

# RNAS-1200 Series



**Network-attached storage with 2 M12 gigabit PoE+ LAN ports and -40 to 70°C temperature tolerance**



- > 2 gigabit Ethernet ports for network redundancy
- > 2 100 GB disks pre-installed (RNAS-1211-T model only)
- > Complies with all EN 50155 mandatory test items\*
- > IEC 61373 certified for shock and vibration resistance
- > JBOD, BIG, RAID 0, and RAID 1 functions available
- > IHS (Intelligent Heating Solution) technology for reliable operation
- > Data XPro for data protection in harsh environments
- > Fast synchronization in RAID 1

\*This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed statement, click here: [www.moxa.com/doc/specs/EN\\_50155\\_Compliance.pdf](http://www.moxa.com/doc/specs/EN_50155_Compliance.pdf)



## Overview

Moxa's RNAS-1200 network-attached storage (NAS) units provide high performance, high reliability, and high capacity data storage in harsh industrial environments. All RNAS-1200 devices are housed in a fanless, thermally efficient, dust and water-protected IP54-rated chassis. This sealed enclosure eliminates internal fans as a point of critical system failure, and protects the internal components from dust and water splashes. RNAS-1200 devices are compliant with mandatory sections of EN 50155, covering operating temperature, power input voltage, surge, ESD, and vibration, as well as conformal coating and power insulation, making them suitable for a variety of industrial applications.

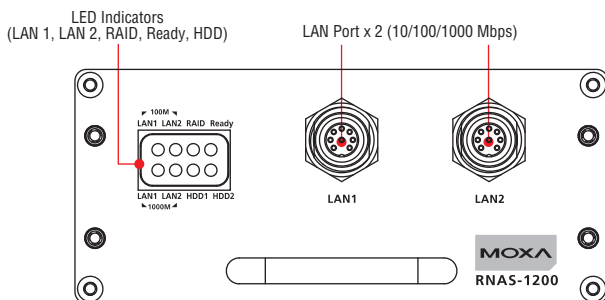
RNAS-1200 devices also come with Moxa's Intelligent Heating Solution™ (IHS) and Data XPro™ technologies. IHS automatically heats the system to ensure reliable operation even in extremely low

temperatures, while the Data XPro™ utility provides intelligent data and drive protections against extreme heat and vibration. In addition, the series' remarkably fast array synchronizations make the full data and hardware redundancies of RAID 1 a feasible alternative for industrial applications, while the two gigabit PoE+ network interfaces provide not only network redundancy, but also a highly efficient, fully redundant power supply over the same set of wires.

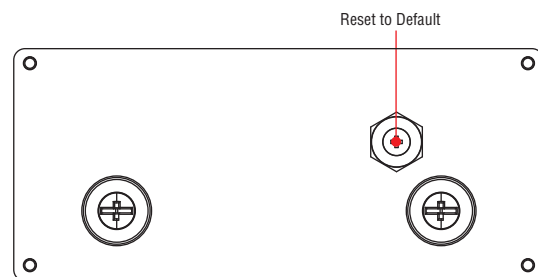
The RNAS-1200 Series combines simple configuration and multiple data and hardware redundancies in a compact, durable, fanless chassis ideal for industrial environments where extreme temperatures and vibration are a concern. The RNAS-1200 NAS devices are your best choice for industrial-strength data storage for rolling stock video surveillance or remote site data storage applications.

## Appearance

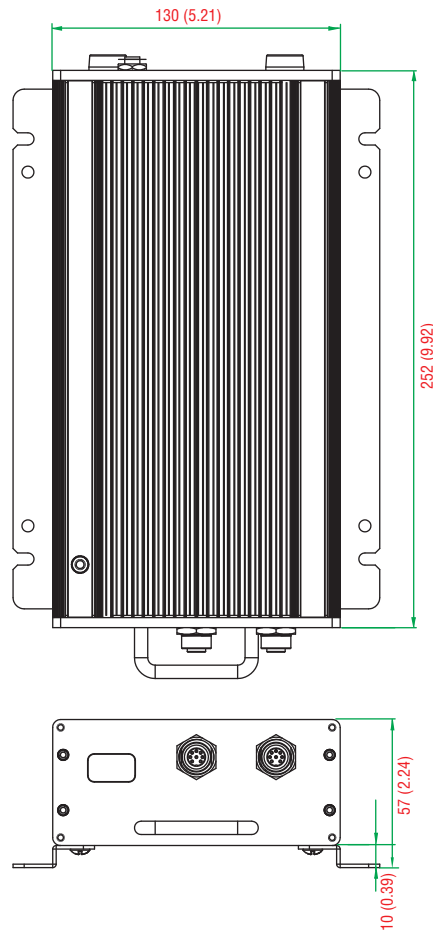
### Front View



### Rear View



## Dimensions



Unit: mm (inch)

