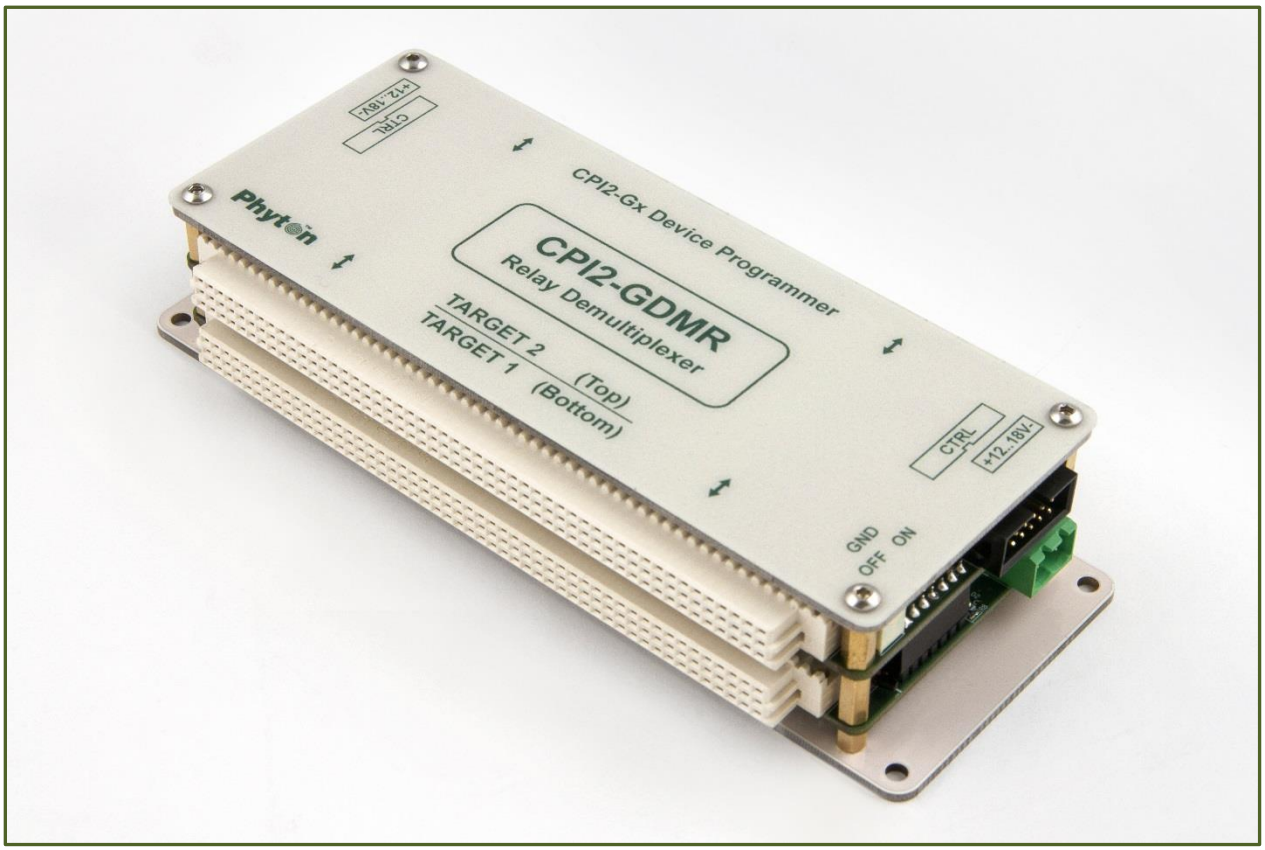
CPI2-GDMR Relay Demultiplexer

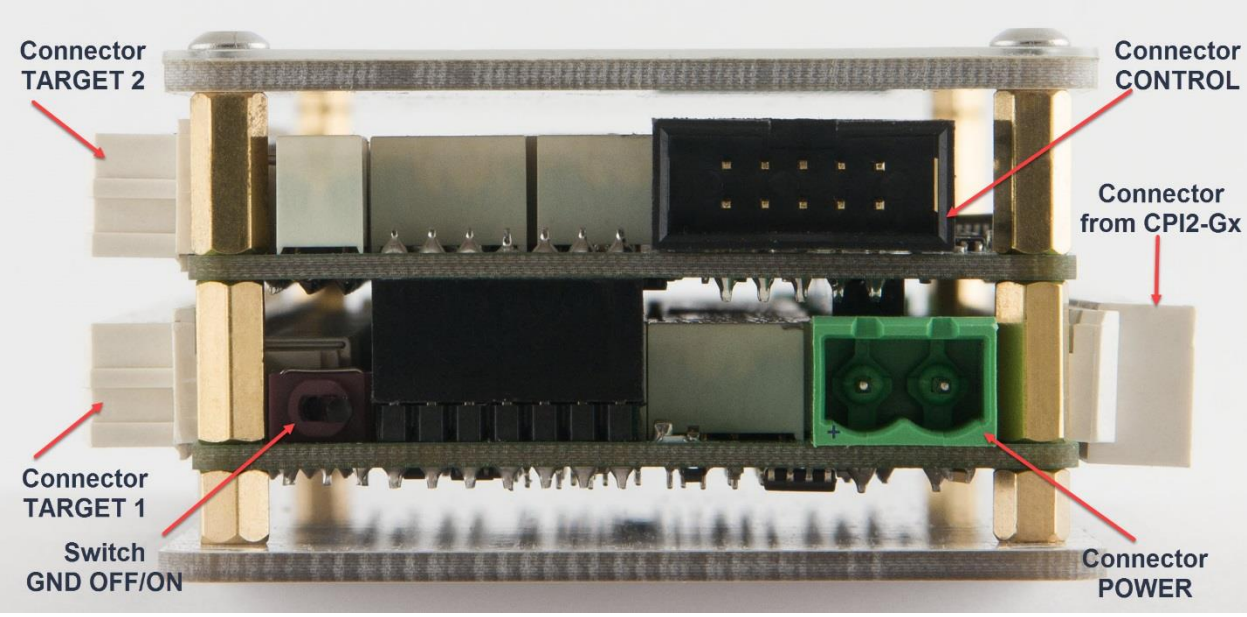
CPI2-GDMR relay demultiplexer shown on the picture below is used for:

