



English

Camera Link Repeater

CL-R100

Product Specification
& Operation Manual

CIS Corporation

Table of Contents

1. Scope of Application.....	3
2. Notice.....	3
3. General Specifications.....	3
4. Durability.....	4
5. Connection Diagram.....	5
6. External Connector Pin Assignment.....	7
6.1. 12pins Circular Connector (HR10A-12PA).....	7
6.2. 26pins Compact Camera Link Connector.....	7
7. Switch Settings and Connector Pin Assignment.....	8
8. Initial Settings.....	9
9. External Dimensions: 999-387-00.....	10
10. Internal Board Dimensions: 720-500-01.....	10
11. Cases for Indemnity (Limited Warranty).....	11
12. Handling Precautions.....	12

1. Scope of Application

This is to describe CL-R100 (Camera Link Repeater).

All specifications contained herein are subject to change without prior notice.

Reproduction in whole or in part is prohibited.

2. Notice

The CL-R100 shall be used with CIS cameras, VCC-8x50 series, VCC-F32/G32 series, and VCC-F22/G22 series. CIS does not guarantee specifications of CL-R100 when it is used with other than those above.

3. General Specifications

Item	Specification	Remarks
Power consumption	1.0 W (Typ. 75mA at 72MCL operation)	
Power requirements	DC+12V ± 10% (Max voltage shall not to exceed 15V.)	
Operation environment	(Performance guaranteed) 0 ~ +40 with RH 20 ~ 80% (Operation guaranteed) -5 ~ +45 with RH20 ~ 80% Note: No condensation	
Storage environment	-25 ~ +60 with RH 20 ~ 80% Note: No condensation	
Mass	80g	
Dimension	Refer to the attached overall dimension drawing. (54mm × 29mm × 71.5mm)	

4. Durability

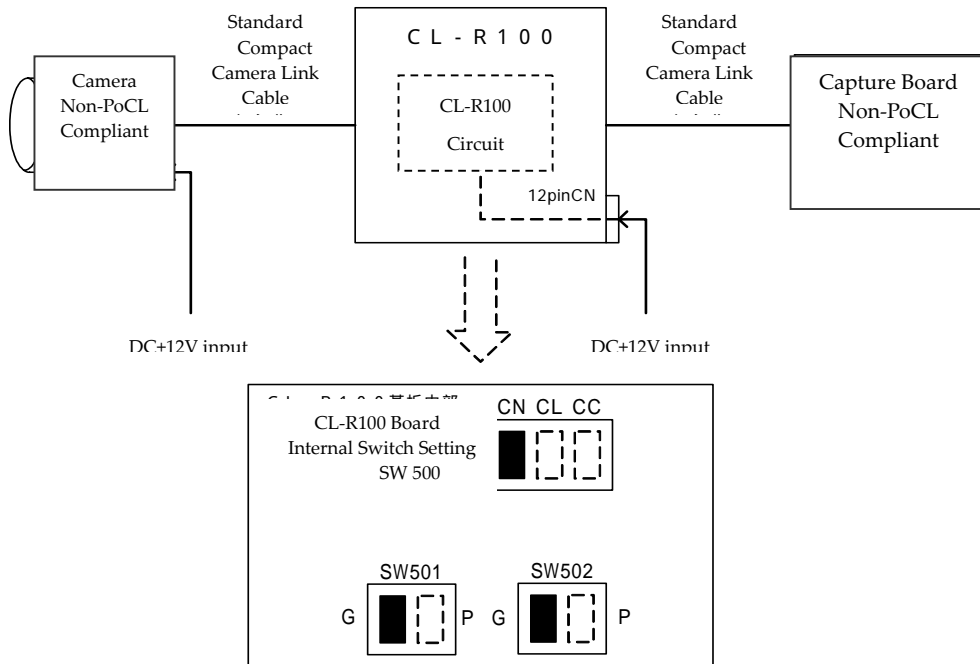
Item	Specification	Remarks
Vibration resistance	Acceleration $7.0m / s^2$ Vibration frequency $11 \sim 200 \text{ Hz}$ Sweep interval 300 sec Direction $X Y Z \quad 3 \text{ directions}$ Testing time $10 \text{ min for each direction}$ No malfunction shall occur after testing the above.	
Shock resistance	Acceleration $490m / s^2 \quad (50G)$ Directions 6 directions	Without package
Operation temperature	$-5 \sim +45$ with $RH20 \sim 80\%$ (No condensation) a) Leave the camera link repeater for 1 hour at the highest operation temperature (no condensation), turn on the power, and then the camera link repeater shall operate and meet specifications. b) Leave the camera link repeater for 1 hour at the lowest operation temperature (no condensation), turn on the power, and then the camera link repeater shall operate and meet specifications.	

