



Making Data Acquisition Easy

CAGE/NCAGE CODE: 3FNFO

## *NS-205R*

# 5-Port Industrial 10/100 Mbps Robust Ethernet Switch

## Quick Start Guide

Product Website:

[http://www.icpdas-usa.com/ns\\_205R\\_ethernet\\_switch.html](http://www.icpdas-usa.com/ns_205R_ethernet_switch.html)

### 1. Introduction

The NS-205R has 5 Ethernet Switching ports that support 10/100Base-T(X), with a 10/100M auto-negotiation feature and auto MDI/MDI-X function. It can connect 5 workstations and automatically switches the transmission speed (10 Mbps or 100 Mbps) for corresponding connections. The flow control mechanism is also negotiated. LEDs embedded in RJ-45 jacks make for easy monitoring. Port connectors are shielded RJ-45. A power source for +10 ~ +30VDC is required.



**Figure 1-1 NS-205R**



## 2. LED functions:

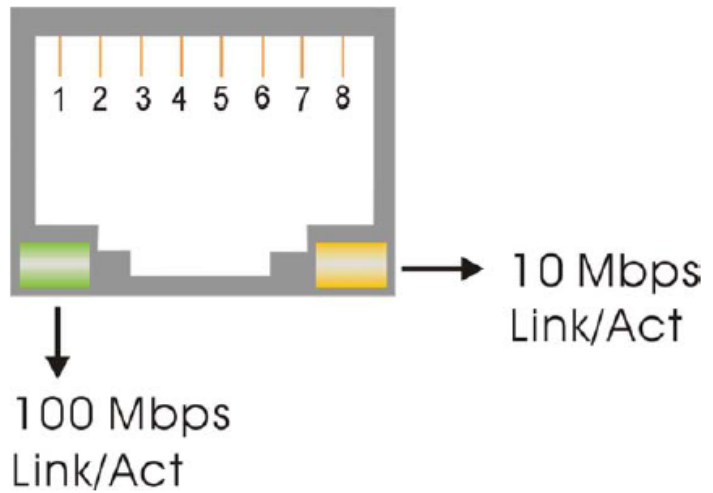
Standard RJ45 female connectors are provided. A standard RJ45 plug cable is all that is necessary to connect your device to the unit since switch that supports auto crossover. Table 1 shows the LED indicator functions. The module includes an internal.

Table 1

LED	Color	Description
Power	Red	Power is On
	Off	Power is Off
10/100M (Port 1)	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking
10/100M (Port 2)	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking
10/100M (Port 3)	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking
10/100M (Port 4)	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking
10/100M (Port 5)	Yellow	Link to 10 Mbps
	Green	Link to 100 Mbps
	Off	Not Networking

Pin-Out:

Pin#	Signal Name	Function
1	TD+	Transmit Data
2	TD-	Transmit Data
3	RD+	Receive Data
4	NC	No Connection
5	NC	No Connection
6	RD-	Receive Data
7	NC	No Connection
8	NC	No Connection





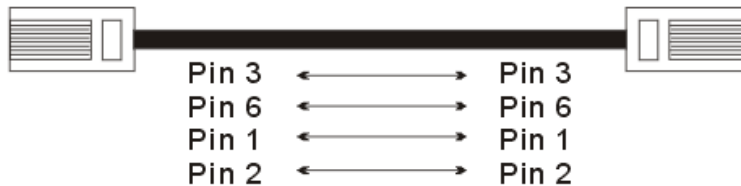
Making Data Acquisition Easy

CAGE/NCAGE CODE: 3FNFO

### 3. Ethernet Wiring:

When making a connection to another device using straight-through UTP cable, make sure the MDI-X to MDI connection rule is followed. The following figure illustrates the pin assignments of a straight-through UTP and a crossover UTP cable:

#### RJ-45 to RJ-45 Ethernet Wiring - Straight Type (Host <--> Hub)



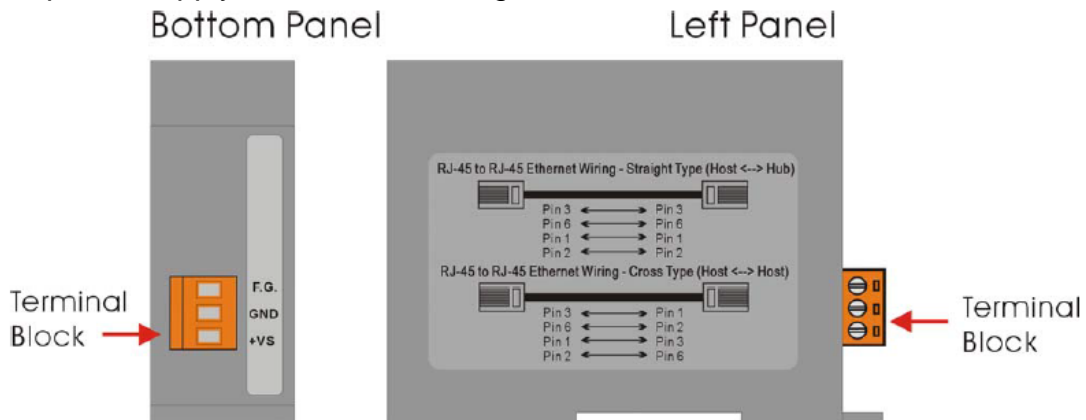
#### RJ-45 to RJ-45 Ethernet Wiring - Cross Type (Host <--> Host)



### 4. Checking Power:

Since the NS-205R consumes 2.4W, ensure that your power supply is able to meet this demand. The Input voltage range is +10~+30VDC.

External power supply is connected using the removable terminal block as shown below:



#### Pin Function For Terminal Block:

External power supply is connected using the removable terminal block:

**+Vs** : Power input (+10 ~ +30V) and should be connected to the power supply (+)

**GND**: Ground and should be connected to the power supply (-)

**F.G.** : F.G. stands for Frame Ground (protective ground). It is optional. If you use this pin, it can reduce EMI radiation; improve EMI performance and ESD protection.



Making Data Acquisition Easy

CAGE/NCAGE CODE: 3FNFO

5.

**Dimensions:**

The width of the NS-205R is just 33 mm, so it can be used where space is important.

