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# SattLine Upgrade and Evolution

Upgrade to the new SattLine 3.1 and CPU80

February, 2021

3BSE093849 rev B

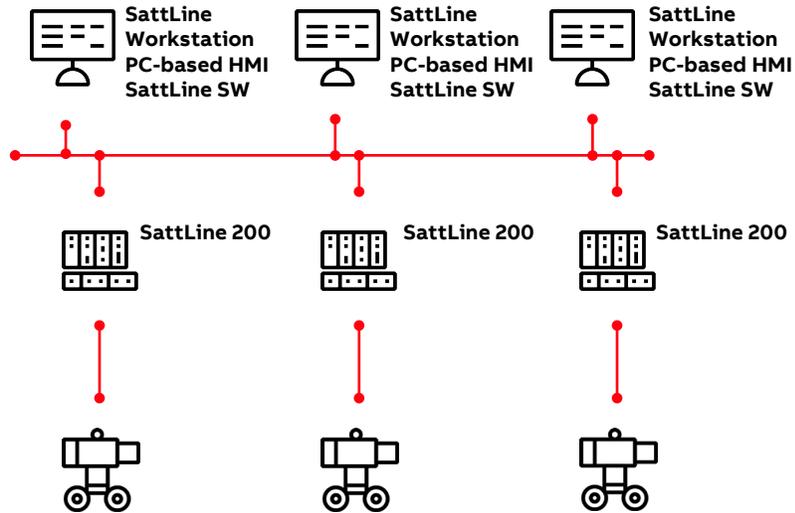


# SattLine Upgrade and Evolution Overview

The recent addition of the actively supported SattLine 3.1 CPU80 controller and new communication modules secures SattLine installations for the future.