5. Connection Diagram

CL-R100 is designed for PoCL (Power Transmission over Camera Link). There are three connection methods available for supplying power. Please refer to the following connection diagrams.

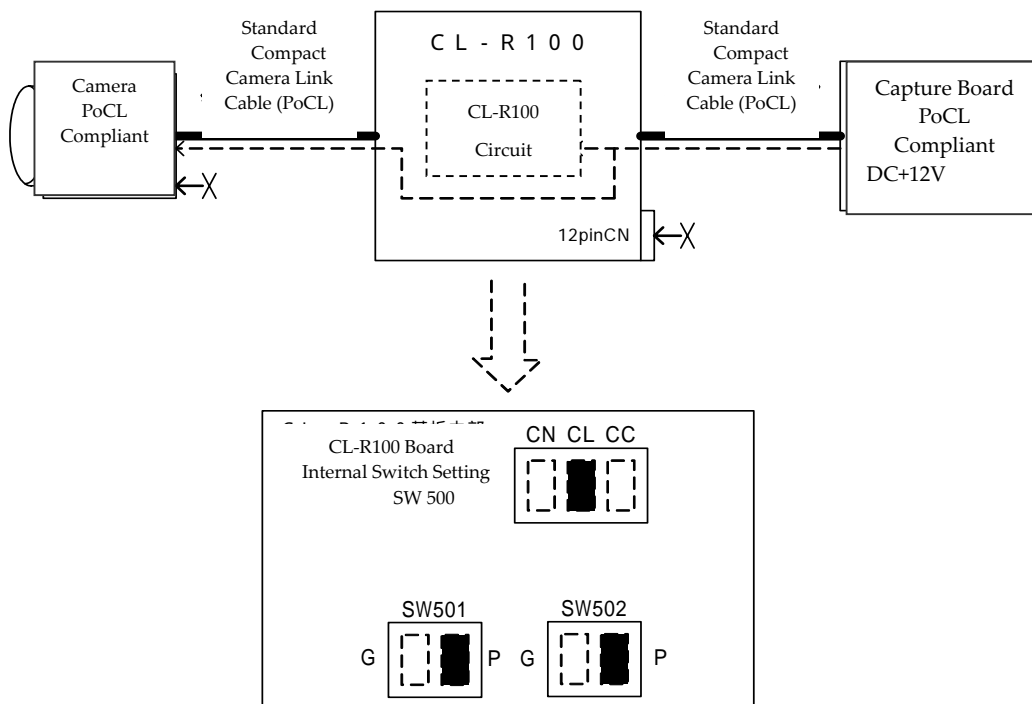
Connection Method 1.

Power is supplied only to the CL-R100 via 12pin connector of CL-R100 rear panel. (Initial setting)



