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**NetEye1000S Series® User Manual**  
**Version 2.12 – (SB:Internal SA:External Type)**  
**Firmware Ver. 1.54sc, 1.55sc**



*NetEye 1000 SA*



*Access Control Products*

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# 1. Overview

## 1.1 NetEye Overview

NetEye1000S is an internet access device (Serial To Ethernet Converter)with which stand-alone electronic equipments, which communicate with serial connections (i.e., RS-232C, RS-422, RS-485), may access to internet via 10 Base-T Ethernet Interface. NetEye1000S is designed as a subminiature embedded system, card-sized, having TCP/IP kernel, Ethernet Chip and Serial port.

A user may access NetEye1000S using a general standard socket programming and use serial communication protocols for the device without any change. A user can monitor and control any stand-alone electronic equipments in the Network circumstance.

There are 2 type of NetEye 1000S. NetEye1000SB is internal board type, NetEye1000SA is external type. Neteye1000S series have features as follows.

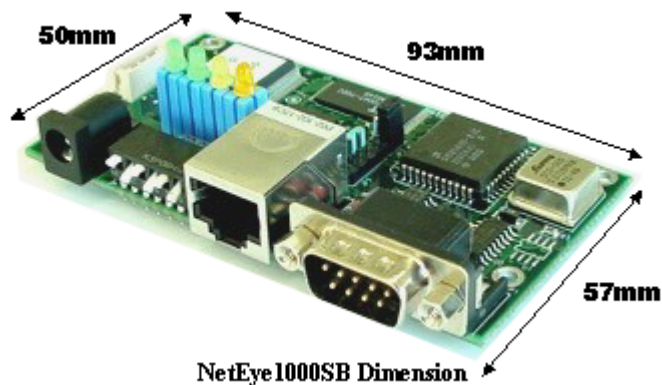
- ✓ **Serial To Ethernet Converting.**
- ✓ **NetEye1000S has Server and Client Mode. You can select from setup program.**
- ✓ **Serial Speed : 300 ~ 576000 bps.**
- ✓ **You can search NetEyes by Group.**
- ✓ **It supports 5, 6, 7, 8 data bit.**
- ✓ **You can search and setup NetEyes from remote network(not only same network).**
- ✓ **Password Management is possible for remote search.(default password is "smicneteye") .**
- ✓ **Connection Expiration Time : 0 ~ Endless : You can define it from setup program.**
- ✓ **TCP Connection status Lamp with RX, TX and Collision Detect Lamp is provided.**
- ✓ **Setup Program includes Socket Simulation Program for convenient test.**
- ✓ **It works very well with various Hub and Router.**
- ✓ **Pin No 6. of DB9 serial connector can be used as +5VDC power supply pin, if your legacy device can provide +5VDC power. You can also use 6~10VDC power adapter.**

**NetEye1000 series is reliable and cheap . It is tested at various fields for more than 2 years. And more than 10,000 units have been installed without any problem.**

## 1.2 NetEye1000S 2 types and Dimension.



NetEye1000SA Dimension



NetEye1000SB Dimension

## 1-3. Technical Support

### SM Information & Communication R&D center

Address : LG Twin House 821Ho, 192 Gumidong, BundangGu, SungNam City, Kuyngido, Korea

Fax : (031) 719-2281

E-mail : [khg@smic21.com](mailto:khg@smic21.com)

Web Site : [www.smic21.com](http://www.smic21.com)

## 1-4. Sales Request

### SM Information & Communication Head Office

Address : A-705 SK Twin Tech Tower, 345-9 Gasandong, Kumcheongu, Seoul Korea

Telephone : (822)6292-2100

Fax : (822)6292-2108

E-mail : [smic21@smic21.com](mailto:smic21@smic21.com)

## 1-5. Environments

Input Voltage : DC 6~14 V from general Power Adapter

DC 5V for No 6 Pin Power of DB9 Serial Connector

Input Current : max 250mA

Humidity : 0 ~ 95%

Temperature : 0 ~ 70 °C

## 2. Specification

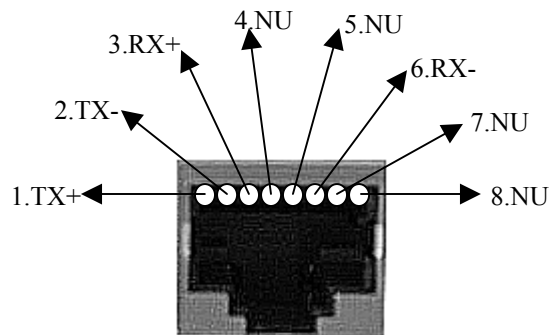
### 2.1. NetEye1000S Hardware Specification

Item	NetEye1000
CPU	(8-Bit Micro Controller, 50MIPS)
Memory	4Kbytes Program Memory 256Bytes SRAM (Data Memory) 512K Bytes Flash Memory ( System Parameter)
Network Hardware	10 Base-T Ethernet Interface (IEEE 802.3) RS232, 422, 485 (Serial 1 port)
Network Protocol	TCP/UDP
	IP/ICMP/ARP
	IEEE802.3(STANDARD ETHERNET)
Utility Software	NetEye Setup Program (Windows 95/98/ME/NT/2000) NetEye Search, IP Setup, Built-In on Network. Test Result Display Simulation Program

NetEye1000S Specification

### 2-2. RJ45 Pin Description

Pin No.	Description	Color
1	TX+	White with Orange
2	TX-	Orange
3	RX+	White with Green
4	NOT USED	Blue
5	NOT USED	White with Blue
6	RX-	Green
7	NOT USED	White with Brown
8	NOT USED	Brown



