X5 / X7 CPU

X5
compatible to
**CPU 945 (941, 942, 943, 944)
CPU 948
(946/947, 928)**

X7
compatible to
CPU 416

Change your
S5 into **S7**

What is X5 / X7

- X5 / X7 CPU's are sophisticated processing units that can be used in the Siemens S5-115U, 135/155U and S5-150U.

- The software based X5 and X7 CPU's have the same hardware. They only differ in the PLC CPU software (S5 resp. S7)

Upgrade in a Flash

While Siemens is phasing out its S5 product line, your investment in S5 PLC technology is secure with replacement X5 / X7 CPU's.

The X5 is a powerful sophisticated processing unit, with an integrated Ethernet controller that can replace your old existing CPU's in the Siemens S5-115U and 135 / 155U PLC's. When the time comes to standardize on a modern S7 PLC technology plattform, you can upgrade your S5 PLC to an S7 PLC in a Flash.

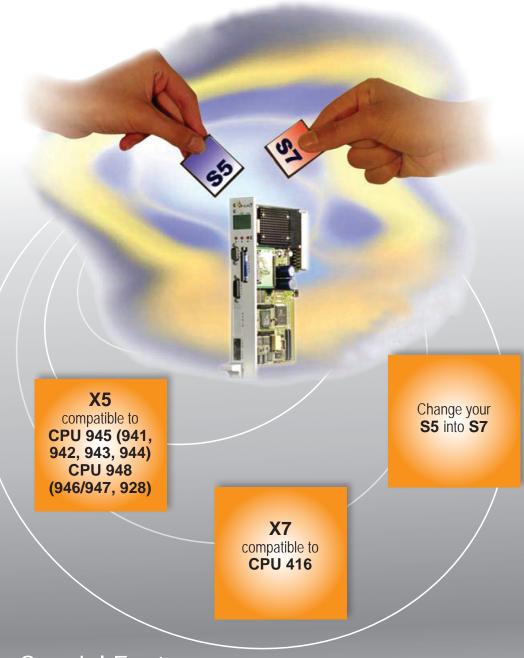Simply change the Flash Card in your X5 powered S5 PLC and your CPU becomes an X7 CPU with the power of 416 CPU from Siemens.

Special Features

- Can be programmed with STEP 7 (X5 with either Siemens STEP 5 or STEP 7) providing maximum flexibility when developing project strategies: Programming is possible via serial interface or Ethernet
- Integrated Ethernet controller: no Ethernet CP for TCP/IP required
- Mobile Pentium Processor 450 MHz
- Integrated Flash Socket for CF cards or IBM Microdrives
- Direct visualization of process data via integrated graphic module
- Direct information of CPU data (cycle time, load of the CPU etc.)
- Supports page frame access for IM and CP modules
- PC-MIP module slot for graphic, fieldbus etc.
- Diagnosis LCD display
- 64 MB memory on board (2 MB retained)
- Supported serial protocols: 3964R, RK512, ASCII
- Supported Ethernet protocols: TCP/IP, ISO on TCP (RFC1006)

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- Purchasing new hardware
- Conversion of programs

Time-consuming, cost-intensive

S5 programs do not run on standard S7 CPU's. When upgrading your S5 PLC to an S7 PLC the S5 program had to be converted to S7.

Converter tools are available to support that process, but are costly and post editing (a common practice) is time consuming.

A converted program is loaded into the S7 CPU, is tested and if it doesn't work as desired (a good bet) the editing continues. Meanwhile production grinds to halt.
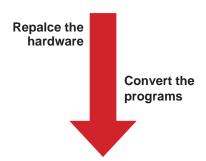
Just imagine you can upgrade your S5 PLC to an S7 PLC, S5 hardware and programs don't change and can be used as S7 components.

With X7 it's possible!

Process control system with Step 5 etc.

STEP 5

S5-Program
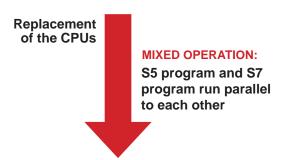
Repalce the hardware

Convert the programs

Process control system with Step 7 usw.

STEP 7

S7-Program

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and S5 programs into S7 projects?

Upgrade today

Process control system
with Step 5 etc.

STEP 5

**Replacement
of the CPUs**

MIXED OPERATION:

**S5 program and S7
program run parallel
to each other**

Process control system
with Step 7 etc.

STEP 7

The existing S5 program is completely executable in the X7 CPU.

In parallel to the S5 program, the new S7 program can be edited.
Blocks from the S5 program to not have to be re-edited.
They can be called in the S7 program.

- Hardware remains constant (exception: CPUs)
- S5 program remains constant
- S7 program and S5 program run concurrently

Time-saving, cost-effective

S5 and S7 program run simultaneously!

This enables you to test the S7 program and gradually
upgrade to the full S7 system with low risk:

- Existing S5 programs can be integrated into S7 projects
- less down time
- easier, better migration possibilities
- less costs

Existing S5 hardware and S5 programs
can be integrated into systems, that do not support S5
components (e.g. Simatic PCS 7 with Step 7 / CFC).

S7-Program

OB 1

CALL FC 10001

S5-Program

OB 1

SPA PB2

X7 CPU:
S5 program and S7 program are executable in parallel

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X5 / X7

Technical Data

- Processor
  K6-2E+ Processor 450 MHz

- Electrical data
  + 5 V DC: 4,85V to 5,24V @tbd

- Memory
  64 MB SDRAM
  128 KB Bios Flash
  2 MB retained SRAM

- Serial Interfaces
  1 x AS511(TTY) or RS232 with 15 pin Sub-D female
  1 x RS232 with 9 pin Sub-D male

- Ethernet interfaces
  2 x 10/100 Mbps, RJ45, 2 port Switch

- Interfaces optional
  Keyboard und Mouse via PS2
  Via PC-MIP module:
        4 x RS232
        4 x RS232 / 485
        Graphic 1.280 x 1.024

- Ethernet protocols
  TCP/IP
  ISO on TCP (RFC1006)

- Serial protocols
  3964(R), RK512
  ASCII
  STX / ETX

- Bus adaption
  SIMATIC S5 115U, 135U/155U and 150U
  Supports P and Q periphery
  Supports page frame access for IM and CP modules

- Software
  Operating system RTOS-32
  Software RS7 PLC CPU Software resp.
  RS5 PLC CPU Software

- Dimensions
  2 S5 slots

- Operating conditions
  Operating temeperature: -20°C up to +50°C
  Relative humidity: Maximum of 95 %

Order data

X, modular CPU for the S5, includes RS PLC CPU Software, includes serial parameterization cable

X5 / X7 CPU for AG 115U
Bestellnr.: 251000   € 8.655,-

X5 / X7 CPU for AG 135/155U
Bestellnr.: 251001   € 8.655,-

X5 / X7 CPU for AG 150U
Bestellnr.: 251002   € 8.655,-

RS 5 Software (CPU 945 compatible)
Bestellnr.: 251010

RS 5 Software (CPU 948 compatible)
Bestellnr.: 251011

RS 7 Software (CPU 416 / 945 compatible = mixed operation)
Bestellnr.: 251020

RS 7 Software (CPU 416 / 948 compatible = mixed operation)
Bestellnr.: 251021

In the PLCs:
S5-115U,
S5-150U,
S5-135U
S5-155U

configured as and compatible with:
CPU 416

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