



Gesytec GmbH



Easylyon Interfaces⁺ – Top Efficiency

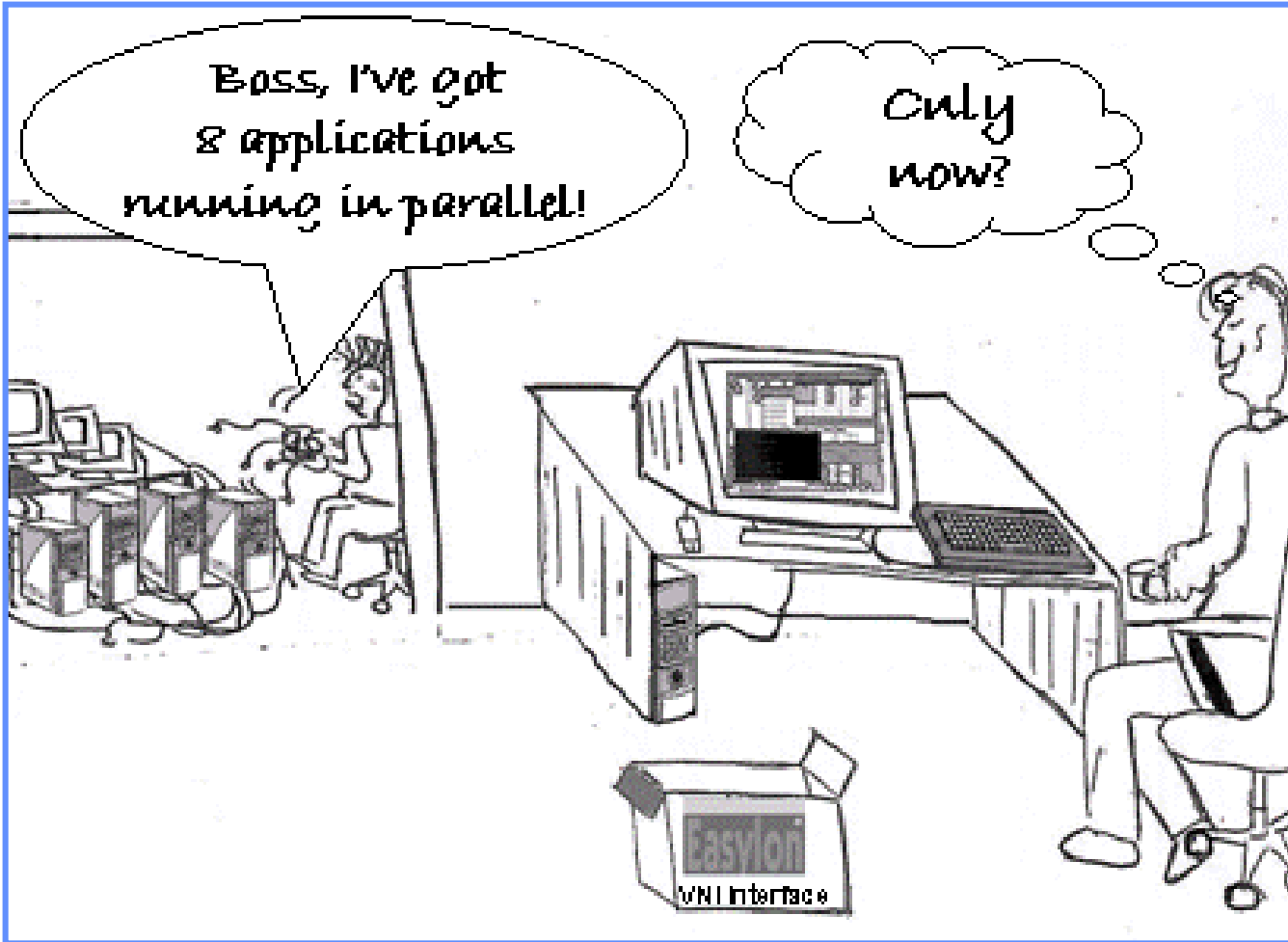


Interfaces⁺, VNI technology

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Less Sometimes is More





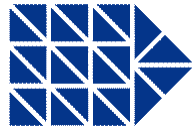
What is an Easylon Interface+ ?



