

RIO G4

RIO G4 INSTALLATION

The Pharos RIO G4 (Remote Gateway 4-Port Device) is an ancillary device that provides additional DMX/RDM output ports to a system. As such, it can not be used on its own but must have at least one controller present on an Ethernet network to function. The unit is designed to be permanently installed in a central control room/cupboard or DIN consumer unit for remote deployment.

The unit is 100% solid state and has been qualified to operate in a dry environment:

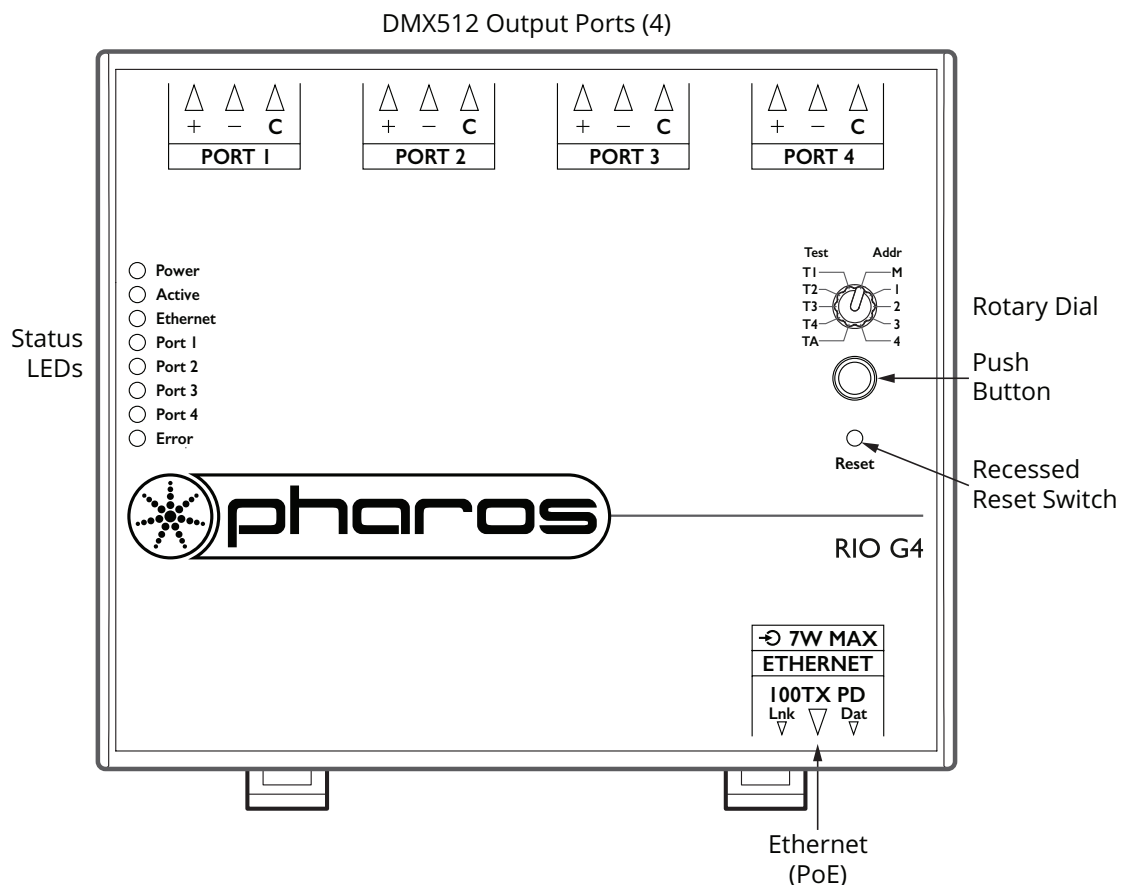
- Temperature range 0°C to 50°C (32°F to 122°F)
- Humidity 10-90% relative, non-condensing
- Ingress IP40

Sealed IP65 rated consumer units are available for outdoor use, please consult your Pharos distributor or representative.

NOTE: This equipment is not suitable for use in locations where children are likely to be present.

RIO G4 LAYOUT

The following drawing illustrates the layout of the gateway, refer to the following sections for details:



POWER SUPPLY

The RIO G4 is shipped without an external power supply.

- Power-over-Ethernet (PoE)

A standard (802.3af) Power-over-Ethernet switch should be used to provide both power and a network connection to the RIO G4 using a single cable.

Alternatively, if a PoE switch is not available, a compliant PoE midspan injector could be used.

The RIO G4 operates as a PoE Class 2 device (7W max).

