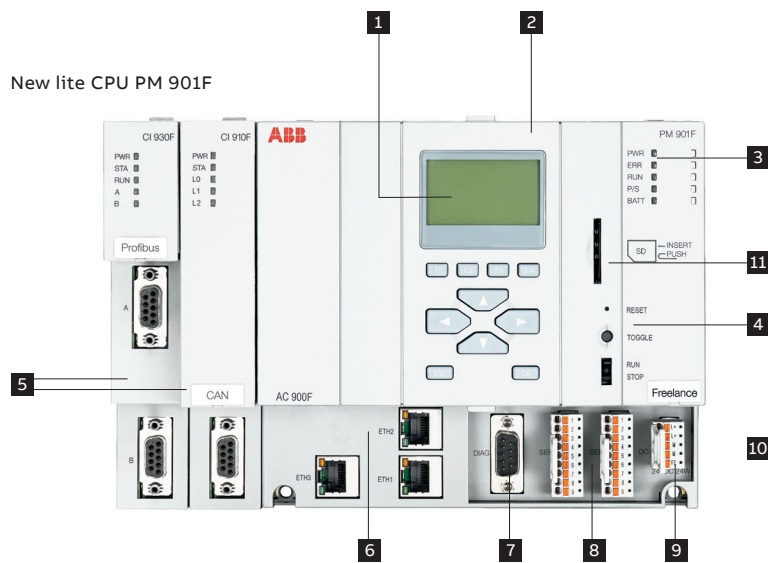CONTROL TECHNOLOGIES

Freelance distributed control system
Version 2016 – What's new

Compact, scalable and reliable

We are sure you will love Freelance Version 2016 because of significant improvements in all areas: availability, scalability, usability, connectivity and security.

New lite CPU PM 901F

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01. Battery (underneath display)
02. Display (optional)
03. LEDs: Power, Error, Run/Stop, A/Sec, Battery
04. Switches/Buttons: Reset, Toggle, Run/Stop
05. 2 slots for communication modules
06. 3 x Ethernet 10/100 MB
07. 1 x Diagnosis/Radio-Clock
08. 2 x serial lines, Modbus or Telecontrol
09. Power 24 V
10. Up to 10 direct I/O modules can be connected
11. SD card slot for loading programs, backup, loading firmware

Freelance is ABB's user-friendly, cost-effective and robust solution, ideal for all process industries, with the following benefits:

- **Easy to use:** It is easy to install, learn, engineer, commission, back-up, maintain and expand.
- **Scalable:** Projects can start as small as 25 I/Os and grow to as large as 25,000 I/Os
- **Reliable:** It is a proven, award-winning and patented technology providing high reliability and availability.
- **Value for your Money:** the small footprint and ability to run on any PC results in savings in training, installation, engineering and commissioning.

ABB has just celebrated the 20th anniversary of Freelance and introduced the award-winning AC 900F controller. This is an excellent replacement of older Freelance controllers in the huge installed base, but also perfect for new projects.

With this version, new innovations have been launched to even better fulfil your requirements.

What's new?
Two CPU variants for the AC 900F controller
The new lite version of the CPU – the Processor Module PM 901F – is made for smaller applications. It includes three Ethernet interfaces instead of four for the standard CPU, but it still supports redundancy for high availability.

Overview of AC 900F Interfaces
- Four (4) built-in Ethernet ports supporting system bus redundancy, Modbus TCP/IP or 60870-5-104 telecontrol protocol for PM 902F (standard)
- Three (3) built-in Ethernet ports supporting system bus redundancy, Modbus TCP/IP or 60870-5-104 telecontrol protocol for PM 901F (lite)
- Two (2) serial ports supporting Modbus RTU/ASCII or IEC 60870-5-101 telecontrol protocol
- Two slots for communication modules:
  - Profibus master modules providing integrated line redundancy
  - CAN bus modules for connection of Freelance Rack I/O
- Direct connection of S700 I/O modules (up to 10). The S700 I/O series provides high density configurable modules that support a mix of inputs and outputs and even analog and digital I/Os in one module for small footprint.

Increased security with controller lock
The new AC 900F controller comes with a feature of locking the controller via the display. When locked, dedicated engineering changes, downloads or firmware updates are disabled, while typical operator access is still possible.

New CAN Bus Module

To protect your investment, the AC 900F now allows connectivity to Freelance Rack I/Os based on CAN bus. This gives excellent support for plant upgrades.

New Profibus Master Modules

To even better support redundancy, a new version of the CI 930F for AC 900F is available. This new module now provides built-in line redundancy on Profibus using two Sub-D plugs.

The new CI 773F is the successor of CM 772F and can be used for AC 900F and AC 700F. It offers additional features and is more powerful by providing enough memory (I/O bytes) for maximum number of Profibus slaves. It is based on same technology as CI 930F, with just one single Profibus connector. Compared to the older CM 772F, the new CI 773F provides the possibility to add slaves without restarting the master.

Freelance Operations Lite

The new lite version of Freelance Operations, formerly known as DigiVis, also provides for enhanced scalability of the system. In contrast to the standard version of Freelance Operations, the lite version is very attractively priced. It offers unlimited number of standard displays and only limits the number of graphic displays to five. It is mainly suitable for smaller plants or the usage of Panel PCs in cabinet doors. What's more, Freelance Operations is now optimized for wide screen displays.

Improved availability through Ethernet line redundancy

From the very beginning, Freelance was designed to support redundancy. Also former versions already provided line redundancy in combination with controller redundancy.

Now, redundant Ethernet networks are available for all engineering and operator stations and even non-redundant AC 900F controllers. This feature is fully integrated into Freelance Engineering and Operations.

S700 I/O now available with standard plug

For easier installation, the S700 Profibus remote I/O is now available with a standard Profibus plug. The new CI 741F Profibus Slave module provides 22 I/O channels – up to 4 AI, 2 AO, 8 DI and 8 DO on board. This also helps to reduce the footprint of your installation.

Benefits of the new version at a glance

- Enhanced scalability: "lite" offering of controller hardware and operations software
- Improved availability: enhanced redundancy options with new Profibus master modules and Ethernet line redundancy
- Improved connectivity: CAN bus now available for AC 900F for connection to older Freelance Rack I/O
- Reduced installation cost: S700 Profibus Remote I/O is now connected by standard plugs
- As a matter of course, Freelance Version 2016 still supports older Freelance hardware dating back to as long as 20 years ago
- Compatibility: Freelance 2016 SP1 runs on Windows 10 and Windows 7

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