

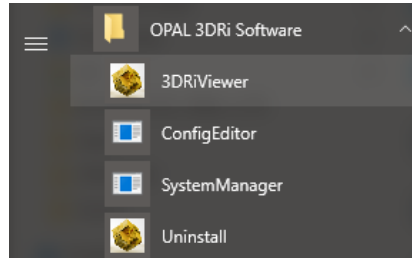
OPAL

QUICK START GUIDE

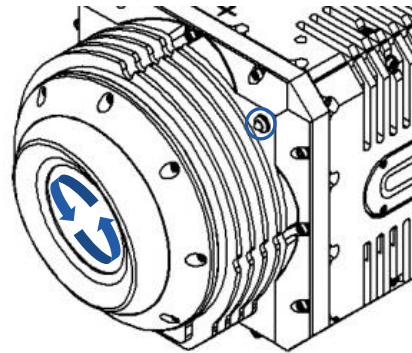


Operation

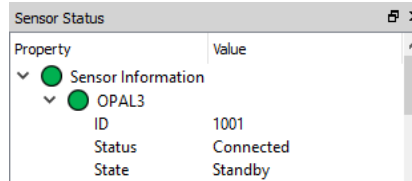
Install the OPAL 3DRi Software and Windows Redistributables found on the included USB flash drive. Refer to section 6.0 of the User Manual for additional information on sensor operation. Launch the 3DRiViewer.exe.



Provide power to the OPAL and wait 1-2 minutes for the sensor to boot. The LED's will illuminate and the prisms will rotate when ready.

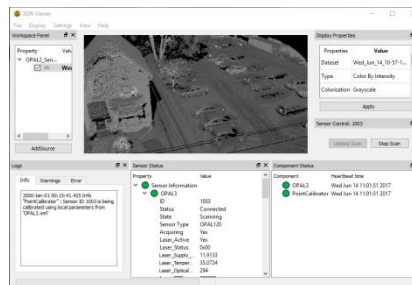


In the Sensor Status pane verify the Sensor Status reads Connected and the State is Standby.



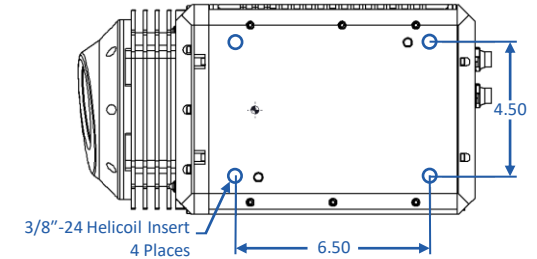
The OPAL is now ready to scan. Choose the desired scan parameters and select Start Scan in the Sensor Control pane. LiDAR data will now be displayed in the 3DRiViewer.

Note: If you cannot control the sensor verify that the TTL in the 3DRi_Viewer.xml is set to 1.



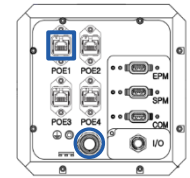
Hardware

The primary mounting method, utilizes four (4) 3/8"-24 locking threaded inserts located on the underside of the OPAL enclosure (see below). Mount the OPAL using SAE Grade 5 Bolts or better. Ensure that the four (4) 3/8"-24 fasteners are properly torqued to 259 in-lbs or 29 N-m. A mating mounting bracket is available, allowing rigid or adjustable angular positioning of the sensor. Refer to section 4.0 of the User Manual for additional information on installation.



Attach the supplied OPAL power cable to a power supply using the wire definitions in the table below. Power requirements are 18 – 36 volts with 110 W TYP; 220 W max.

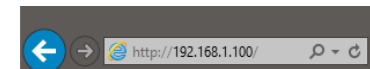
Signal	Wire
PWR +	Red
PWR –	Black
Chassis Ground	Blue



Firmly connect the provided Ethernet cable to the back of the unit (blue square in the diagram above) and your PC. Thread the power cable onto the OPAL power connector (blue circle in the diagram above).

Web Interface

The OPAL web interface is used to set sensor defaults (IP address, scan modes, etc.) and control the sensor. Refer to section 5.2 of the User Manual for further detail on the web interface's functionality. Once connected to the OPAL, enter the sensors IP address (default is **192.168.1.100**) into your web browser address bar.



The default login is user: **admin** password: **admin**



Note: If you cannot connect to the sensor with your web browser verify that your PC is on the same subnet as the OPAL. Set your Computers IP to 192.168.1.50 and subnet to 255.255.0.0.

Safety Guidelines

OPAL systems must be installed, operated and serviced by trained personnel. Personnel not trained or familiar with the operating characteristics of OPAL systems should not be allowed to operate the equipment.

- Warnings and Cautions in this guide must be observed.
- When installing, operating, testing, or decommissioning OPAL systems, always follow the national and local codes, standards and regulations.
- Operators and their representatives of the structure/vehicle on which the OPAL system is installed are responsible for observing all applicable safety regulations and rules.
- The User Manual (Neptec Document # 88-00101) must be made available to the operator of the structure/vehicle where the OPAL is installed and operating.
- Use of controls, adjustments, or procedures, other than those specified in the User Manual, may result in hazardous laser light exposure.
- Follow the installation sequence described in Section 4.4 of the User Manual when installing the external data and the external power harness. Always follow current safety regulations when performing electrical work.
- In the event of servicing, maintenance, or an emergency, remove power from the unit by disconnecting the DC power input connector located on the rear of the unit. The connector locks in place using a threaded locking mechanism; by rotating the connector in a counter-clockwise direction the connector will disconnect from the unit.
- The OPAL Sensor is Class 1 (eye safe) as per IEC 60825-1: 2007, i.e. complies with 21CFR1040.10. The laser beam is invisible to the human eye. No corrective maintenance is necessary to ensure compliance with laser Class 1.