a) doubling a number of CPI2-Gx' device programmer channels for sequential device programming and
b) disconnecting the device programmer from the target panel while it is under functional testing.

The demultiplexer uses miniature electromechanical relays for switching Digital IO signal lines (7 sites by 12 signals in each) plus GND (ground) lines (7 sites by 9 GND signals in each). Each programming site can be controlled individually.



A CPI2-GDMR unit should be powered from an external 12 to 18V@2A power supply. The unit has a couple of two-pin green power connectors to plug a cable or wires from the power adapter, which can be connected to either side, wherever it is more convenient. These connectors are located on both short end faces of the CPI2-GDMR unit. See the CPI2-GDMR side view below.

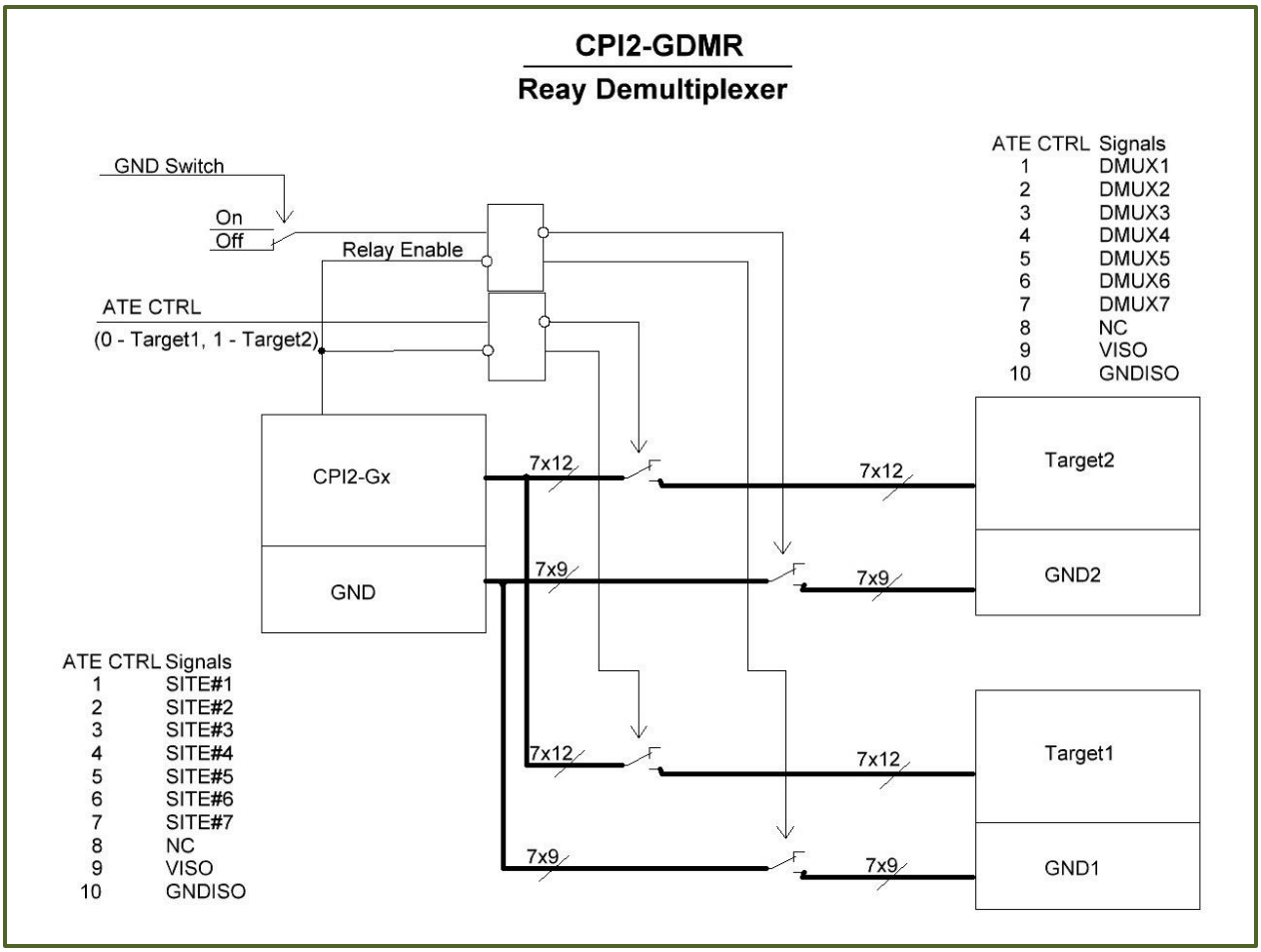


A CPI2-GDMR unit docs to female type **TARGET – channel A** or **TARGET – channel B** 150-pin DIN connectors installed on CPI2-Gx device programmers by a male type complimentary connector marked on the top label as **CPI2-Gx Device Programmer.** This connector locates on a long rear side of the CPI2-GDMR unit.

It is possible to dock two relay demultiplexers to both **A** and **B** channel connectors – in this case the total number of programming channels will be quadrupled. *[Note: CPI2-Gx device programmers belonging to the revision #1 with serial numbers GMV-1xxxxxx do not allow demultiplexing the **B** channel by CPI2-GDMR!].*

On an opposite, front site a CPI2-GDMR unit has a pair of female type 150-pin DIN connectors marked as **TARGET 1 (Bottom)** and **TARGET 2 (Top).** The demultiplexer toggles ISP lines between these two connectors but the signals come to the panels for short periods of time while the CPI2-Gx programs, reads or maintains other operations on the DUTs installed on the target panel. Most of the time relays keep the ISP lines disconnected from the programmer.

See the CPI2-GDMR flowchart below.



In the idle mode a CPI2-Gx gang device programmer keeps relays inside of the CPI2-GDMR unit inactive, so the ISP signals and ground lines coming from the CPI2-Gx device programmer remain disconnected from the target panel and ATE lines. In this mode the target panel remains disconnected from the programmer; most likely in this stage the panel is under functional testing. Only when the programmer operates on the target panel, i.e. it executes an **Auto Program** batch of command it issues the **Relay Enable** signal that switches relays on and connects ISP signals and ground lines to the target.

