

<a href="#">MikeMakes</a>	Requirements Traceability Matrix <b>NanoRiego</b>	Rev 0.1
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# Requirements Traceability Matrix (RTM)

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## NanoRiego

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## 1. Introduction

This Requirements Traceability Matrix (RTM) ensures that all user and system requirements are covered by one or more test cases. It links each requirement from the URS and SRS to its corresponding validation method in the Test Case Document. The RTM enhances transparency, ensures complete test coverage, and supports system certification and validation.

## 2. Legend

- **URS:** User Requirements Specification
- **SRS:** System Requirements Specification
- **TC:** Test Case ID (from Test Case Document)

## 3. Traceability Matrix

Req ID	Requirement Description	Source	Related Test Cases
UR1	Control up to 3 irrigation valves	URS	TC-F01, TC-F03
UR2	Control 1 hydraulic pump	URS	TC-F02
UR3	Manual activation/deactivation of irrigation zones	URS	TC-F01
UR4	Automatic irrigation scheduling	URS	TC-F03
UR5	Synchronize time from Android	URS	TC-F04, TC-IF03
UR6	Persist parameters without power	URS	TC-NF01
UR7	Modular and replaceable hardware	URS	TC-NF02
UR8	Cost-effective hardware ( $\leq 43\text{€}$ )	URS	—
UR9	Safe for basic electrical users to install	URS	— (Covered in implementation)
UR10	Visual feedback of Bluetooth status in app	URS	TC-NF03
UR11	Automatic reconnection after pairing	URS	TC-F05
UR12	App allows full system configuration	URS	TC-F01, TC-F03, TC-IF01
UR13	Bluetooth pairing via PIN	URS	TC-IF01
UR14	UI disables controls when not connected	URS	TC-NF03
SRS-RTC	Real-time clock maintains schedule timing	SRS	TC-F03, TC-F04, TC-IF03
SRS-CMD	Arduino parses and executes Bluetooth commands	SRS	TC-F01, TC-F02, TC-F04
SRS-EEPROM	Store and restore data via EEPROM	SRS	TC-NF01
SRS-UI	Android UI accurately reflects system status	SRS	TC-NF03, TC-IF02

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## 4. Notes

- All URs have been validated by at least one test case, except those that are cost- or safety-focused.
- Hardware safety and cost-efficiency are validated via inspection, not formal test cases.

## 5. Conclusion

This matrix confirms full traceability between requirements and testing artifacts, ensuring all critical features and behaviors are validated through systematic testing.

*This RTM will be updated in parallel with future requirement and test case revisions.*