RJ45 Pin Configuration

RJ45 Connector Pin Description

### 2-3. DB9 Connector Pin Description

Pin Number	Signal	Description	Function
1.	TRX+	RS485+	Difference + Signal for RS485
2.	RXD	RS232 Recv	Data Recv for RS232
	RX+	RS422 Recv+	Data Recv+ for RS422
3.	TXD	RS232 Send	Data Send for RS232
	TX+	RS422 Send+	Data Send+ for RS422
4.	TRX-	RS485-	Difference + Signal for RS485
5.	GND	Ground	Signal Ground
6.	CTS	Clear To Send For RS232C	Clear To Send Input for RS232
	<b>PWR</b>	<b>+5V DC Power Pin</b>	<b>Can be used Power Supply Pin with Dip Switch</b>
7.	RX-	RS422 Recv-	Data Recv -for RS422
8.	TX-	RS422 Send-	Data Send – for RS422
9.	RTS	Read To Send for RS232C	Ready To Send Output for RS232

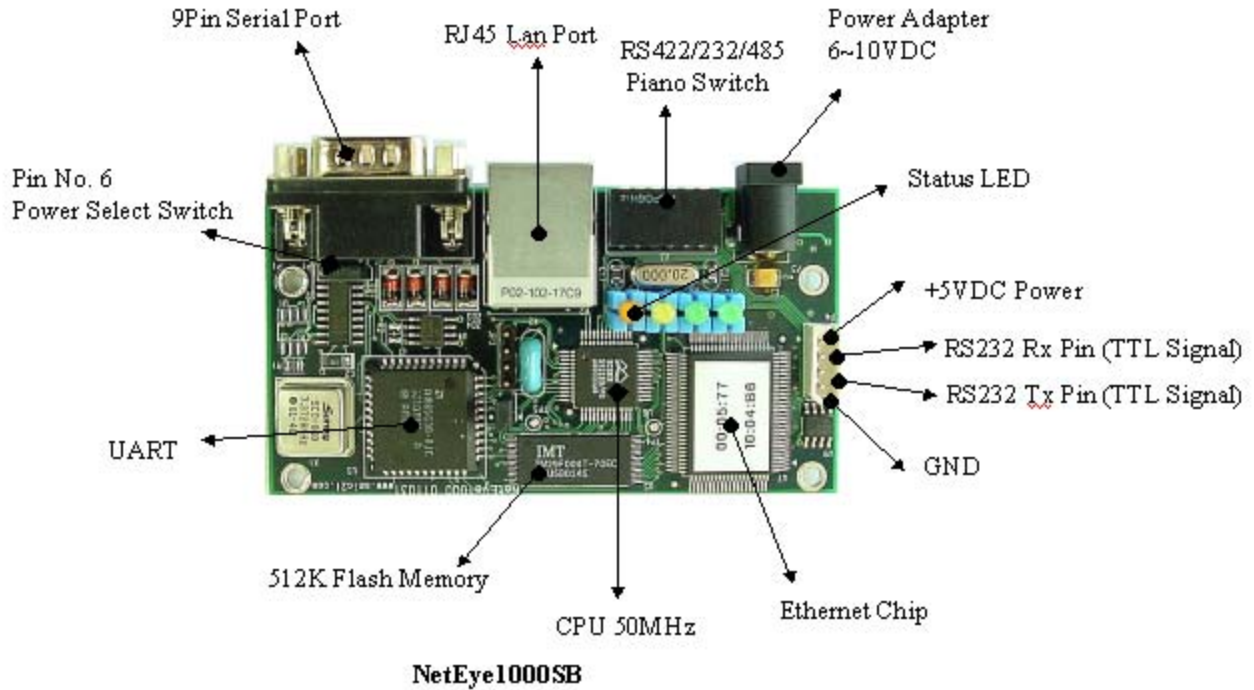
NetEye 1000S DB9 Connector Pin Description

### 2-4. Status LED Description

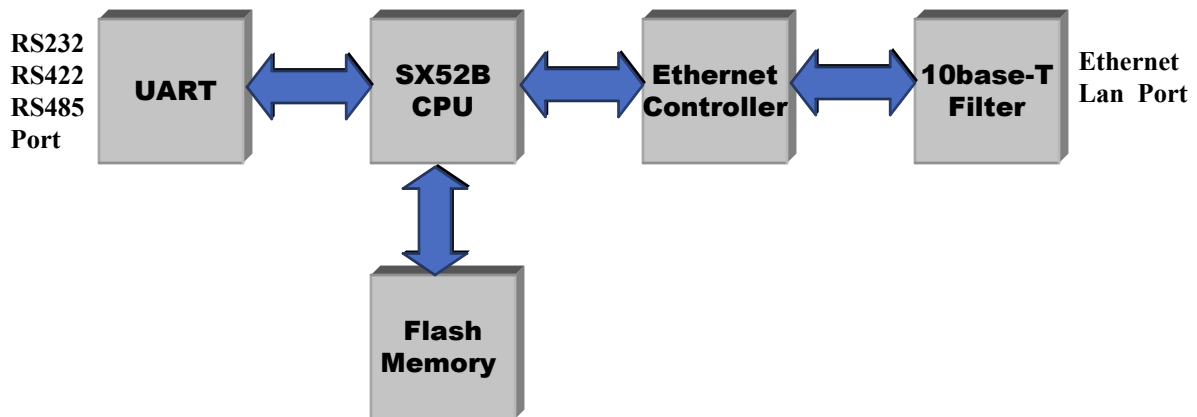
LED	Color/U-No	Description
TX	Green/D1	It light on when Power is On. And it blinks in the normal connection only when NetEye send data to PC indicating the Ethernet Controller (RTL8019AS) is sending data to a network.
RX	Green/D2	It light on when Power is On. It Indicates that the Ethernet controller is receiving data from a network. It is blinking frequency changes subject to the traffic volume of a network.
CD (Collision)	Yellow/D3	Indicating that an Ethernet packet sending from the Ethernet controller to a network collides with another one from other devices or computers. In this case the Ethernet controller resends the collided packet automatically after the lapse of specified period.
TCP (Establish, Power)	Orange/D4	When Power is On, it blinks during 3 seconds for Arp table update of general router and out. It is Indicating that NetEye 1000S is connected to the user's PC via a TCP Port Number. When connection between NetEye and PC Program is established, the LED is on.