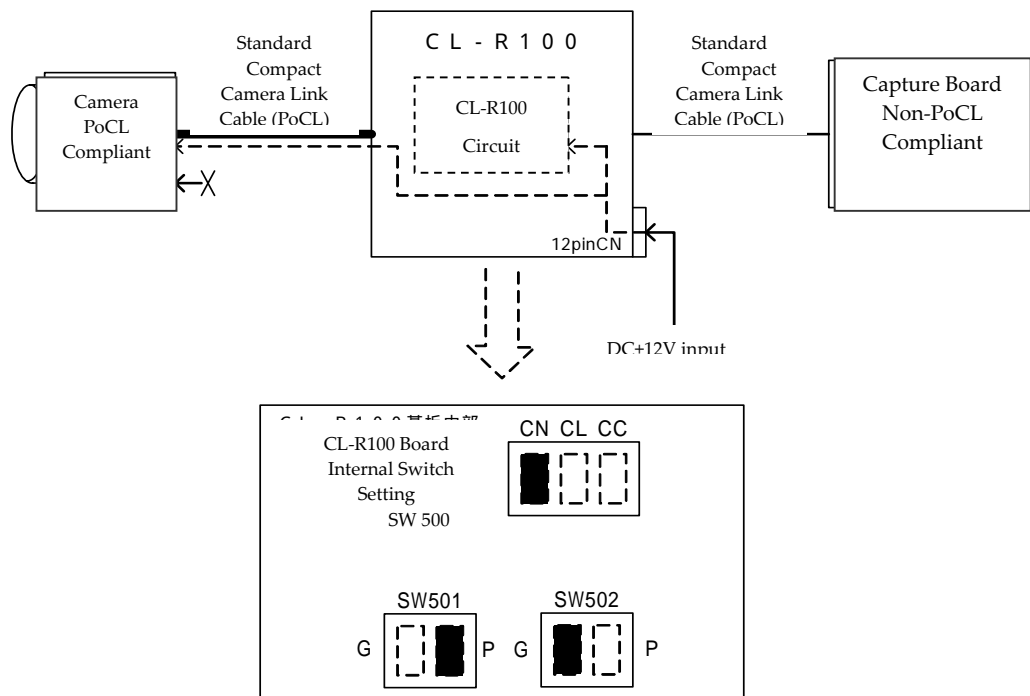
Connection Method 2.

Power is supplied to both CL-R100 and the camera via capture board.



Connection Method 3.

Power is supplied to both CL-R100 and the camera via 12pin connector of CL-R100 rear panel

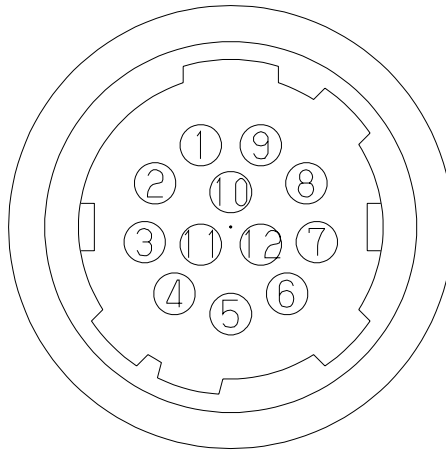


(Note) Be sure whether each of the camera, camera link cable, and capture board are PoCL-compliant or non-PoCL-compliant, before connecting. Improper connection may cause damages and/or irreparable malfunctions not only to CL-R100 but also to the connected devices. Also, please make sure to remove camera link cable and 12pin circular connector when changing internal board switch settings.

6. External Connector Pin Assignment

6.1. 12pins Circular Connector (HR10-10R-12PA) (73)

Pin No.	
1	GND
2	POWER IN DC +12V
3	NC
4	NC
5	GND
6	LVAL (HD)
7	FVAL (VD)
8	GND
9	NC
10	NC
11	TRG IN
12	GND



- The rear 12pins circular connector can be assigned to RS232-C.
- When CL-R100 is set to PoCL setting, the designation of No. 2 pin input shall be NC (open).

