



## PRODUCT OVERVIEW

D1U74T-12-CONC2.7K is an interface connector card that provides a convenient method to connect a Murata D1U74T-x-2700-12-HxxC-xx power supply module. Access points are provided for hardware and digital signals as well as DC power load connection, which simplifies operation.

The robust circuit board design makes this interface connector card suitable for continuous operation as an interposer or mid-plane function in a system. PMBus™ communications is supported with Murata PMBob™ USB to I2C Interface.

Compatible with D1U74T-W-3200-12-HxxC-xx series power module.

## INTRODUCTION

The [Top View and Feature Map](#) is provides location details for the headers, switches, jumpers, threaded studs provided to connect system loads and access and configure the power supply module.

- Threaded Studs are provided for the DC output power connections:
  - +12Vdc main output
  - Standby Output (Vsb.)
- Header, jumpers, and switches are provided for these signals and configuration settings:
 

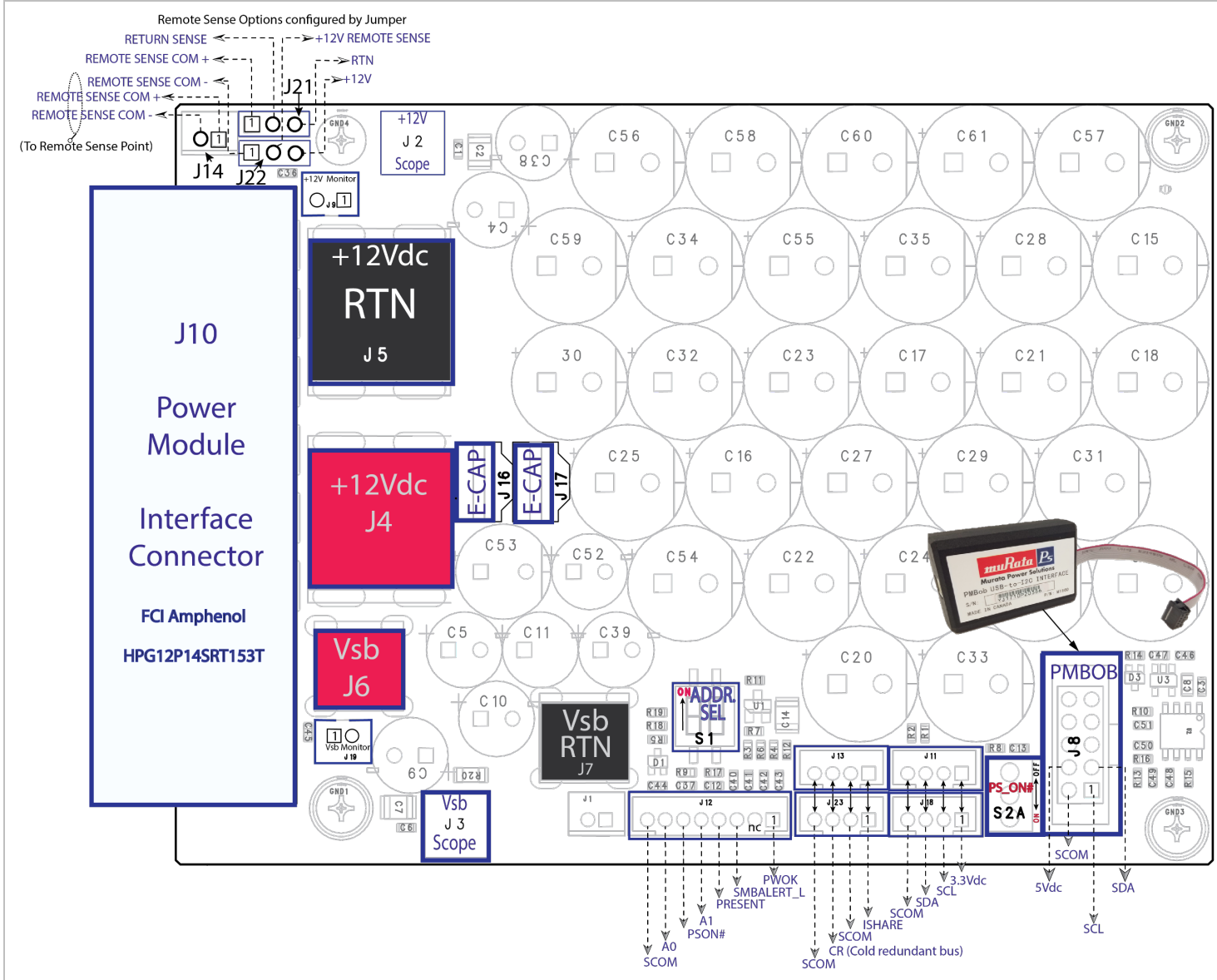
✓ REMOTE SENSE	✓ PRESENT	✓ CR	✓ SCL
✓ PWOK	✓ AO, A1	✓ ISHARE	✓ SDA
✓ SMBALERT_L	✓ PSON#	✓ PRESENT_L	✓
- PMBus serial communications access header readily accommodates Murata's PMBob I2C to USB adapter, [available separately](#)
- PMBus slave device slave device address: [DIP Switches](#) are provided to set the address.
- Output on/off control: A [toggle switch](#) is provided for PSON# main output on/off control.

