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# E-3GU-4 / E-4GU-1/2/3
# USB MODEM INSTALLATION

**(Product appearance may vary)**

**E-3GU-4**

The E-3GU-4 and E-4GU-x Modem is used to enable SMS alert messages to be sent from an ENVIROMUX Enterprise Environment Monitoring System (SYSTEM) to any user's cell phone or device capable of receiving SMS messages. Before connecting the modem to the SYSTEM, a GSM SIM card configured for SMS messaging must be installed to the modem following instructions from the modem manufacturer. If the ENVIROMUX 3G Data Transfer features are going to be used (E-3GU-4 modem and E-xD SYSTEM models only), the SIM card must also be configured to support this instead of **or** in addition to SMS messaging (see page 5).

**Compatibility Chart**

| Modem Model | System Compatible With |
|---|---|
| E-3GU-4 | E-2D/5D/16D, E-MINI-LXO |
| E-4GU-1/2/3 | E-2D/5D/16D |

**To use E-4GU-x the E-2D/5D/16D must be running firmware version 2.60 or later.**

The E-3GU-4 and E-4GU-1/2/3 modems accept the mini SIM card and the micro SIM card (when used with micro-to-mini SIM card adapter).

## Cell phone SIM cards

**A SIM card or *Subscriber Identity Module* is a portable memory chip used in some models of cellular telephones. It can be thought of as a mini hard disk that automatically activates the phone (or in this case the GSM modem) into which it is inserted. SIM cards are available in four standard sizes. The first is the size of a credit card (85.60 mm x 53.98 mm x 0.76 mm). The next, more popular miniature-version ("mini") has a width of 25 mm, a height of 15 mm, and a thickness of 0.76 mm. The third, "micro" version measures 15 mm x 12 mm x 0.76 mm, and lastly the "nano" measures 12.3 mm x 8.8 mm x 0.67 mm.**

Some cellular service providers use SIM cards. Verify with your service provider that their SIM card will work with 3G (or 4G if applicable) GSM type modems before purchasing their SIM card. **See charts on last page for SIM card compatibility.**

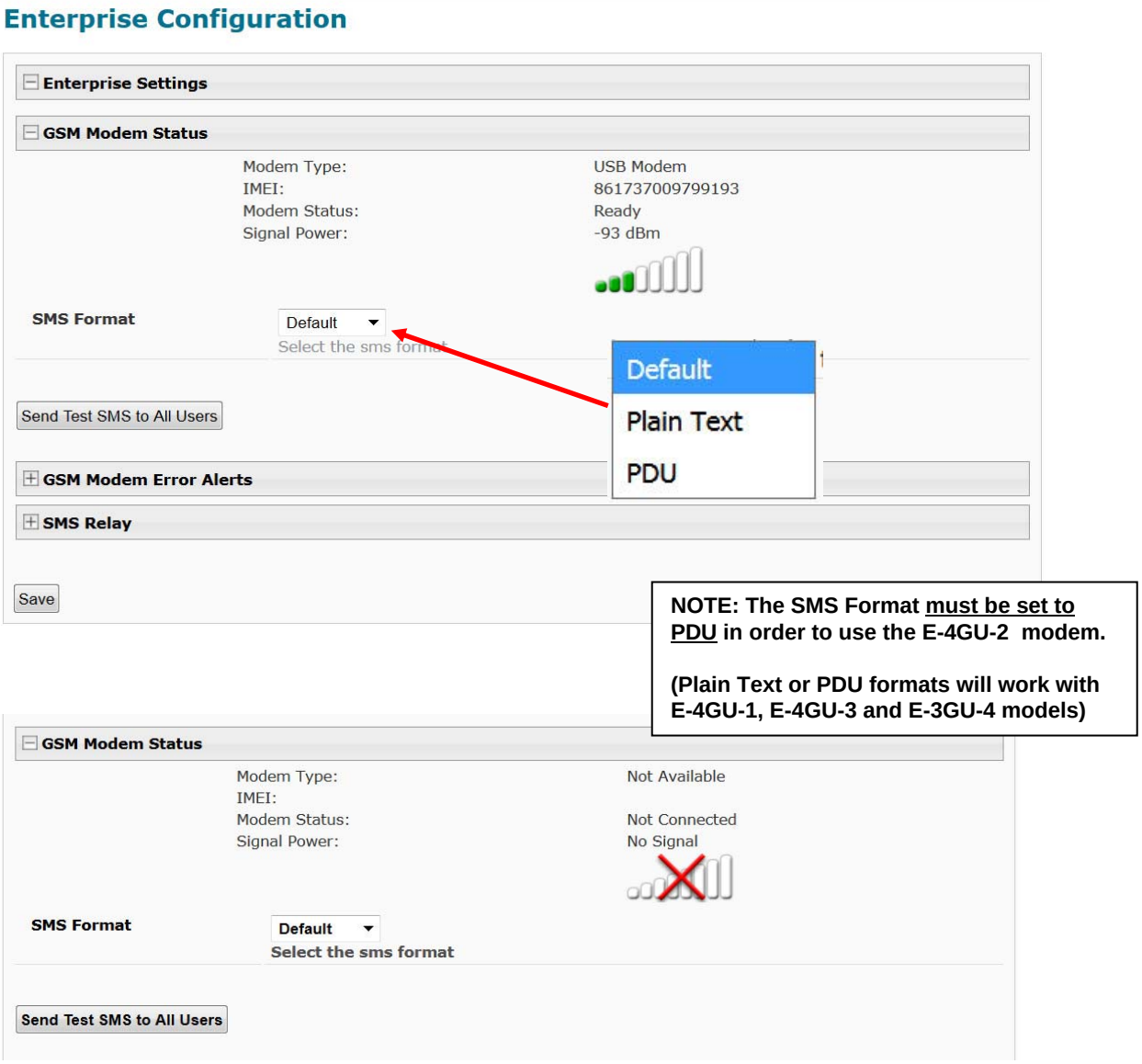
***Note: Make sure the SIM card is for GSM communication (not CDMA), configured to send SMS messages, and that it is not locked (some SIM cards are "locked" to search for a specific IMEI number of the phone to operate).***

