



v1.5 - Jul. 2004

To get access to different fieldbus systems becomes easier and less expensive for your machine

DC100PFB Embedded Network Interface

For fast implementation of Profibus into your machine

Features

- Embedded Network Interface (ENI Module)
- One Common Interface for all ENI modules
- Simple Integration with Direct DP-RAM Access
- Automatic or manual DP-RAM I/O configuration
- Possible storage of the Network configuration in flash memory.
- Upgradeable Firmware
- Independent of Operating Systems
- Lower engineering and integration costs
- Lower product and life cycle cost
- Very compact dimension (horizontal or vertical mounting)
- Embedded communication firmware (processor on-board)
- Up to 3Kb Input + 3Kb Output Data
- EMC compliance

Protocols

- Available:
 - ✓ Profibus DP-V0 Master/Slave, DP-V1 Master
- On request:
 - ✓ Profibus S7/MPI
 - ✓ CANopen
 - ✓ DeviceNet
 - ✓ Modbus TCP/IP

Typical applications

- Industrial PC Solutions
 - ✓ Test Measurement, PC based Control, Operator Panel
- Machine Tool Industry
 - ✓ Robotic Application, Embedded Control for small Devices
- Building Automation
 - ✓ Multiple Gateways, Alarm Center, Elevator / Escalator Control, Access Control / Data Collection

Woodhead is a member of PTO (PROFIBUS Trade Organization), PNO (PROFIBUS Nutzerorganisation e. V.) and France Profibus



The DC100PFB ENI Profibus daughter card

Overview

The Woodhead ENI module (Embedded Network Interface) for Profibus is the first intelligent Woodhead module supporting the new common physical interface. Woodhead ENI Module benefits to machine tool, conveyor and Industrial PC manufacturer by significantly shortening the time to market for new systems.

The ENI Module is connected with the motherboard through a simple 60 PIN connector. Therefore the integration is easy and inexpensive. As the wiring of the connector is always the same, only one hardware design is required in order to support different Fieldbuses protocols. Depending on the size of the target system, customer can use the already integrated plug (Sub-D) or he may use an external connector (HE13 2*5 pins connector).

The data exchange with the Host systems is carried out via an "easy to use" interface, having a 8Kb dual-port memory as all the ENI modules, and this whatever the protocol used. As the ENI module is equipped with its own embedded processor, all the communication is processed on the module, without any load on the Host system.

In order to support customer specific development, Woodhead provides also a Development and Evaluation kit, including:

- 1 development card: PCI 3.3/5V bus interface, plugs up to 4 daughter cards (1 DC100xxx ENI Daughter card to buy separately)
- 1 CD-Rom including:
 - Driver under Windows 2000, XP or Open Development for specific OS (Linux, DOS, QNX, Vx-Works, etc).
 - Under Windows, .EXE files for tests purposes (Read, Write, DP-Ram access, Slave diagnostic, etc) + integration samples in C ANSI source code.
 - Documentations in PDF format.

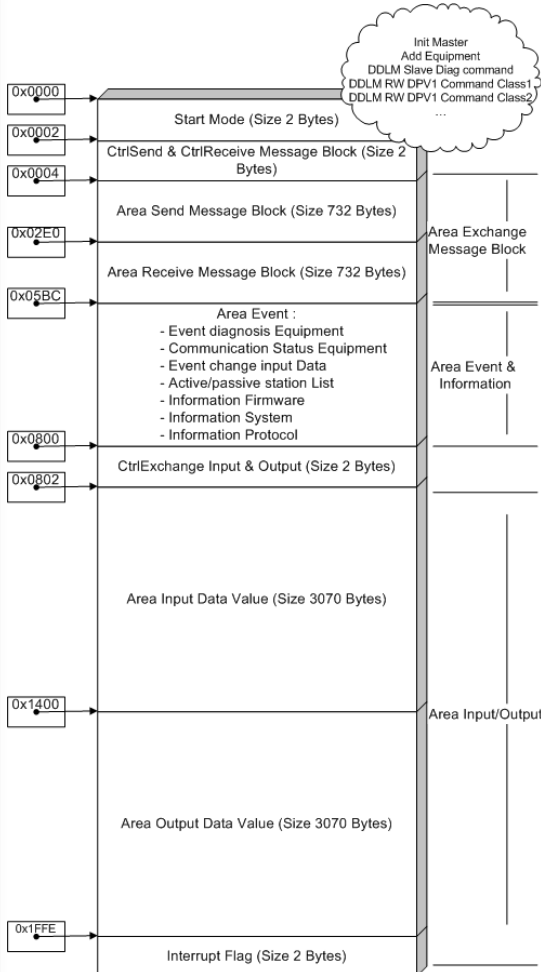
To assist you for an easier and quicker integration, Woodhead may propose you training or development assistance on site or in Woodhead office.

