To get access and fast implementation of DeviceNet into your system becomes easier and less expensive with BradCommunications™ SST™ fieldbus OEM modules.

SST™ DC100 DeviceNet Master/Slave

Embedded Network Interface (ENI)

Features

- Cost effective OEM module for DeviceNet
- One Common Interface for all ENI module family
- Very compact dimension (horizontal or vertical mounting)
- Simple integration with Direct DP-RAM Access
- Possible storage of the network configuration in flash memory
- Independent of Operating Systems
- Lower engineering and integration costs
- Lower product and life cycle cost
- Up to 2500 bytes Input and 2500 bytes Output Data
- ODVA Conformance Tested

Protocols

- Available:
  - ✓ Profibus DP-V0 Master/Slave,
  - ✓ Profibus DP-V1 Master
  - ✓ CC-Link Slave
  - ✓ DeviceNet Slave
  - ✓ DeviceNet Master and Slave
- Pending:
  - ✓ CC-Link Master
  - ✓ Ethernet IO (Modbus TCP, EtherNet/IP and PROFINET IO)

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

Overview

The BradCommunications™ SST™ DC100DNM module is an Embedded Network Interface (ENI) dedicated to OEMs who want to connect their systems to the DeviceNet™ fieldbus. The SST™ DC100DNM ENI module benefits to machine builders and system manufacturers (robot controllers, drives, industrial PCs, field instruments, scales, etc) by significantly shortening the time to market for new products.

The SST™ DC100DNM module has been designed to meet the latest DeviceNet connectivity requirements, featuring low price, small size and an easy integration process. The DC100DNM module is ODVA conformance tested and supports DeviceNet Master and Slave specifications version 2.00.

The SST™ DC100DNM 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 fieldbus protocols (PROFIBUS, CC-Link, and Ethernet).

The data exchange with the Host systems is carried out via an “easy to use” interface using a dual-port memory. As the DC100DNM 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 Industries provides also a development and evaluation kit, including:

- 1 development board: USB v2.0 High Speed Adapter
- 1 CD-Rom including:
  - Hardware Reference Guide
  - DC100 Family Host Design Guide
  - DC100Kit USB-Carrier Development Board
  - DLL source available to speed up implementation on new host
  - Demo / Test software and source code available
  - Driver and APIs under Windows XP and source code to enable fast integration into specific OS (Linux, DOS, QNX, Vx-Works, etc)

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

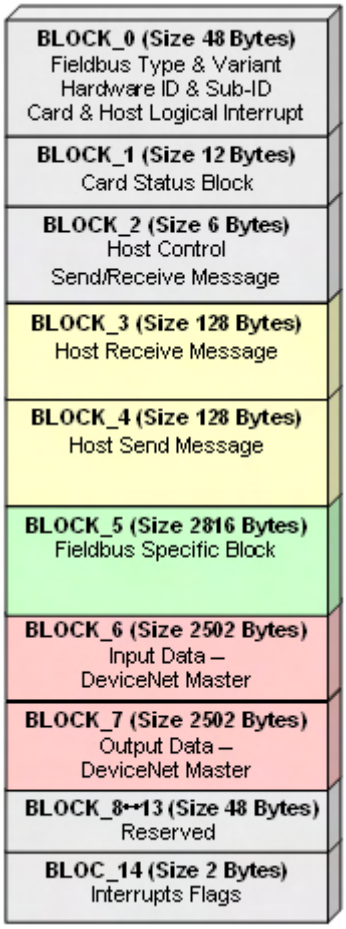
BradCommunications™
from Woodhead Industries

Embedded Network Interface

Network Interface

Memory MAP

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



Hardware Development Kit

High Speed USB v2.0 Adapter Development Kit

Hardware Specifications

DC100DNS SPECIFICATIONS	
Bus Interface	8 bit, DC100
Host Connector	Proprietary technology (ISA Bus signals)
Processor	Phillips LPC2292 ARM7 (CAN 2.0 B compliant)
Memory	1MB RAM and 256KB Flash
Access Methode	Interrupt: From Host to DC100, From DC100 to Host Polling: From Host to DC100, From DC100 to Host
Dimensions (LxWxH)	90 X 40 x 16 mm (3.54 x 1.57 x 0.62 inches)
Consumption	1.2 W
Typical Current Drawn	5Volts +-5%, 20mA, 3.3Volts +-5%, 120mA, Network Power +12V, 50mA
Voltage Requirements	+5V and +3.3V from DC100 bus connector, Network Power 8 – 24Volts
Addressing Memory	DPRAM Window 8KB (Master) / 2KB (Slave), Access time: 25ns
Operating T°	0 deg C (32 deg F) to +70 deg C (158 deg F)
Storage T°	-40 deg C (-40 deg F) to +85 deg C (185 deg F)
Humidity	5% to 95% non-condensing
RoHS Compliance	Yes
Certification	CE, UL, UL/C

Device Type	• DeviceNet Master Scanner and/or Slave • Conform to Specification version: Vol 1: 2.0, Vol 2: 2.0
Device Features	• Explicit Peer to Peer messaging • I/O Peer to Peer Messaging
I/O Memory Size	2500 Input bytes, 2500 Output bytes
Master Features	• Maximum Slave Devices: 63 • Supports Group 2 Only Slaves • Supports Group 2 Slaves (UCMM capable) • Supports UCMM-capable servers without the Group 2 Master/Slave Connection Set (explicit messaging only) • Supports Quick Connect
Slave Features	• UCMM-Capable Group 2 Server • Supports Strobe, Poll, Change-of-State and Cyclic I/O connections • Objects in the host application are accessible from DeviceNet • Supports Quick Connect
Data Rate	125K, 250K, 500K bauds
Display Leds	2 bi-colors leds: Health, Communication
Isolation	500 Volts
ODVA Conformance	Yes
Configuration Methods	EDS or Custom Software
Connector	Shielded 5 Cores DeviceNet compliant cable
Bus Connector	Standard: DeviceNet 5 pin terminal block with/without screws. On Request: HE13 fieldbus header for connection to host card

Ordering information

Part Number	Description
DC100DNM-C-B10	BradCommunication™ SST™ DC100DNM, DeviceNet Master and Slave, 5 pins connector with screw, Bulk of 10
DC100DNM-H-B10	BradCommunication™ SST™ DC100DNM, DeviceNet Master and Slave, 5 pins HE13 connector, Bulk of 10
SST-DNM-USB-KIT	BradCommunication™ SST™ DC100DNM Development Kit (USB Adapter + DC100DNM + CD-Rom)

BradCommunications™
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