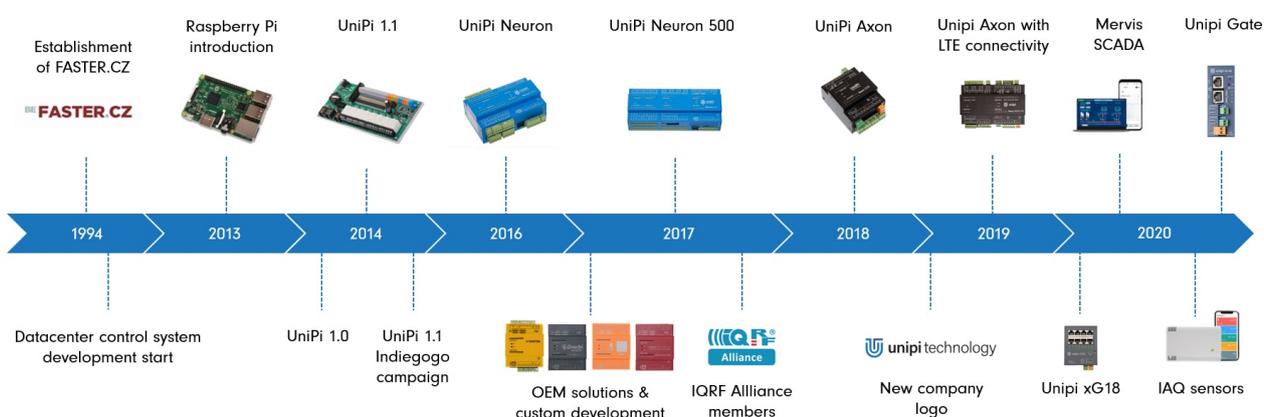


Unipi technology description and vision

We are Unipi technology - developers and manufacturers of programmable logic controllers, gateways, sensors and systems for smart home, building management systems, industry and automation projects.

Our vision is simple - to deliver products that do not limit their users and provide them with a wide spectrum of applications thanks to a complete software openness, broad options of communication and customization, and compatibility with products of other manufacturers. Our controllers are used in thousands of successful projects in over 65 countries across the globe.

Timeline



Development history

Beginnings

Roots of Unipi technology can be traced back to 1994. In this year, the [Faster CZ](#) company was established. During preparations to move into the current residency, a vision of an economic data centre control and a regulation system was created. Our goal was to create a technological solution that would allow us to control and regulate all aspects of the data centre (cooling, energy supply and regulation, lighting, air conditioning etc.) as simply and economically as possible. In 2013, we thus launched the development of a custom system that would utilize open-source platforms as much as possible.

Raspberry Pi introduction

The introduction of the Raspberry Pi was a small revolution. Its development originated from a requirement for a so-called credit-sized computer - literally a computer with the size of a credit card. But despite its size, Raspberry Pi is a fully-fledged computer that can be used like any other PC and features an excellent computing performance. With Raspberry Pi available, we reworked our project to integrate it. That way, Raspberry Pi became the basis for all of our subsequent work.

Unipi 1.1

The development resulted in [Unipi 1.1](#). Simply put, it is an extension board for Raspberry Pi that provides it with "ears, eyes and hands" in form of 14 digital inputs, 8 changeover relay outputs, a pair of analog inputs and a single analog output. The board is compatible with all Raspberry Pi Models (from the original Model B+ up to the recent Pi 4 Model B) and features a 1-Wire bus and an integrated EEPROM memory.



Unipi Neuron

Based on the experience gained during the development and sale of Unipi 1.1, the design underwent an extensive rework resulting in a second generation - [the Unipi Neuron](#). Compared to the 1.1 variant, the Neuron features many advantages - it is extendable, has a fully modular construction and all of its components are protected by a durable aluminium chassis. The entry [S103 model](#), both the basic and the most universal controller of the entire product line, features 4 digital inputs, 4 digital outputs, single analog input and output, and also a single connector for the universal RS485 bus.

