**NitroMag Firmware Version**

**Identification & Tracking Guide**

**Document Reference:** NM-FW-VER-STD-01

**1. Purpose**

This document provides a clear, standardized method for interpreting **NitroMag** firmware version codes. The version identifier communicates the release channel, major revision level, and incremental update stage applicable to your installed firmware.

All **NitroMag** builds conform to a fixed **8-character version format**.

Example:

19.00Ao

**2. Version Structure Overview**

Each firmware version is composed of four defined fields. These fields allow customers to determine whether the installed software is a production release, beta build, or internal test iteration, as well as understand the scale of changes introduced.

| Position | Example | Definition | Description |
|----------|---------|------------|-------------|
| 1 | (space) / B / T | Release Channel | Identifies official, beta, or test status |
| 2–3 | 19 | Platform Base Code | Fixed system identifier (unchanged across lifecycle of V19) |
| 4 | . | Delimiter | Required formatting mark |
| 5–6 | 00 | Major Revision | Denotes structural, protocol, or compatibility changes |
| 7–8 | Ao | Patch / Update Code | Identifies minor fixes, incremental updates, refinements |

## 3. Release Channel Definitions (Position 1)

| Code | Classification | Description | Usage |
|------|----------------|-------------|-------|
| (blank) | Production Release | Fully qualified and approved for field deployment | General availability |
| B | Beta Release | Feature preview, controlled exposure, limited deployment approval | Customer access under guidance |
| T | Test Build | Engineering and internal validation only | Non-distribution category |

## 4. Revision Level Definitions

### 4.1 Major Revision (Positions 5-6)

Major revision numbers change only when fundamental system adjustments occur.

**Triggers for advancement:**

- Communication or protocol format changes
- Data structure or compatibility alterations
- Device interoperability transitions

**Example:**

19.00 → 19.01

This indicates a core upgrade beyond incremental servicing.

## 4.2 Patch / Iteration (Positions 7-8)

These characters track enhancements that do not alter core compatibility.

**Triggers for advancement:**

- Hotfix implementation

- Minor feature additions

- Stability optimizations

- Performance adjustments

**Examples:**

19.00A   → Initial hotfix

19.00Ab → Subsequent refinements

19.00Ca → Extended update sequence, no major platform shift

## 5. Client Interpretation Summary

| Version Example | Classification | Meaning & Deployment Status |
|---|---|---|
| 19.00 | Production Release | Initial certified release |
| 19.00A | Production Release | Approved corrective update |
| 19.00Ac | Production Release | Continued optimization series |
| B19.00Af | Beta Release | Preview feature release under control |
| T19.00Ca | Test Build | Internal engineering cycle only |
| 19.01 | Production Release | Major redesign or protocol shift |
| 19.01Aa | Production Release | Initial refinement following major update |
| B19.01Ds | Beta Release | Pre-production evaluation stage |

**6. Compliance Requirements**

The version string format is mandatory and must not be modified.

- Positions **2-3** remain **"19"**

- String length must remain **exactly 8 characters**

- Major revision (positions 5-6) must use **digits only**

- Patch level (positions 7-8) may use **alpha or alphanumeric codes**

- Release channel code applies **only** to position 1

**7. Document Classification**

- Intended Use: Customer & Field Deployment Support

- Status: Controlled Distribution

- Ownership: Micro Control Systems Engineering