NetEye 1000 LED Description

## 2-5 . NetEye1000SB Hardware Description



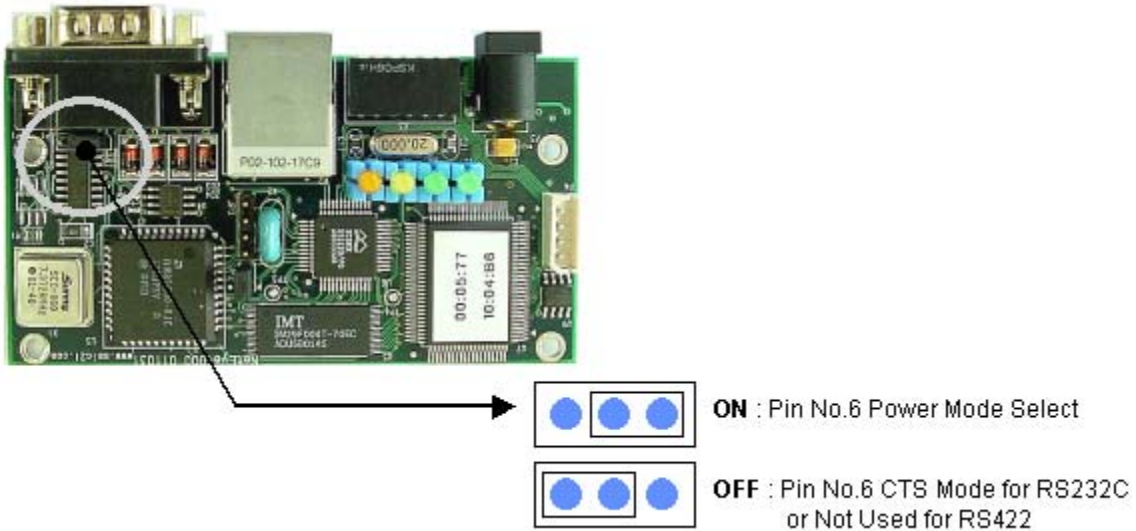
## 2-6. NetEye 1000S Hardware Block Diagram



### 3. Switch Setup Description

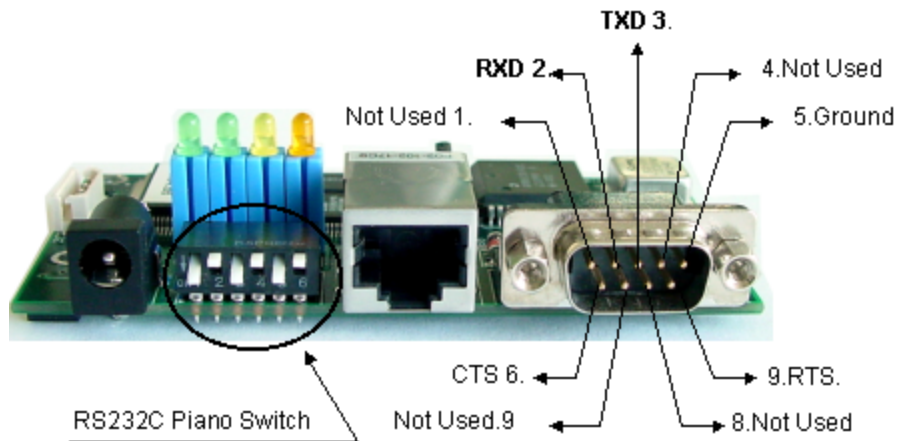
#### 3.1. NetEye1000S Pin Power Mode switch select

If Pin No.6 Power Select Dip switch is selected(ON), Pin No 6. can be used Power, Normal status is On.

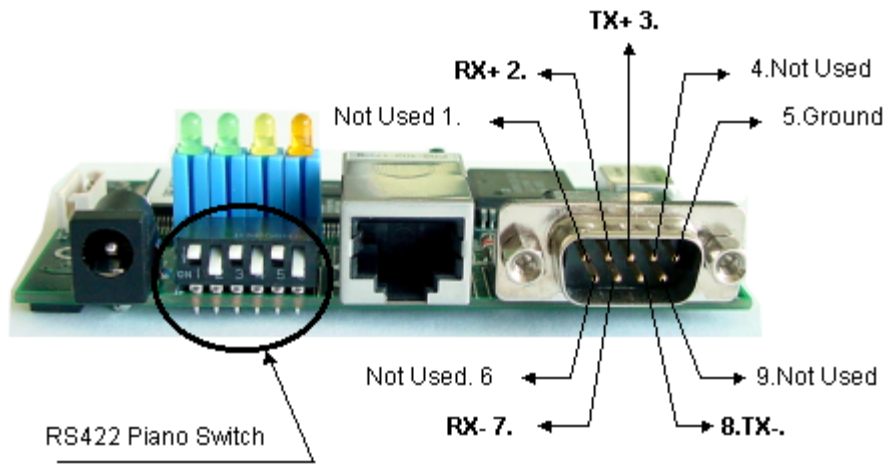


Pin No.6 Power Select Dip switch

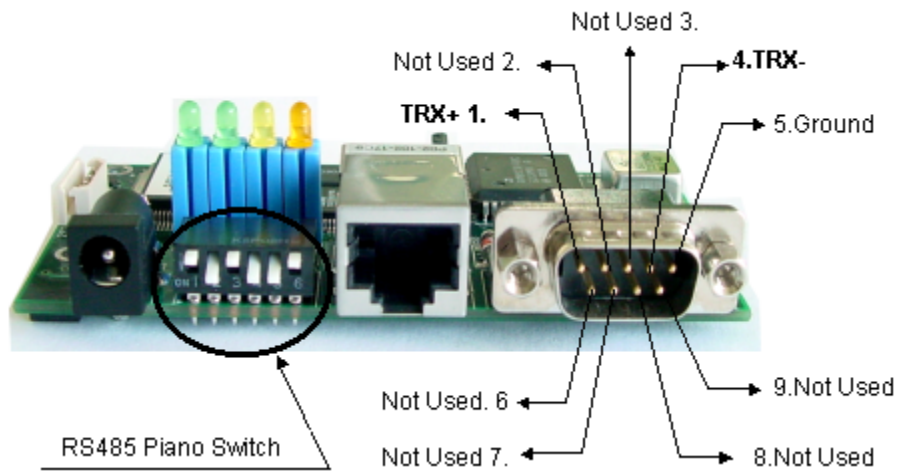
#### 3-2. NetEye 1000S RS232/422/485 Piano Switch Select and DB9 connector Pin Spec