## SattLine DCS Upgrade

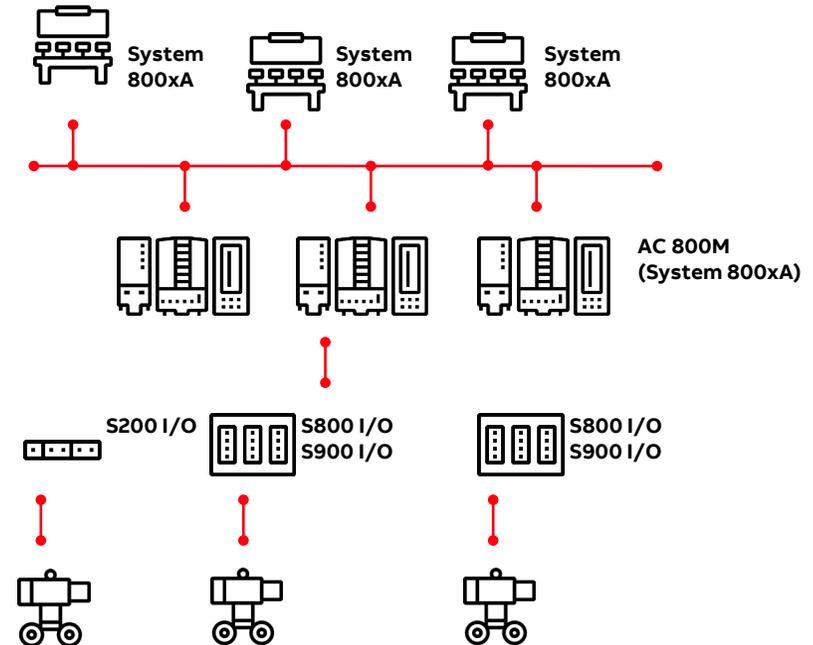
SattLine 2.x and 200 Series HW



**The new SattLine 3.1 and CPU80**  
Upgrade to the latest HMI and Control version.

## ABB Ability™ System 800xA Evolution

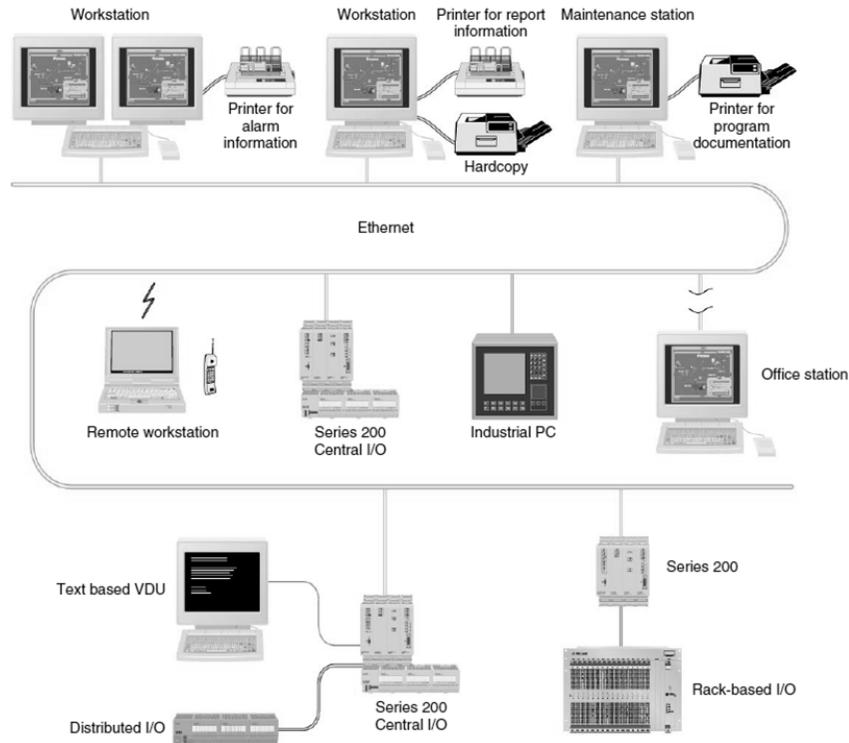
Market Leader DCS



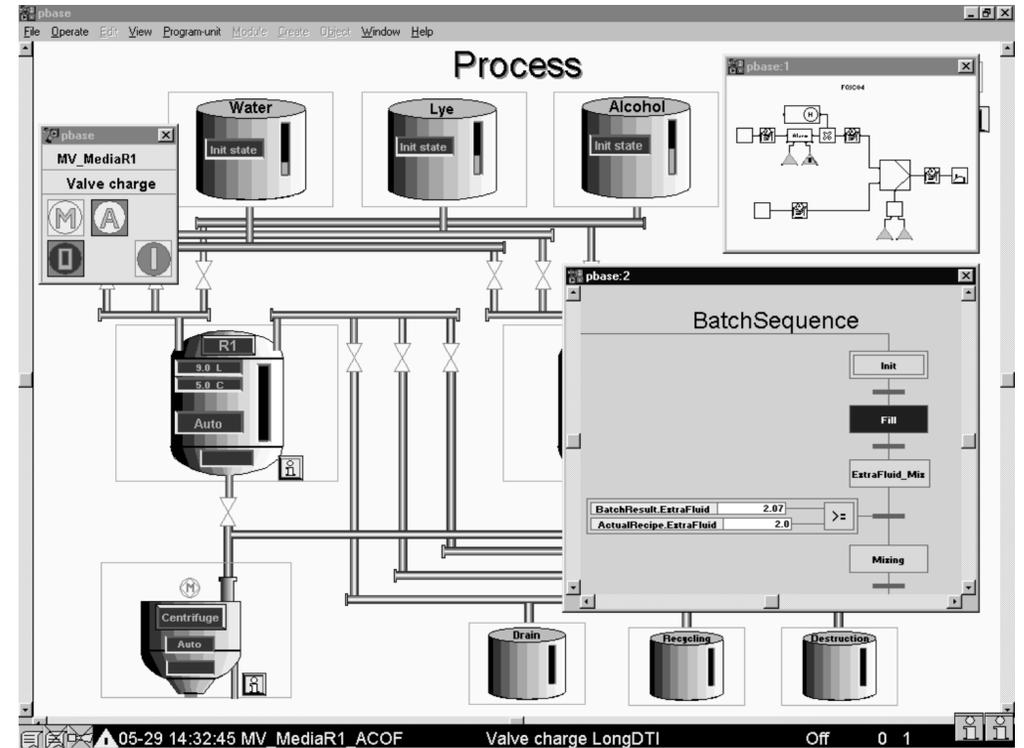
# SattLine

## Overview

### System Configuration



### Process Window



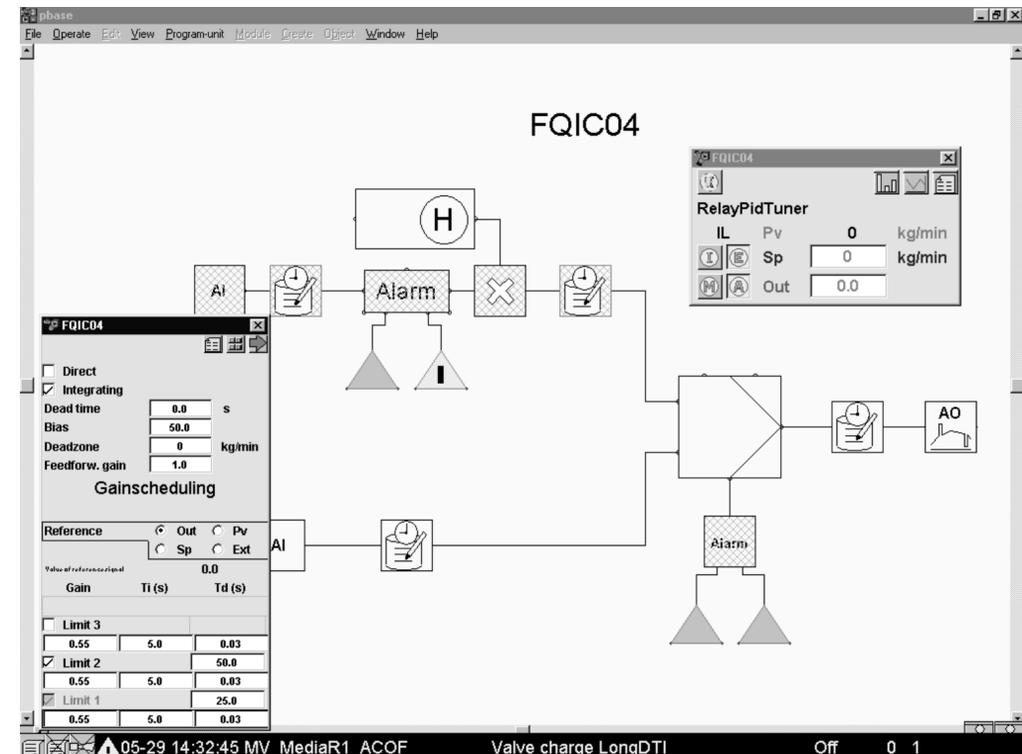
# Object-based architectures

How much information do you have for each Thing?

