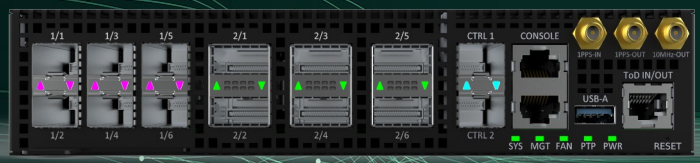
Advanced
Programmable Switches

APS Networks



When Open Source Software opens Pandora's Box

The use of Open Source software provides tremendous leverage when used correctly. For example, SONiC is a trendy and low-cost way to add Layer 3 routing services to your next-generation network products. Likewise, Open Source software is available for Operating Systems, Deep Packet Inspection, video quality measurement algorithms, databases, and many other applications.

But Open Source is not entirely free of obligations or necessarily free of license requirements, license fees, obligations, and even security risk.

Companies are advised to assess the potential security risks in embracing Open Source software. In many ways Open Source software can provide the lowest risk of security back doors because the source code is open to the associated community for review and is open to study.

On the other hand Open Source software is often intended to provide access to data that is very sensitive, for example in the case of security concerns including Man in the Middle (MITM) attacks and covert packet tapping that are inserted into in-line software based packet forwarding. This can affect software such as used with DPDK and SwitchDev. Both are commonly used in data centers currently.

Finally, corporations need to ensure that the overall delivered code does not include undisclosed or unlicensed code, or Open Source that includes an End-User License Agreement (EULA) that must be agreed upon by the end user.

Design Brief

Why APS Networks?

Security by Design
Our switches are designed based on the security by design principles. We have full control of our hardware supply chains and have Software Bill of Materials (SBoMs) in place for all software used. Further security features all for use of our products in Critical National Infrastructure (CNI).

Programmability with P4
The innovative technology of the Intel Tofino chipset offers unlimited open networking possibilities by the use of P4 programming language, featuring in-band telemetry and mega scale data center switching. P4 is easy to access, it enables hardware offloading of protocols, arbitrary tagging of packets, and controlling behavior based on individual data pattern matches. The switch has a non-blocking switching capacity of 2.0 Tb/s and is capable of complex protocol processing at wire speed.

Innovative Designs
Our technologies provide the ultimate, stable and supported platform for open network innovation. And our dedicated hardware solutions are built around enabling the latest open technologies to serve vertical industry needs. Open technology enables hardware and software diversity: reducing risk and lock-in to tardy vendor roadmaps.

Made in Europe
Our switches are produced in Europe, as the final manufacturing will be done in Belgium, and most of the components are provided by European suppliers. The printed circuit boards (PCBs) come from Austria and most of the design is done in The Netherlands.

We Deliver!

Modularity
All our new models can be upgraded with a daughter board, supporting a full range of Precision Timing Protocol (PTP) profiles. For the CPU you have the choice of AC or DC power supplies with front to back (port to power) and back to frond (power to port) airflow. The PSUs are of Titanium-grade, to provide the highest possible power efficiency levels.

PTP Timing & Synchronization
Our advanced programmable switches are the first to deploy the Tofino chipset with a time synchronization function, which is an essential capacity in the field of telecommunications as well as in media and entertainment. This feature enables

Efficient Power Consumption
The switches are equipped with low-consumption CPUs and energy-efficient PSUs and Fans. The intelligent automatic control system recognizes and manages the operating mode to reduce the power consumption to an optimized minimum, in particular when not in use.

Certification/Traceability
APS Networks and its design partners have invested in simulation tools to augment our capabilities and our engineers have a high level of expertise in designing products that not only meet but exceed requirements in these areas and most importantly we have a track record of largely passing the first time. That saves time, avoids rework and ultimately cuts costs.

Contact our Design Experts to help you choose your switch: +31 35 689 1989