



Factsheet

Coordinator

Aristotle University of Thessaloniki

Funding

EU-H2020-RIA-ICT-27

Grand Agreement: 688172

Total Budget/EU Contribution

€ 4.086.810 / € 2.917.135

Project Launch : February 2016

Duration : 36 months

Consortium

Aristotle University of Thessaloniki (Coordinator) (GR)
Centre National de la Recherche Nationale - Laboratoire de
photonique et de nanostructures (CNRS-LPN) (F)
IBM Research Zurich GmbH (CH)
Interuniversitair MicroElektronica Centrum -IMEC (BE)
Politecnico di Milano (IT)
ST MICROELECTRONICS (IT)
iMinds (BE)
Vario Optics AG (CH)
Amphenol FCI (D)



The EU framework Programme for Research and Innovation



ICT-STREAMS

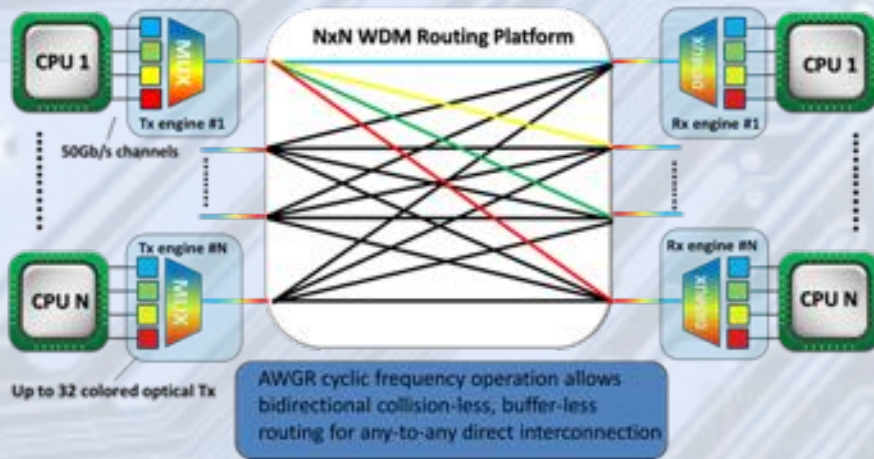
**Silicon Photonics Transceiver and Routing
technologies for High-End Multi-Socket
Server Blades with Tb/s Throughput
interconnect and interfaces**



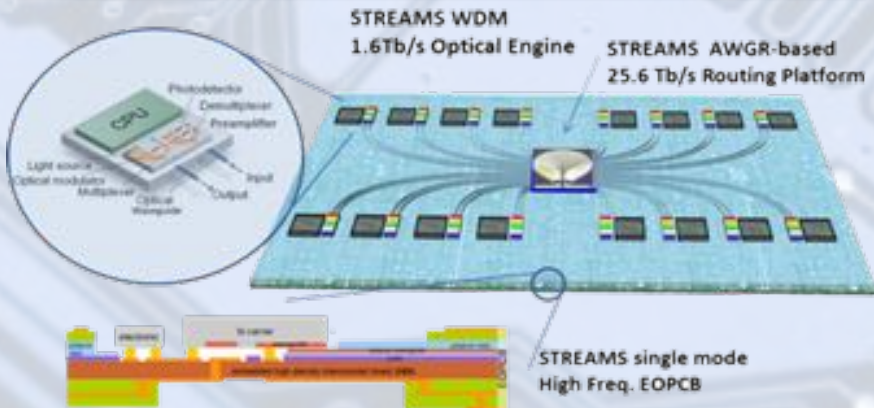
What is ICT- STREAMS?

ICT-STREAMS is a 3-years research project funded by EU-H2020 that will deliver a 1.6 Tb/s WDM mid-board transceiver together with a 25.6 Tb/s-throughput mid-board routing engine hosted onto the same electro-optic PCB, as a way to offer the technology toolkit for implementing multi-socket server boards with point-to-point-linked connectivity. ICT-STREAMS aims to increase state of the art server-board density and throughput by >400% and 1600% respectively, with a 10 fold reduced energy consumption.

ICT-STREAMS 16X16 ANY-TO-ANY INTERCONNECT TOPOLOGY...



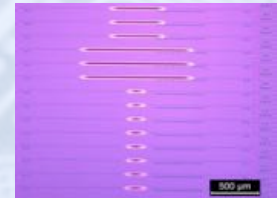
... implemented on a single Electro-Optical PCB



ICT-STREAMS

Technology Breakthroughs

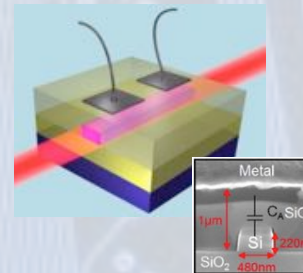
In-plane fully CMOS compatible III-V-on-SiPh DWDM laser Arrays



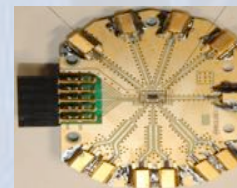
Single-mode, polymer-based optical PCB ...



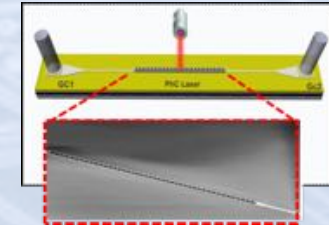
Thermal Drift Compensation Subsystem with ContactLess Integrated Photonic Probe (CLIPP)



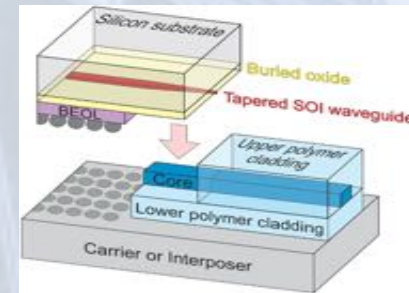
Energy efficient 50GHz driving electronics



III-V on Si, PhC-based nanoamplification paradigm



...and Low loss Silicon-to-polymer coupling interfaces



50Gb/s active silicon photonics