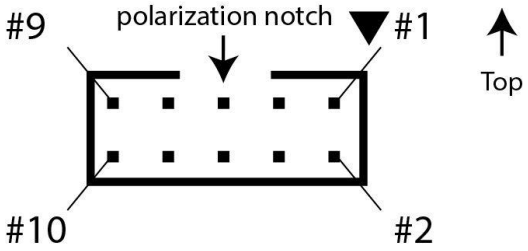
The demultiplexer enables two modes for switching ground lines between the programmer and target:

- **GND ON** - when the ground lines on the CPI2-Gx TARGET connector remain always connected to the ground circuit of the target, even while the relays disconnect ISP signals from the target panel;
- **GND OFF –** when the CPI2-Gx ground lines are disconnected synchronously with the ISP signals and remains disconnected between executing **Auto Program** batch of command.

Switching between the **GND ON** and **GND OFF** modes is controlled manually by a miniature switch located on one side of the unit and marked on the top of the CPI2-GTRB unit as **GND/ ON-OFF**.

Connector CONTROL

The signals that drive toggling between the **TARGET 1** and **TARGET 2** connectors come from the ATE to the 10-pin connector marked as **CTRL** on a top of the demultiplexer unit. This connector is located on one of the short end faces of the CPI2-GDMR unit. See the connector pinout below):



Here is the corresponding signal table:

CTRL pin#	Signal from ATE	Site# to control or description
1	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#1 or DMUX1
2	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#2 or DMUX2
3	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#3 or DMUX3
4	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#4 or DMUX4
5	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#5 or DMUX5
6	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#6 or DMUX6
7	If =0, switch to TARGET 1, if =1 – TARGET 2	Site#7 or DMUX7
8	Not used	Not used
9	VISO	Galvanically isolated voltage 5V
10	GNDISO	Galvanically isolated GND

Each programming site from #1 to #7 can be toggled between **TARGET 1** and **TARGET 2** connectors individually. To toggle all them synchronously by a single signal via a single wire it is necessary to join the control pins #1 to #7.

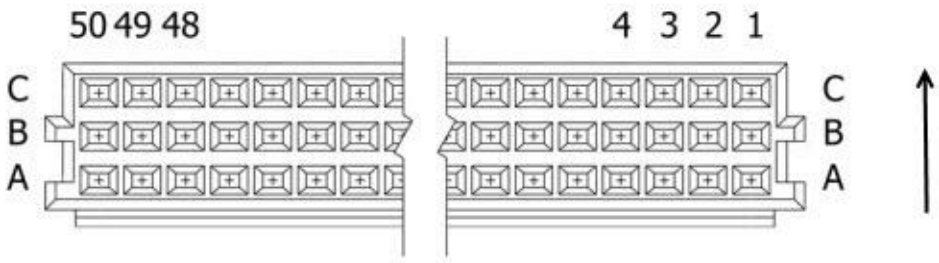
By default, these CTRL pins #1 to #7 are pulled down to log. 0. So, by default, when ATE does not generate any signals on the pin#1 ..7, the programmer is connected to the **TARGET 1**. Setting log. 1 on a certain CTRL pin toggle the site to the **TARGET 2.**

The **CTRL** connector outputs a galvanically isolated signal with the log. 1 level to the pin# 9 (VISO). This signal can be used for switching the programmer from the **TARGET 1** to **TARGET 2** by connecting the pin# 9 to an appropriate pin#1 ..7. If the pin# 9 is connected to all pins#1 to #7 then all programming sites will be switched to the **TARGET 2**.

