

## Safety, Regulatory and Compliance Information

Safety, regulatory and compliance information for “Nodegrid Services Router” - NSR is described in this document.

### Safety and environmental guidelines for rack mounting the NSR

The following considerations should be taken into account when rack mounting the ZPE Systems NSR.

#### Temperature

The manufacturer's maximum recommended ambient temperature for the NSR is as follow:

| NSR power supply configuration  | Air Direction | Maximum Ambient Temperature |
|---|---------------|-----------------------------|
| Single AC power supply (NSR-XXXX-SAC)                                 | IN or OUT     | 122 °F (50 °C)              |
| Dual AC power supplies (NSR-XXXX-DAC)                                 | IN or OUT     | 122 °F (50 °C)              |
| Single DC power supply and single POE power supply (NSR-XXXX-SDC-POE) | IN or OUT     | 122 °F (50 °C)              |
| Single AC power supply and single POE power supply (NSR-XXXX-SAC-POE) | IN            | 122 °F (50 °C)              |
|   | OUT           | 104 °F (40 °C)              |
| Dual DC power supplies (NSR-XXXX-DDC)                                 | IN            | 122 °F (50 °C)              |
|   | OUT           | 104 °F (40 °C)              |

#### Elevated operating ambient temperature

If the NSR is installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer’s maximum rated ambient temperature. See above.

#### Reduced air flow

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

#### Mechanical loading

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

#### Circuit overloading

Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring.

Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

#### Reliable earthing

Reliable earthing of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit, such as power strips or extension cords.

### Safety precautions for operating the NSR

Please read all the following safety guidelines to protect yourself and your ZPE Systems NSR.

**WARNING:** Do not operate your ZPE Systems NSR with the cover removed.

**WARNING:** Shutdown NSR and remove all power cords before inserting/removing **expansion cards** on the unit.

**CAUTION:** To avoid shorting out your ZPE Systems NSR when disconnecting the network cable, first unplug the cable from the Host Server, unplug external power (if applicable) from the equipment and then unplug the cable from the network jack. When reconnecting a network cable to the back of the equipment, first plug the cable into the network jack and then into the host server equipment.

**CAUTION:** To help prevent electric shock, plug the ZPE Systems NSR into a properly grounded power source. The cable is equipped with a three-prong plug to help ensure proper grounding. Do not use adaptor plugs or remove the grounding prong from the cable. If you have to use an extension cable, use a three-wire cable with properly grounded plugs.

**CAUTION:** To help protect the ZPE Systems NSR from electrical power fluctuations, use a surge suppressor, line conditioner or uninterruptible power supply. Be sure that nothing rests on the cables of the NSR and that they are not located where they can be stepped on or tripped over. Do not spill food or liquids on NSR.

**CAUTION:** Do not push any objects through the openings of the ZPE Systems NSR. Doing so can cause fire or electric shock by shorting out interior components.

**CAUTION:** Keep your ZPE Systems NSR away from heat sources and do not block host's cooling vents.

**CAUTION:** The ZPE Systems NSR DC models are to be installed with a maximum 20A Listed circuit breaker or branch-rated fuse.

**CAUTION:** The ZPE Systems NSR DC-powered models are only intended to be installed in restricted access areas (dedicated equipment rooms, equipment closets or the like) in accordance with Articles 110-18, 110-26 and 110-27 of the National Electrical Code, ANSI/NFPA 701, 1999 Edition. Use 18 AWG or 0.75 mm<sup>2</sup> or above cable to connect the DC configured unit to the Centralized D.C. Power Systems. Install the required double-pole, single-throw, DC rated UL Listed 20A listed circuit breaker or branch-rated fuse between the power source and the ZPE Systems NSR DC version. Minimum Breaker Rating: 2A. Required conductor size: 18 AWG or larger. Fuses provided with unambiguous cross-reference to servicing instructions (F1). End product servicing instructions to contain fuse type and ratings- 3 A, 125 V DC.

**CAUTION:** To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord (for example, 24 AWG).

**CAUTION:** The ZPE Systems NSR AC models have one or two power supply cords. Disconnect all power supply cord(s) before servicing to avoid electric shock.

## Working inside the NSR

Do not attempt to service the NSR yourself, except when following instructions from ZPE Systems Technical Support personnel. In the latter case, first take the following precautions:

- Turn the NSR off.
- Ground yourself by touching an unpainted metal surface on the back of the equipment before touching anything inside the unit.

## Electrostatic Discharge (ESD) precautions

When handling any electronic component or assembly, you must observe the following antistatic precautions to prevent damage.

- Always wear a grounded wrist strap when working around printed circuit boards.
- Treat all assemblies, components and interface connections as static-sensitive.
- Avoid working in carpeted areas.
- Keep body movement to a minimum while removing or installing boards to minimize the buildup of static charge.

## Replacing the battery

**CAUTION:** There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

## Laser Safety

CLASS 1 LASER PRODUCT  
LASERPRODUKT DER KLASSE 1  
PRODUIT LASER DE CLASSE 1

PRODUCTO LASER CLASE 1  
クラス1レーザー製品

## Safety and Hazards when Cellular Module is installed

Do not operate NSR in areas:

- Where blasting is in progress,
- Where explosive atmospheres may be present including refueling points, fuel depots, and chemical plants,
- Near medical equipment, life support equipment, or any equipment which may be susceptible to any form of radio interference.

Otherwise, the cellular module can transmit signals that could interfere with this equipment.

- Inside of aircrafts. Otherwise, the cellular module can transmit signals that could interfere with various onboard systems and may be dangerous to the operation of the aircraft or disrupt the cellular network. Use of a cellular phone in an aircraft is illegal in some jurisdictions. Failure to observe this instruction may lead to suspension or denial of cellular telephone services to the offender, or legal action or both.