Piano Switch Select and Serial Port Pin Spec for RS232



**Piano Switch Select and Serial Port Pin Spec for RS422**



**Piano Switch Select and Serial Port Pin Spec for RS485**

## 4. Setup Utility Software

### 4.1. NetEye1000S Setup Utility Software

1. Connect NetEye1000S to your Network and Power On.
2. Download Setup Utility software v.2.11 from [www.smic21.com](http://www.smic21.com) download Field.
3. Install and execute it.
4. If you have any NetEye1000S on your network, you can see following screen.
5. If you double click any Neteye1000S, you can see **Device Setup –Server** Dialog Box.
6. Change parameters as you want.
7. Click OK button.

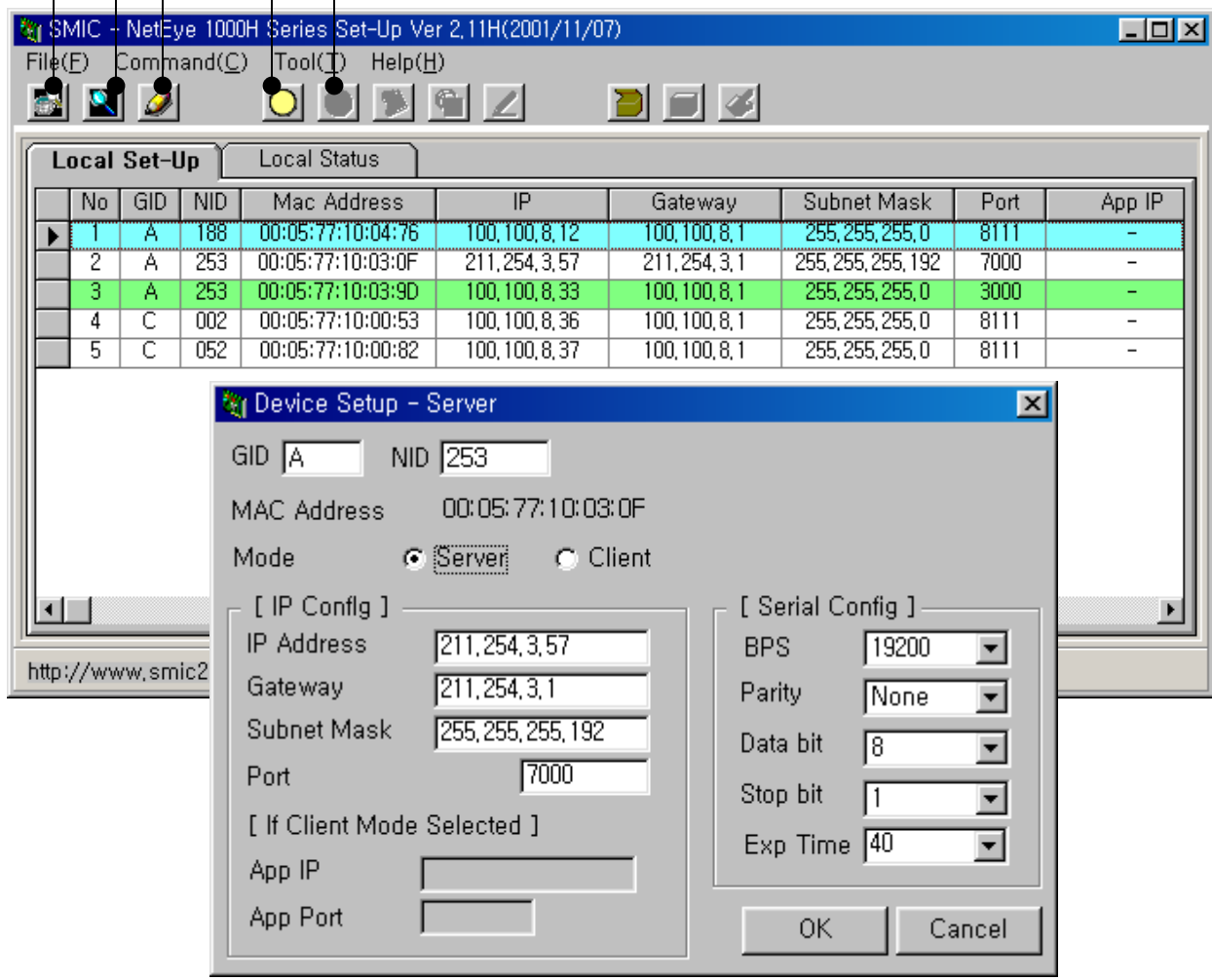
Local Search All: Search every NetEye1000 on the same network.

Local Search Group: Search NetEye1000 by Group ID.

