Lantiq™ FALC™ ON-S GPON SoC

PEB/PEF 98035 ET

Features

- Industry's lowest GPON ONU system power solution
- Integrated power management with unique power-saving solution
- Interfaces directly to FSO- or PLC-based BOSAs or PICs
- Real single-chip GPON SFP ONU
- Most advanced Rogue ONU detection, isolation and mitigation
- Time of Day/1PPS with outstanding system clocking performance
- Single 25 MHz reference clock
- Available in industrial/commercial temperature range
- PG-TFBGA-302 Package: 0.5 mm ball pitch, 11x11 mm^2

FALC™ ON-S is the industry's first fully integrated GPON ONU system solution providing all functional layers between a direct laser/APD interface and the high-speed differential interface on a single chip. This system integration enables a reduced Bill Of Material (BOM), an industry-leading high level of reliability, increased flexibility, and a shorter time to market. The FALC™ ON-S is a version for GPON ONU SFU applications based on an SFP optical transceiver and offers a highly optimized feature set, including a burst-mode laser driver, post amplifier and APD control interfacing directly to a low-cost BiDi Optical Sub-Assembly. It also includes a standard-compliant GPON ONU MAC, powerful IPv4/v6 packet processing, embedded MIPS34kc CPU, and a single high-speed Ethernet port operating either in 1.25 Gbps or 3.125 Gbps SGMII interface mode. The device enables real GPON wire-speed packet processing capabilities independent of the packet size and application processing performed on the on-chip CPU. Due to the integration of the optical interface and the high-speed serial Ethernet I/O on a single chip, a new GPON ONU power consumption benchmark is defined.

GPON Features

- System on Chip (SoC) for GPON Optical Network Termination (ONU)
- ITU-T G.984-compliant GPON TC sublayer
- Flexible optical interfaces addressing BiDi Optical Sub-Assembly (BOSA), Planar Lightwave Circuit BOSAs or Photonic Integrated Circuits (PIC)
- Integrated burst-mode laser driver and APD/PIN receiver
- Extended optical supervision improves optical network robustness
- Flexible L2-L4 packet processing engine with extensive traffic management functionality compliant with the Broadband Forum TR-156, G.984.4/G.988 and Metro Ethernet Forum specifications
- Real GPON wire speed packet processing throughput independent of packet size and CPU application processing
- SGMII interface operating at 1 Gbps or 2.5 Gbps
- Support of Time of Day/PPS synchronization according to G.984.3/.4

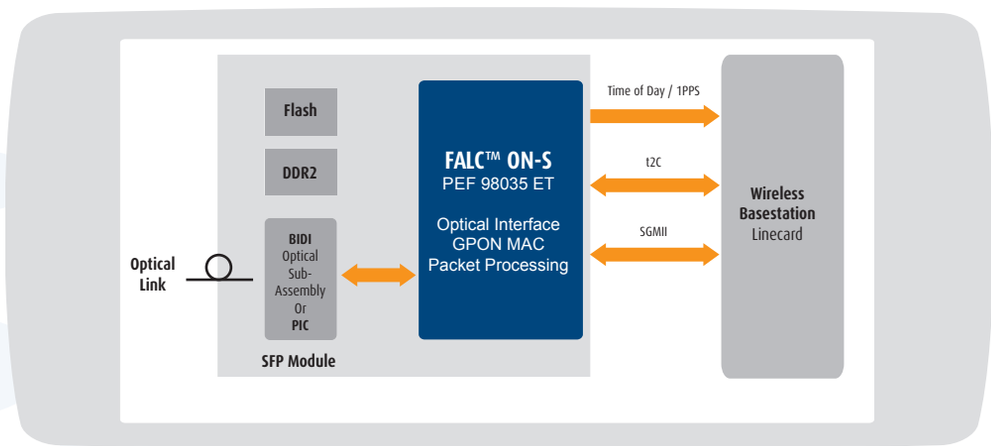
Applications

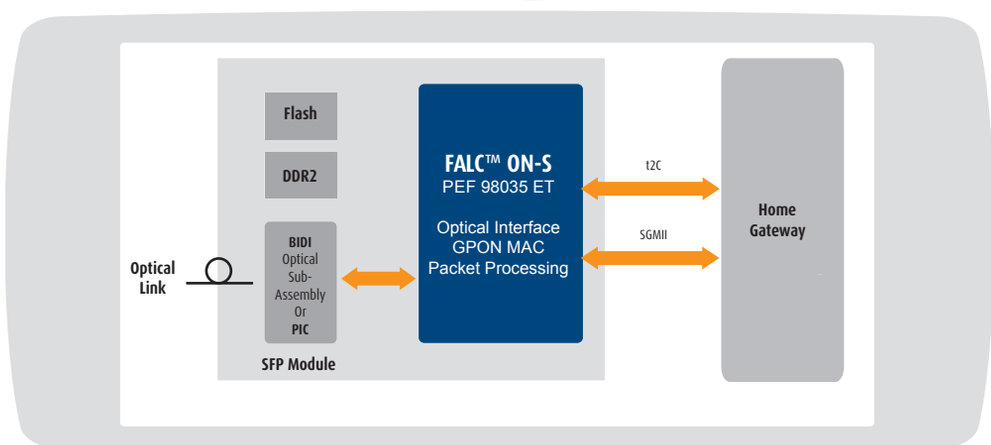
- GPON ONU in SFP pluggable module form factor

Lantiq™ FALC™ ON-S GPON SoC

PEB/PEF 98035 ET

Application Example





Product Summary

Product	Sales Code	Package
FALC™ ON-S	PEB/PEF 98035 ET	PG-TFBGA-302

How to reach us: http://www.Lantiq.com

Published by Lantiq
85579 Neubiberg, Germany

Order Number: PB-e-0056-v1