

Product Brief: 1G1G Rate Adaptation Smart SFP™

Overview

The 1G1G Rate Adaptation SFP™ provides a solutions for customers with newer generation routers and switching systems that no longer support auto-negotiation on 1G ports.

Internally the 1G1G Rate Adaptation Smart SFP™ uses a 1G bridge function processor to add functionality like auto-negotiation.

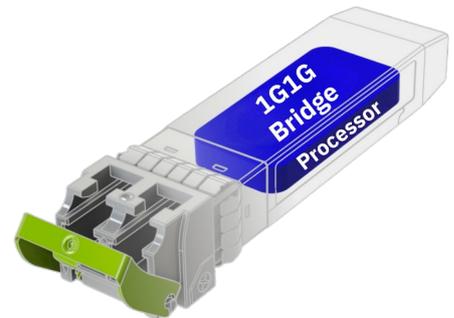
This bridge function is fully transparent for all frames, including jumbo frames and supports independent auto negotiation to the fiber and the host side.

Furthermore, it facilitates bi-directional Synchronous Ethernet to sustain network-wide frequency synchronization among devices.

The 1G1G Rate Adaptation SFP™ is ideal for high-end systems that require auto negotiation on 1 GbE interfaces, such as:

- 'Legacy' 1G Ethernet equipment
- Management interfaces

Having a 1G 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.



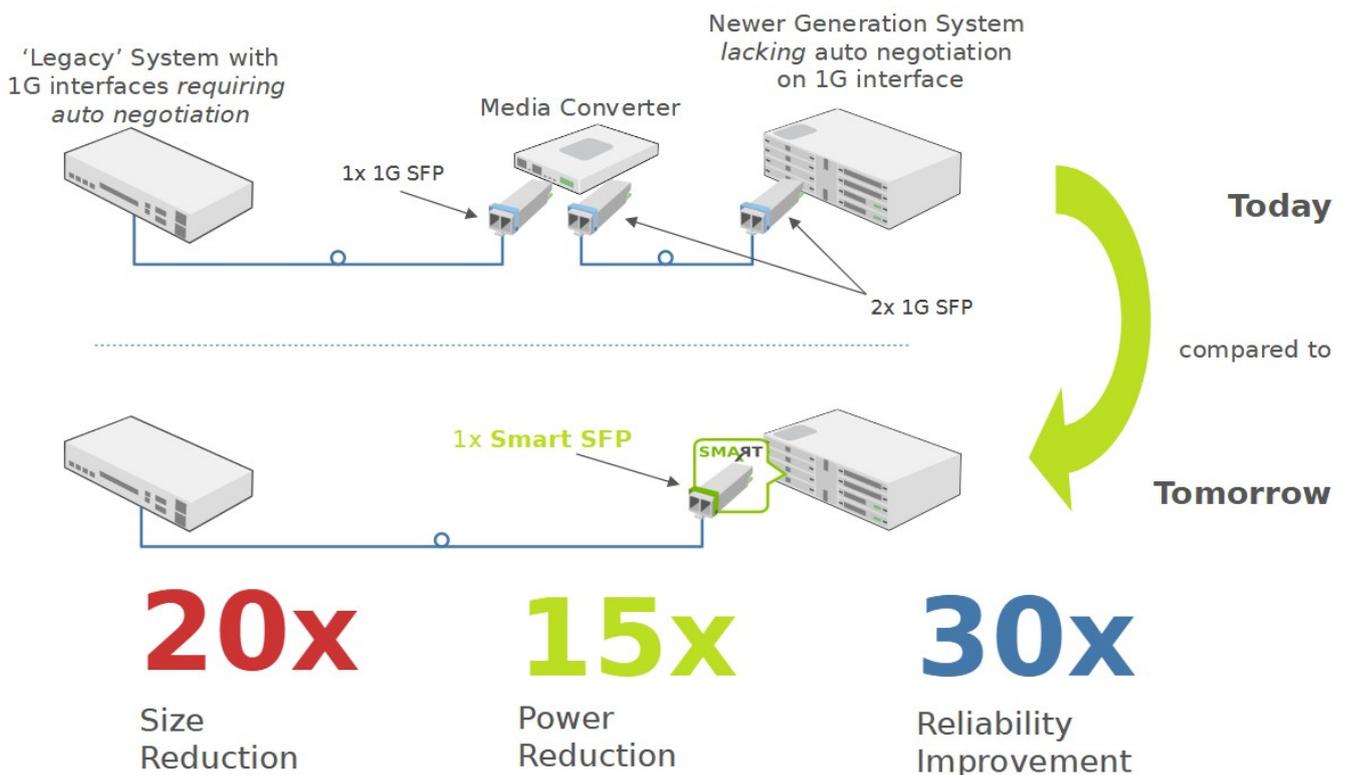
Application Highlights

- Optical 1GbE interface for systems without auto negotiation support

Benefits

- Simple interface range extension
- Power and noise reduction
- Space saving
- Low carbon footprint
- Total cost reduction

Application

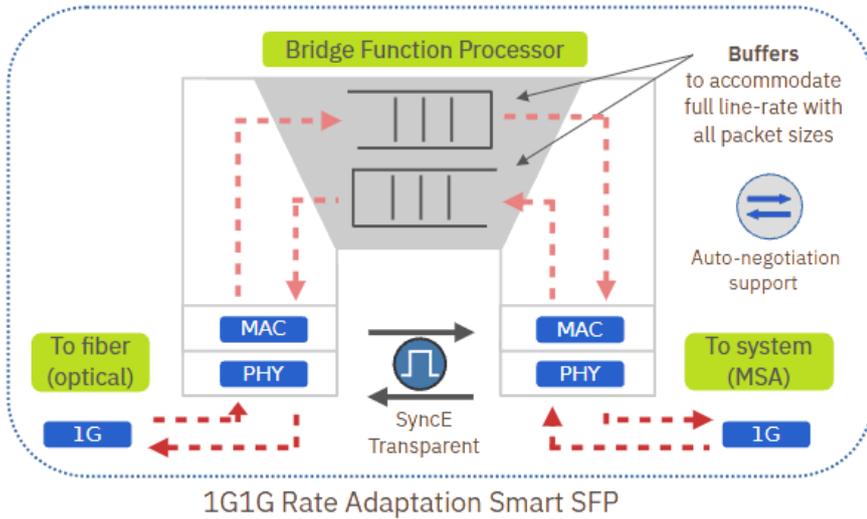


Installation

The 1G1G Rate Adaptation SFP™ can be used as any regular SFP as the bridge function will be configured and enabled in the factory:

- Whenever the SFP is inserted in a system, it will start the bridge function and can be used directly
- The SFP will perform auto negotiation to both the fiber as well as the MSA side with a fallback to 1G in case the remote end does not support auto negotiation.
- While management is possible for equipment manufactures by integrating our Titan API into the host system, it is not mandatory. Optional management will give access to, for example, counters, link status information and some configurables.

Functional overview



Features

- 1000BASE-LX10 interface
- Internal bridge function processor with auto negotiation support
- SFP MSA SFF-8074 compliant¹
- DDM SFF-8472 compliant
- Jitter compliant with IEEE 802.3
- Store and forward or cut through mode
- Jumbo frame support up to 9600 bytes
- SyncE compliant in both directions
- Optical link failures reported through RxLOS signal on MSA interface
- Low device latency

Interfaces

- LC connector type
- Optical transceiver
 - Duplex fiber
 - up to 10km reach
- Industrial operating temperature range:
 - -40°C to 85°C
- Maximum power consumption:
 - 1.9W

Contact Information

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¹ Exception: power consumption exceeds MSA limit