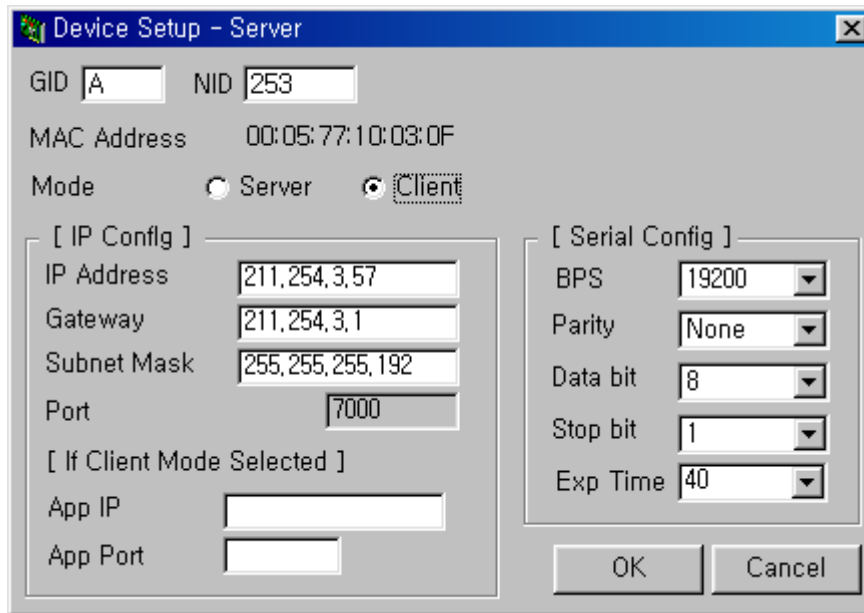
Local Edit: Run Device Setup dialog Box and Edit parameters.

Remote Enable: Enable remote mode,

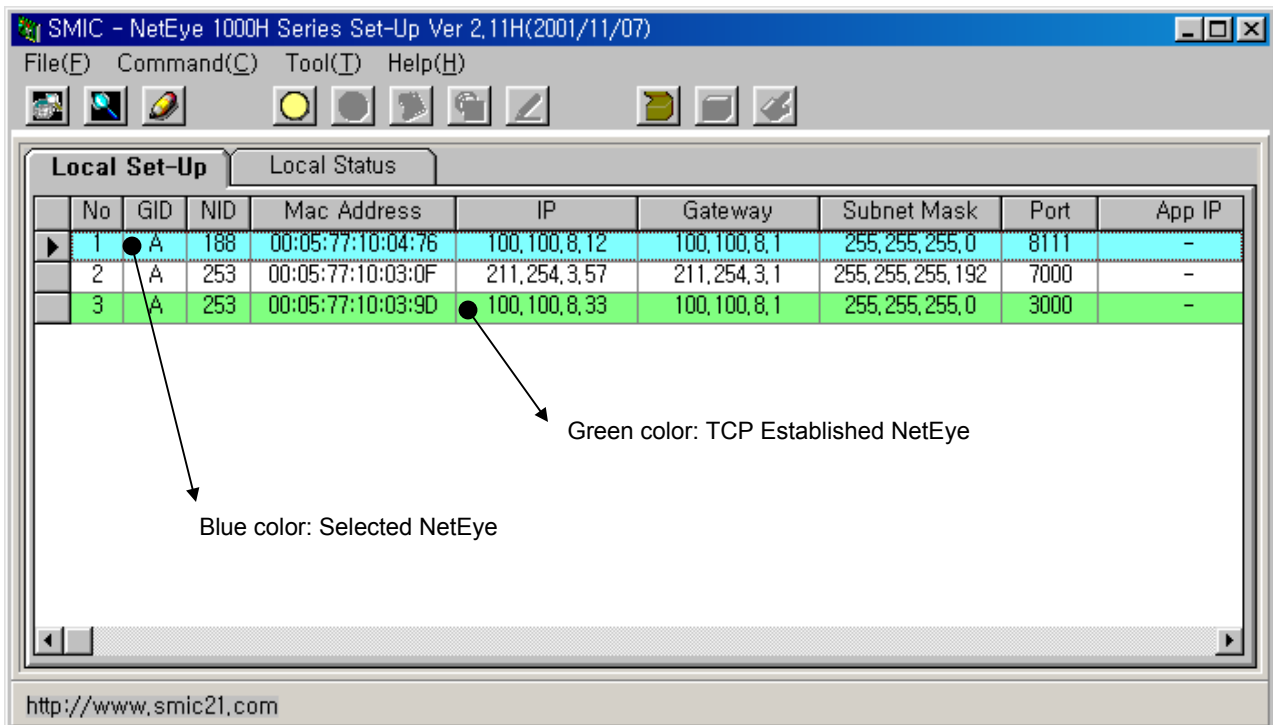
Remote Disable: Disable remote mode



If you click "Client" on Device Setup Dialog Box, the Client Mode is selected. And you can input Application IP address and Port Number. When Client Mode NetEye starts, NetEye try to connect to the Application IP and Port Number as TCP client process.