Connecting the CPI2-Gx device programmer to either **TARGET 1** or **TARGET 2** is enabled *only* while the programmer conducts any programming operation (see the **Relay Enable** signal in the CPI2-GDMR flowchart). In between of the programming operations all the relays disconnect the programmer from the target. Therefore, stopping the programming session allows to provide the target panel functional testing or other manipulations without influence of the Phyton equipment.

Connectors TARGET

A CPI2-GDMR relay demultiplexer unit has three 150-pin connectors – an “input” one located on the side docking to a CPI2-Gx gang programmer and a pair of “output” connectors: **TARGET 1** and **TARGET 2** that connect target panel with DUTs. All three connectors are the same type 150-pin DIN connectors with the following pinout:



The matrix below shows ISP signal and GND pinouts of **TARGET - channel A** and **TARGET - channel B** “input” connectors on a side docking to a CPI2-Gx device programmer. Both connectors have identical pinouts.

TARGET - channel A

Pin #	Pin Name	Description	Pin #	Pin Name	Description	Pin #	Pin Name	Description
A1	1/PA1	Site1: digital IO pin1	**B1**	GND	**Ground**	**C1**	1/PA7	Site1: digital IO pin7
A2	1/PA2	Site1: digital IO pin2	**B2**	GND	**Ground**	**C2**	1/PA8	Site1: digital IO pin8
A3	1/PA3	Site1: digital IO pin3	**B3**	GND	**Ground**	**C3**	1/PA9	Site1: digital IO pin9
A4	1/PA4	Site1: digital IO pin4	**B4**	GND	**Ground**	**C4**	1/PA10	Site1: digital IO pin10
A5	1/PA5	Site1: digital IO pin5	**B5**	GND	**Ground**	**C5**	1/PA11	Site1: digital IO pin11
A6	1/PA6	Site1: digital IO pin6	**B6**	GND	**Ground**	**C6**	1/PA12	Site1: digital IO pin12
A7	**DNU**	**Reserved for Phyton use***	**B7**	GND	**Ground**	**C7**	**DNU**	**Reserved for Phyton use***
A8	2/PA1	Site2: digital IO pin1	**B8**	GND	**Ground**	**C8**	2/PA7	Site2: digital IO pin7
A9	2/PA2	Site2: digital IO pin2	**B9**	GND	**Ground**	**C9**	2/PA8	Site2: digital IO pin8
A10	2/PA3	Site2: digital IO pin3	**B10**	GND	**Ground**	**C10**	2/PA9	Site2: digital IO pin9
A11	2/PA4	Site2: digital IO pin4	**B11**	GND	**Ground**	**C11**	2/PA10	Site2: digital IO pin10
A12	2/PA5	Site2: digital IO pin5	**B12**	GND	**Ground**	**C12**	2/PA11	Site2: digital IO pin11
A13	2/PA6	Site2: digital IO pin6	**B13**	GND	**Ground**	**C13**	2/PA12	Site2: digital IO pin12
A14	**DNU**	**Reserved for Phyton use***	**B14**	GND	**Ground**	**C14**	**DNU**	**Reserved for Phyton use***
A15	3/PA1	Site3: digital IO pin1	**B15**	GND	**Ground**	**C15**	3/PA7	Site3: digital IO pin7
A16	3/PA2	Site3: digital IO pin2	**B16**	GND	**Ground**	**C16**	3/PA8	Site3: digital IO pin8
A17	3/PA3	Site3: digital IO pin3	**B17**	GND	**Ground**	**C17**	3/PA9	Site3: digital IO pin9
A18	3/PA4	Site3: digital IO pin4	**B18**	GND	**Ground**	**C18**	3/PA10	Site3: digital IO pin10
A19	3/PA5	Site3: digital IO pin5	**B19**	GND	**Ground**	**C19**	3/PA11	Site3: digital IO pin11
A20	3/PA6	Site3: digital IO pin6	**B20**	GND	**Ground**	**C20**	3/PA12	Site3: digital IO pin12
A21	**DNU**	**Reserved for Phyton use***	**B21**	GND	**Ground**	**C21**	**DNU**	**Reserved for Phyton use***
A22	GND	**Ground**	**B22**	GND	**Ground**	**C22**	GND	**Ground**