6.2. 26pins Compact Camera Link Connector

- Camera side : Standard (MDR connector) 10226-5212 PL (3M)
- Capture Board side : Compact (SDR connector) 12226-5100-00 PL (3M)

(1) Pin Assignment (When CL-R100 is set to standard setting)

Signal	Channel Link	Pin No.	Signal	Channel Link	Pin No.
GND		1	SerTFG +		8
GND		14	SerTFG -		21
X0-		2	CC1-		9
X0+		15	CC1+		22
X1-		3	CC2+		10
X1+		16	CC2-		23
X2-		4	CC3-		11
X2		17	CC3+		24
XCLK-		5	CC4+		12
XCLK+		18	CC4-		25
X3-		6	GND		13
X3		19	GND		26
SerTC+		7			
SerTC-		20			

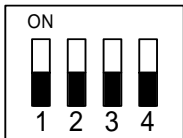
(2) Pin Assignment (When CL-R100 is set to PoCL setting)

Signal	Channel Link Pin No.	Signal	Channel Link Pin No.
+ 12V	1	SerTFG+	8
GND	14	SerTFG-	21
X0-	2	CC1-	9
X0+	15	CC1+	22
X1-	3	CC2+	10
X1+	16	CC2-	23
X2-	4	CC3-	11
X2	17	CC3+	24
XCLK-	5	CC4+	12
XCLK+	18	CC4-	25
X3-	6	GND	13
X3	19	+12V	26
SerTC+	7		
SerTC-	20		

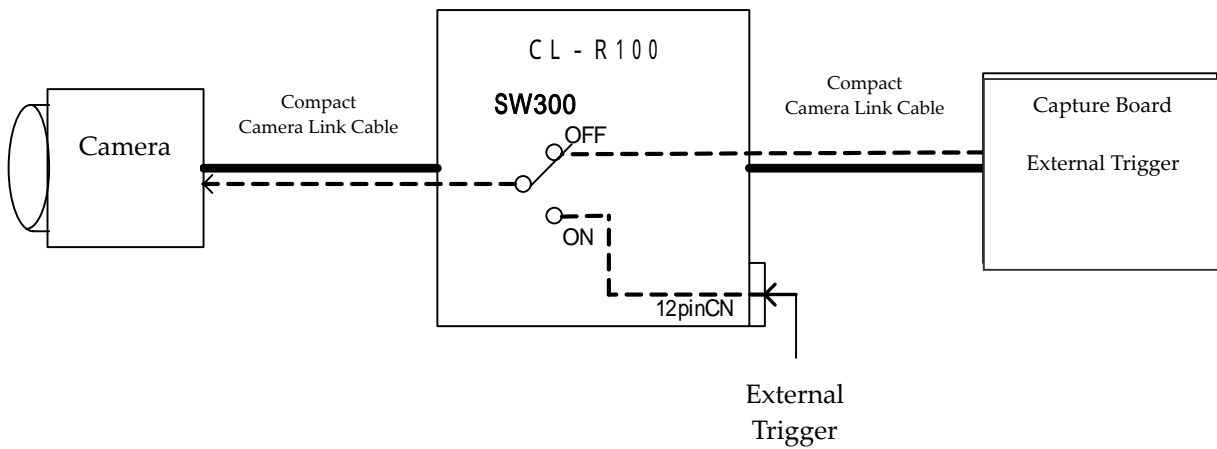
7. Switch Settings and Connector Pin Assignment

