

AMR-350 COMPONENT COMPATIBILITY MATRIX

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Document Owner: NaviFloor Robotics, Inc.

1. PURPOSE AND SCOPE

1. This Component Compatibility Matrix ("Matrix") documents the app

2. This Matrix serves as the authoritative reference for all component

2. CORE SYSTEM COMPONENTS

1. Navigation Control Unit (NCU)

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Model: NCU-350X

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Firmware Version: 4.2.1 or higher

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Compatible Processors: Intel(R) i7-1185G7E, AMD Ryzen(TM) V2000

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Required Memory: 32GB DDR4-3200 minimum

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Storage: 512GB NVMe SSD minimum

2. LiDAR Sensor Array

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Primary Sensor: NaviSense(TM) LS-420 (360° coverage)

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Secondary Sensors: 4x NaviSense(TM) LS-220 (corner mounted)

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Minimum Resolution: 0.13° angular, 30mm@10m

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Update Rate: 50Hz minimum

3. Drive System

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Motor Controllers: DualDrive(TM) MC-800 Series

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Motors: 4x NaviTrac(TM) MT-350 (24V, 500W)

- - 3 -

Encoders: Renishaw(R) RE22 Series (1024 PPR)

3. APPROVED THIRD-PARTY COMPONENTS

1. Safety Systems

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Emergency Stop: SICK(R) ES-11 Series

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Safety Scanners: SICK(R) microScan3 Core I/O

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Safety PLC: Pilz(R) PNOZmulti 2

2. Power Systems

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Battery: 4LiFePO4 48V 100Ah

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Charging System: NaviCharge(TM) AC-350

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Power Distribution: Eaton(R) PDU G3

4. SOFTWARE COMPATIBILITY

1. Operating System

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Ubuntu Server 22.04 LTS

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Real-Time Kernel Extension 5.15-rt

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NaviFloor Container Runtime v3.2

2. Control Software

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NaviCore(TM) Controller v4.2.x

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NaviMap(TM) Environment Modeling v2.1.x

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NaviFleet(TM) Management Interface v3.0.x

5. INTEGRATION REQUIREMENTS

1. Network Connectivity

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Primary: IEEE 802.11ax (Wi-Fi 6)

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Secondary: 4G LTE/5G cellular modem

- - 6 -

Minimum Bandwidth: 10 Mbps sustained

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Maximum Latency: 100ms round-trip

2. Environmental Parameters

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Operating Temperature: 0 C to 45 C

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Humidity: 10% to 90% non-condensing

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Floor Surface: Concrete, epoxy, vinyl, steel plate

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Maximum Slope: 7% grade

6. CERTIFICATION REQUIREMENTS

1. Safety Standards

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ISO 13849-1:2015 (PLd, Category 3)

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IEC 61508 SIL 2

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ANSI/RIA R15.08-1-2020

2. EMC Compliance

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FCC Part 15 Class A

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EN 61000-6-2

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EN 61000-6-4

7. WARRANTY AND SUPPORT

1. Component warranty validity requires strict adherence to this Matrix
2. Software updates must be applied within 90 days of release to main

8. REVISION CONTROL

1. This Matrix shall be reviewed and updated quarterly by the Company
2. Changes to approved components require written authorization from

9. LEGAL NOTICES

1. PROPRIETARY INFORMATION

This document contains confidential and proprietary information of Na Robotics, Inc. Any unauthorized reproduction, use, or disclosure is strictly prohibited.

2. DISCLAIMER

The Company reserves the right to modify this Matrix at any time. Users are responsible for ensuring compliance with the most current version.

APPROVAL AND AUTHORIZATION

APPROVED BY:

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Marcus Depth

Chief Technology Officer

NaviFloor Robotics, Inc.

Date: January 11, 2024

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NaviFloor Robotics, Inc.

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