

# 10 GbE: HARI and LAN PHY

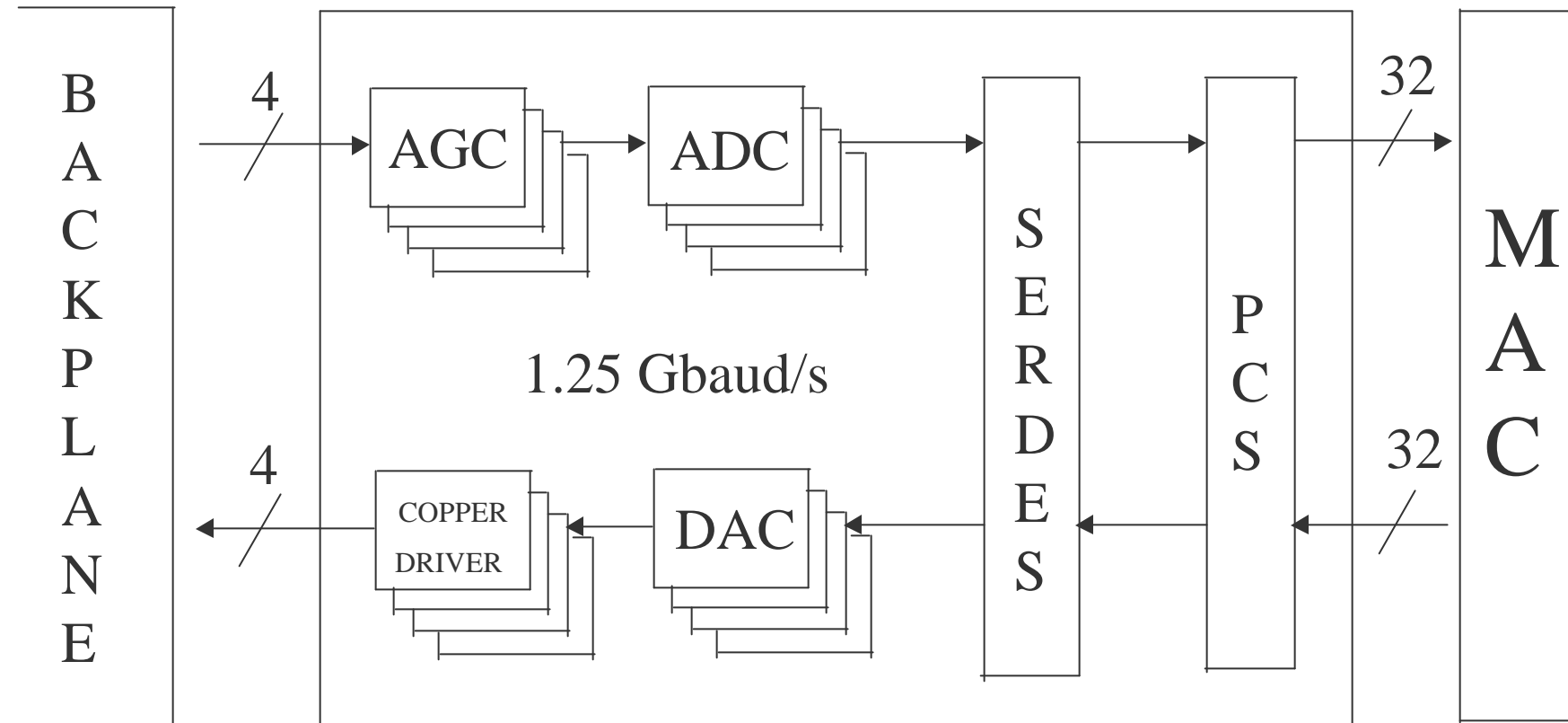
I would like to present briefly the description of two CMOS ICs for the emerging 10 GbE 802.3ae Standard. The two ICs address two key applications:

- 1) the transport of 10 Gbps over boards and backplanes, also known as “HARI interface”.
- 2) the transport of 10 Gbps Ethernet frames over the installed base of multimode fiber (up to 300 meters)

The advantages of the proposed solutions are:

- 1) they run at 1.25 Gbaud/s on the backplanes and optical MMF. Hence, it is the best fit to the limited bandwidth of the medium used to transport the bits.
- 2) they reuse the PCS of the 1000BASE-T standard, saving considerable development time.

