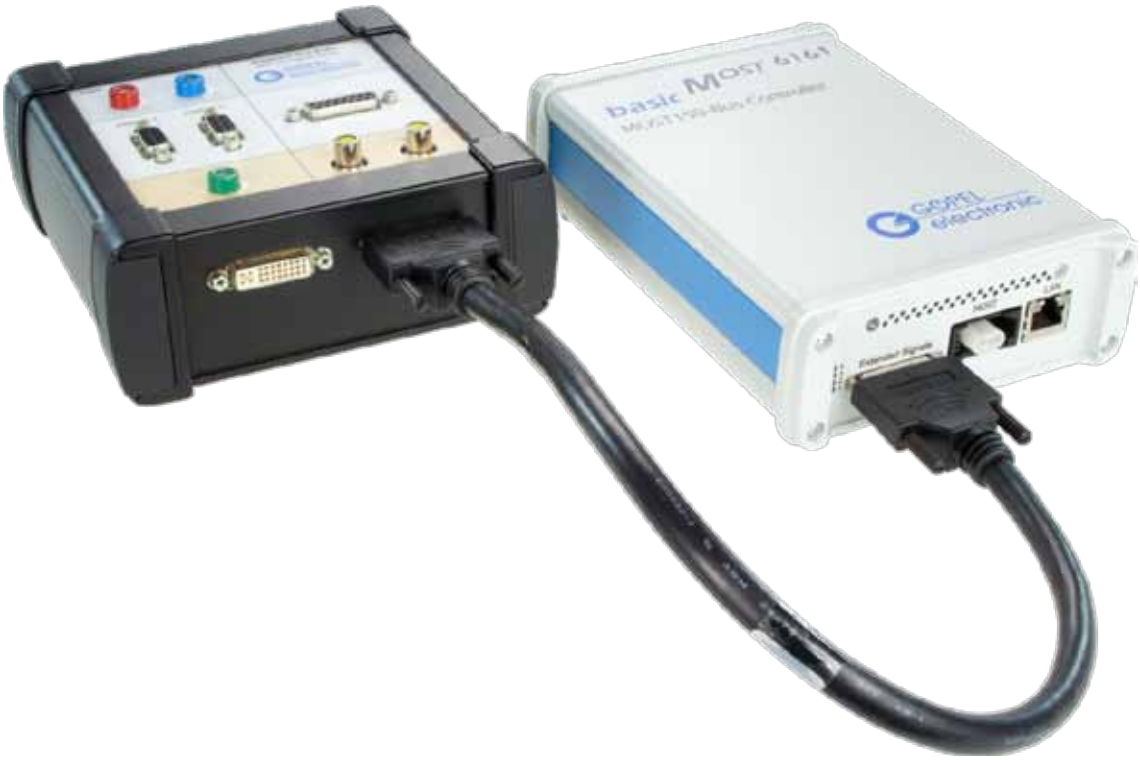

Figure 1-1: Breakout box for 6161 with a connected basic MOST 6161

The Breakout box for 6161 DOES NOT distribute MOST signals.

2 Connectors

On the top side of a Breakout box for 6161 there are the following components:

- Individual banana sockets U_{BAT} and GND_{ISO} to supply the voltage for the transceivers of the 6161 hardware as well as the reference voltage for the Ring break diagnosis
- Interface 1 and Interface 2
  Females for two communication interfaces
  (per female CAN/ LIN/ KLine possible)
- Digital IN/ OUT – female connector for digital signals
- ECL Individual banana socket for the control line of the Ring break diagnosis
- SPDIF IN Individual cinch socket, digital Audio Input
- SPDIF OUT Individual cinch socket, digital Audio Output