You'll get more
than with a standard adapter

Technically it is a VNI interface





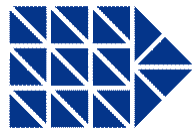
What is a VNI Interface ?



VNI = Virtual Network Interface

- of course, it is hardware
- “virtual” is just the implementation of the protocol





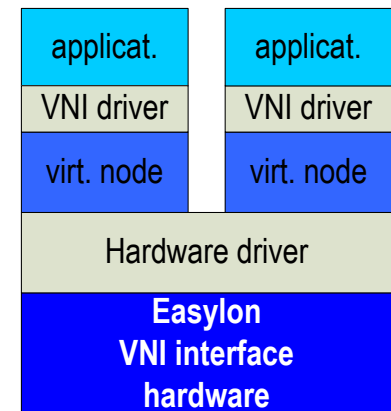
Easylon Interfaces⁺

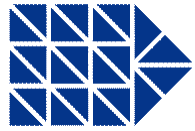
Improved Performance by New Technology



- Interface according to ISO/IEC 14908-1
- Increased performance by usage of PC processor
- Real multi-client usage for up to 8 applications
 - Application has not to be changed
 - Usage of terminal server vs. single PCs
- LNS and MIP applications running together
- Interface can be used from remote PCs
- Protocol analysis is possible
- Compatible with other VNIs

How is this done?





Structure of a Common LON Interface

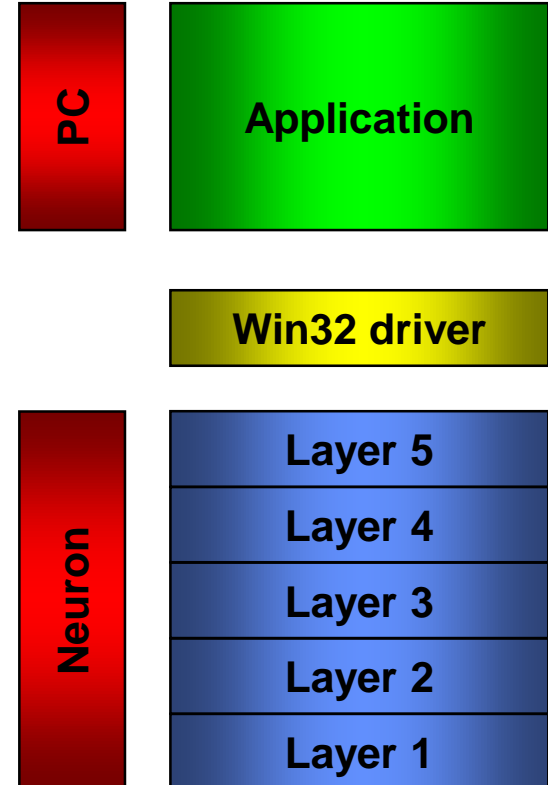


Properties

- Neuron chip as network processor
- Protocol is running on the interface
- MIP or NSI firmware

Restrictions

- Just one outgoing transaction
 - limited throughput
- Limited memory (64K address space)
 - buffer size problem
- Limited performance (max. 40 MHz)
 - especially in case of long messages



