



SattLine Upgrade and Evolution

Upgrade to the new SattLine 3.1 and CPU80

February, 2021

3BSE093849 rev B

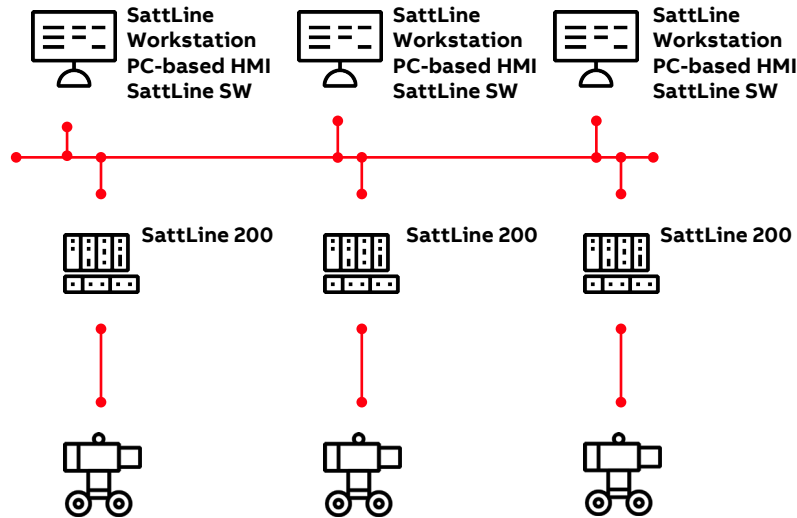


SattLine Upgrade and Evolution Overview

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

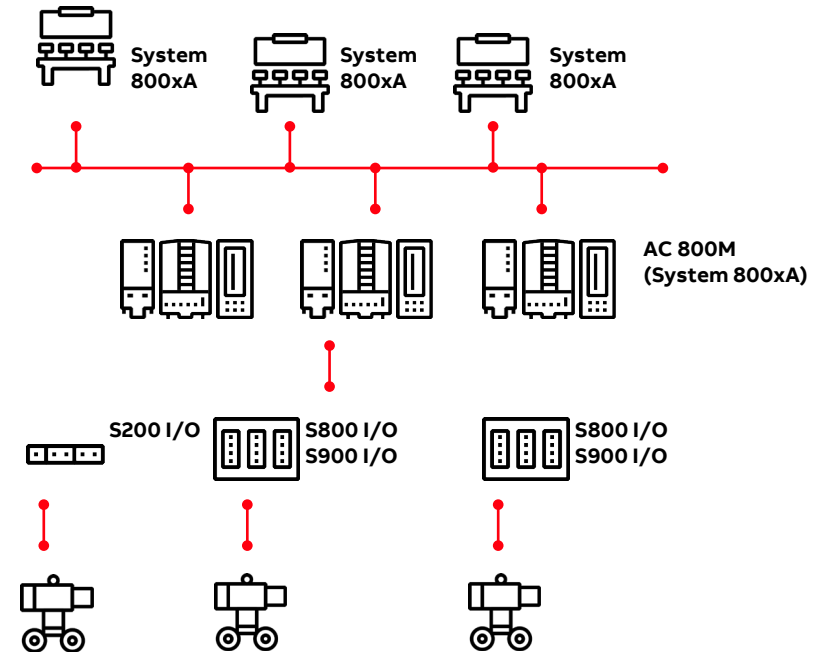


The new SattLine 3.1 and CPU80

Upgrade to the latest HMI and Control version.

