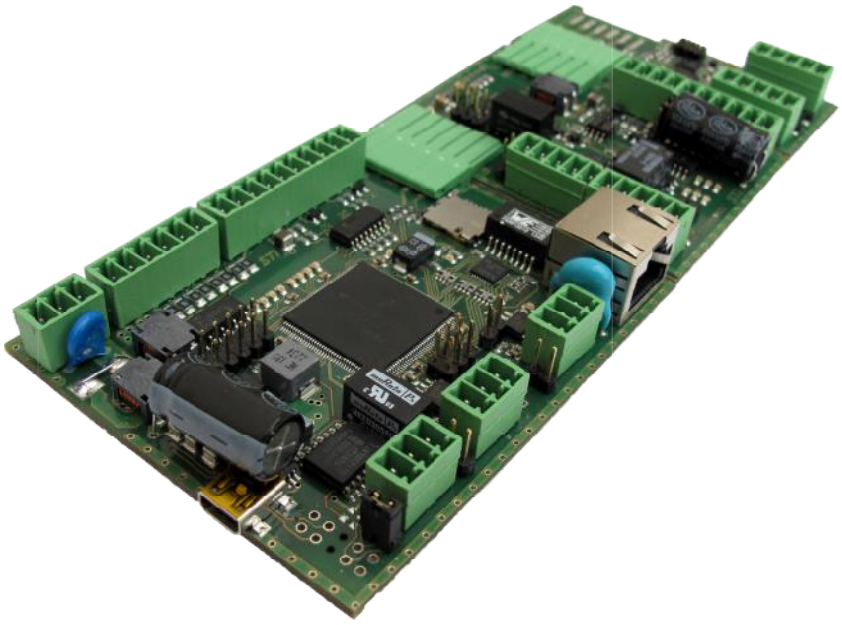
STIve • Automation System



STIve • 3 modules configuration example

MODULARITY

In support of STIve a basic set of modules, CPU Master, CPU Slave, Analog I / O, Digital I / O, Motor Control, Strain Gauge, Connection Board, based on ARM Cortex hardware platforms.

PLC-OPEN

The STIve project shares the Open Automation ideals and complies with the IEC 61131-3 and PLCopen XML standards.

CONNECTORS

Master-CPUs and other STIve modules are equipped with Phoenix connectors interface, step 3.5, and are interconnected with the innovative ZECC connectors.

STIve • Automation System is a versatile and robust modular PLC, specialized in the management and implementation of industrial processes.

STIve arises from field design and development in collaboration with leading industrial automation experts,
The result of this partnership is a product that meets the real needs of the client, guaranteeing maximum flexibility, high safety standards and the interoperability of projects, with maximum attention to the continuity of industrial processes.

Configuration, programming, debugging and remote control of the system take place through a dedicated software platform, developed for Windows 32/64 environments. This is an IDE compliant with the IEC-61131-3 and PLCopen standards, which implements the 5 standard languages of industrial automation: IL, ST, LD, SFC and FDB. Additional extensions can be programmed in C and Python.

The SoftPLC approach allows real-time control of the automation system with precision and reliability.

Connectivity is guaranteed by physical interfaces Ethernet 802.3, USB-OnTheGo, I2C, RS485, CAN bus, Virtual COM. Supervision and diagnostics occur by connecting via USB, through the Modbus protocol, the microSD ensures the storage of logs and data.

From a hardware point of view, the Master-CPU is the basic module to which the extension modules can be connected. The Master-CPU houses a 32-bit microcontroller, based on the ARM Cortex-M4. 1Mb FLASH, 256Kb SRAM ensure optimal management of analog peripherals, control, communication and timing.

STIve • Automation System

IDE

STIve is programmed through an integrated development environment for automation and is programmable in the 5 standard automation languages FBD, IL, LD, SFC, ST.

SOFTWARE

STIDesigner sw allows to control the whole automation process, from machine configuration to programming, debugging, SoftPLC real-time monitoring, simulation functions etc.

MODULARITY

- The PLC configuration can include several modules. It is possible to integrate to the existing basic modules, Master-CPUs, Slave-CPUs, Connection-Boards, Digital-I / O, AnalogI / O, Strain-Gauge, Motor-Control, further customized modules.

MEMORY

- 1MB FLASH memory;
- 256KB SRAM memory;
- MicroSd up to 32 GB for data storage.

COM INTERFACES

- CANbus, Modbus RTU, Ethernet 10/100 Mbps, RS485 RTU, mini-USB, Virtual COM.

LANGUAGES

- 3 graphic languages: SFC, FDB, LD;
- 2 text languages: ST, IL;
- Python and C programmable extensions.

USB HOST/DEVICE

- BIOS Update;
- PLC executables download;
- PLC applications debugging;
- Update and communication with the MasterCPU, which acts as a gateway for the entire network. The protocol used for communication is MODBUS RTU.

I2C

- The I2C interface is used for secure communication with the connected modules and their FW update.

STIve • PLC format

HARDWARE	
	ARM© Cortex©-M4 da 120 Mhz
	2x 16-bit analog-to-digital converters (ADCs)
MEMORY	**1MB integrated FLASH**
	256 KB SRAM
	+ max 32GB microSD external flash
INTERFACES	
	EIA232 + RS485 + LVTTL serial
	USB 2.0 On-The-Go (full-speed)
	SDIO, 3 UART, DSPI, I2C, I2S, Digital I/O, Analog I/O
	CANbus
	MAC + PHY Ethernet a 10/100Mbps CAT5e
POWER SUPPLY	
	12-24V DC