A23	4/PA1	Site4: digital IO pin1	**B23**	GND	**Ground**	**C23**	4/PA7	Site4: digital IO pin7
A24	4/PA2	Site4: digital IO pin2	**B24**	GND	**Ground**	**C24**	4/PA8	Site4: digital IO pin8
A25	4/PA3	Site4: digital IO pin3	**B25**	GND	**Ground**	**C25**	4/PA9	Site4: digital IO pin9
A26	4/PA4	Site4: digital IO pin4	**B26**	GND	**Ground**	**C26**	4/PA10	Site4: digital IO pin10
A27	4/PA5	Site4: digital IO pin5	**B27**	GND	**Ground**	**C27**	4/PA11	Site4: digital IO pin11
A28	4/PA6	Site4: digital IO pin6	**B28**	GND	**Ground**	**C28**	4/PA12	Site4: digital IO pin12
A29	**DNU**	**Reserved for Phyton use***	**B29**	GND	**Ground**	**C29**	**DNU**	**Reserved for Phyton use***
A30	**DNU**	**Reserved for Phyton use***	**B30**	GND	**Ground**	**C30**	**DNU**	**Reserved for Phyton use***
A31	5/PA1	Site5: digital IO pin1	**B31**	GND	**Ground**	**C31**	5/PA7	Site5: digital IO pin7
A32	5/PA2	Site5: digital IO pin2	**B32**	GND	**Ground**	**C32**	5/PA8	Site5: digital IO pin8
A33	5/PA3	Site5: digital IO pin3	**B33**	GND	**Ground**	**C33**	5/PA9	Site5: digital IO pin9
A34	5/PA4	Site5: digital IO pin4	**B34**	GND	**Ground**	**C34**	5/PA10	Site5: digital IO pin10
A35	5/PA5	Site5: digital IO pin5	**B35**	GND	**Ground**	**C35**	5/PA11	Site5: digital IO pin11
A36	5/PA6	Site5: digital IO pin6	**B36**	GND	**Ground**	**C36**	5/PA12	Site5: digital IO pin12
A37	**DNU**	**Reserved for Phyton use***	**B37**	GND	**Ground**	**C37**	**DNU**	**Reserved for Phyton use***
A38	6/PA1	Site6: digital IO pin1	**B38**	GND	**Ground**	**C38**	6/PA7	Site6: digital IO pin7
A39	6/PA2	Site6: digital IO pin2	**B39**	GND	**Ground**	**C39**	6/PA8	Site6: digital IO pin8
A40	6/PA3	Site6: digital IO pin3	**B40**	GND	**Ground**	**C40**	6/PA9	Site6: digital IO pin9
A41	6/PA4	Site6: digital IO pin4	**B41**	GND	**Ground**	**C41**	6/PA10	Site6: digital IO pin10
A42	6/PA5	Site6: digital IO pin5	**B42**	GND	**Ground**	**C42**	6/PA11	Site6: digital IO pin11
A43	6/PA6	Site6: digital IO pin6	**B43**	GND	**Ground**	**C43**	6/PA12	Site6: digital IO pin12
A44	**DNU**	**Reserved for Phyton use***	**B44**	GND	**Ground**	**C44**	**DNU**	**Reserved for Phyton use***
A45	7/PA1	Site7: digital IO pin1	**B45**	GND	**Ground**	**C45**	7/PA7	Site7: digital IO pin7
A46	7/PA2	Site7: digital IO pin2	**B46**	GND	**Ground**	**C46**	7/PA8	Site7: digital IO pin8
A47	7/PA3	Site7: digital IO pin3	**B47**	GND	**Ground**	**C47**	7/PA9	Site7: digital IO pin9
A48	7/PA4	Site7: digital IO pin4	**B48**	GND	**Ground**	**C48**	7/PA10	Site7: digital IO pin10
A49	7/PA5	Site7: digital IO pin5	**B49**	GND	**Ground**	**C49**	7/PA11	Site7: digital IO pin11
A50	7/PA6	Site7: digital IO pin6	**B50**	GND	**Ground**	**C50**	7/PA12	Site7: digital IO pin12

TARGET - channel B

Pin #	Pin Name	Description	Pin #	Pin Name	Description	Pin #	Pin Name	Description
A50	1/PB1	Site1: digital IO pin1	**B50**	GND	**Ground**	**C50**	1/PB7	Site1: digital IO pin7
A49	1/PB2	Site1: digital IO pin2	**B49**	GND	**Ground**	**C49**	1/PB8	Site1: digital IO pin8
A48	1/PB3	Site1: digital IO pin3	**B48**	GND	**Ground**	**C48**	1/PB9	Site1: digital IO pin9
A47	1/PB4	Site1: digital IO pin4	**B47**	GND	**Ground**	**C47**	1/PB10	Site1: digital IO pin10
A46	1/PB5	Site1: digital IO pin5	**B46**	GND	**Ground**	**C46**	1/PB11	Site1: digital IO pin11
A45	1/PB6	Site1: digital IO pin6	**B45**	GND	**Ground**	**C45**	1/PB12	Site1: digital IO pin12
A44	**DNU**	**Reserved for Phyton use***	**B44**	GND	**Ground**	**C44**	**DNU**	**Reserved for Phyton use***
A43	2/PB1	Site2: digital IO pin1	**B43**	GND	**Ground**	**C43**	2/PB7	Site2: digital IO pin7
A42	2/PB2	Site2: digital IO pin2	**B42**	GND	**Ground**	**C42**	2/PB8	Site2: digital IO pin8
A41	2/PB3	Site2: digital IO pin3	**B41**	GND	**Ground**	**C41**	2/PB9	Site2: digital IO pin9
A40	2/PB4	Site2: digital IO pin4	**B40**	GND	**Ground**	**C40**	2/PB10	Site2: digital IO pin10
A39	2/PB5	Site2: digital IO pin5	**B39**	GND	**Ground**	**C39**	2/PB11	Site2: digital IO pin11
A38	2/PB6	Site2: digital IO pin6	**B38**	GND	**Ground**	**C38**	2/PB12	Site2: digital IO pin12
A37	**DNU**	**Reserved for Phyton use***	**B37**	GND	**Ground**	**C37**	**DNU**	**Reserved for Phyton use***
A36	3/PB1	Site3: digital IO pin1	**B36**	GND	**Ground**	**C36**	3/PB7	Site3: digital IO pin7