## SAFETY PRECAUTION

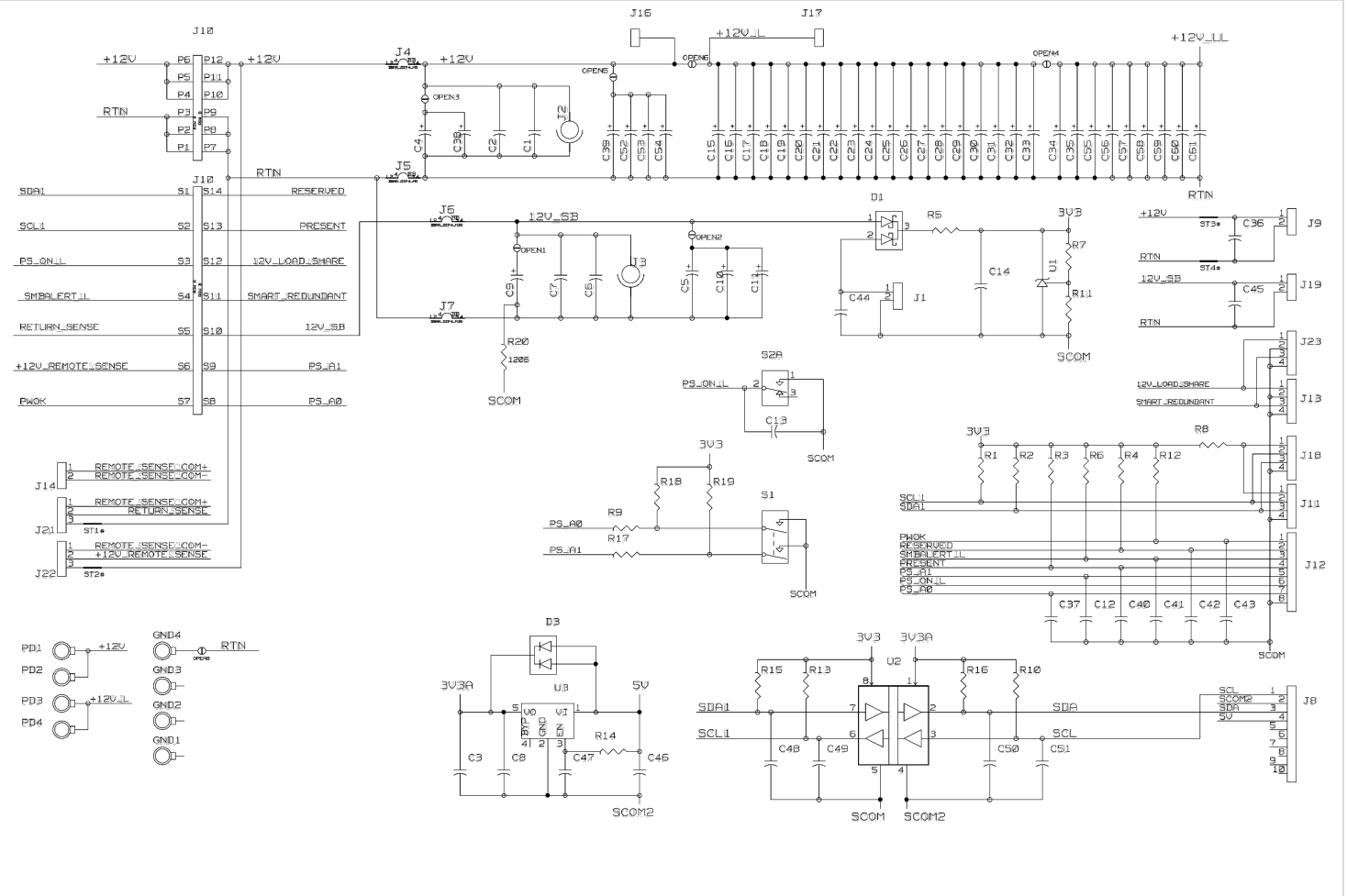


The D1U74T-12-CONC2.7K interface connector card and power supply module are components intended to be built into a safety enclosure (system/host). The installation of the interface connector card and power supply module must be verified and approved in the end system safety certification.

## TOP VIEW & FEATURE MAP



**SCHEMATIC**





1. This drawing is a graphical representation of the product and might not show all fine details.
2. Textures, screw head patterns, molded parts may appear different from this illustration. Contact Murata Power for 3D-model details.
3. Dimensions in mm.
4. Subject to change. Contact Murata Power for the latest version.

### POWER SUPPLY MODULE CONNECTOR CARD INTERFACE OVERVIEW



D1U74T-x-2700-12-HxxC-xx power supply module uses a card edge (“PCB Gold Fingers”) and is compatible with FCI/Amphenol HPG12P14SRT153T receptacle, provided on the interface connector board, “J10”.

### DC OUTPUT POWER CONNECTIONS

Location	Function	Details	Image
J4	+12Vdc output connection	M5x10 stud with nut provided	 qty 2
J5	+12Vdc RTN output connection <sup>1</sup>	M5x10 stud and nut provided	
J6	+VSB output connection	STUD M3.5x8 and nut provided	 qty 2
J7	VSB RTN output connection <sup>1</sup>	STUD M3.5x8 and nut provided	

<sup>1</sup>Both outputs share a common return “RTN.”

### SWITCHES

Location	Function	Function			Image
S2A	PSON#	Main output “+12Vdc” on/off control; Output on when set to “ON” position			