(1) External Trigger Input Switch

SW300

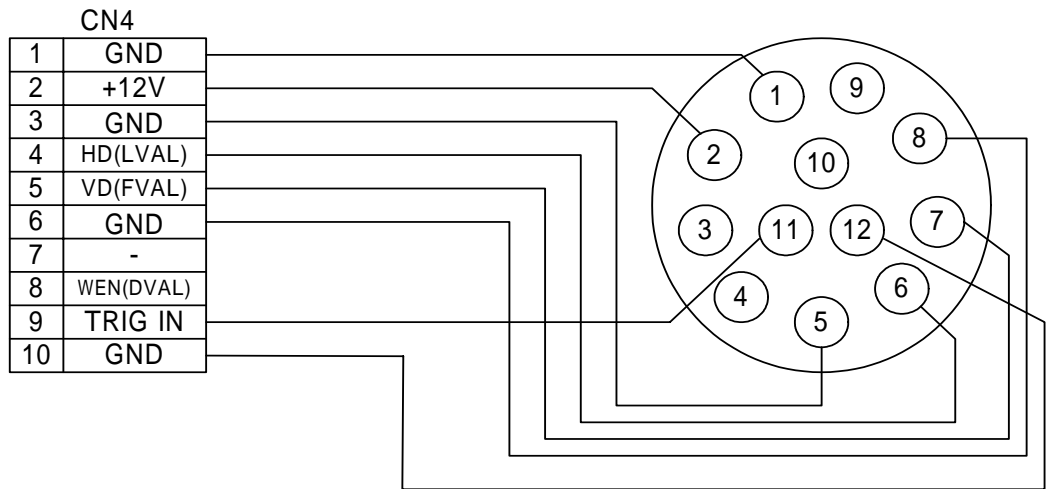


SW300-1: Trigger input switch OFF: Camera link connectors on capture board side (Initial Setting)
 ON: CL-R100 No.11 of 12pins circular connector input.



- SW300-2 ~ 4 : Not in use.

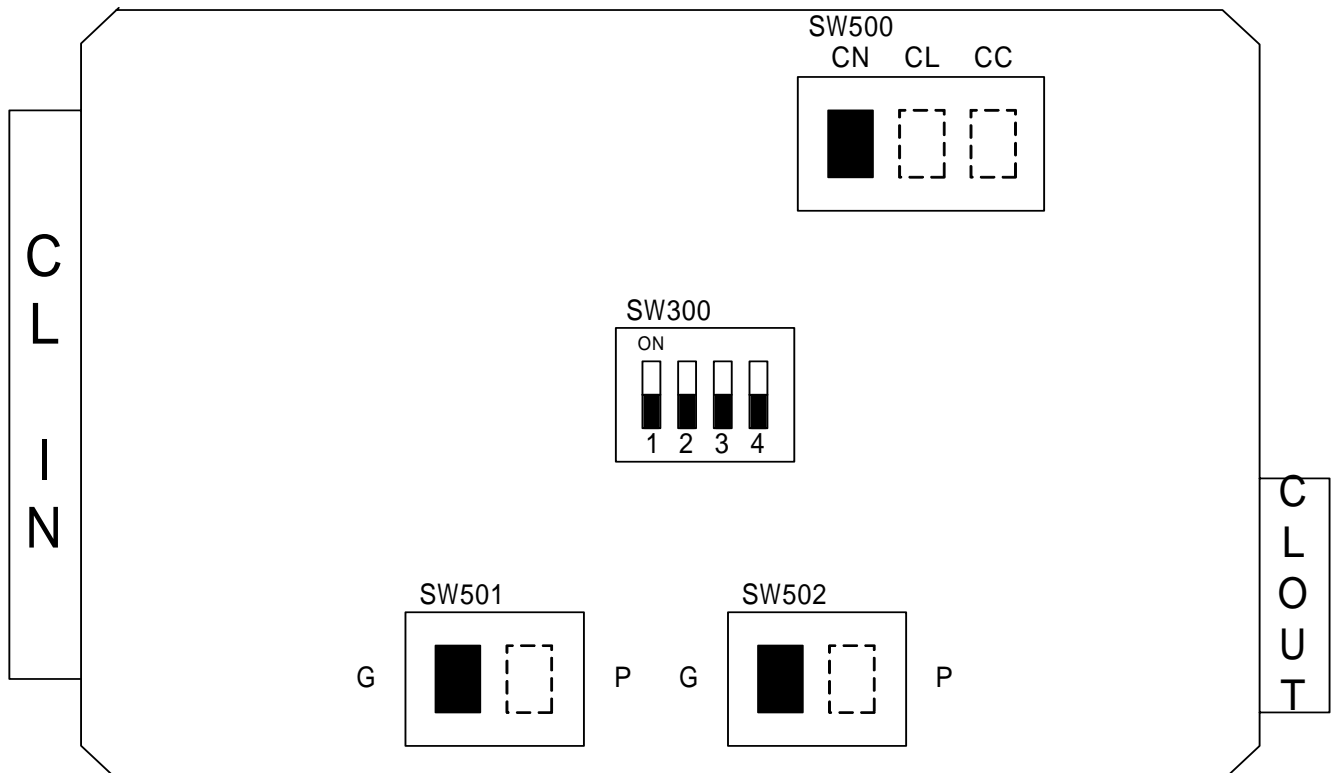
(2) 12pins circular connector pin assignment for internal board.



