

HNAS Battery Safety Manual

HNAS Servers: 3080, 3090, 4040, 4060, 4080, 4100

This document provides safety information for batteries fitted in the HNAS servers detailed in this document.

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Table of Contents

Preface	4
About this document.....	4
Document conventions.....	4
Intended audience.....	4
Accessing product downloads.....	5
Getting Help.....	5
Comments	5
Chapter 1: Battery Safety	6
Introduction.....	6
Overview.....	6
Hazard Identification.....	6
Human health effects.....	7
Handling and storage	7
Handling.....	7
Storage	7
Disposal instructions	8
Transport information	8
Regulatory information	8

Preface

About this document

This document provides safety information for batteries fitted in the HNAS servers detailed in this document.

Document conventions

This document uses the following typographic convention:

Convention	Description
Bold	<ul style="list-style-type: none">• Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click OK.• Indicates emphasized words in list items.
<i>Italic</i>	Indicates a document title or emphasized words in text.
Monospace	Indicates text that is displayed on screen or entered by the user. Example: <code>pairdisplay -g oradb</code>

Intended audience

This document assumes you have the necessary skills to configure and implement Hitachi NAS Platform (HNAS) servers.

This document is intended for system administrators, Hitachi Vantara representatives, and authorized service providers involved with the following HNAS servers.

- HNAS 3080
- HNAS 3090
- HNAS 4040
- HNAS 4060
- HNAS 4080
- HNAS 4100

Accessing product downloads

Product software, drivers, and firmware downloads are available on Hitachi Vantara Support Connect: <https://support.hitachivantara.com/>.

Log in and select Product Downloads to access the most current downloads, including updates that may have been made after the release of the product.

Getting Help

[Hitachi Vantara Support Connect](https://support.hitachivantara.com/) is the destination for technical support of products and solutions sold by Hitachi Vantara. To contact technical support, log on to Hitachi Vantara Support Connect for contact information: https://support.hitachivantara.com/en_us/contact-us.html.

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Comments

Please send us your comments on this document to doc.comments@hitachivantara.com. Include the document title and number, including the revision level (for example, -07), and refer to specific sections and paragraphs whenever possible. All comments become the property of Hitachi Vantara LLC.

Thank you!

Chapter 1: Battery Safety

Introduction.

Applicable to product: SX170145-04 – HNAS Server Battery NiMH 7.2V 9Ah

Spare part: SX325097 – FRU HNAS Server Battery Module

This is a Nickel Metal Hydride battery.

Overview

The battery is used in the following models of Hitachi Vantara server:

- HNAS 3080
- HNAS 3090
- HNAS 4040
- HNAS 4060
- HNAS 4080
- HNAS 4100

The battery is constructed of 12 Nickel Metal Hydride cells. It is assembled into a metal case with connector which mates with the server.

Hazard Identification

For the battery cell, chemical materials are stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion or chemical danger of hazardous materials' leakage.

However, if exposed to a fire, mechanical shock, decomposed, added electric stress by misuse, the gas release vent will be operated. The battery cell case will be breached at the extreme. Hazardous materials may be released.

Moreover, if heated strongly by fire, acrid or harmful fumes may be emitted.

Human health effects.

Inhalation: The fumes may affect the respiratory tract membrane and the lungs. Fumes may cause a cough, chest pain and dyspnea. Bronchitis and pneumonia may occur. The fumes could possibly be a carcinogen.

Skin contact: Skin contact with the electrolyte would seriously affect the skin and may cause dermatitis.

Eye contact: The electrolyte leaked from the battery cell is a strong alkali. When it goes into the eye, the cornea may be affected and it may lead to blindness.

Ingestion: Ingestion of the electrolyte would seriously irritate the mouth and the throat and result in vomiting, nausea, hematemesis, stomach pains and diarrhoea.

Handling and storage

Handling

Technical measures:

Prevention of user exposure: Not necessary under normal use.

Prevention of fire and explosion: Not necessary under normal use.

Precaution for safe handling: Do not damage or remove the external case or the cells' external tube.

Specific safe handling advice: Never throw cells into a fire or expose to high temperatures. Do not soak cells in water or seawater. Do not expose to strong oxidizers. Do not give strong mechanical shocks or throw to the floor. Never disassemble, modify or deform. Do not connect the positive terminal to the negative terminal with electrically conductive material.

Storage

Technical measures:

Storage conditions: Avoid direct sunlight, high temperature and high humidity.

Temperature range: -20 to +35°C; Humidity range: 20 to 80%.

Incompatible materials: Conductive materials, water, seawater, strong oxidizers and strong acids

Disposal instructions

Install and remove the battery in accordance with FE-92HNAS061 NAS_Platform_Battery_Replacement.

Dispose of batteries according to the local laws and regulations of your region. Batteries may be recycled and may be accepted for disposal at your local recycling center. Alternatively, return to the supplier.

Transport information

Install and remove the battery in accordance with FE-92HNAS061 NAS_Platform_Battery_Replacement.

Dispose of batteries according to the local laws and regulations of your region. Batteries may be recycled and may be accepted for disposal at your local recycling center. Alternatively, return to the supplier.

This battery does not require the following:

- TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR(ICAO)
- IATA Dangerous Goods Regulations - 57th Edition Effective 1st January 2016 (IATA)
- Code of federal regulations (U.S.DOT)

Regulatory information

Install and remove the battery in accordance with FE-92HNAS061 NAS_Platform_Battery_Replacement.

Dispose of batteries according to the local laws and regulations of your region. Batteries may be recycled and may be accepted for disposal at your local recycling center. Alternatively, return to the supplier.

Regulations specifically applicable to this product:

- Wastes Management and Public Cleaning Law (Japan)
- Law for Promotion Effective Utilization of Resources (Japan)
- EU Commission Directive 2006/66/EC

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