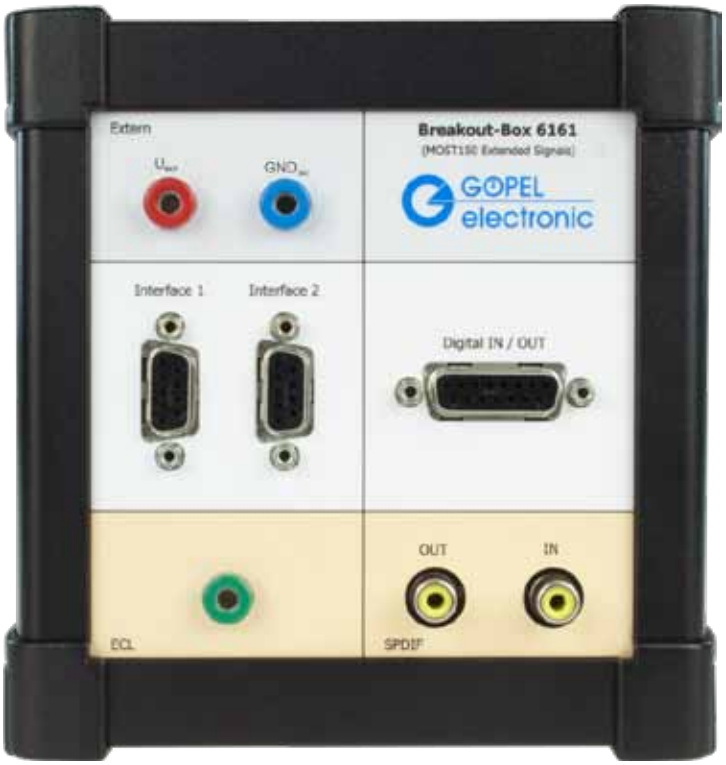

Figure 2-1: Top view

Frontal view:

- DVI connector (left)
- UUT Connector Central UUT connector (right)

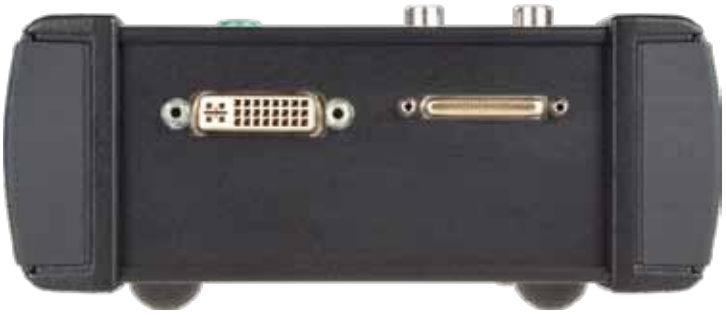

Figure 2-2: Frontal view

2.1 UUT Connector

On the pins of the central UUT Connector (frontal side, right) you find the same signals as on the Extended Signals connector of the GOEPEL electronic MOST150 hardware (in the same order).

Type: Samtec VRDPC-50-01-M-RA

Pin	*Signal*				*Pin*	*Signal*		
1	GND				26	GND		
2	**CAN1_H**	**LIN1**	**K Line1**		**27**	**CAN2_H**	**LIN2**	**K Line2**
3	**CAN1_L**		**L Line1**		**28**	**CAN2_L**		**L Line2**
4	GND				29	GND		
5	$UBAT_{externCAN1}$				30	$UBAT_{externCAN2}$		
6	GND_{ISO}				31	GND_{ISO}		
7	GND				32	GND		
8	DIGITAL_OUT1				33	DIGITAL_IN1		
9	DIGITAL_OUT2				34	DIGITAL_IN2		
10	GND				35	GND		
11	DIGITAL_OUT3				36	DIGITAL_IN3		
12	DIGITAL_OUT4				37	DIGITAL_IN4		
13	GND				38	GND		
14	**R**ing**B**reak**D**iagnosis				39	GND_{ISO}		
15	$UBAT_{externRBD}$				**40**	N.C. | **DVI.+5Vout**		
16	GND				41	*GND*		
17	N.C. | **S/PDIF in**				**42**	N.C. | **DVI.SDA**		
18	N.C. | **S/PDIF out**				**43**	N.C. | **DVI.SCL**		
19	*GND*				44	*GND*		
20	N.C. | **DVI.TX0_p**				**45**	N.C. | **DVI.TX2_p**		
21	N.C. | **DVI.TX0_n**				**46**	N.C. | **DVI.TX2_n**		
22	*GND*				47	*GND*		
23	N.C. | **DVI.TX1_p**				**48**	N.C. | **DVI.TXC_p**		
24	N.C. | **DVI.TX1_n**				**49**	N.C. | **DVI.TXC_n**		
25	GND				50	GND		

