

# M258/LMC058

## Release Notes



**Firmware Version:** **V4.0.3.6 (SoMachine V4.3)**  
**V2.0.31.40 (SoMachine V3.1)**

**Release Date:** **16.08.2018**

**Released For:**

- Production (V4.0.3.6)
- SESU
- SE.com

**This document contains important information about firmware delivery of M258/LMC058. Read the complete document before you use the product or products described herein.**



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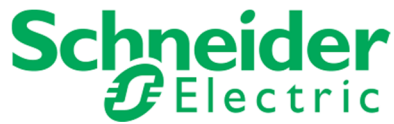
All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

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## 1. Product Overview

Current document describes the major improvements and firmware versions released for M258/LMC058 controller products.

## 2. Release History

The table below list all major releases for M258/LMC058 products.

Firmware version	Description
<b>V4.0.3.2</b>	Firmware version released in SoMachine V4.3
<b>V4.0.2.33</b>	Firmware version released in SoMachine V4.1 SP1
<b>V4.0.2.6</b>	Firmware version released in SoMachine V4.1
<b>V2.0.31.15</b>	Firmware version released in SoMachine V3.1

### 3. Firmware evolution in versions V4.0.3.6 and V2.0.31.40

Due to some component availability issues, the memory of the M258 and LMC058 evolved. This hardware evolution led to a firmware adaptation.

#### 3.1. Compatibility

Firmware version	Description
<b>V4.0.3.6</b>	Targeted to systems running applications developed with SoMachine V4.1 or greater
<b>V2.0.31.40</b>	Targeted to systems running applications developed with SoMachine V3.1

#### 3.2. New features and improvements

Independent from the SoMachine version, both firmware versions are bringing the following improvement in comparison to their predecessors.

Improved feature(s)
Extended Error Detection and correction (ECC) algorithm (4-bits) applied to the entire non-volatile memory

#### 3.3. Mitigated Anomalies

This firmware version is targeted at the extension of supported hardware components and therefore does not mitigate software issues.

#### 3.4. Restrictions

This firmware evolution has the following impacts on downgrade operations initiated from this firmware release:

- downgrade will require two consecutives operations.
  - o The first one can be either started from Controller Assistant or a prepared USB key.
  - o For the second operation, the use of an USB key prepared with the final firmware version is mandatory.
- downgrade will not be possible with M258/LMC058 hardware older than the one referenced with PV16 and RL23 (see chapter 5).

Firmware compatibility to a given hardware versions listed in chapter 5 also applies to the clone feature. Therefore, a clone initiated in an old firmware will be unsuccessful when applied to a new controller.



Furthermore, downgrade operation starting with a firmware V4.0.3.6 will be blocked if target firmware version is below V2.0.31.40.

In case of an upgrade from a version having "option bit(s)" turned on, the migration to this newer version will de-activate them.

## 4. Legacy firmware evolution

### 4.1. Version V4.0.2.51

#### 4.1.1. Improvements

Improved feature(s)
Improvement of non-volatile file system robustness (use of ECC4 instead of ECC1).

#### 4.1.2. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
Website gives access to /usr/cfg/firewall.cfg
UserRight prevent anonymous access to embedded EDS files
Error while reading firmware file

### 4.2. Version V4.0.2.34

#### 4.2.1. Improvements

This firmware version improves the behavior of M258/LMC058 controllers on functionalities listed in the table below.

Improved feature(s)
Extension of the Modbus TCP and Ethernet IP slave modules limitation from 40 words to 120 words
Increased number of cyclic tasks from 3 to 5
Increased number of interfaces from 4 to 8
Extended 'keepalive' setting to up to 30 minutes (formerly 1 second)

#### 4.2.2. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
HMI communication to controller interrupted after an online modification
Default exception handler ObjVerify instance is not ignored
Type S conversion anomaly
Persistent values lost
Incorrect calculation of multicast address (Ethernet IP adapter)
Issues while using USB Key
Login to Webvisu impossible if SD card inserted (user management)

#### 4.3. Version V4.0.2.10

##### 4.3.1. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
Vxboot update not processed
Vxboot: Syslog deleted after update



## 4.4. Version V4.0.2.8

### 4.4.1. Improvements

This firmware version improves the behavior of M258/LMC058 controllers on functionalities listed in the table below.