## Hardware Specifications

### Computer

**CPU:** Onboard Marvell 1.0 GHz 88F6281

**DRAM:** 512 MB DDRII

**Flash Memory:** Onboard 2 GB USB DOM to store OS

### Storage

**RNAS-1201-T:** 2.5-inch HDD bay x 2, reserved for storage expansion

**RNAS-1211-T:** 100 GB HDD x 2 pre-installed

### Ethernet Interface

**LAN:** Auto-sensing 10/100/1000 Mbps ports (M12) x 2

### IHS Control

**IHS Function Control:** Temperature reading, power output control for heating function

### LEDs

**System:** RAID, Ready, HDD1, HDD2

**LAN:** 100M/Link x 2, 1000M/Link x 2

### Physical Characteristics

**Housing:** Aluminum

### Weight:

RNAS-1201-T: 1.98 kg (4.4 lb)

RNAS-1211-T: 2 kg (4.44 lb)

**Dimensions:** 252 x 130 x 57 mm (9.92 x 5.12 x 2.24 in)

**Mounting:** Wall

**IP Rating:** IP 54

### Environmental Limits

#### Operating Temperature:

-40 to 70°C (-40 to 158°F)

**Storage Temperature:** -40 to 85°C (-40 to 176°F)

**Ambient Relative Humidity:** 5 to 95% (non-condensing)

**Anti-Vibration:** EN 50155 standard

**Anti-Shock:** EN 50155 standard

**Conformal Coating:** Available on request

### Power Requirements

**Input:** PoE (IEEE 802.3af), or PoE+ (IEEE 802.3at)

**Note:** If the RNAS-1200 is connected to a PoE switch and T1 mode has been configured, the RNAS-1200 should only be booted up when the ambient temperature is above 0°C.

### Standards and Certifications

**Safety:** UL 60950-1

**EMC:** EN 55032/24

**EMI:** CISPR 32, FCC Part 15B Class A

#### EMS:

IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV

IEC 61000-4-3 RS: (80 MHz to 1 GHz): 20 V/m

IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV

IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV

IEC 61000-4-6 CS: 10 V

IEC 61000-4-8

**Green Product:** RoHS, CRoHS, WEEE

**Rail Traffic:** EN 50155\*, IEC 61373

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## MTBF (mean time between failures)

### Time:

RNAS-1211: 486,185 hrs

RNAS-1201: 503,159 hrs

**Standard:** Telcordia (Bellcore) Standard TR/SR

## Warranty

**Warranty Period:** 5 years (storage drive not included)

**Details:** See [www.moxa.com/warranty](http://www.moxa.com/warranty)

**Note:** These hardware specifications describe the NAS unit itself, but not its recommended accessories. In particular, the wide temperature specification does not apply to accessories such as power adapters and cables.

## Software Specifications

### Operating System

**System Platform:** Linux 2.6 pre-installed

### Network

**IP Settings:** Fixed IP, DHCP

**Redundancy:** Port trunking / NIC teaming

### System Management

**Firmware Upgrade:** Can be run via web interface

**System Bootup:** Can be observed by LED indicators for system status

**HDD Failure Status:** Can be observed by LED indicators

### Disk Management

**JBOD:** Two hard disks can work independently

**Spanning Big:** Two hard disks can be merged as spanning big mode

**RAID 0:** Two hard disks can be merged and work in RAID 0 mode

**RAID 1:** Two hard disks can be merged and work in RAID 1 mode

**HDD Recovery:** Support automatic or manual data recovery when new hard disk has been inserted

### Data Protection

**Vibration Protection:** Storage buffer available for strong vibration status

**Temperature Protection:** Storage buffer available for low/high temperature environment

**Fast Sync.:** Fast synchronization in RAID 1 mode

### SNMP Management

**System:** Standard MIB-II (RFC 1213), plus additional Moxa features that include: NTP, time zone, and time display management; channel bonding and IP configuration; management of SSH, FTP, and DNS; and configuration of SNMP agents and traps.

## Ordering Information

### Available Models

**RNAS-1201-T:** Network-attached storage with 2 M12 PoE+ gigabit LAN ports and -40 to 70°C temperature tolerance (operating)

**RNAS-1211-T:** Network-attached storage with 2 M12 PoE+ gigabit LAN ports, 2 pre-installed 100 GB hard disks, and -40 to 70°C temperature tolerance (operating)


**RNAS-1201-CT-T:** Network-attached storage with 2 M12 PoE+ gigabit LAN ports and -40 to 70°C temperature tolerance (operating), conformal coating

**RNAS-1211-CT-T:** Network-attached storage with 2 M12 PoE+ gigabit LAN ports, 2 pre-installed 100 GB hard disks, and -40 to 70°C temperature tolerance (operating), conformal coating


### Package Checklist

- 1 RNAS-1200 storage appliance
- Wall-mounting kit
- Documentation and software CD or DVD
- Quick installation guide (printed)
- Warranty card

## Optional Accessories

Ethernet	Item	Type	Model Name	Description
	1	Cable	CBL-M12MM8PRJ45-BK-100-IP67	1-meter A-coded M12-to-RJ45 Cat-5E UTP gigabit Ethernet cable, 8-pin male M12 connector, rated IP67
	2	Connectors	M12A-8PMM-IP67	Field-installation A-coded screw-in gigabit Ethernet connector, 8-pin male M12 connector, rated IP67

### Mechanical Parts

	1	Mounting Kit	RNAS Wall-Mounting Assembly with a Lock	Mounting frame with a lock, screws, 2 faceplate brackets, 2 rails
	2	Rail	RNAS Slide Rail	2 extra rails for the RNAS-1200