# HARI 10 Gbps interface using 1.25 Gbaud/s(\*)

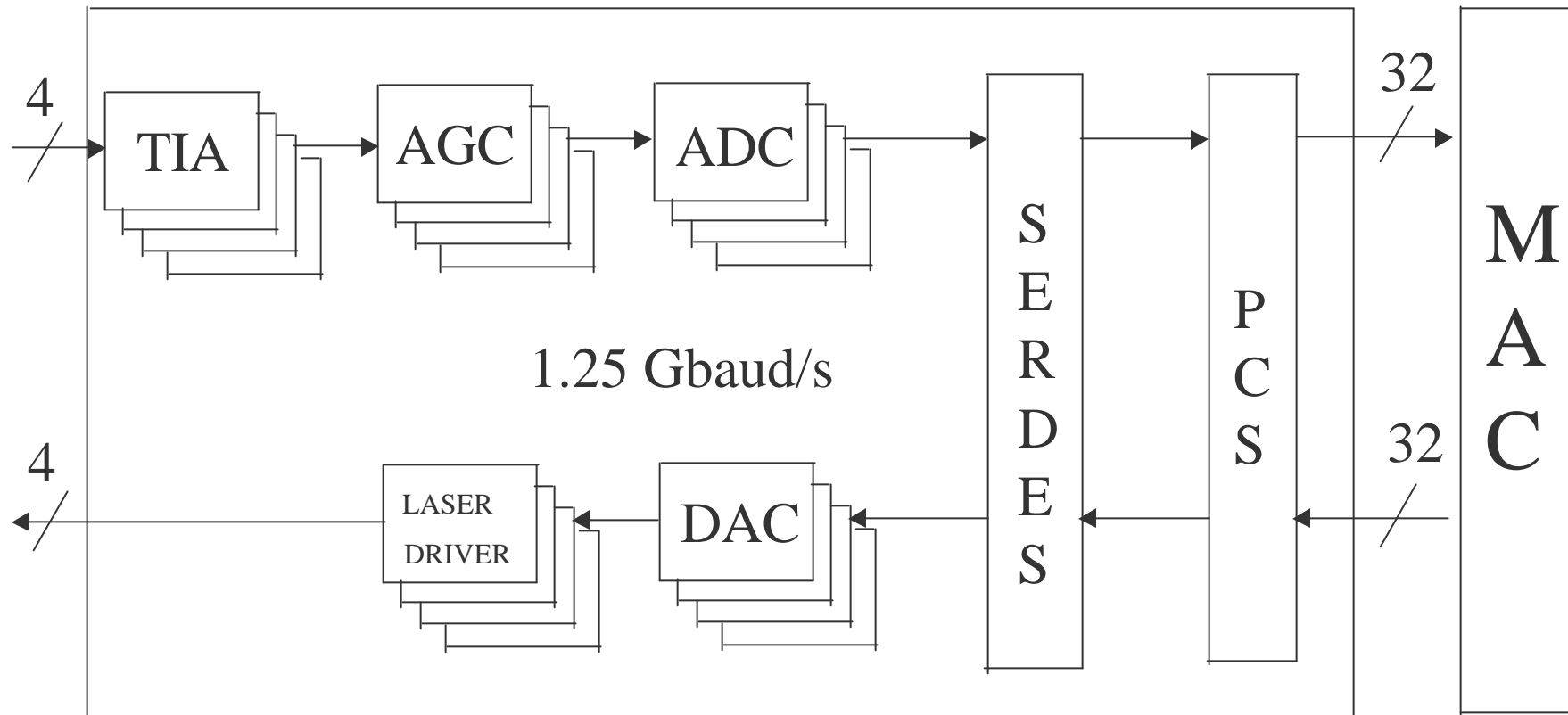


1.25 Gbaud/s (PAM-5)

312.5 Mbit/s

(\*) bits transported over PCBs and backplanes

# 10 Gbps LAN PHY using 1.25 Gbaud/s(\*)



1.25 Gbaud/s (PAM-5)

312.5 Mbit/s

(\*) bits transported over 300m installed MMF optical fiber

TIA = Transimpedance Amplifier