With the SIM card installed, plug the modem into an available USB Type A port on the SYSTEM.

Once installed, the SYSTEM will sense the modem and provide status information on the “Enterprise Configuration” page in the web browser.

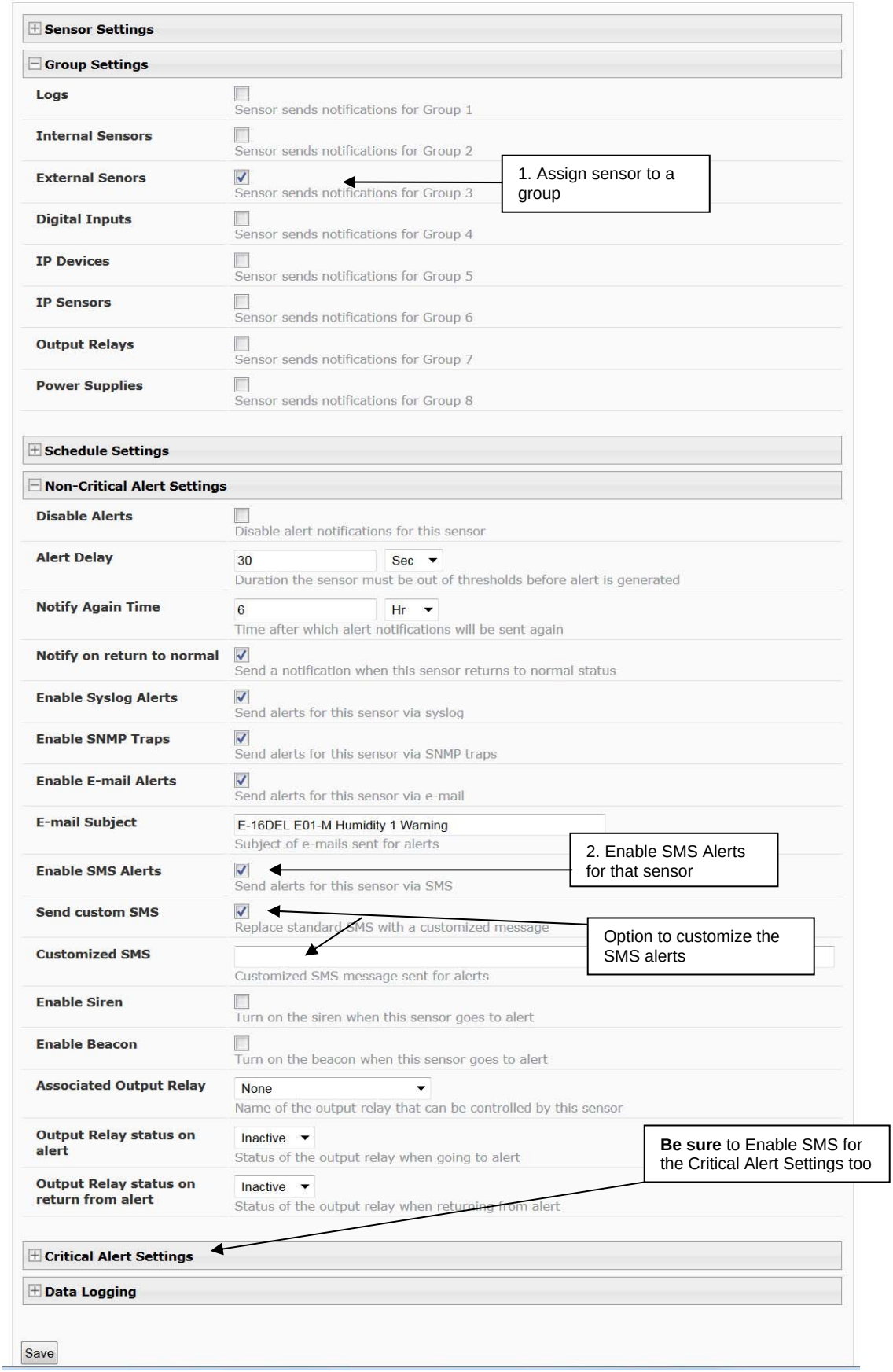
When a modem is present, the type, status, IMEI number, and signal strength will be displayed. The modem will work with a signal strength between -111dBm (weak) and -51dBm (strong).