Embedded Network Interface



Memory MAP

The 8 kbytes Dual Port Memory (DP-RAM) allows a fast access to all Fieldbus data.

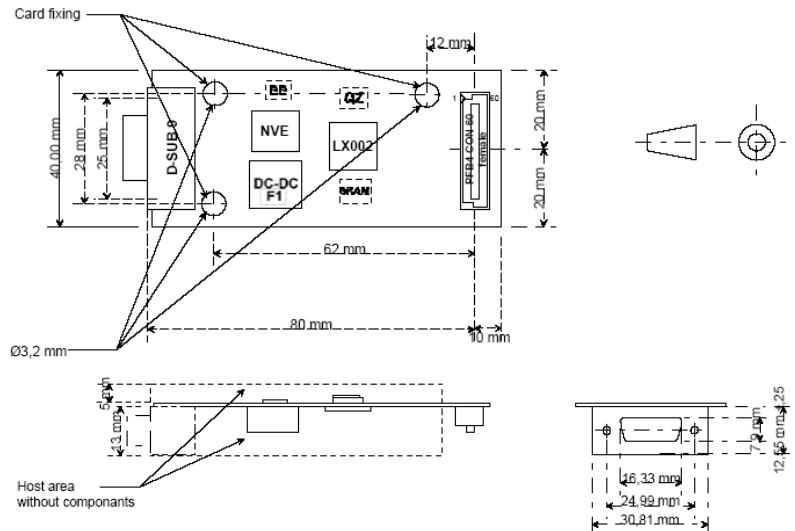


Development PCI board



Test and evaluation board, carries up to 4 ENI modules

Physical Dimensions



Power supply: 3.3V / 5 V provided by the carrier board

DC100PFB characteristics

- Processor: 186 core, 48 Mhz
- S-RAM 1,256 Mb, Serial flash: 256 Kb
- Proprietary host connector technology (ISA Bus signals)
- Management signals for 2 bicolour LEDs (to be implemented on the host)
- DPRAM size: 8 Kbytes
- Max. Power Consumption: 2W
- Galvanic Insulation: 500V
- EMC: EEC directive n° 89/336/CEE
- Card size: 40 x 90 mm
- Operating Temperature: 0-65°C

Profibus supported features

- Profibus DP according to EN50170
- Speed: from 9.6 Kbps to 12 Mbps
- Connector: Standard 9-point female D-Sub or HE13 2 x 5 pins
- ASPC2 embedded
- Profibus Master / Slave DP-V0 Class 1 & 2
- Profibus Master DP-V1 Class 1 & 2 (acyclic communication)
- Free Profibus FDL messaging
- Up to 126 DP slaves

Ordering information

Part Number	Description
DC100KIT	ENI Development Kit (Dev't PCI board + Cd-Rom) (Buy DC100xxx daughter card separately)
DC100DPM-S-B10	DC100PFB ENI for Profibus DP Master/Slave, Sub-DB9, Bulk of 10
DC100DPM-S-DVT	DC100PFB ENI for Profibus DP Master/Slave, Sub-DB9, 1 unit for dev't purpose + Profibus diag. connector
DC100DPM-H-B10	DC100PFB ENI for Profibus DP Master/Slave, HE13 conn., Bulk of 10
DC100DPM-H-DVT	DC100PFB ENI for Profibus DP Master/Slave, HE13 conn., 1 unit for dev't purpose + Profibus diag. connector

Following P/N are on request status :

Part Number	Description
DC100MPI-S-B10	DC100PFB ENI for Profibus MPI/S7 Client, Sub-DB9, Bulk of 10
DC100MPI-S-DVT	DC100PFB ENI for Profibus MPI/S7 Client, Sub-DB9, 1 unit for dev't purpose + Profibus diag. connector

Related products

Part Number	Description
PA9D01-42	Profibus metal connector sub-D 9 with integrated Diagnostic, vertical
PA9S01-42	Profibus metal connector sub-D 9 without Diagnostic, vertical
81688-030	Front panel Mount Male Receptacle, IP68, M16 (quick disconnect)
81689-030	Front panel Mount Female Receptacle, IP68, M16 (quick disconnect)
BR5L30	Bulkhead Feed-Thru Male/Female, IP68, M16