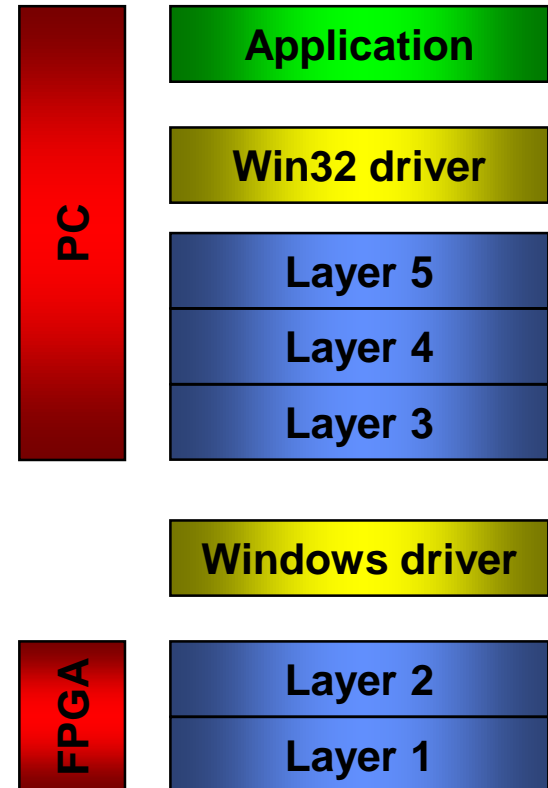


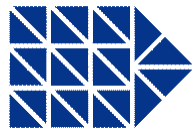
Structure of an Interface+



Properties

- FPGA for LonTalk Layer 2
- 512 kByte network buffer
- Hardware based timestamp
 - used for protocol analyzer
- No software inside the interface
- Driver implements the MIP
 - **VIRTUAL NEURON CHIP**
- All messages are received by the PC
- All messages can be sent by the PC
- No limitations by the neuron chip