## SattLine - Object-oriented Process Automation

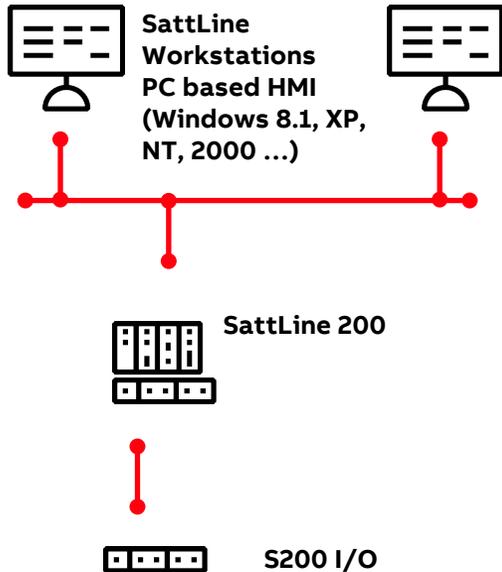
- A common control language is used throughout all components of the system to cover the various needs of a control application.
- SattLine includes the process graphics, operator interaction and program code for calculations and control in one and the same object.
- The objects, called Module types, may be saved in libraries.
- Programs consist of a hierarchy of such objects which are able to correspond to physical objects in the plant or process functions.