S1	PMBus Slave Address Device select	<b>Slave Address (hex)</b>	<b>A1 Switch state (Pos 1)</b>	<b>A0 Switch state (Pos 2)</b>	
		PSU $\mu$ P / EEPROM			
		0xB0	ON	ON	
		0xB2	ON	OFF	
		0xB4	OFF	ON	
		0xB6	OFF	OFF	

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## SIGNAL ACCESS HEADERS AND CONFIGURATION JUMPERS

### Remote Sense ("12VRS + & -")

**J21 & J22** are jumper headers provided to configure the remote sense signals of the power supply to either sense locally or remotely.

**Local Sense:**

Use this configuration when voltage drop compensation is not desired. This is the default configuration of many applications and places the sense point near the main power module interface connector point.

- Place a jumper between pin 2 and 3 of J21.
- Place a jumper between pin 2 and 3 of J22.

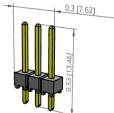


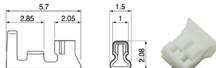
### Remote Sense:

Use this configuration to compensate for voltage drop due to load connection wiring.

- Place jumper between pin 1 and 2 of J21.
- Place jumper between pin 1 and 2 of J22.
- Connect J14 pin 1 to the external or “remote” +12Vdc load point and J14 pin 2 to the external or “remote” RTN load point.
- Connect the J14 pin 1 to the “+” remote<sup>1</sup> load connection and J14 pin 2 to the “-” remote<sup>1</sup> load connection.

<sup>1</sup> “Remote” refers to a load connection point that is located at the point of the actual load after the “interface connector card” to load wire connection and provides some degree of voltage compensation related to that connection/wiring voltage drop.