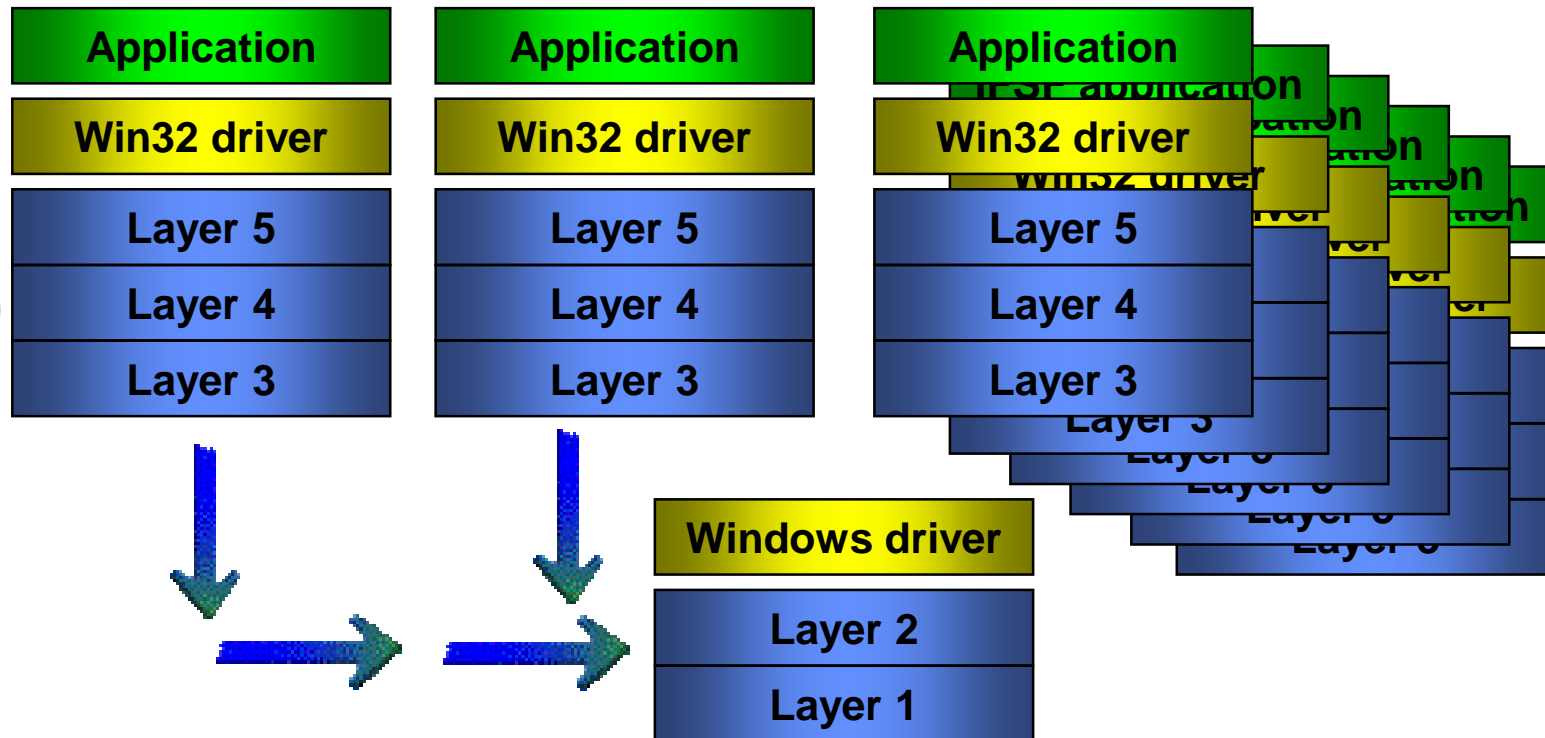




Multiple Applications with VNI



Up to eight clients for one interface



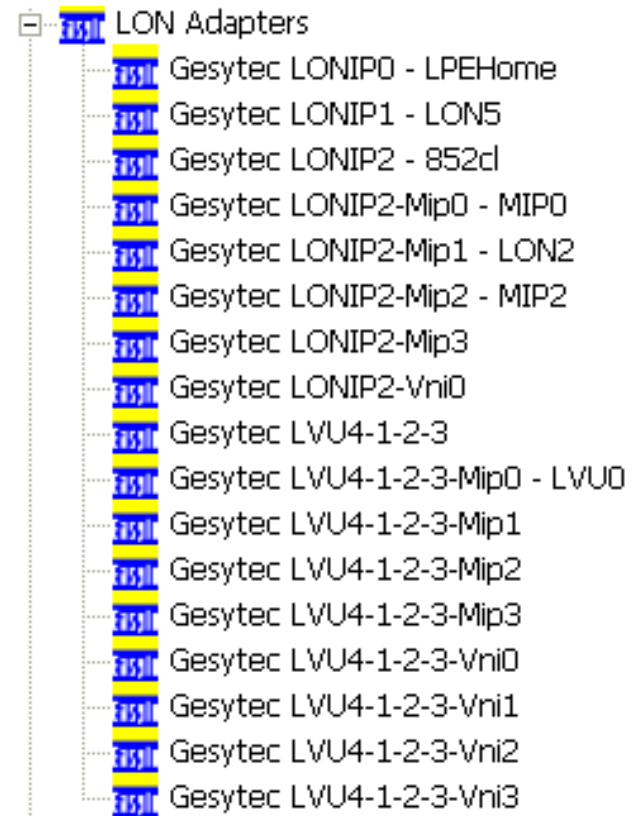


Multiple Applications with VNI



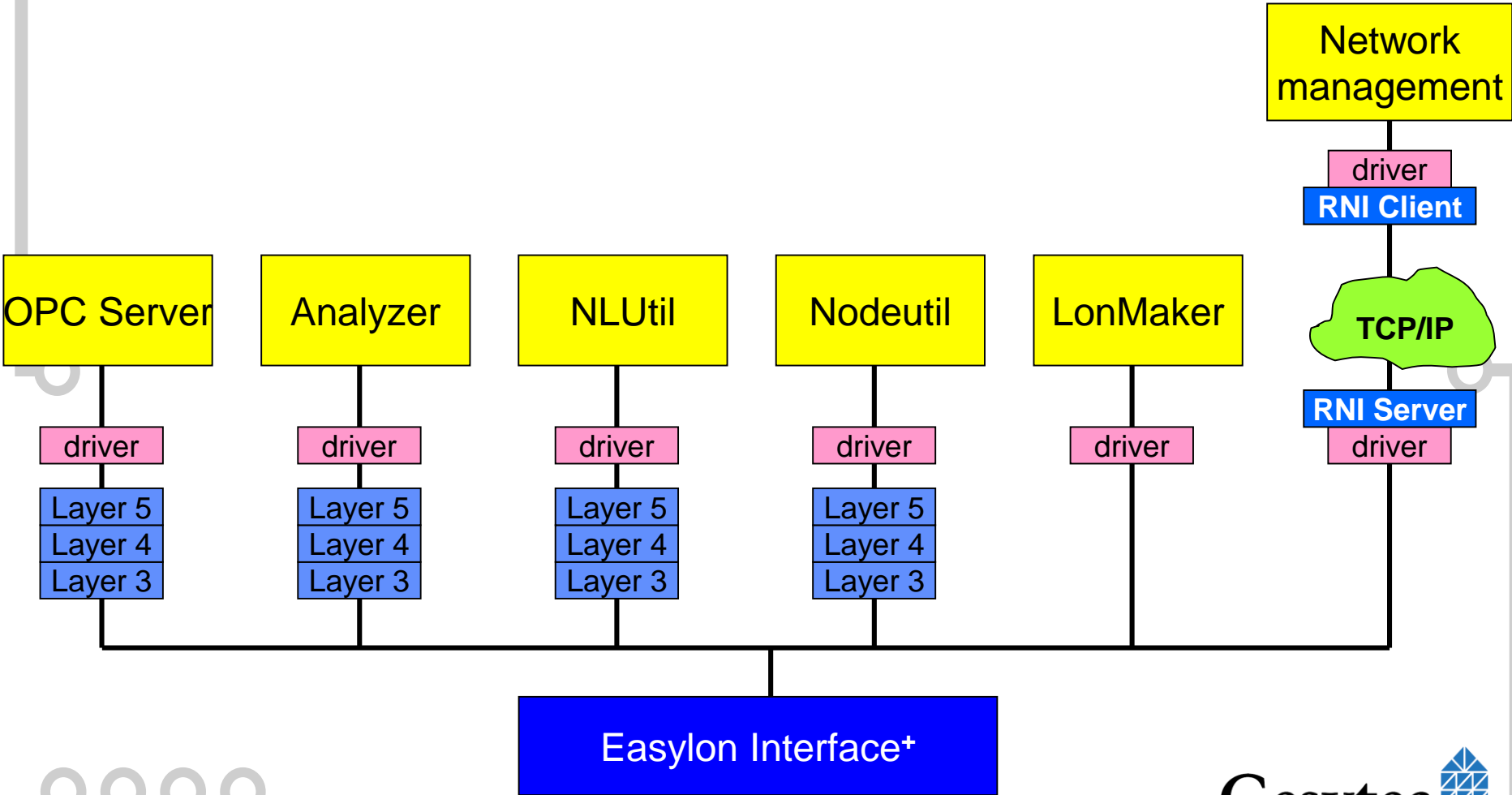
Up to eight clients for one interface

- Completely independent
- Separate virtual neurons
- Standard Echelon Windows
32 bit driver interface
- 16 bit applications are possible
- Compatible with LDV.DLLs