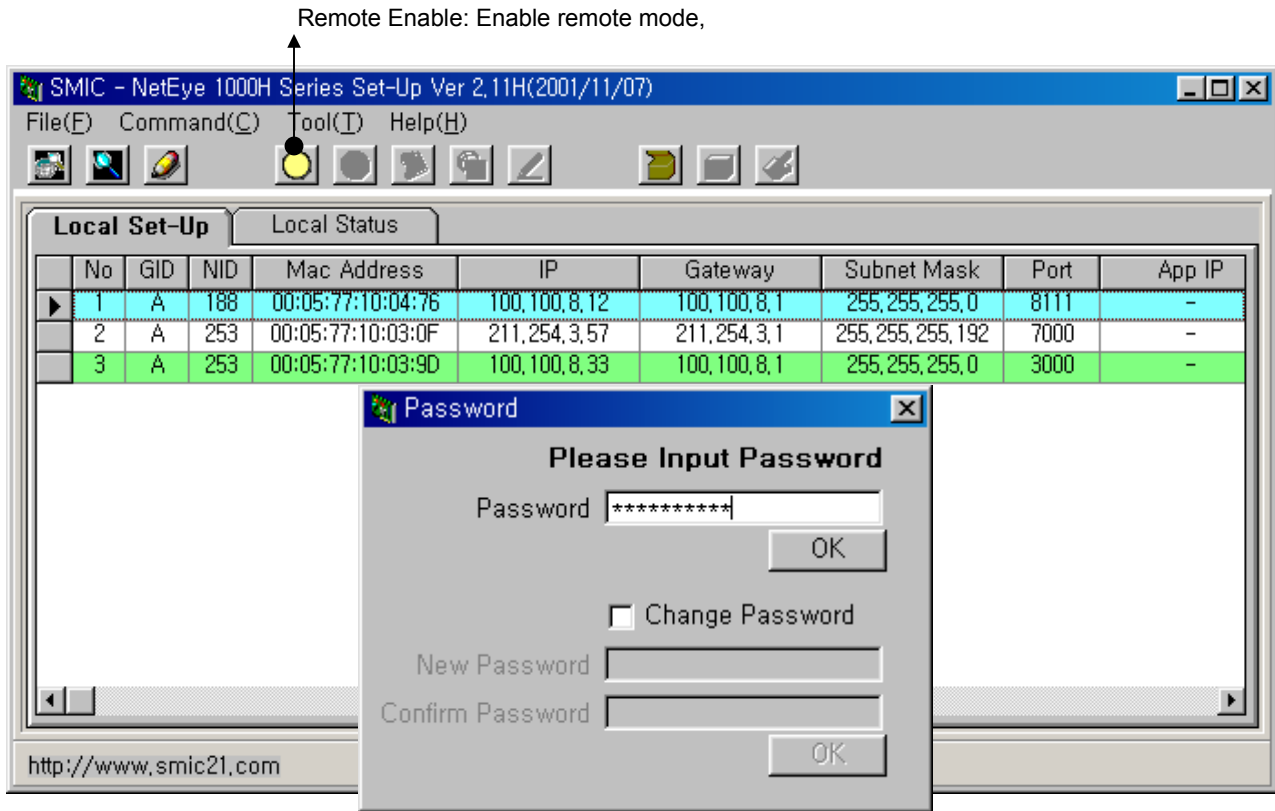


If you click "Local Search Group" NetEye Setup Program, you can see following Group ID Dialog Box. And you can select Group ID from "A" to "Z", When you select "A", Setup Program searches only by Group ID "A"