ABB Ability™ System 800xA Evolution

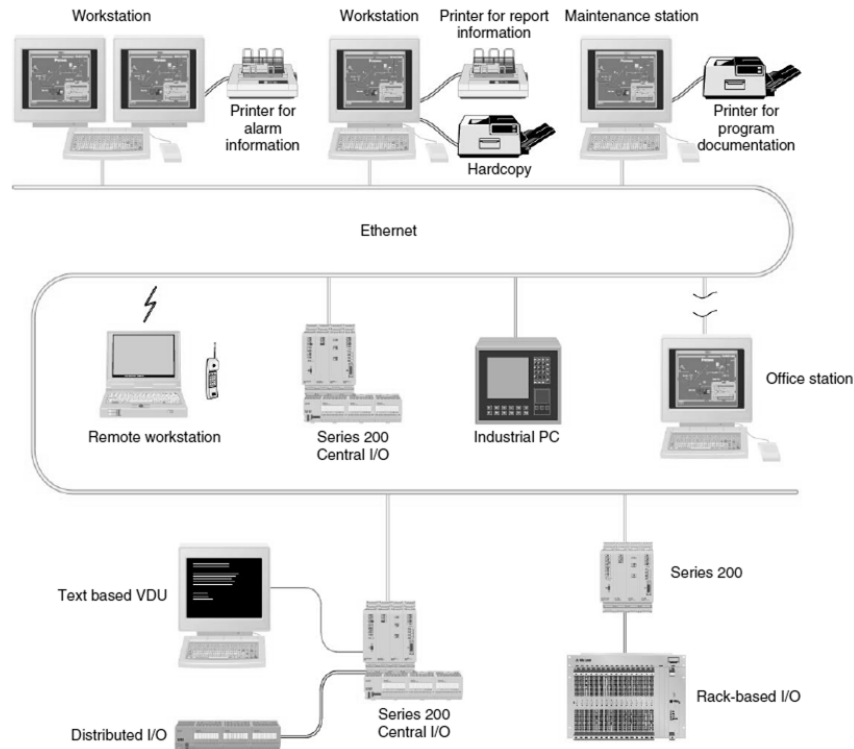
Market Leader DCS



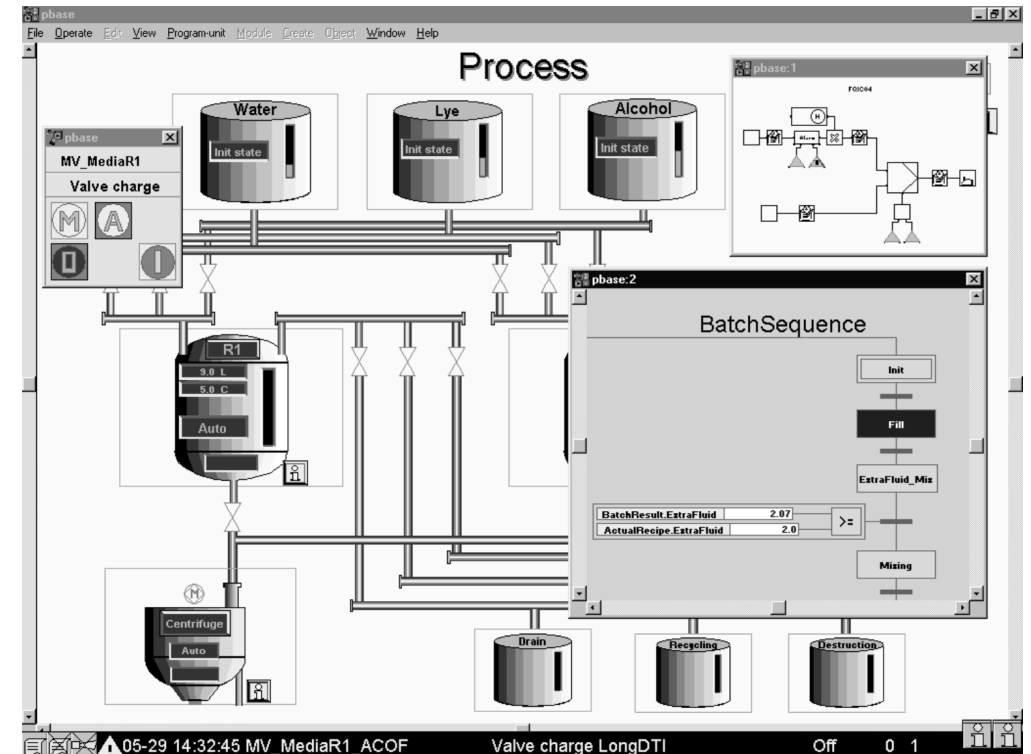
SattLine

Overview

System Configuration



Process Window



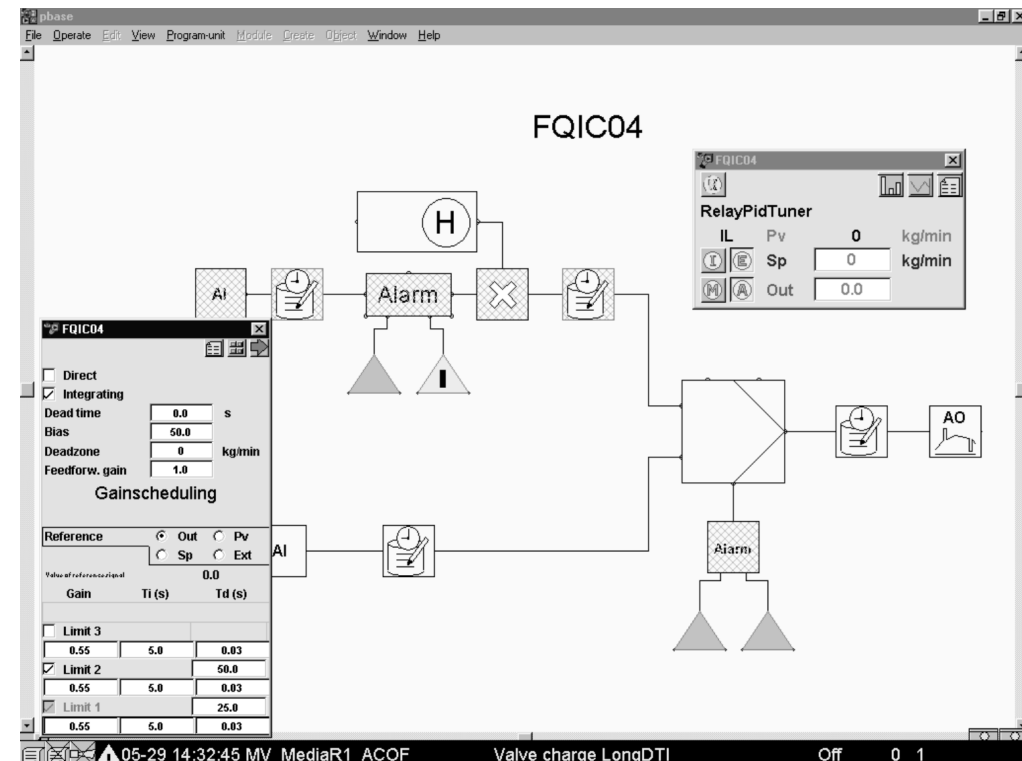
Object-based architectures

How much information do you have for each Thing?

SattLine - Object-oriented Process Automation

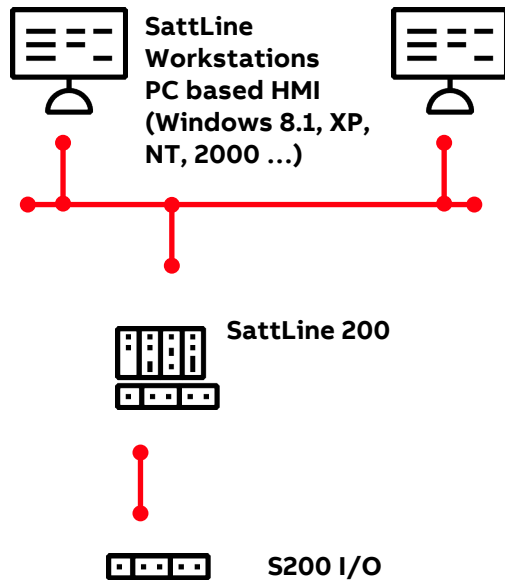
- A common control language is used throughout all components of the system to cover the various needs of a control application.
- SattLine includes the process graphics, operator interaction and program code for calculations and control in one and the same object.
- The objects, called Module types, 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