A35	3/PB2	Site3: digital IO pin2	**B35**	GND	**Ground**	**C35**	3/PB8	Site3: digital IO pin8
A34	3/PB3	Site3: digital IO pin3	**B34**	GND	**Ground**	**C34**	3/PB9	Site3: digital IO pin9
A33	3/PB4	Site3: digital IO pin4	**B33**	GND	**Ground**	**C33**	3/PB10	Site3: digital IO pin10
A32	3/PB5	Site3: digital IO pin5	**B32**	GND	**Ground**	**C32**	3/PB11	Site3: digital IO pin11
A31	3/PB6	Site3: digital IO pin6	**B31**	GND	**Ground**	**C31**	3/PB12	Site3: digital IO pin12
A30	**DNU**	**Reserved for Phyton use***	**B30**	GND	**Ground**	**C30**	**DNU**	**Reserved for Phyton use***
A29	GND	**Ground**	**B29**	GND	**Ground**	**C29**	GND	**Ground**
A28	4/PB1	Site4: digital IO pin1	**B28**	GND	**Ground**	**C28**	4/PB7	Site4: digital IO pin7
A27	4/PB2	Site4: digital IO pin2	**B27**	GND	**Ground**	**C27**	4/PB8	Site4: digital IO pin8
A26	4/PB3	Site4: digital IO pin3	**B26**	GND	**Ground**	**C26**	4/PB9	Site4: digital IO pin9
A25	4/PB4	Site4: digital IO pin4	**B25**	GND	**Ground**	**C25**	4/PB10	Site4: digital IO pin10
A24	4/PB5	Site4: digital IO pin5	**B24**	GND	**Ground**	**C24**	4/PB11	Site4: digital IO pin11
A23	4/PB6	Site4: digital IO pin6	**B23**	GND	**Ground**	**C23**	4/PB12	Site4: digital IO pin12
A22	**DNU**	**Reserved for Phyton use***	**B22**	GND	**Ground**	**C22**	**DNU**	**Reserved for Phyton use***
A21	**DNU**	**Reserved for Phyton use***	**B21**	GND	**Ground**	**C21**	**DNU**	**Reserved for Phyton use***
A20	5/PB1	Site5: digital IO pin1	**B20**	GND	**Ground**	**C20**	5/PB7	Site5: digital IO pin7
A19	5/PB2	Site5: digital IO pin2	**B19**	GND	**Ground**	**C19**	5/PB8	Site5: digital IO pin8
A18	5/PB3	Site5: digital IO pin3	**B18**	GND	**Ground**	**C18**	5/PB9	Site5: digital IO pin9
A17	5/PB4	Site5: digital IO pin4	**B17**	GND	**Ground**	**C17**	5/PB10	Site5: digital IO pin10
A16	5/PB5	Site5: digital IO pin5	**B16**	GND	**Ground**	**C16**	5/PB11	Site5: digital IO pin11
A15	5/PB6	Site5: digital IO pin6	**B15**	GND	**Ground**	**C15**	5/PB12	Site5: digital IO pin12
A14	**DNU**	**Reserved for Phyton use***	**B14**	GND	**Ground**	**C14**	**DNU**	**Reserved for Phyton use***
A13	6/PB1	Site6: digital IO pin1	**B13**	GND	**Ground**	**C13**	6/PB7	Site6: digital IO pin7
A12	6/PB2	Site6: digital IO pin2	**B12**	GND	**Ground**	**C12**	6/PB8	Site6: digital IO pin8
A11	6/PB3	Site6: digital IO pin3	**B11**	GND	**Ground**	**C11**	6/PB9	Site6: digital IO pin9
A10	6/PB4	Site6: digital IO pin4	**B10**	GND	**Ground**	**C10**	6/PB10	Site6: digital IO pin10
A9	6/PB5	Site6: digital IO pin5	**B9**	GND	**Ground**	**C9**	6/PB11	Site6: digital IO pin11
A8	6/PB6	Site6: digital IO pin6	**B8**	GND	**Ground**	**C8**	6/PB12	Site6: digital IO pin12
A7	**DNU**	**Reserved for Phyton use***	**B7**	GND	**Ground**	**C7**	**DNU**	**Reserved for Phyton use***
A6	7/PB1	Site7: digital IO pin1	**B6**	GND	**Ground**	**C6**	7/PB7	Site7: digital IO pin7
A5	7/PB2	Site7: digital IO pin2	**B5**	GND	**Ground**	**C5**	7/PB8	Site7: digital IO pin8
A4	7/PB3	Site7: digital IO pin3	**B4**	GND	**Ground**	**C4**	7/PB9	Site7: digital IO pin9
A3	7/PB4	Site7: digital IO pin4	**B3**	GND	**Ground**	**C3**	7/PB10	Site7: digital IO pin10
A2	7/PB5	Site7: digital IO pin5	**B2**	GND	**Ground**	**C2**	7/PB11	Site7: digital IO pin11
A1	7/PB6	Site7: digital IO pin6	**B1**	GND	**Ground**	**C1**	7/PB12	Site7: digital IO pin12

The matrix below shows ISP signal and GND pinouts of **TARGET 1** and **TARGET 2** “output” connectors installed on a CPI2-GDMR relay demultiplexer unit. Both connectors have identical pinouts.