STATUS LEDS

The red LEDs on the top of the RIO G4 indicate the unit's status:

- Power: Indicates that power has been applied.
- Active: Indicates that the unit is functional.
- Ethernet: Indicates Pharos related network activity (not network link, see Ethernet port later).
- Port 1-4: Indicates output on the corresponding data port.
- Error: Flashes to indicate an error condition.

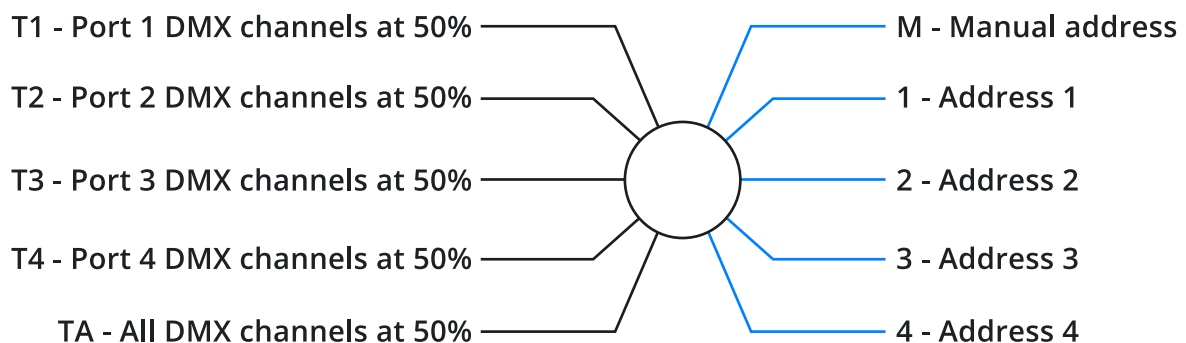
ERROR CODES

Additionally, the red status LEDs are used to indicate any boot failures of the RIO G4 that prevent the unit from operating. Error codes are displayed by a repeating pattern of flashing LEDs a number of times in succession, followed by a 1 second pause:

- 1 flash: Invalid firmware version (reset to factory default required).
- 2 flashes: Invalid device type or serial number.

The second error code indicates a hardware error; please consult your distributor, representative, or Pharos Support for assistance.

ROTARY DIAL AND PUSH BUTTON



- Test Modes

When the rotary dial is set to a test mode, all DMX channels on the corresponding port(s) are set to 50% intensity. Pressing and holding the button alternately increases or decreases output levels. Status LEDs indicate whether output level is increasing or decreasing.

- Addressing

Multiple RIO G4s may be used on a single network. Each RIO G4 is uniquely identified by its address setting. Address settings '1' to '4' directly set the RIO G4's address to the corresponding number. Up to 4 RIO G4s may be addressed in this way. For systems with more than 4 RIO G4s, the manual ('M') setting should be used to allow identification using the RIO G4's serial number rather than the address.

RESET SWITCH

RIO G4 may be reset by inserting a small blunt object into the reset hole on the front of the unit to depress the reset switch. Press to reboot; long hold for factory reset.

NOTE: The reset must not be operated during bootloader/firmware updates to the RIO G4 as corruption of the software may occur, perhaps even rendering the unit inoperable.

PORTS

- Ethernet (PoE)

A standard 100TX Ethernet connection must be made to RIO G4. The LEDs on the RJ45 jack itself are useful for debugging the Ethernet installation:

- The Lnk LED will illuminate when an Ethernet link has been established.
- The Dat LED will illuminate to indicate Ethernet traffic (not just Pharos-relevant).

- DMX Outputs

Four DMX output ports are provided.

The pins on these connectors are marked:

- + Data + ('Hot' or 'True')
- Data - ('Cold' or 'Complement')
- C Data common

To make up a cable to a 5 pin XLR the following connections should be made:

	LPC:	5 pin XLR:
Data +	+	3
Data -	-	2
Shield	↕	1

The DMX ports are individually isolated.

DMX & RDM GUIDELINES

RIO G4 is compatible with the DMX512, DMX512(1990), DMX512-A and RDM 1.0 standards and care should be taken to ensure that your cabling, wiring topology and termination also complies with these standards.

Such compliance is beyond the scope of this document but a good resource is "Recommended Practice in DMX 512" by Adam Bennette which is available through PLASA and USITT .

WARRANTY

Pharos Architectural Controls Limited (Pharos) products are warranted for a period of five (5) years from the original date of purchase against defective materials and workmanship.

This warranty is subject to the terms, conditions and exclusions available at www.pharoscontrols.com/legal