Neuron OEM

By the introduction of the [OEM solutions](#), our customers gained the option to customize Neuron controllers according to their requirements and without the need to invest in developing their own solution. Customers now had the opportunity to create custom graphic design and colour of the aluminium chassis, and also to modify the combination of inputs, outputs and communication interfaces.

Neuron 500

Only a few months after the introduction of the Neuron OEM, we introduced the Neuron 500 line focused on a higher number of analog I/Os that currently consists of [M523](#), [L523](#) and [L533](#) models. These controllers offer up to nine analog inputs/outputs and up to three RS485 interfaces.

Unipi Axon

In March 2018, we introduced a brand-new [Unipi Axon product line](#) on the AMPER international trade fair. Axon is based on the Neuron line but replaces Raspberry Pi with an industrial computer powered by quad-core Allwinner H5 ARM CPU with 1.2GHz frequency, 1GB RAM and 8GB eMMC onboard memory. The basic model of the line is [Axon S105](#) featuring four digital I/O's, single analog I/O, RS485 & RS232 lines and a 1-Wire bus connector.

New company logo

The original Unipi logo depicted a raspberry, hinting at the fact we use Raspberry Pi in Unipi products (Unipi 1.1 and Unipi Neuron product lines). However, after the introduction of the Axon line, Raspberry Pi was no longer the only computing module used. For this reason, we decided to adopt a new symbol designed as a universal logo for all Unipi products. More info about the new logo can be found [on this link](#).

New Axon LTE/IQRF controllers

As part of further development of the Axon line, new Axon M265 LTE and M565 LTE were introduced in 2019, featuring an interface for communication via the LTE wireless network. We elaborated further on these models [in this article](#) and the [corresponding case study](#). Shortly after, the S175 controller was added, offering an IQRF interface serving for communication with devices using the IQRF wireless technology. You can learn more about IQRF [in this article](#).

A new generation of Neuron/Axon 500 and Unipi Extension modules

Neuron 500 models, along with their counterparts from the Axon 500 line, became a huge success. Capitalizing on this success, we introduced the second generation of these controllers in early 2020, represented by Neuron M523, L523 and L533, and Axon M525 and L525. You can learn more [in this article](#). As a replacement for the older xS10, xS30, xS40 and xS50 extension modules, we also introduced the new xS11 and xS51 models.. Visit [this article](#) for more info.

Unipi xG18



1-Wire temperature sensors are an affordable and simple way to measure temperature and are suitable for a wide range of automation projects. However, especially extensive systems may soon run into technical limits of the 1-Wire bus itself, namely the limit of 15 devices per bus and the maximum bus length of 200 m. For such cases, we created a solution in the form of the Unipi xG18 1-Wire/Modbus RTU extension module. [Click here to learn more](#)

Mervis SCADA

With the release of the Mervis IDE 2.3.0, Mervis users gained the option to create and manage their SCADA projects using the Mervis SCADA service available for free. [Click here to learn more](#)

Indoor air quality sensors

We introduced new indoor air quality sensors that offer the ability to measure up to six parameters in a single compact package. Aside from that, the sensors also feature broad connectivity (including wireless technologies), compact size, easy installation and a web user interface. [Click here to learn more.](#)

Unipi Patron

In fall 2020 we introduced Unipi Patron - a product line of PLCs designed as a successor to Axon controllers. Patron represents a true breakthrough of Unipi PLC development, as it is the first product based on the Unipi-developed computing module powered by i.MX 8M Mini processor (4× Arm® Cortex®-A53) with 1GB RAM and 8GB eMMC onboard memory. Using our own platform allows us to provide technical support on all levels along with wide options for custom development. You can learn more about Unipi Patron [on this page](#).

Unipi Gate

In December 2020 we launched the Unipi Gate - a programmable Ethernet/RS485 Linux IoT gateway and logic controller. Thanks to its compact size, sufficient computing performance and software openness the Gate represents an ideal solution for a variety of projects within industrial automation, building management systems and other automation projects. Aside from the pre-installed Node-RED solution, customers can also use their own software or any supported third-party SW platform thanks to Gate's software openness. For more info about Unipi Gate please visit [this link](#).