Improved feature(s)
File system migration from Datalight to YAFFS

### 4.4.2. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
CAA Library function File.DirOpen always reports "UNKNOWN ERROR"
CAA File.Libraray - Different function blocks do not work on LMC058
ChangeIPAddress: Function block is in error "unkown" after a download during its execution
ChangeIPAddress: Sometimes the Function Block remains blocked in a busy state
File System access problem after several downloads of Firmware image
Script: setnodename command executed even if access right is not granted

## 4.5. Version V2.0.31.30

### 4.5.1. Improvements

This firmware version improves the behavior of M258/LMC058 controllers on functionalities listed in the table below.

Improved feature(s)
Possible to use the Controller assistant for V4.1
File system homogenization for the performance platforms (M241 / M251 / M258 / LMC058).

## 4.6. Version V2.0.31.27

### 4.6.1. Improvements

This firmware version improves the behavior of M258/LMC058 controllers on functionalities listed in the table below.

Improved feature(s)
Classless configuration for Ethernet network: there is no SoMachine V3.1 evolution, so the user must set a Classless configuration ONLY in the file "machine.cfg"

### 4.6.2. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
After several power cycles, the controller transitions to a STOP status

## 4.7. Version V2.0.31.24

### 4.7.1. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
Access to the M258 Web server not possible through a VPN
SSI does not function correctly with a cable greater than 10 meters
After some power interruptions of power supply, the controller starts with "status" off and "ExpertIO" LED illuminated "Red"

## 4.8. Version V2.0.31.21

### 4.8.1. Mitigated Anomalies

This firmware version is compatible with all M258 and LMC058 controllers. The mitigated anomalies are listed in the table below.

Mitigated Anomaly
Clone functionality does not function if USB is formatted
System blocked at Power On with all LEDs ON

## 4.9. Version V2.0.31.15

### 4.9.1. New features

New feature(s)
Profibus DPV1 Slave PCI communication module TM5PCDPS
Faster file access over controller applications
USB key available through device “/bd0”
It is now possible to use 3 serial lines; one embedded and 2 PCI modules. The limitation is 2 SoMachine protocol max and 2 IoScanner max.
New function block to allow copy of data between application variable(s) and file system
New function block offers the USB script command through the application
Support of Logical Axis
New function block DM72FbSetImmediateOutputn

## 5. Compatibility

The table below lists the main M258/LMC058 hardware references and the known firmware incompatibilities.

Firmware versions		Product hardware identification (PV)			
		≥ 2	≥ 6a	≥ 9	≥ 16
<b>until</b>	V2.0.21.15	✓	✓	✗	✗
<b>From To</b>	V2.0.31.21 V2.0.31.40	✓	✓	✓	✗
<b>From To</b>	V4.0.2.6 V4.0.3.2	✓	✓	✓	✗
<b>From</b>	V2.0.31.40	✗	✓	✓	✓
<b>From</b>	V4.0.3.6	✗	✓	✓	✓

Parallel to previous table and to limit issues in the migration process, restrictions listed in the table below have been integrated into the Controller Assistant tool. Cells labelled with a red cross represent migration operations not allowed by the tool (please check in Controller Assistant release note to confirm feature has been activated for a given controller reference).

Migrating to version		Current controller firmware version				
		Until V2.0.31.30	V2.0.31.3x	From V4.0.2.6 to V4.0.3.2	From V2.0.31.40	From V4.0.3.6
<b>until</b>	V2.0.31.30	✓	✓	✓	✗	✗
<b>From To</b>	V2.0.31.30 V2.0.31.40	✓	✓	✓	✗	✗
<b>From To</b>	V4.0.2.6 V4.0.3.2	✓	✓	✓	✗	✗
<b>From</b>	V2.0.31.40	✓	✓	✓	✓	✓
<b>From</b>	V4.0.3.6	✓	✓	✓	✓	✓