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Open Source OPC UA/TSN demonstrator

- Adding Publish/Subscribe to the existing 62541-compliant implementation of OPC UA under an Open Source license.

- Brokerless OPC UA Publish/Subscribe via IP-multicast and the binary message encoding format (according to draft of part 14 of the OPC UA specification).

- Integration of the publisher in a regular OPC UA server with additional real-time interrupting. Subscribers are standalone.

- Demonstrator and measurement tests for real-time operations of OPC UA Publish/Subscribe via TSN.

- Configuration of the Publisher during startup.

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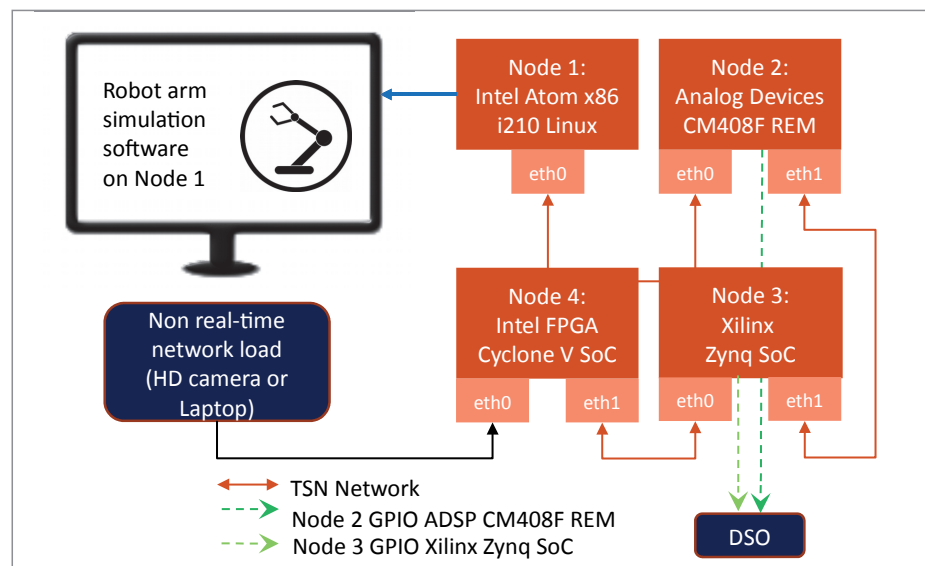www.iosb.fraunhofer.de/ILT

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open62541

Robot arm simulation software on Node 1

Non real-time network load (HD camera or Laptop)

Node 1: Intel Atom x86 i210 Linux — eth0

Node 2: Analog Devices CM408F REM — eth0 eth1

Node 4: Intel FPGA Cyclone V SoC — eth0 eth1

Node 3: Xilinx Zynq SoC — eth0 eth1

DSO

TSN Network
Node 2 GPIO ADSP CM408F REM
Node 3 GPIO Xilinx Zynq SoC

Hardware and project participants

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Project participants

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