To send and receive SMS messages, be sure to enable SMS messaging in the configuration for each applicable sensor and for each user that will receive them. (Refer to your respective SYSTEM manual for configuration instruction.)



(RJ45 Sensor Configuration)

## E-16DEL E01-M Humidity 1 Configuration (Type: Temperature/Humidity)



(Digital Input Sensor Configuration)

## Digital Input Configuration

**Digital Input Settings**

**Group Settings**

| | |
|---|---|
| **Logs** | ☐ Sensor sends notifications for Group 1 |
| **Internal Sensors** | ☐ Sensor sends notifications for Group 2 |
| **External Senors** | ☐ Sensor sends notifications for Group 3 |
| **Digital Inputs** | ☑ Sensor sends notifications for Group 4 |
| **IP Devices** | ☐ Sensor sends notifications for Group 5 |
| **IP Sensors** | ☐ Sensor sends notifications for Group 6 |
| **Output Relays** | ☐ Sensor sends notifications for Group 7 |
| **Power Supplies** | ☐ Sensor sends notifications for Group 8 |

1. Assign sensor to a group

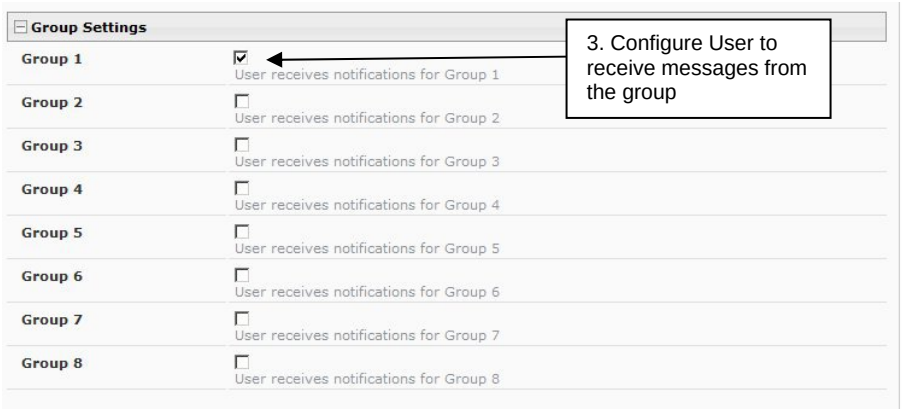
**Schedule Settings**

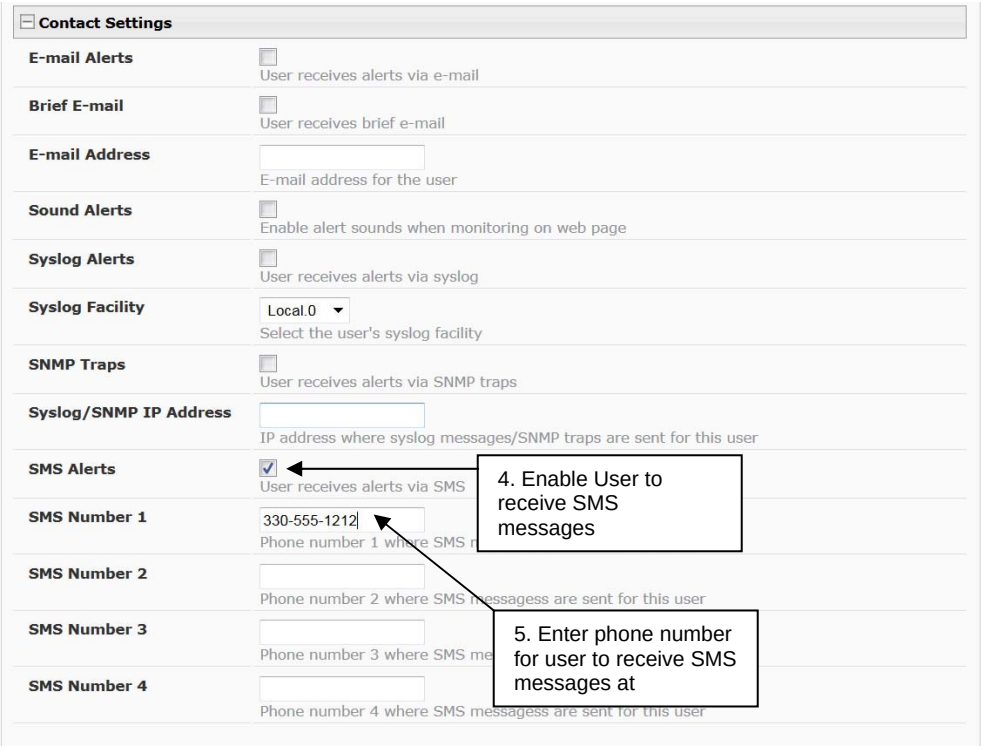
**Alert Settings**

| | |
|---|---|
| **Disable Alerts** | ☐ Disable alert notifications for this digital input |
| **Alert Delay** | 2 Sec — Duration the digital input must be out of normal status before alert is generated |
| **Notify Again Time** | 30 Min — Time after which alert notifications will be sent again |