The pinout of the **Communication interfaces** depends on the plugged-in transceivers of the 6161 hardware, while the **Pins 17..24** and **40..49** remain empty (but not the GND pins) OR, if the AV Extension board Type 1 is mounted, have a Pinout to the table above (see also basic MOST 6161 or PXI 6161 Manual).

2.2 DVI Connector

Type: DVI/ RA female 24 poles (+5)

Pin	Signal	Remarks
1	**DVI.TX2_n**	
2	**DVI.TX2_p**	
3	GND	
4	empty	
5	empty	
6	**DVI.SCL**	
7	**DVI.SDA**	
8	empty	
9	**DVI.TX1_n**	
10	**DVI.TX1_p**	
11	GND	
12	empty	
13	frei	
14	**DVI.+5Vout**	
15	GND	
16	empty	
17	**DVI.TX0_n**	
18	**DVI.TX0_p**	
19	GND	
20	empty	
21	empty	
22	GND	
23	**DVI.TXC_p**	
24	**DVI.TXC_n**	

Die Analog pins of this female (front side right) are not used for the Breakout box for 6161.

2.3 Digital IN/ OUT Connector

Type: DSub 15 poles female

Pin	Signal	Remarks
1	DIGITAL_IN1	
2	DIGITAL_IN2	
3	DIGITAL_IN3	
4	DIGITAL_IN4	
5	DIGITAL_OUT1	
6	DIGITAL_OUT2	
7	DIGITAL_OUT3	
8	DIGITAL_OUT4	
9	GND_{ISO}	
10	GND_{ISO}	
11	GND_{ISO}	
12	empty	
13	U_{BAT}	
14	U_{BAT}	
15	U_{BAT}	

2.4 CAN/ LIN/ KLine Connectors

Interface 1

Type: DSub 9 poles female

Pin	Signal	Remarks
1	U_{BAT}	
2	**CAN1_L | - | L Line1**	Depends on 6161 Transceiver
3	GND_{ISO}	
4	empty	
5	empty	
6	GND_{ISO}	
7	**CAN1_H | LIN1 | K Line1**	Depends on 6161 Transceiver
8	empty	
9	empty	

Interface 2

Type: DSub 9 poles female

Pin	Signal	Remarks
1	U_{BAT}	
2	**CAN2_L | - | L Line2**	Depends on 6161 Transceiver
3	GND_{ISO}	
4	empty	
5	empty	
6	GND_{ISO}	
7	**CAN2_H | LIN2 | K Line2**	Depends on 6161 Transceiver
8	empty	
9	empty	

2.5 Individual Females

Female	Signal	Remarks
ECL	**R**ing**B**reak**D**iagnosis	Banana female 4 mm green RBD control line Reference potentials: U_{BAT} and GND_{ISO}
U_{BAT}	U_{BAT}	Banana female 4 mm red
GND_{ISO}	GND_{ISO}	Banana female 4 mm blue
SPDIF In_{inside}	**S/PDIF in**	Cinch female yellow Digital Audio input
SPDIF $In_{outside}$	GND	
SPDIF Out_{inside}	**S/PDIF out**	Cinch female yellow Digital Audio output
SPDIF $Out_{outside}$	GND	

The U_{BAT} voltage can be supplied via the U_{BAT} individual banana female or via the corresponding contacts of the Interfaces 1/ 2 or Digital IN/ OUT.

It is used for supplying the transceivers of the 6161 hardware and as reference potential fo the Ring break diagnosis.

3 Supply Note

To a Breakout box for 6161 belongs also the connection cable to the GOPEL electronic 6161 hardware.