AMRA STANDARD

AMRA-271:2025(en)

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Mobile Robots - Common Communication Protocols

(P.1 ~ P.14 preview with watermark)

NOTICE

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For standard improvement, summit comments:
https://forms.gle/Ahw3GGjEsqtVYuRP8

INTRODUCTION

This standard defines a standardized set of communication protocols to enable seamless interaction among mobile robots, their management systems, and peripheral devices such as elevators and auto doors. It outlines message structures and data formats to support mission execution, robot coordination, status reporting, and peripheral integration. Designed for developers, integrators, and solution providers, this guideline enhances interoperability, reliability, and scalability in the mobile robot deployments. As part of AMRA's 2025 initiatives, AMRA-271:2025(en) provides a foundational framework to support the growing complexity of robot-assisted environments.

This standard was developed by the experts in AMRA working group #3 (WG3) based on consensus. The final standard was reviewed by the technical committee (TC) and approved by the board. The participants in the following list, sorted alphabetically, have made valuable contributions to this standard.

Board

Approved AMRA-271:2025(en) on 2025-06-16

- AU Optronics
- CASTEC International Corp.
- CiLS
- DEKRA iST Reliability Services
- Delta Electronics
- ITRI [Chair]
- PMC
- TUV Rheinland Taiwan Ltd.

Technical Committee

Reviewed AMRA-271:2025(en) on 2025-05-05

- CiLS
- ITRI [Chair]
- PMC
- SPIL
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CONTENTS

TABLES

FIGURES