| **Notify on return to normal** | ☑ Send a notification when this digital input returns to normal status |
| **Auto acknowledge** | ☑ Automatically acknowledge alert when digital input returns to normal status |
| **Enable Syslog Alerts** | ☑ Send alerts for this digital input via syslog |
| **Enable SNMP Traps** | ☑ Send alerts for this digital input via SNMP traps |
| **Enable E-mail Alerts** | ☑ Send alerts for this digital input via e-mail |
| **E-mail Subject** | E-16DEL E01M Digital Input 7 Alert — Subject of e-mails sent for alerts |
| **Select IP Camera** | Trendnet TV-IP562WI — Select IP camera for image capture on alert |
| **Attach IP camera capture to e-mail** | ☐ Attach captured image from selected IP camera to alert e-mail |
| **Save image to USB** | ☐ Save captured image from selected IP camera to USB Flash |
| **Enable SMS Alerts** | ☑ Send alerts for this digital input |
| **Send custom SMS** | ☐ Replace standard SMS with a customized message |
| **Customized SMS** | Customized SMS message sent for alerts |
| **Enable Siren** | ☐ Turn on the siren when digital input goes to alert |
| **Enable Beacon** | ☐ Turn on the beacon when digital input goes to alert |
| **Associated Output Relay** | None — Name of the output relay that can be controlled by this digital input |
| **Output Relay status on alert** | Inactive — Status of the output relay when going to alert |