## Control Loops



# SattLine Upgrade and Evolution

Current life cycle and support situation

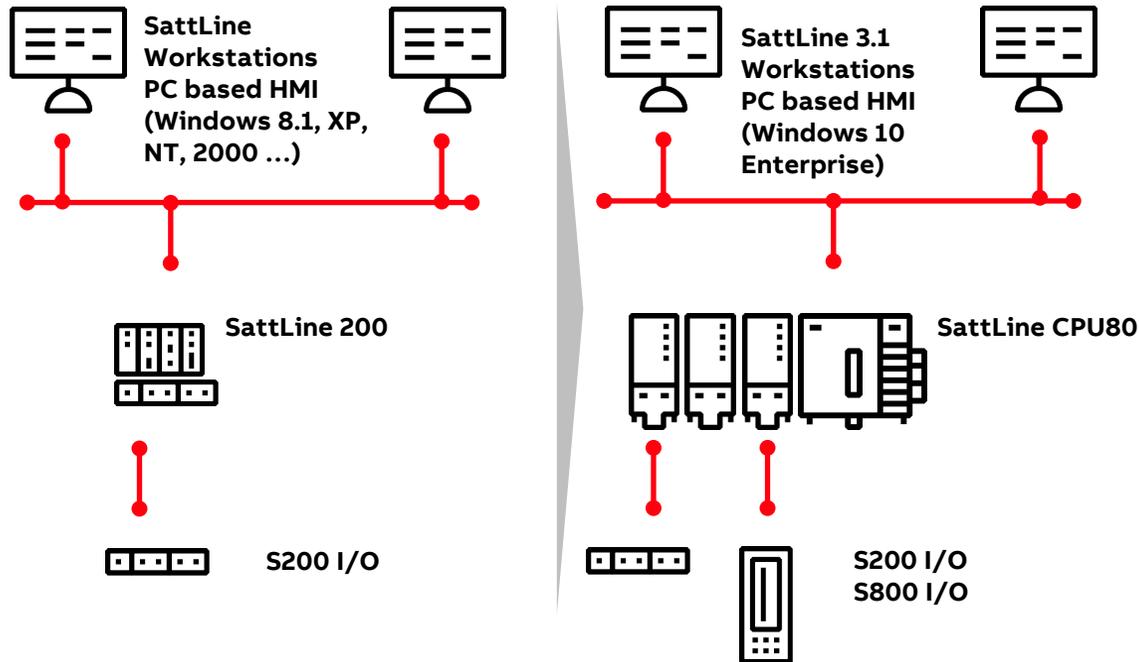


- Life Cycle Status:
  - SattLine 200 Series CPU is in Classic life cycle phase
- Aging components
- The CPU is in Classic life cycle phase with limited support
- HMI operating system may be in non supported life cycle

Expensive system to support

# SattLine 3.1 with CPU80 Upgrade

Upgrade recommendation: Continue with SattLine 3.1 – Stepwise Controller upgrade to CPU80



- Upgrade to SattLine ver. 3.1-1 for Windows 10 Enterprise 2019 LTSC, option to run Workstation PC virtualized verified in VMware ESXi 6.0
- Upgrade path supported by Automation Sentinel
- Support of the classic SattLine 200 Series controller platform
- Stepwise upgrade to the new SattLine CPU80
  - Support of COMLI master/slave and User defined protocols
  - Support of Satt I/O via ControlNet
  - Stepwise evolve to the S800 I/O via PROFIBUS

