

# ECM-PCIe/8300

## EtherCAT® Master Board for PCI Express®



EtherCAT®

- Intelligent EtherCAT master board
- Dual NIC to support EtherCAT cable redundancy
- On board real-time OS
- Master API and 'EtherCAT Workbench' support

### Intelligent EtherCAT Master Interface for PC

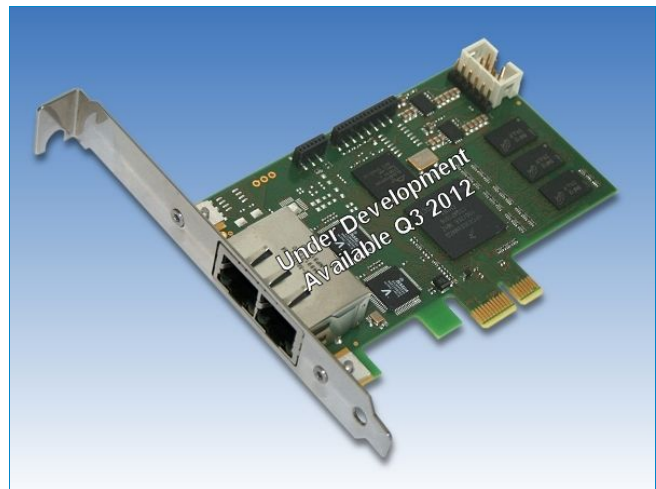
The ECM-PCIe/8300 is a PC board designed for PCI Express slots. It features an on board running EtherCAT master (ECM) in a real-time environment. Two RJ45 sockets are available to connect EtherCAT slave segments. These two interfaces can be used to either control two independent EtherCAT slave segments without support for EtherCAT cable redundancy or to control a single EtherCAT slave segment with support for EtherCAT cable redundancy. In combination with an optional 1 GE switch with VLAN support the control of even more individual slave segments is supported.

### Applications

The board turns any PC into an EtherCAT master where initialization and control of the EtherCAT segments are completely handled in the real-time environment of the master interface. Time and performance critical tasks are executed in a deterministic way without any influence of the PC's hardware, operating system, device driver, etc. The PC's network interface remains available for e.g. standard TCP/IP communication.

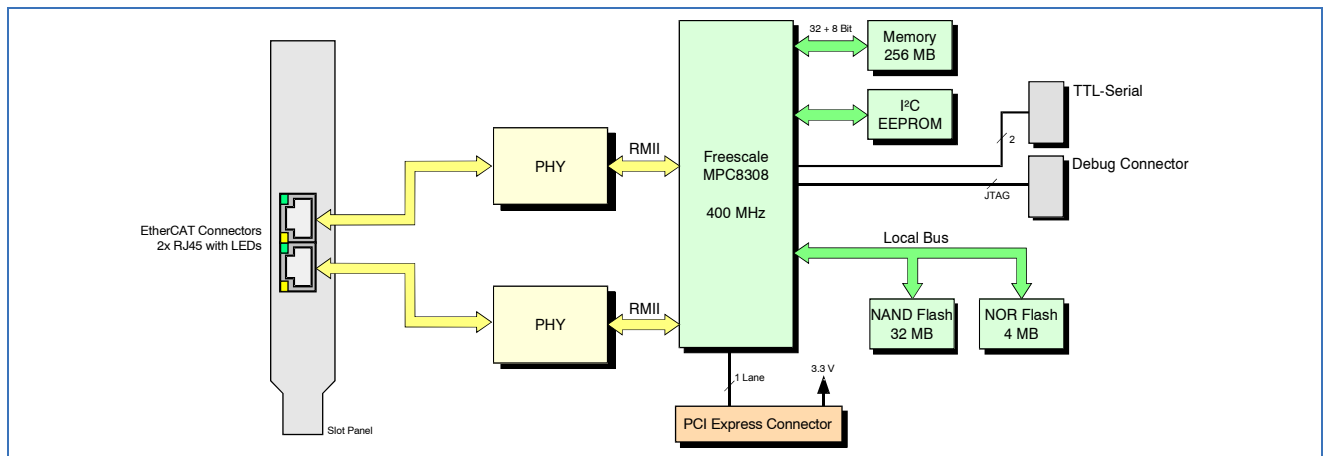
### Configuration and Protocols

Network configuration is either based on standard EtherCAT Network Information (ENI) files according to ETG.2100 specification or can be completely performed with API calls.



### Software Support

Device drivers for data exchange with an application for Linux and Windows are available. Drivers for other operating systems are available on request. For application development esd offers a master API library with sample code and our EtherCAT configuration and diagnostic tool 'EtherCAT Workbench'.



### Technical Specifications:

PCI Express interface:	
PCIe endpoint:	Freescale 8308
PCIe port:	according to PCI Express Specification R1.0a
Link width:	1x Lane, 2,5 GBit/s
CPU and memory:	
Controller:	Freescale 8308, 400 MHz
RAM:	256 MB, DDR2
ROM:	Flash: 32 MB NAND, 4 MB NOR
EtherCAT network interfaces:	
Controller:	dual NIC integrated in CPU Freescale 8308 2x 10/100/1000BASE-TX
PHY-interface:	2x Vitesse 8601
Connector:	2x RJ45

General:		
Supply voltage:	3,3 V	
Ambient temperature:	operational: 0°C to +55°C	
Relative humidity:	max. 95 % (non-condensing)	
Dimensions [mm]:	105 mm x 70 mm (low profile PCIe)	
Weight:	70 g	
Order information:		
Designation	order no.	
ECM-PCIe/8300-DE	dual NIC intelligent EtherCAT-Master PCI Express board	E.1300.02
EtherCAT-Master	runtime license for Master-API-LCD, object code for Windows and Linux	E.1101.02
EtherCAT Workbench	Network configurator for Windows	P.4510.01

All data are subject to change without prior notice.  
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