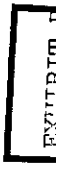


EUT:HUB

FCC ID:JOUND4205S01

NATIONAL DATACOMM CORPORATION

User's manual



## Quick Installation Guide

ND4205

# SOHware™ Hub

### What You Get With SOHware™ Hub

The following items should be included in the shipping carton.

- One ND4205 SOHware™ Hub
- One AC Power Adapter
- This Quick Installation Guide

### How to Install Your SOHware™ Hub

#### Making Network Connections

10BaseT is a specification for Ethernet networks based on twisted-pair cabling. The maximum length of cable allowed from a hub to a PC is 100 meters.

The cable is commonly referred to as twisted-pair cable and the accompanying connectors as RJ-45 connectors.

To establish 10BaseT connections, you will need the following equipment:

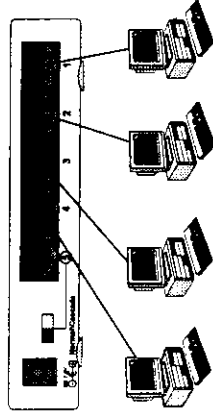
- Twisted-pair straight cable for hub-to-NIC (Network Interface Card) connections.
- Twisted-pair straight cable for hub-to-hub connections, usually referred to as hub cascading.

The SOHware™ Hub has five RJ-45 connectors for attaching up to five 10BaseT based workstations. To establish such connections:

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1. Ensure that both the hub and the soon-to-be-connected workstation are in the power off mode.
2. Plug one end of the cable into an available 10BaseT hub port.
3. Plug the other end into the workstation's network interface card. **Figure 1** illustrates a simple network topology using 10BaseT hub-to-workstation connections.



**Figure 1: 10BaseT Connections**

### How to Cascade SOHware™ Hubs

When your 10BaseT network needs to grow beyond the five available connections provided by the hub, you should consider purchasing an additional hub and cascading it with the original.

The SOHware™ Hub features a cascade enable switch. This switch allows you to use twisted-pair straight cables instead of special crossover cables when cascading hubs.

- Data collision and jabber handling functions.
- Palmtop size: 25 x 66 x 125mm. 110g. (0.98 x 2.59 x 4.92in. 3.88oz)
- Lightweight space-saver: can be installed anywhere.

## Federal Communications Commission Statement

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. This equipment has been tested and found to comply with the limits for a class A computing device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

## Trademarks

SOHWARE™ is a trademark of NDC Communications, Inc.. Ethernet is a trade mark of Xerox Corporation. All other trademarks and product names are trademarks or registered trademarks of their respective companies.

## EC DECLARATION OF CONFORMITY

For the following equipment:

Product Name : SOHWARE™ Hub  
Model Number : ND4205

Produced by:

Manufacturer's Name : NATIONAL DATACOMM CORPORATION  
Manufacturer's Address : 2F, NO. 28, INDUSTRY EAST 9TH ROAD  
SCIENCE PARK, HSINCHU  
TAIWAN, R.O.C.

is hereby confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/ 336/ EEC). The product meets or exceeds the following EMC standards:

EN 55022	(1986)	/class A
EN 50 082-1	(1992)	
IEC 1000-4-2	(1992)	
IEC 801-2	(1984)	
IEC 801-3	(1984)	
IEC 801-4	(1988)	
IEC 1000-4-4	(1992)	

The manufacturer/importer is responsible for this declaration:

Company Name : NDC (EUROPE) CO., LTD  
Company Address : 1, EARLSFORT CENTRE, HATCH STREET, DUBLIN 2, IRELAND

Person authorized to make this declaration:

Name : CHIN-TU WU  
Position/Title : MANAGING DIRECTOR

Sept. 1, 1996 C. J. Wu

Date \_\_\_\_\_ Legal Signature \_\_\_\_\_

## Our Customer Support

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The following diagram illustrates 10BaseT cascading.

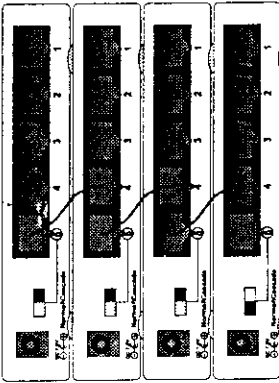


Figure 2: Cascading Hubs Using RJ-45 Ports

**Note:** When cascading hubs, ensure that the slide switch next to the fifth port is switched to the cascade position. A maximum of four hubs can be cascaded, allowing for a total of 14 network stations to be connected.

### SOHware™ Hub - Front Panel

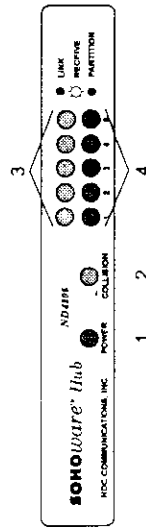


Figure 3: The Front Panel LED Indicators

1. **Power (RED) Indicator**  
When the power LED is lit, it indicates that the SOHware™ Hub's power is on.
2. **Collision (YELLOW) Indicator**  
This LED indicator blinks when the hub detects a collision on the network.

### 3. Link/Receive (GREEN) Indicators

These LEDs indicate the state of the data link. The LED remains on when the connection is okay. These LEDs blink to indicate data is being received on the segment.

### 4. Partition (RED) Indicators

These LEDs light to indicate a port on the hub is malfunctioning. Faulty ports are automatically isolated by the hub. When the port recovers, however, the partition LED returns to normal status.

### SOHware™ Hub - Rear Panel

The rear of the hub contains the hub's AC Adapter port, the Cascade Enable switch, and the hub's RJ-45 ports.

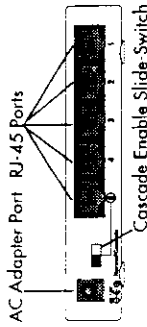


Figure 4: Rear View

### 1. RJ-45 Ports

The SOHware™ Hub is equipped with 5 RJ-45 ports for making 10BaseT hub-to-workstation connections.

### 2. Cascade Enable Slide-Switch

Slide this switch to the right to enable cascading with straight twisted-pair cables.

### 3. AC Adapter Port

Plug the AC adapter jack into this port.

### SOHware™ Hub - Features

Your SOHware™ Hub has the following features:

- IEEE 802.3 compliant (10 Mbps, CSMA/CD).
- Five RJ-45 ports supporting up to five 10BaseT segment connections.
- Polarity auto-detection and auto-correction for RJ-45 ports.
- Port auto-partitioning and reconnection to facilitate faulty segment isolation.
- Two LEDs per port indicate Link/Receive, and Partition status.
- Two LEDs to indicate Power and Collision status.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.