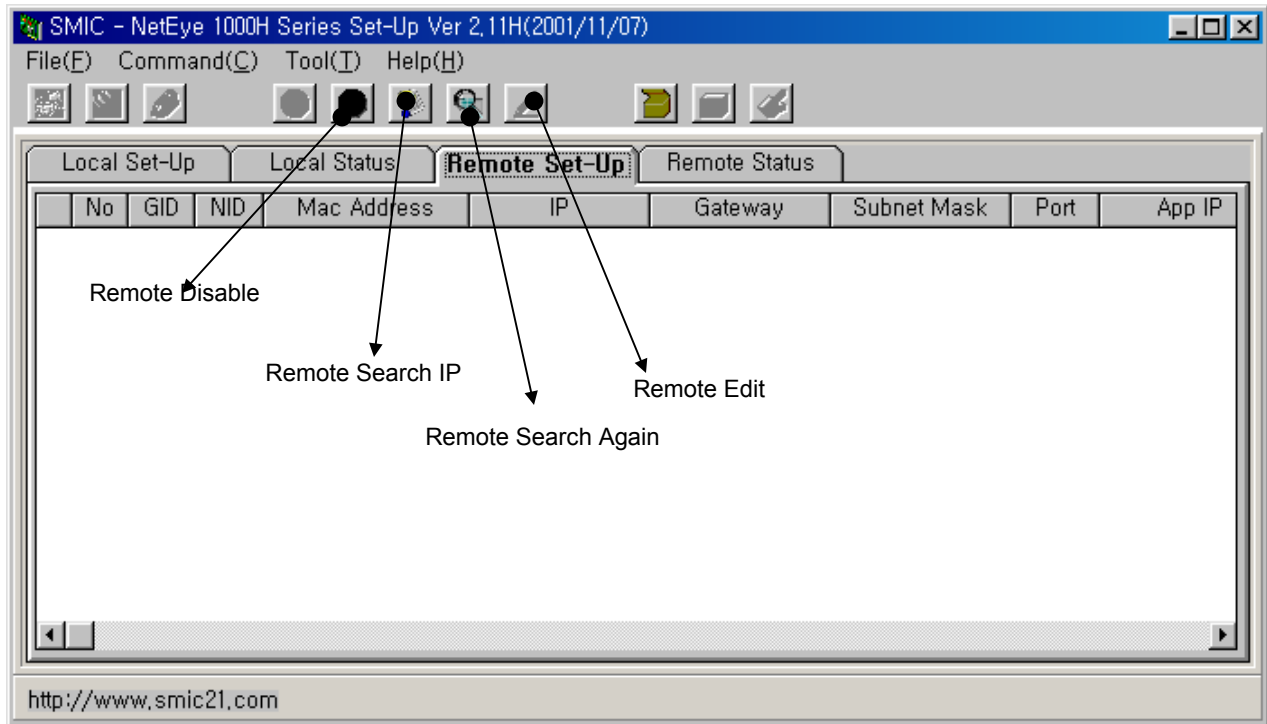


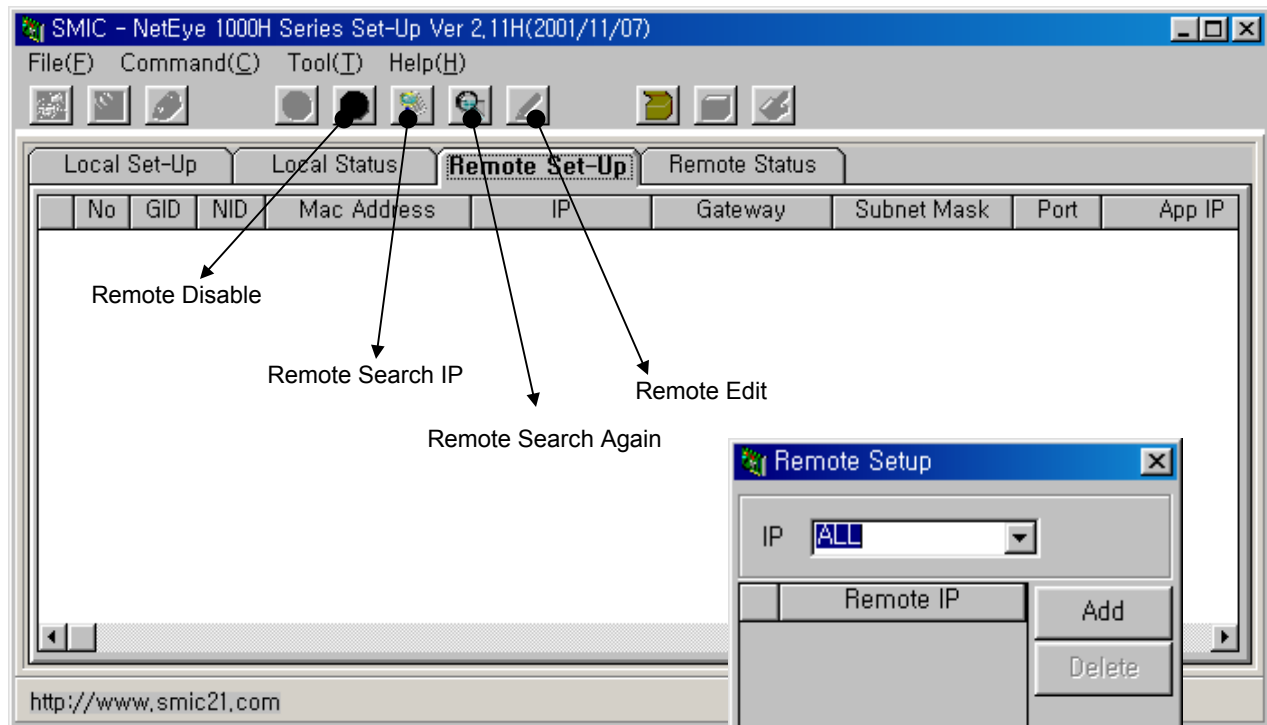
## 4.2. Remote Set-up

Remote Enable: Click Enable remote Button, you can see Password Input Box. Default Password is "smicneteye". Input password and click OK button, You can change your password.

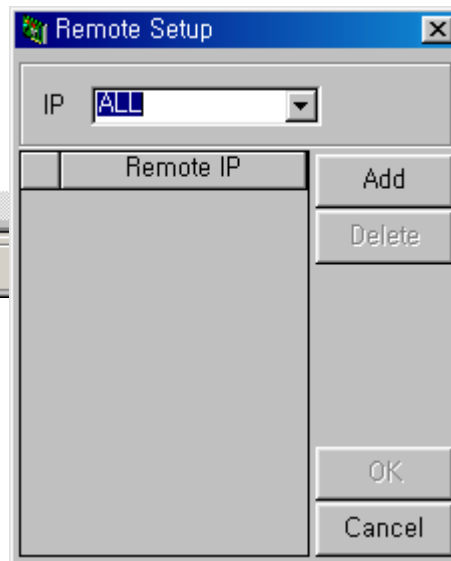


Remote Buttons will be enabled and remote Set-up file folder is added on the screen.

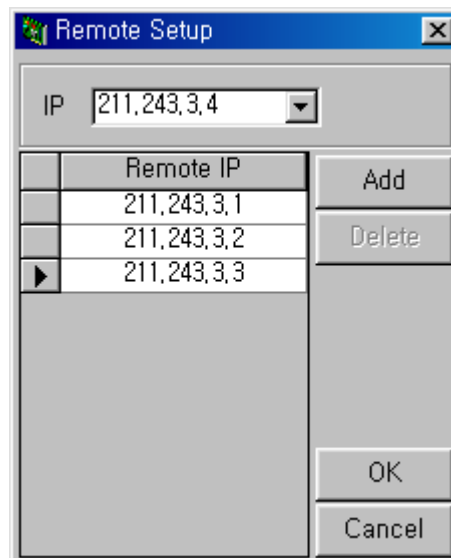




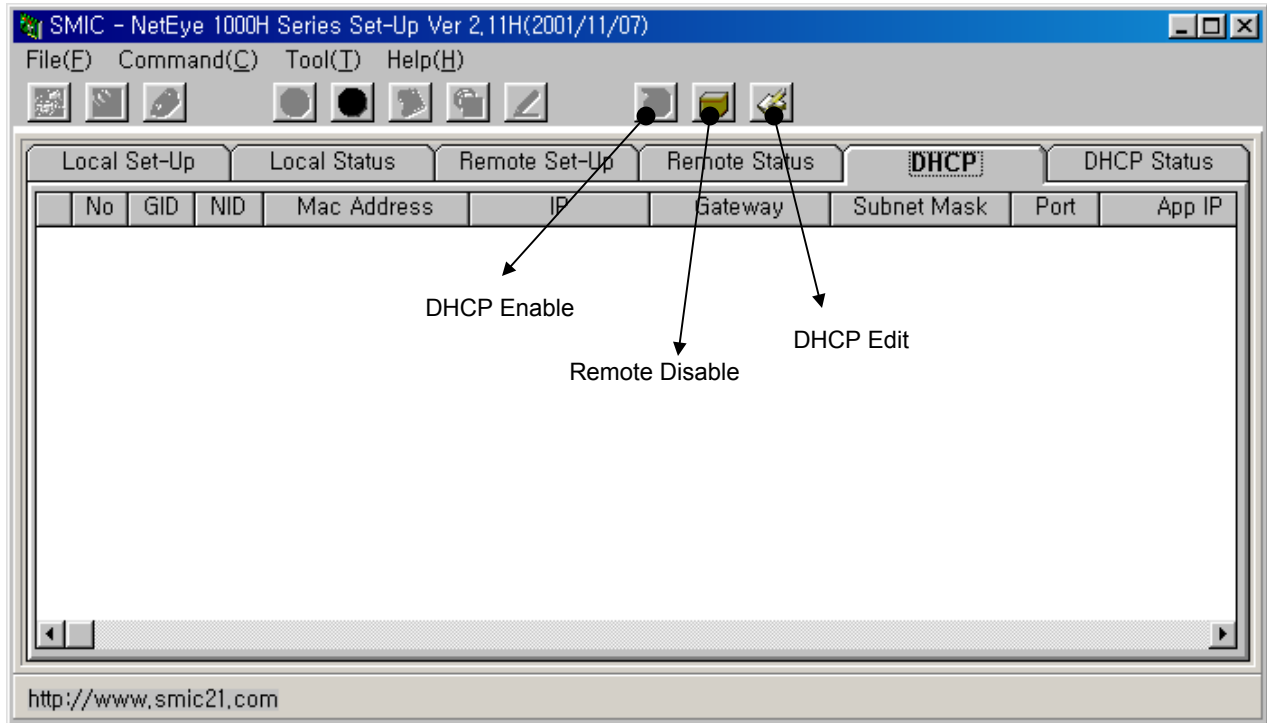
If you click Remote search IP button, Remote Setup Box is displayed.



