

Press Release: New Telecom Product – 1G10G Rate Adaptation Smart SFP™

March 21st, 2024, Hilversum, The Netherlands – AimValley and OE Solutions announce today the addition of a new 1G10G Rate Adaptation Smart SFP™ Pluggable Device to its extensive line of Smart SFP devices.

Need a 1 GbE interface on your high-speed network switch?

The 1G10G Rate Adaptation SFP™ provides a solution for customers that need an optical 1G interface for newer generation routers and switches that only support ports with interface rates such as 10/25/100/400G.

Internally the 1G10G Rate Adaptation Smart SFP™ uses a 1G to 10G bridge function processor to convert the 1GbE optical signal into a 10GbE data rate to the host system and vice-versa. This bridge function is fully transparent for all frames, including jumbo frames.

Furthermore, it facilitates bi-directional Synchronous Ethernet to sustain network-wide frequency synchronization among devices. The 1G10G Rate Adaptation Smart SFP™ is ideal for high-end systems (10G and up) that require connection to installed systems that only support 1 GbE interfaces, such as:

- Management interfaces
- Timing interfaces
- Legacy 1G Ethernet equipment

“Having a 1G to 10G bridge function in a Small Form Factor Pluggable (SFP) will give more deployment flexibility, delivering lower rack-space use, lower power & carbon footprint and an overall cost saving”.

Senior Network Planner – Tier 1 Network Equipment Manufacturer

Smart SFP Devices

OE Solutions and AimValley jointly conceived the Smart SFP idea and started to build a comprehensive and feature-rich Smart SFP portfolio. The idea was built upon the strengths of both companies, by joining transceiver technology with systems and network technology.

Smart SFPs are deployed in networks of major 5G mobile operators, communications service providers, and mission-critical networks for Utility, Transport, Oil & Gas, Government, and Energy.

You typically find Smart SFPs in equipment, such as:

- Ethernet and IP/MPLS switches and access and cell site routers
- Ethernet and IP/MPLS microwave radio systems
- xWDM systems
- Packet/optical systems

The entire Smart SFP portfolio supports Plug & Play, and individual configuration using a supplied software application. An embedded network management software API is also available to achieve full integration.

Evert Konings
AimValley’s Smart SFP Product Manager

Using the Smart SFP technology, customer-specific options can be provided.

The Smart SFP portfolio

- T1 1.5 Mb/s, E1 2.0 Mb/s, T3 45 Mb/s
- SONET/SDH OC-3/STM-1, 155 Mb/s
- SONET/SDH OC-12/STM-4, 622 Mb/s
- SONET/SDH OC-48/STM-16, 2.5 Gb/s
- Packet over TDM (2.5G over OC-48/STM-16)

Smart SFP Applications

- 5G mobile fronthaul networks
- Fixed-line networks
- Packet-based microwave radio for 5G mobile fronthaul networks
- Mission-critical networks

About OE Solutions

OE Solutions is a global technology leader and vertically integrated supplier, specializing in direct-detect as well as coherent transceivers for mobile fronthaul and cable network applications at speeds up to 400G. For more information, please visit the [OE Solutions website](#).

About AimValley

AimValley is a world-class engineering and innovation center that develops high-reliability system designs and products (Hardware, Embedded Software, ASIC & FPGA) for Telecom, HealthTech, and other mission-critical applications. For more information, please visit the [AimValley website](#).

More information

[1G10G Rate Adaptation Smart SFP™](#)

[AimValley Development Process](#)

[TDM over Packet Solutions](#)

[TDM Network Migration](#)