Wafer (53398-1090: MOLEX)
 Housing (51021-000: MOLEX)

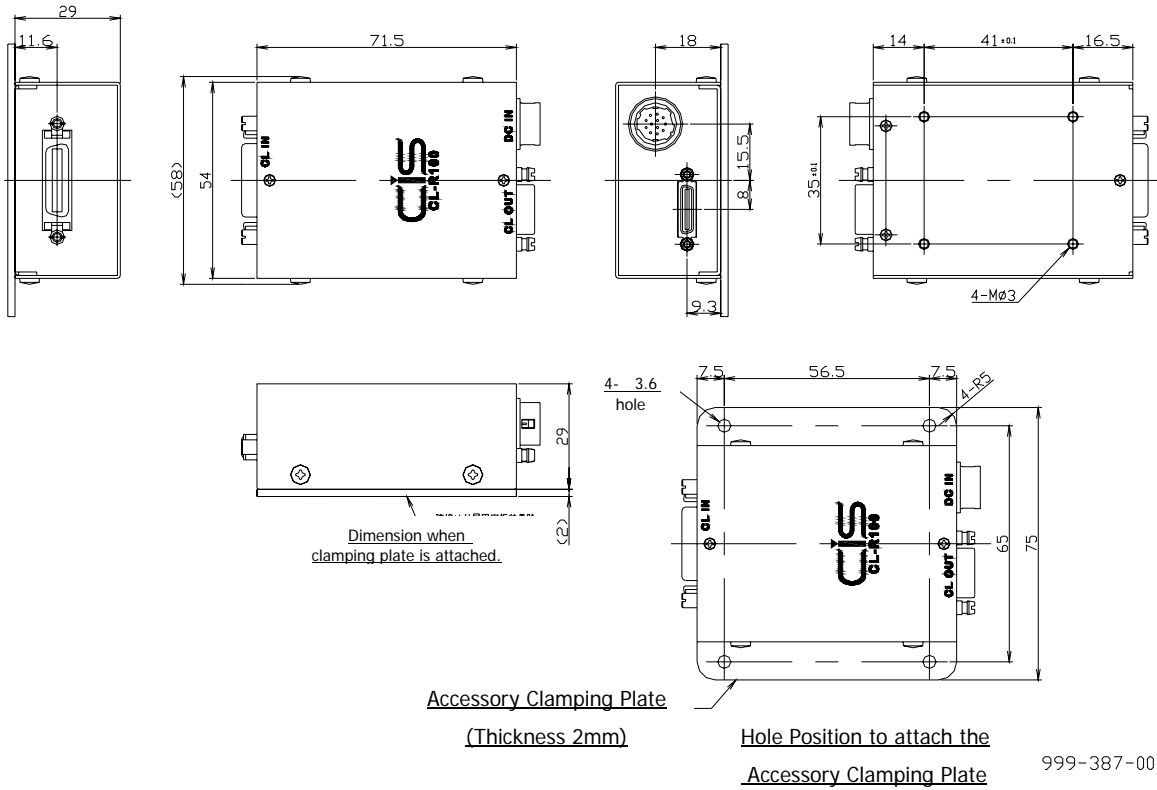
12pins Circular Connector
 (HR10-10R-12PA (73) : HIROSE)
 Receiving Side Connector
 (HR-10A-10P-12S (73) : HIROSE)

