S7-1500 / S7-1200

Processor

One of the main differences between the S7-1200 and the S7-1500 is the processor. The S7-1200 uses a Cortex-M3 processor, while the S7-1500 uses a Cortex-M4 processor. The S7-1500 has a more powerful CPU with faster processing speeds, which makes it better suited for larger and more complex systems.

I/O Points

Another important difference between the two PLCs is the number of I/O points. The S7-1200 has a maximum of 128 I/O points, while the S7-1500 can have up to 2048 I/O points. This makes the S7-1500 more suitable for larger and more complex systems that require more inputs and outputs.

Ethernet Connectivity

The S7-1500 has built-in Ethernet connectivity, while the S7-1200 requires an additional communication module to enable Ethernet connectivity. This means that the S7-1500 is more flexible and can be easily integrated into a networked system, while the S7-1200 may require additional hardware and configuration.

Programming

Both PLCs are programmed using Siemens software, but they use different software. The S7-1200 uses Siemens' TIA Portal software, while the S7-1500 uses the Siemens S7-1500 software controller. Both software programs are user-friendly and intuitive, but the S7-1500 software controller is more advanced and offers more features than the TIA Portal.

Step 7 Basic is used to program the S7-1200 whereas Step 7 Professional is needed for the S7-1500. Both are on TIA Portal and have the same appearance and feel, but Pro is 10 times more expensive. PLCSIM is included in both Basic and Professional to simulate code without uploading it to a real device.

S7-1500 models

The SIMATIC S7-1500 is Siemens' modular, top-of-the-line controller with a variety of CPU types and additional modules that support multiple performance classes and applications with high processing speeds, integrated system diagnostics, … Simatic S7 PLC types: S7 PLC types