

netIC

Real-Time Ethernet as DIL-32 IC

CONNECTED BY

netx

Description

Simple field devices such as barcode readers, identification system, valve islands or digital and analogue inputs and outputs will require a connection to Real-Time Ethernet systems in the future. These also often have a serial interface such as UART, SPI or I2C and make no great demands on data throughput.

The netIC is a complete 'Single Chip Module' in the compact dimensions of a DIL-32 ICs. It is based on the netX 50 network controller and contains all components of a Real-Time Ethernet interface with integrated 2-Port Switch and Hub. These serial interfaces are available for application on which the user data are transferred with simple write-read commands. Alternatively conventional shifting registers can be controlled via a synchronous serial interface so that no additional processor is required.

With the netX technology the whole spectrum of relevant Real-Time Ethernet systems is covered by loadable Firmware with one netIC. The widely known Modbus RTU protocol is implemented as a serial protocol on the Host interface. With the open netX technology and the provided tools, the customer can also implement his own protocol or additional functions. For this purpose the Firmware can also be provided in source code or as linkable Object Module.

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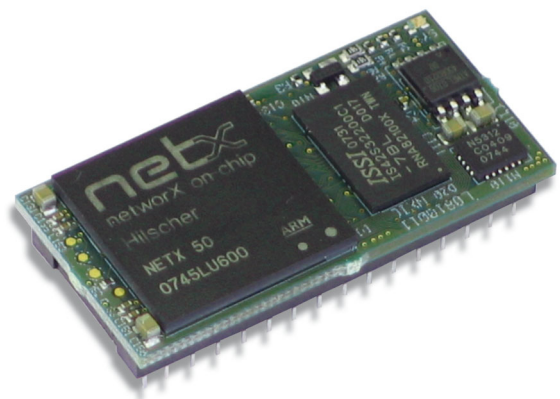
PROFI
INDUSTRIAL ETHERNET
NET

SERCOS
interface



Highlights

- For all Real-Time Ethernet systems
- Integrated Switch and Hub
- Fits in a DIL-32 socket
- UART- / SPI- / I2C interface with Modbus RTU protocol
- Firmware in source code or linkable Object Module deliverable optionally
- Pin-compatible to the industry standard with 3.3 V supply voltage



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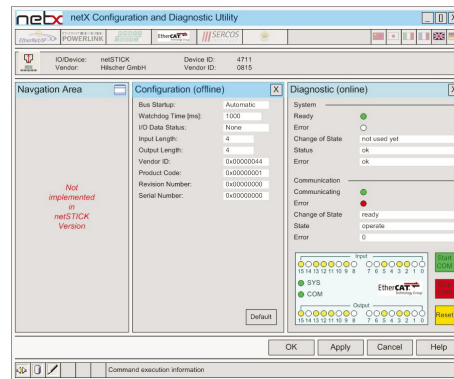
netIC

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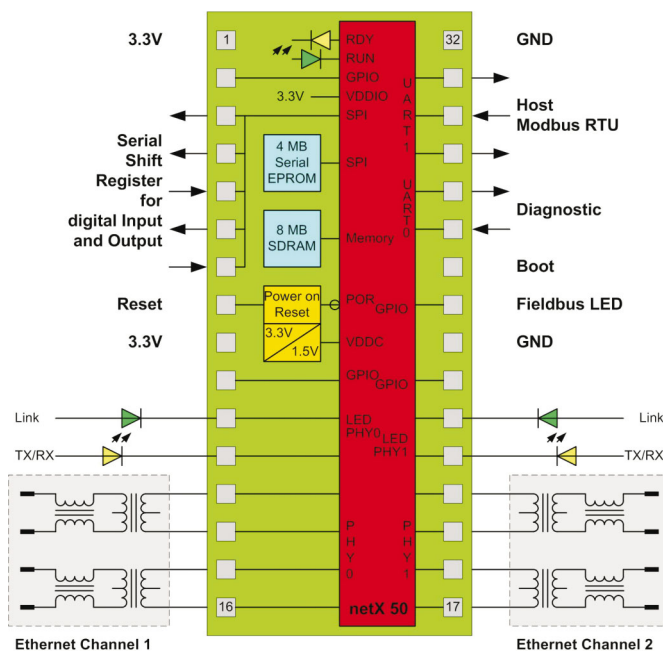
Block Diagram

The netIC only requires a 3.3 V power supply and two RJ45 Ports with integrated transmitter for operation on a Real-Time Ethernet system. Examples of schematic diagrams are included in the documentation. An evaluation board is available for testing, loading the Firmware and for the configuration.

The configuration is transmitted online from the Host system or can be saved with the help of netX utility program as a configuration file on the netIC.



netX Utility for configuring the netIC



Block diagram of the netIC with its connections

Technical Data

Parameter	Value
Prozessor	netX 50
Memory	8 MB SDRAM
Displays	System-LED
Serial interfaces	Diagnostic/configuration UART RXD, TXD Host Interface UART with RXD, TXD, RTS SPI and I2C Master / Slave
Synchronous serial IO interface	Inputs: max.1 6x8 Bit shift register Outputs: max.1 6x8 Bit shift register

Parameter	Value
Communication interface	2x Ethernet 100 BASE-TX auto cross over / auto negotiation
Operating voltage	+3.3 V / typ. 400 mA
Operating temperature	-20° ... 70° C
Dimensions (L x W x H)	42 x 21 x 15 mm
Emission	EN55011 class A
Immunity	Surge - IEC 61000-4-5 Burst - IEC 61000-4-4 ESD - IEC 61000-4-2
RoHS	yes
UL	In preparation

Product Overview

Article description	Article number	Article
NIC 50-RE	1541.100	netIC with Real-Time Ethernet Interface
NIC EB	1540.000	netIC Evaluation board

Headquarters

Germany
Hilscher Gesellschaft für Systemautomation mbH
Rheinstrasse 15
65795 Hattersheim
Phone: +49 (0) 6190 9907-0
Fax: +49 (0) 6190 9907-50
E-Mail: info@hilscher.com
Web: www.hilscher.com

Subsidiaries

China
Hilscher Ges.f.Systemaut. mbH
Shanghai Representative Office
200010 Shanghai
Phone: +86 (0) 21-6355-5161
E-Mail: info@hilscher.cn

France
Hilscher France S.a.r.l.
69500 Bron
Phone: +33 (0) 4 72 37 98 40
E-Mail: info@hilscher.fr

Italy
Hilscher Italia srl
20090 Vimodrone (MI)
Phone: +39 02 25007068
E-Mail: info@hilscher.it

Japan
Hilscher Japan KK
Tokyo, 160-0022
Phone: +81 (0) 3-5362-0521
E-Mail: info@hilscher.jp

Switzerland
Hilscher Swiss GmbH
4500 Solothurn
Phone: +41 (0) 32 623 6633
E-Mail: info@hilscher.ch

Hilscher Swiss GmbH
Branch Office East Switzerland
Embedded Systems
9444 Diepoldsau
Phone: +41 (0) 71 737 7575
E-Mail: info@hilscher.ch

USA
Hilscher North America, Inc.
Lisle, IL 60532
Phone: +1 630-505-5301
E-Mail: info@hilscher.us

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