Input Remote NetEye IP address and click Add button. You can input multi remote NetEyes IP address. OK button make to search remote NetEyes and display on the screen.

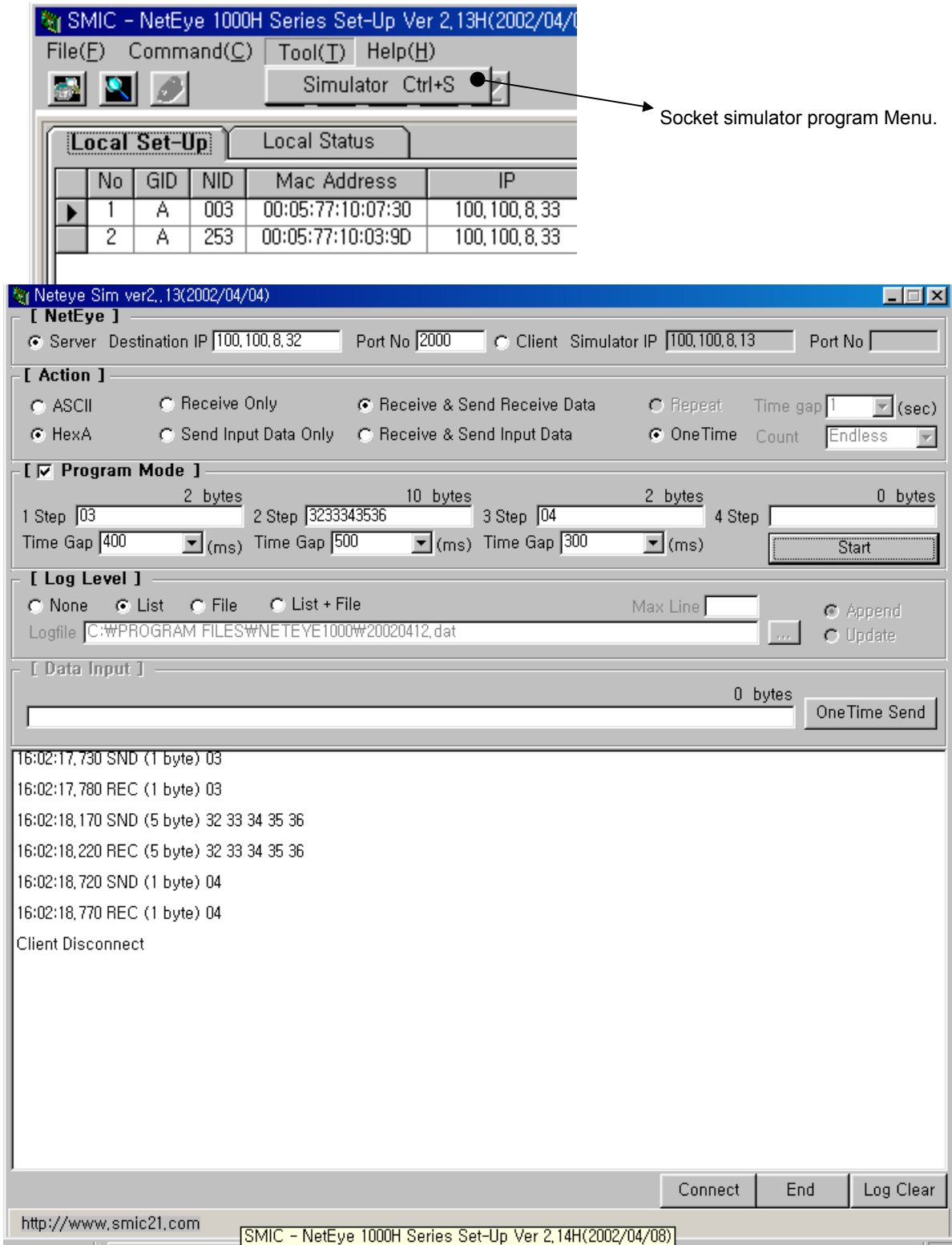


## 4.2. DHCP Set-up



DHCP version NetEye has different firmware. In local search, Firmware version (F/W Ver) fields is DHCP. When you are in DHCP file folder menu, if DHCP NetEyes are connected to Network, it send the IP Information to the server computer. DHCP NetEyes should be setup the server computer IP address (Application IP address), at local Edit mode, in advance.

## 4.2. Tool Menu



Tool in the Menu Bar has a simulator popup menu. It starts socket simulator program with which you can send and receive message by socket program.

With this simulator, you can simulate devices such as PLC, special machine. You can send 0x03,(STX), Data, 0x04(ETX) with various time interval.