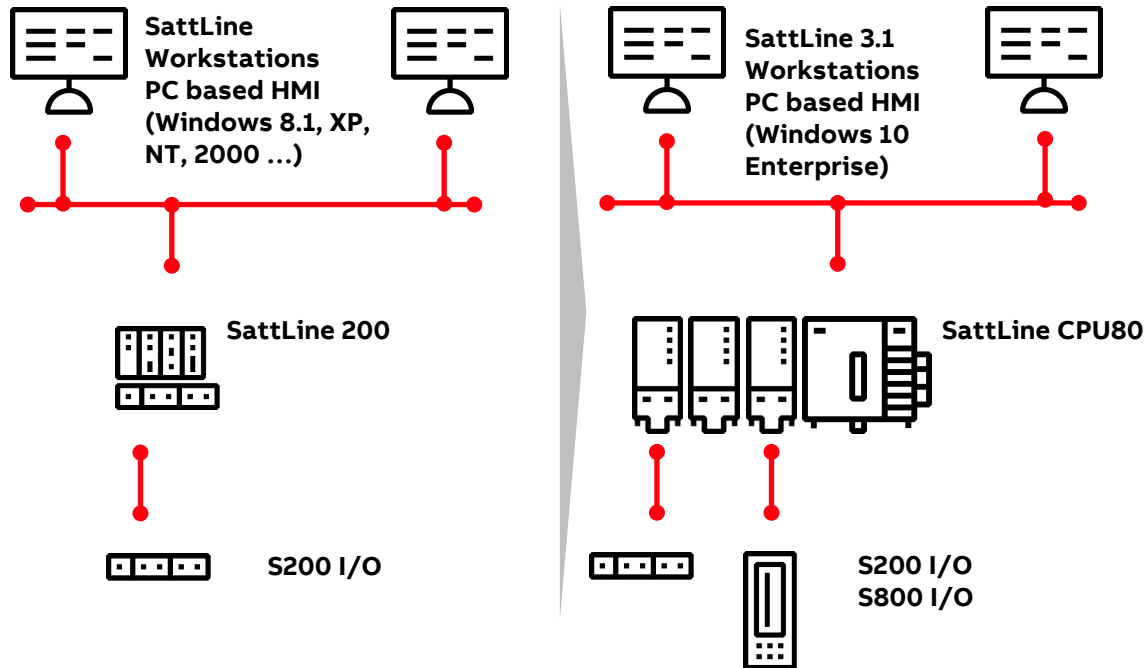


- Life Cycle Status:
 - SattLine 200 Series CPU is in Classic life cycle phase
- Aging components
- The CPU is in Classic life cycle phase with limited support
- HMI operating system may be in non supported life cycle