Expensive system to support

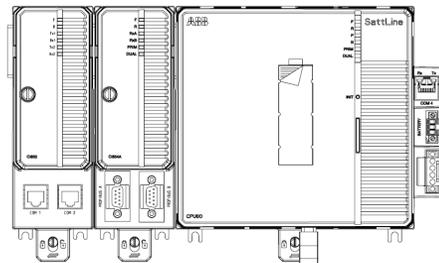
Easily and cost effective to support

# SattLine 3.1 New version

Based on Windows 10 Enterprise, Supports CPU30/40 and 50 from Series 200 and CPU80

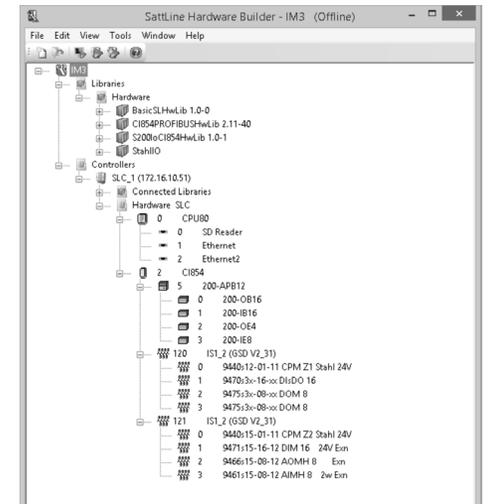
## SattLine CPU80

- New SattLine CPU hardware based on the AC 800M Hardware platform
- Larger memory
- Faster scan time
  - Foreseen 20-40 % increased capacity compared to CPU 50 depending on application.
- Ethernet and power supply onboard (no external unit like PSMG or 200-CIE needed)
- SattLine CPU80 supports
  - CI853 Serial RS232-C
  - CI854B PROFIBUS
  - CI865 ControlNet



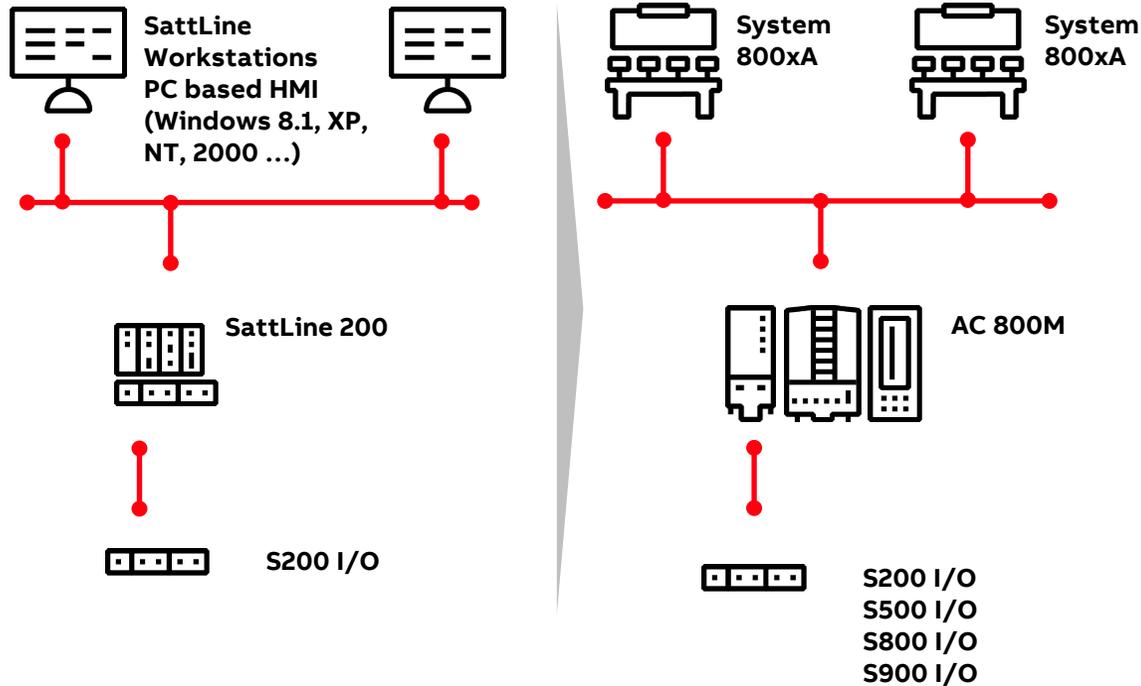
## SattLine Hardware Builder

- New tool for PROFIBUS I/O configuration time
  - Reuse and Import your existing Sycon .PB files
  - Recommended to make a hardware lib for the used modules
  - From SattLine version 3.1-1 the Hardware Builder can be used to manually address Profibus addresses on the DPM