TARGET 1 and TARGET 2 output connectors

Pin #	Pin Name	Description	Pin #	Pin Name	Description	Pin #	Pin Name	Description
A1	1/PA1	Site1: digital IO pin1	**B1**	1/GND	**Site#1 Ground**	**C1**	1/PA7	Site1: digital IO pin7
A2	1/PA2	Site1: digital IO pin2	**B2**	1/GND	**Site#1 Ground**	**C2**	1/PA8	Site1: digital IO pin8
A3	1/PA3	Site1: digital IO pin3	**B3**	1/GND	**Site#1 Ground**	**C3**	1/PA9	Site1: digital IO pin9

A4	1/PA4	Site1: digital IO pin4	**B4**	1/GND	**Site#1 Ground**	**C4**	1/PA10	Site1: digital IO pin10
A5	1/PA5	Site1: digital IO pin5	**B5**	1/GND	**Site#1 Ground**	**C5**	1/PA11	Site1: digital IO pin11
A6	1/PA6	Site1: digital IO pin6	**B6**	1/GND	**Site#1 Ground**	**C6**	1/PA12	Site1: digital IO pin12
A7	**DNU**	**Reserved for Phyton use***	**B7**	1/GND	**Site#1 Ground**	**C7**	**DNU**	**Reserved for Phyton use***
A8	2/PA1	Site2: digital IO pin1	**B8**	2/GND	**Site#2 Ground**	**C8**	2/PA7	Site2: digital IO pin7
A9	2/PA2	Site2: digital IO pin2	**B9**	2/GND	**Site#2 Ground**	**C9**	2/PA8	Site2: digital IO pin8
A10	2/PA3	Site2: digital IO pin3	**B10**	2/GND	**Site#2 Ground**	**C10**	2/PA9	Site2: digital IO pin9
A11	2/PA4	Site2: digital IO pin4	**B11**	2/GND	**Site#2 Ground**	**C11**	2/PA10	Site2: digital IO pin10
A12	2/PA5	Site2: digital IO pin5	**B12**	2/GND	**Site#2 Ground**	**C12**	2/PA11	Site2: digital IO pin11
A13	2/PA6	Site2: digital IO pin6	**B13**	2/GND	**Site#2 Ground**	**C13**	2/PA12	Site2: digital IO pin12
A14	**DNU**	**Reserved for Phyton use***	**B14**	2/GND	**Site#2 Ground**	**C14**	**DNU**	**Reserved for Phyton use***
A15	3/PA1	Site3: digital IO pin1	**B15**	3/GND	**Site#3 Ground**	**C15**	3/PA7	Site3: digital IO pin7
A16	3/PA2	Site3: digital IO pin2	**B16**	3/GND	**Site#3 Ground**	**C16**	3/PA8	Site3: digital IO pin8
A17	3/PA3	Site3: digital IO pin3	**B17**	3/GND	**Site#3 Ground**	**C17**	3/PA9	Site3: digital IO pin9
A18	3/PA4	Site3: digital IO pin4	**B18**	3/GND	**Site#3 Ground**	**C18**	3/PA10	Site3: digital IO pin10
A19	3/PA5	Site3: digital IO pin5	**B19**	3/GND	**Site#3 Ground**	**C19**	3/PA11	Site3: digital IO pin11
A20	3/PA6	Site3: digital IO pin6	**B20**	3/GND	**Site#3 Ground**	**C20**	3/PA12	Site3: digital IO pin12
A21	**DNU**	**Reserved for Phyton use***	**B21**	3/GND	**Site#3 Ground**	**C21**	**DNU**	**Reserved for Phyton use***
A22	3/GND	**Site#3 Ground**	**B22**	3/GND	**Site#3 Ground**	**C22**	3/GND	**Site#3 Ground**
A23	4/PA1	Site4: digital IO pin1	**B23**	4/GND	**Site#4 Ground**	**C23**	4/PA7	Site4: digital IO pin7
A24	4/PA2	Site4: digital IO pin2	**B24**	4/GND	**Site#4 Ground**	**C24**	4/PA8	Site4: digital IO pin8
A25	4/PA3	Site4: digital IO pin3	**B25**	4/GND	**Site#4 Ground**	**C25**	4/PA9	Site4: digital IO pin9
A26	4/PA4	Site4: digital IO pin4	**B26**	4/GND	**Site#4 Ground**	**C26**	4/PA10	Site4: digital IO pin10
A27	4/PA5	Site4: digital IO pin5	**B27**	4/GND	**Site#4 Ground**	**C27**	4/PA11	Site4: digital IO pin11
A28	4/PA6	Site4: digital IO pin6	**B28**	4/GND	**Site#4 Ground**	**C28**	4/PA12	Site4: digital IO pin12
A29	**DNU**	**Reserved for Phyton use***	**B29**	4/GND	**Site#4 Ground**	**C29**	**DNU**	**Reserved for Phyton use***
A30	**DNU**	**Reserved for Phyton use***	**B30**	5/GND	**Site#5 Ground**	**C30**	**DNU**	**Reserved for Phyton use***
A31	5/PA1	Site5: digital IO pin1	**B31**	5/GND	**Site#5 Ground**	**C31**	5/PA7	Site5: digital IO pin7