(WLDV32.DLL, openLDV,...)





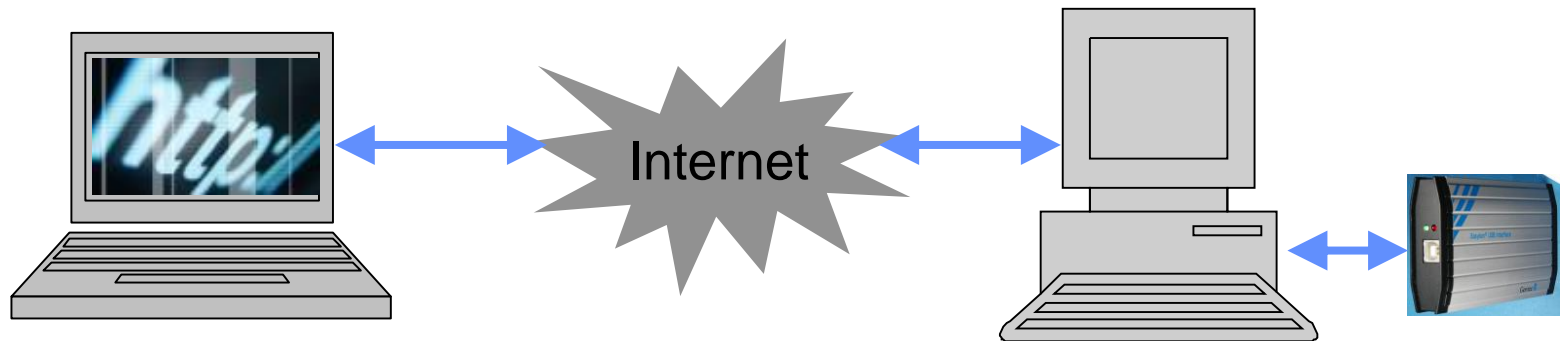
Using Multiple Applications via a Single Interface

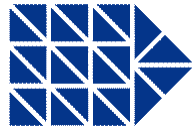




Remote drivers

- Interface can be used remotely
 - Windows, Windows CE, Linux
- Identical driver interface for the remote client
- Interface is “tunnelled” to the remote client
- Remote client can run all applications
- Maintenance and diagnosis remote and local are now identical