# SattLine Evolution

Evolution recommendation – System 800xA with AC 800M controller



- HMI replacement: Replace existing SattLine Workstations with System 800xA
- Process graphics conversion available, usually remade to benefit from new HMI.
- Controller replacement
  - SattLine 200 Series CPU to AC 800M.
    - Remove CPU and Power Supply
    - Replace local communications module with ACN communications module,
    - Retain fieldbus, Rack I/O, S200 I/O and wiring
    - Add AC 800M processor module - PM860 or greater.
- Application software: Automatic conversion for System 800xA

Expensive system to support

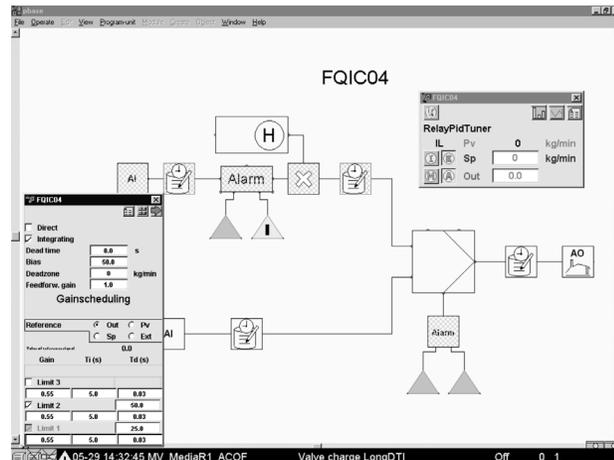
Easily and cost effective to support

# Object-based oriented architectures in both SattLine and 800xA

The SattLine module type concept is included in the 800xA Controller.

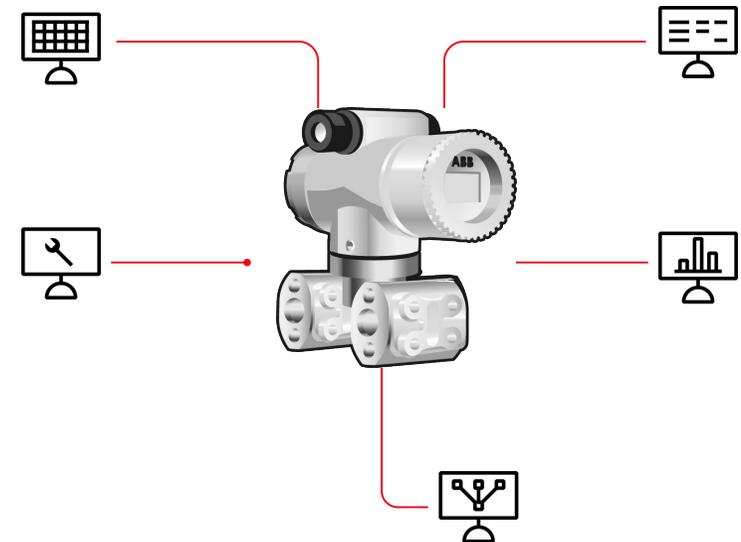
## SattLine - Object-oriented Process Automation

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## System 800xA

- Faceplates, Graphic Symbols
- Alarm management
- Trend, History
- Drawings
- Instructions
- ...



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# Satt Evolution

Contacts and additional resources

## Additional resources

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[ABB Satt web pages](#) (external)

[ABB Library – Satt downloads](#) (external)

## Contact us

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Satt Evolution Center: [satt.evolution@se.abb.com](mailto:satt.evolution@se.abb.com)

ABB Control Systems : [Contact form](#)

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