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

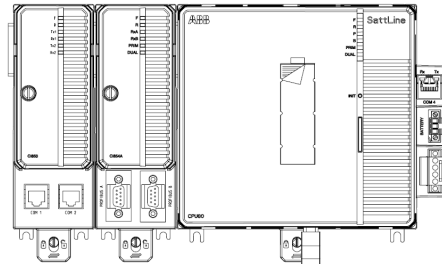
Easily and cost effective to support

SattLine 3.1 New version

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

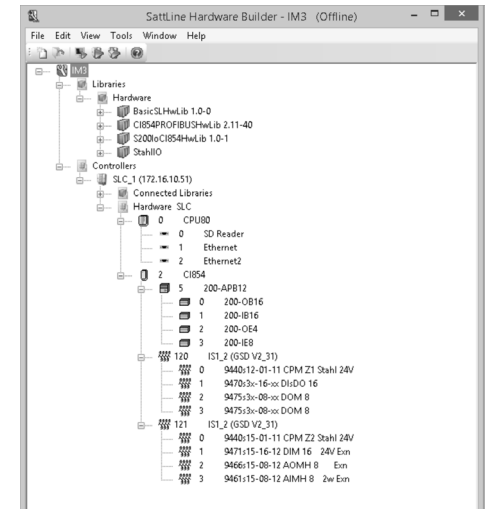
SattLine CPU80

- 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



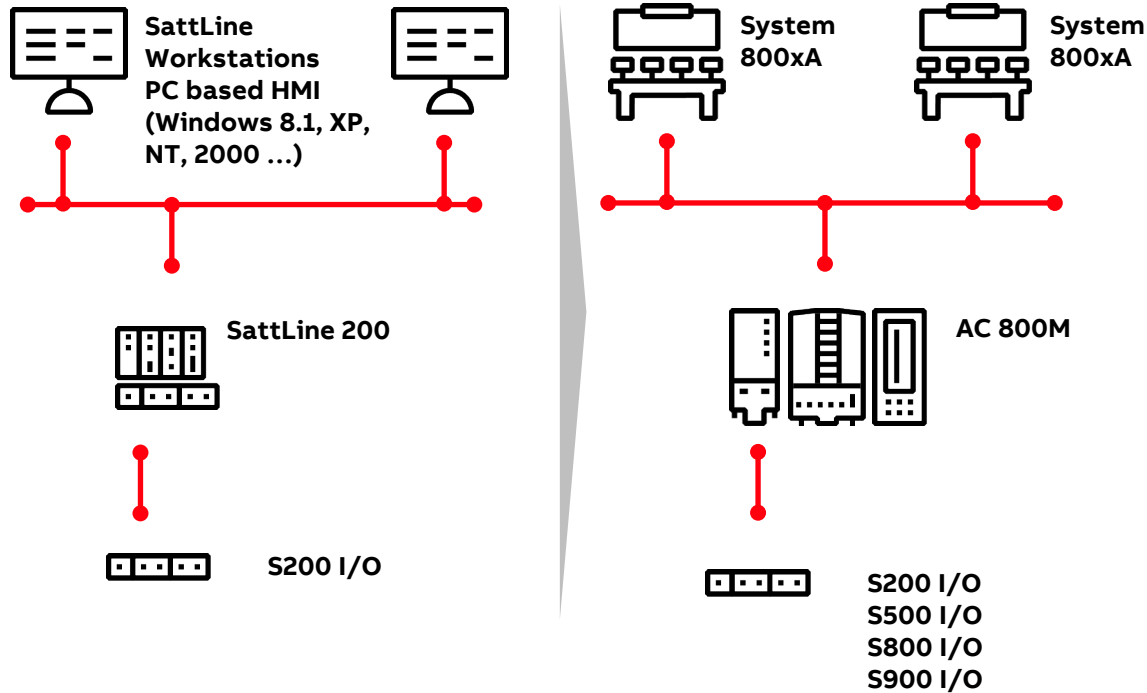
SattLine Hardware Builder

- 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

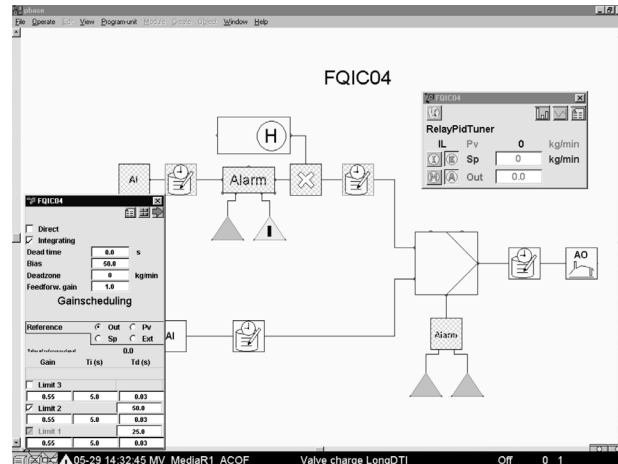
Easily and cost effective to support

Object-based oriented architectures in both SattLine and 800xA

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

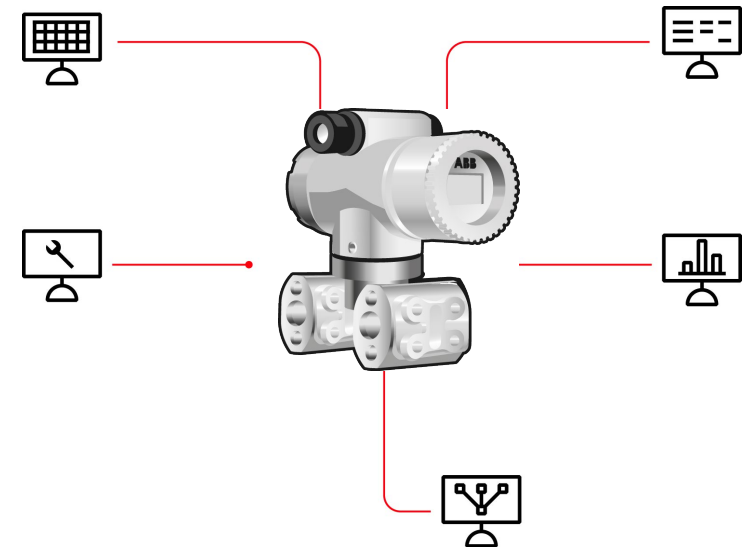
SattLine - Object-oriented Process Automation

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System 800xA

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



Satt Evolution

Contacts and additional resources

Additional resources

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

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

Contact us

Satt Evolution Center: satt.evolution@se.abb.com

ABB Control Systems : [Contact form](#)

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