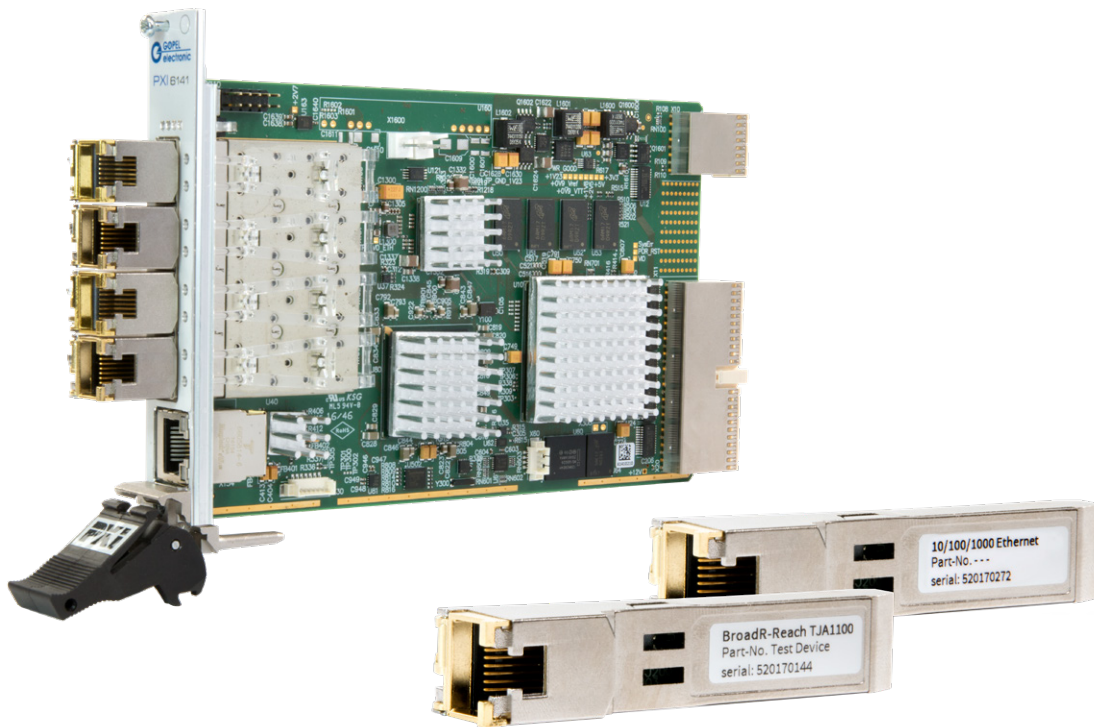




PXI 6141

Automotive Ethernet Controller for test and validation of Ethernet-based in-vehicle networks



- flexible test platform for Automotive Ethernet
- modular transceiver system (four modular transceiver bays)
- a total of five independent 10/100/1000 Mbit MAC interfaces
- trace-capture on all SFP interfaces with precise hardware timestamps
- FPGA based switching fabric which allows multiple data path for tapping and bypassing, PHY to PHY routing, PHY to MAC routing
- bypassing with packet injection through internal switches to inject:
 - *additional traffic from MAC/packet generator*
 - *erroneous frames from the packet generator*
- fourfold integrated FPGA based packet generator (up to 100 % busload with valid and erroneous data)
- comprehensive G API and LabVIEW virtual instrument library



Parameters		
host interface	PXI	
number of interfaces	five independent 10/100/1000 Mbit MAC interfaces	
modular system	SFP transceiver modules for:	100Base-T1 (BroadR-Reach) 1000Base-T1 10/100/1000Base-T
packet generator	fourfold integrated FPGA based packet generator up to 100% busload	
software support	G API and LabVIEW virtual instrument library	

Switching matrix

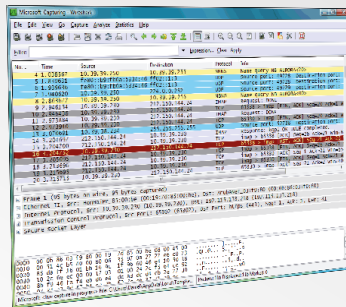
- coupling of four 10/100/1000 Mbit MAC interfaces to the four SFP transceiver bays

Modular system

- four modular SFP transceiver bays
- five independent 10/100/1000 Mbit MAC interfaces

PXI 6141

Test and validation of Ethernet-based in-vehicle networks



Packet generator

- up to 100% busload with valid and erroneous data

Simulation

- all MACs can simulate independent traffic for multiple ECUs, each virtual ECU with its own MAC and IP addresses

Software support

- G API and LabVIEW virtual instrument library

Capturing

- monitoring the network traffic of each MAC
- using Wireshark Network Analyzer tool or the G API
- pCAPng format