### J21, J22 MFG P/N details

<p>Header: SAMTEC: HTSW-103-14-T-S (or equivalent)</p>	
<p>Jumper: TE Connectivity Pt# 390088-2 or equivalent</p>	
<p><b>J14 MFG P/N details</b></p>	
<p>Header, JST: B2B-PH-K-S(LF)(SN)</p>	
<p>Mating Contact: JST SPH-002T-P0.5L (for 24-28AWG) Housing: JST PHR-2</p>	

### Output Voltage Monitor Points

J9 & J19: Can be used to monitor the main +12Vdc and Vsb output voltage respectively.

### J9 and J19 MFG P/N Details

Header: JST B2B-PH-K-S(LF)(SN) Pin 1: “+” Vdc, Pin 2: “RTN”	
Mating Contact: JST SPH-002T-P0.5L (for 24-28AWG) Housing: JST PHR-2	

### Maximum E-Cap connection Points

Jump J16 to J17 (Keystone 1287) to insert the maximum output capacitance across the +12Vdc main output.

### J16 and J17 MFG P/N Details


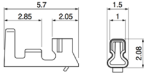

<p>0.25 " Quick Connect tab: Keystone 1287</p>	
<p>Mating Contact: Any 0.25" Female Quick connect tab</p>	

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**SIGNAL ACCESS CONNECTORS AND CONFIGURATION JUMPERS (continued)**

**Signal Connector J12**


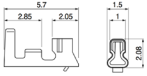

**J12** 8-position header provides access to the signals listed in the following table.

Pin#	Pin Function	PIN Identification "J12"
1	PWOK	Header: JST P/N: B8B-PH-K-S(LF)(SN)   Contact: JST P/N: SPH-002T-P0.5L (for 24-28AWG)   Housing: JST P/N: PHR-8 
2	No Connection (NC)	
3	SMBALERT_L	
4	PRESENT	
5	A1	
6	PSON#	
7	A0	
8	SCOM <sup>1</sup>	

<sup>1</sup>SCOM is connected to RTN within the connector interface card.

**Signal Connector J13 and J23**


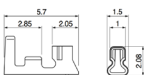

**J13 and J23** 4-position headers provide access to the signals listed in table to right. The pins of these two headers are connected together internally on the Connector Interface Card.

Pin#	Pin Function	PIN Identification "J12"
1	ISHARE	Header: B4B-PH-K-S(LF)(SN)   Contact: JST P/N: SPH-002T-P0.5L (for 24-28AWG)   Housing: JST P/N: PHR-4 
2	SCOM <sup>1</sup>	
3	CR	
4	SCOM <sup>1</sup>	

<sup>1</sup>SCOM is connected to RTN within the Connector Interface Card

**Signal Connector J11 and J18**

**J11 and J18** 4-position headers provide access to the signals listed in the following table. The pins of these two headers are connected together internally on the connector interface card.

Pin#	Pin Function	PIN Identification "J12"
1	3.3Vdc	Header: B4B-PH-K-S(LF)(SN)   Contact: JST P/N: SPH-002T-P0.5L (for 24-28AWG)   Housing: JST P/N: PHR-4 
2	SCL	
3	SDA	
4	SCOM <sup>1</sup>	

<sup>1</sup>SCOM is connected to RTN within the connector interface card.

**PMBob Connector**

**PMBob™** connector J8 interfaces with Murata PMBob™, a fully featured I2C bus master and USB to I2C Interface for a convenient method to communication via PMBus™ with the slave devices (PSU Secondary controller and FRU EEPROM). The control panel GUI provides convenience when status monitoring and specific PMBus read/write command tasks are required, contact Murata Power for additional details for the latest GUI.

**Scope Connections**

J2 and J3 are TE connectivity PN: 1-1337482-0 male coaxial SMB type connectors for ripple & noise measurements, and are intended for direct connection to an oscilloscope. Ensure the scope's 20Mhz bandwidth limit is enabled. This measurement node is filtered with a parallel connected 10μF and 100nF ceramic capacitors, across tip to ground points as shown in schematic. J2: +12V J3: Vsb.



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#### OPTIONAL ACCESSORIES

Description	Part Number
PMBob™ USB to I²C interface <sup>1</sup>	MS-PMBob

<sup>1</sup> Contact Murata Power for availability.

#### REFERENCED DOCUMENT LINKS

Document Number	Description	Link to Document
D1U74T-W-2700-12-HB4C	Product Datasheet	<a href="#">URL Link to Datasheet</a>

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ISO 9001 REGISTERED



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