A32	5/PA2	Site5: digital IO pin2	**B32**	5/GND	**Site#5 Ground**	**C32**	5/PA8	Site5: digital IO pin8
A33	5/PA3	Site5: digital IO pin3	**B33**	5/GND	**Site#5 Ground**	**C33**	5/PA9	Site5: digital IO pin9
A34	5/PA4	Site5: digital IO pin4	**B34**	5/GND	**Site#5 Ground**	**C34**	5/PA10	Site5: digital IO pin10
A35	5/PA5	Site5: digital IO pin5	**B35**	5/GND	**Site#5 Ground**	**C35**	5/PA11	Site5: digital IO pin11
A36	5/PA6	Site5: digital IO pin6	**B36**	5/GND	**Site#5 Ground**	**C36**	5/PA12	Site5: digital IO pin12
A37	**DNU**	**Reserved for Phyton use***	**B37**	6/GND	**Site#6 Ground**	**C37**	**DNU**	**Reserved for Phyton use***
A38	6/PA1	Site6: digital IO pin1	**B38**	6/GND	**Site#6 Ground**	**C38**	6/PA7	Site6: digital IO pin7
A39	6/PA2	Site6: digital IO pin2	**B39**	6/GND	**Site#6 Ground**	**C39**	6/PA8	Site6: digital IO pin8
A40	6/PA3	Site6: digital IO pin3	**B40**	6/GND	**Site#6 Ground**	**C40**	6/PA9	Site6: digital IO pin9
A41	6/PA4	Site6: digital IO pin4	**B41**	6/GND	**Site#6 Ground**	**C41**	6/PA10	Site6: digital IO pin10
A42	6/PA5	Site6: digital IO pin5	**B42**	6/GND	**Site#6 Ground**	**C42**	6/PA11	Site6: digital IO pin11
A43	6/PA6	Site6: digital IO pin6	**B43**	6/GND	**Site#6 Ground**	**C43**	6/PA12	Site6: digital IO pin12
A44	**DNU**	**Reserved for Phyton use***	**B44**	7/GND	**Site#7 Ground**	**C44**	**DNU**	**Reserved for Phyton use***
A45	7/PA1	Site7: digital IO pin1	**B45**	7/GND	**Site#7 Ground**	**C45**	7/PA7	Site7: digital IO pin7
A46	7/PA2	Site7: digital IO pin2	**B46**	7/GND	**Site#7 Ground**	**C46**	7/PA8	Site7: digital IO pin8
A47	7/PA3	Site7: digital IO pin3	**B47**	7/GND	**Site#7 Ground**	**C47**	7/PA9	Site7: digital IO pin9
A48	7/PA4	Site7: digital IO pin4	**B48**	7/GND	**Site#7 Ground**	**C48**	7/PA10	Site7: digital IO pin10
A49	7/PA5	Site7: digital IO pin5	**B49**	7/GND	**Site#7 Ground**	**C49**	7/PA11	Site7: digital IO pin11
A50	7/PA6	Site7: digital IO pin6	**B50**	7/GND	**Site#7 Ground**	**C50**	7/PA12	Site7: digital IO pin12

Where:

- Signals marked as **DNU - Reserved for Phyton use***, may not be used by CPI2-GDMR demultiplexer users. These connector pins should be left untouched.

- Site#/PAn and Site#/PBn (n=1...10) - logical signals formed by high-speed buffers that can output target-specific logic 0 or 1, Vcc or GND levels, according to the chosen target device type. The buffers are bidirectional, also serving as inputs when the programmer reads data.

- Site#/PAm and Site#/PBm (m=11 & 12) – signals formed by high speed mixed-signal circuits that can also output target-specific logic 0 or 1, Vpp or GND levels according to the type of the chosen target device. These lines can output Vcc with levels from 1.2 to 5.5V @ up to 350mA. The mixed-signal buffers are bidirectional, also serving as inputs when the <%CPN%> programmer reads data. In addition, these two signals can output Vpp voltage with levels from 1.5V to 15V @ up to 100mA.

In general, ISP signals and GND line map remains the same for the **TARGET 1** and **TARGET 2** connectors that replicate status of the device programmer depending on what **TARGET** is active: **1** or **2**. The major difference is that all GND lines on an output connector **TARGET** are galvanically connected while the GND lines on the **TARGET 1** and **TARGET 2** connectors are separated in seven groups (Site#1 Ground, Site#2 Ground, etc.) that allows to control each site from #1 to #7 individually.