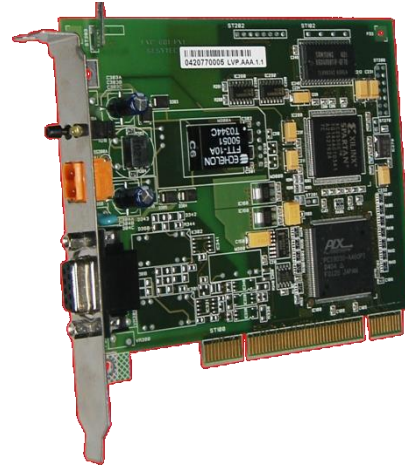


Easyton Interfaces+

for ISO/IEC 14908-1 compatible Networks



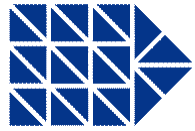
- PCIe Interface
- PCI Bus Interface
- USB Interface
- PC/104 Interface



LON Adapters

- Easyton Gesytec LONIP0 - LPEHome
- Easyton Gesytec LONIP1 - LON5
- Easyton Gesytec LONIP2 - 852d
- Easyton Gesytec LONIP2-Mip0 - MIP0
- Easyton Gesytec LONIP2-Mip1 - LON2
- Easyton Gesytec LONIP2-Mip2 - MIP2
- Easyton Gesytec LONIP2-Mip3
- Easyton Gesytec LONIP2-Vni0
- Easyton Gesytec LVU4-1-2-3
- Easyton Gesytec LVU4-1-2-3-Mip0 - LVU0
- Easyton Gesytec LVU4-1-2-3-Mip1
- Easyton Gesytec LVU4-1-2-3-Mip2
- Easyton Gesytec LVU4-1-2-3-Mip3
- Easyton Gesytec LVU4-1-2-3-Vni0
- Easyton Gesytec LVU4-1-2-3-Vni1
- Easyton Gesytec LVU4-1-2-3-Vni2
- Easyton Gesytec LVU4-1-2-3-Vni3





Easyton Interfaces⁺ for PCI and USB



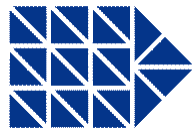
PCI Interface⁺

- Transceivers:
 - TP/FT-10
 - TP/XF-78 and -1250
 - DC-1250
 - RS-485
- 2-pin plug-screw and D-type connectors
- Service pushbutton & traffic LED
- Drivers for Windows from 2000 to 7 / 64 bit and server os
- Options
 - RJ45 instead of D-type

USB Interface⁺

- High speed USB 2.0
- TP/FT-10 transceiver:
- Service pushbutton and service, status error LED
- Drivers for Windows from 2000 to 7 / 64 bit and server os



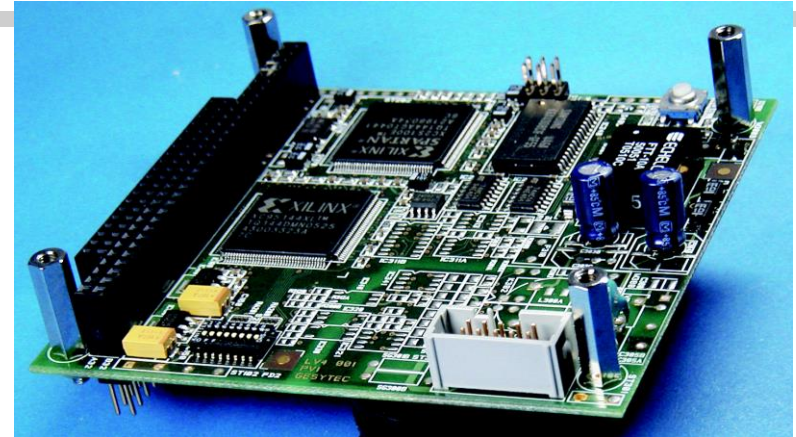


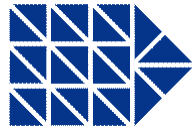
Easyton PC/104 Interface⁺



- Transceivers:
 - TP/FT-10
 - TP/XF-78 and -1250
 - DC-1250
 - RS-485
- Service pin & LED
- Transmit/receive LEDs externally available
- Drivers for Windows from 2000 to 7 / 64 bit and server os

- Special variants
 - Railway system compliant: EN 50155 and IEEE 1473-L
 - Special coating for harsh environments
 - Extended temperature range





Profit from More than Technical Advantages



Easlon Interfaces⁺ are available at prices corresponding to those of standard interfaces



Interfaces⁺, VNI technology



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