8. Initial Settings

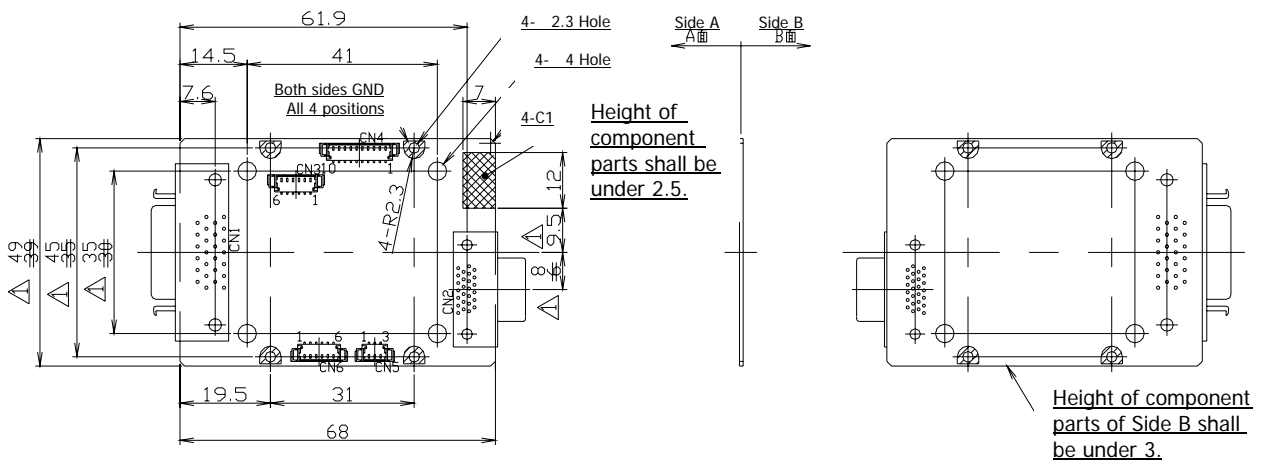


- Power supplied only to CL-R100 itself via 12pins rear connector.
- Trigger input: Use camera link connectors of capture board side. (CC1)

9. External Dimensions: 999-387-00



10. Internal Board Dimensions: 720-500-01



720-500-01-03

11. Cases for Indemnity (Limited Warranty)

We shall be exempted from taking responsibility and held harmless for damage or losses incurred by the user in the following cases.

- In case damage or losses are caused by fire, earthquake, or other acts of God, acts by third party, deliberate or accidental misuse by the user, or use under extreme operating conditions.
- In case indirect, additional, consequential damages (loss of business interests, suspension of business activities) are incurred as result of malfunction or non-function of the equipment, we shall be exempted from responsibility for such damages.
- In case damage or losses are caused by failure to observe the information contained in the instructions in this product specification & operation manual.
- In case damage or losses are caused by use contrary to the instructions in this product specification & operation manual.
- In case damage or losses are caused by malfunction or other problems resulting from use of equipment or software that is not specified.
- In case damage or losses are caused by repair or modification conducted by the customer or any unauthorized third party (such as an unauthorized service representative).
- Expenses we bear on this product shall be limited to the individual price of the product.

12. Handling Precautions

【Important】 Please observe all warnings and cautions stated below. Our warranty does not apply to damages or malfunctions caused by neglecting these precautions.

- Do not use or store the camera in the following extreme conditions:
 - Extremely dusty or humid places.
 - Extremely hot or cold places (operating temperature $-5 \sim +45$)
 - Close to generators of powerful electromagnetic radiation such as radio or TV transmitters.
 - Places subject to strong vibration.
- Do not apply excessive force or static electricity that could damage CL-R100.
- Do not apply excessive voltage. Use only the specified voltage. Unstable or improper power supply voltage may cause damages or malfunction.
- Be sure whether each of the camera, camera link cable, and capture board are PoCL-compliant or non-PoCL-compliant, before connecting. Improper connection may cause damages and/or irreparable malfunctions not only to CL-R100 but also to the connected devices. Also, please make sure to remove camera link cable and 12pin circular connector when changing internal switch settings.
- The CL-R100 shall be used with CIS cameras, VCC-8x50 series, VCC-F32/G32 series, and VCC-F22/G22 series. CIS does not guarantee specifications of CL-R100 when it is used with other than those above.
- In case of abnormal operation, contact the distributor from whom you purchased the product.