2. Enable SMS Alerts for the Digital Sensor

**(User Configuration)**



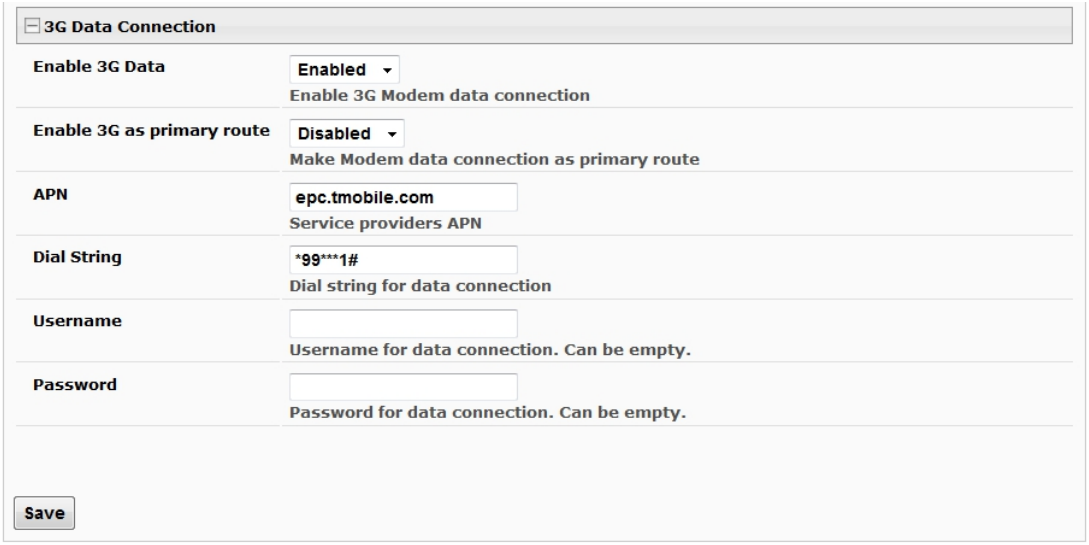



# 3G Data Support (E-xD Models and E-3GU-4 only)

### 3G Data Transfer And SMS Messaging (Applies to E-3GU-4 only)

To use your USB modem for 3G Data connection, your SIM card must be configured to support 3G data connections and have either a **public or private** IP address. Make sure the account associated with the SIM card also has SMS messaging enabled if this feature will be used. With 3G data connection support, the ENVIROMUX can be configured ("Enable 3G Data" below) to send all alert messaging through the USB modem instead of requiring an Ethernet connection for these messages.

***Note: When configured for 3G data transfer and SMS messaging only, no access to the ENVIROMUX will be possible through the modem.***




**Configuration Page from E-xD Web Interface**

(**Administration->Network->3G Data Connection**)

### 3G Data Transfer, SMS Messaging, and Web Interface (Applies to E-3GU-4 only)

To access the web interface through your USB modem, your SIM card must be configured to support 3G data connections and have a **public** IP address. The ENVIROMUX can be configured ("Enable 3G as primary route" above) to send all alert messaging through the USB modem instead of requiring an Ethernet connection for these messages. With a public IP address, you will also be able to access the web interface using the IP address of the SIM card for full control of the ENVIROMUX through the modem.

Make sure the account associated with the SIM card also has SMS messaging enabled if this feature will be used.

Contact your service provider to obtain a SIM card with the features you desire.

***Note: If the 3G Data connection is enabled as the primary internet connection, make sure that a reliable signal exists between the modem and service provider. Otherwise attempts made by the ENVIROMUX to communicate with devices on the network may be delayed and cause unnecessary alert messages.***

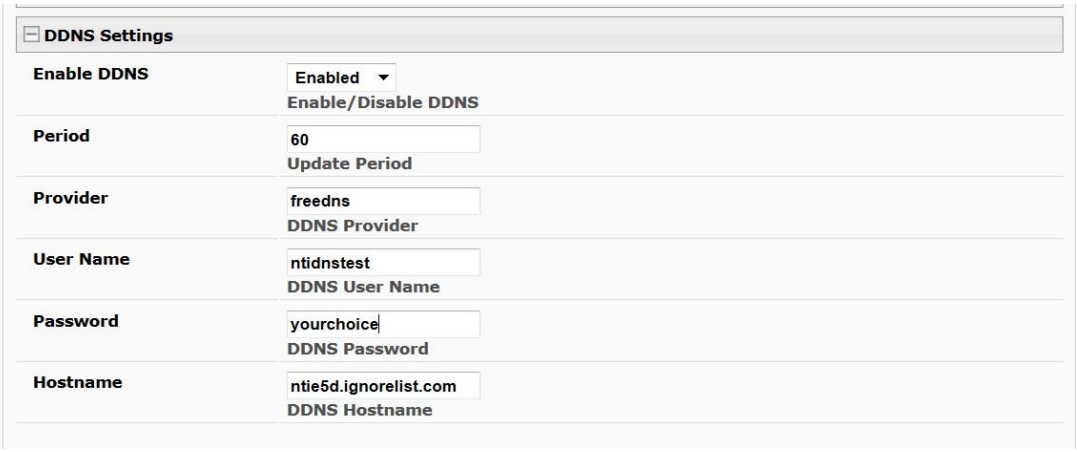
**DDNS Settings (Applies to E-3GU-4 Modem only)**

If you are going to access the web interface of the ENVIROMUX through your USB modem, and your service provider does not support a fixed (static) IP address (only offers a dynamic IP address), then in order to reliably access the ENVIROMUX web interface through the modem, the ENVIROMUX DDNS support feature will need to be configured.

The ENVIROMUX supports DDNS services with many providers, for example No-IP, Dydns and FreeDNS. (See list of known providers below). Any provider compatible with inadyn daemon will work with the E-xD. For general information on inadyn go to https://github.com/troglobit/inadyn .

Simply establish an account with a DDNS provider. Then, enable the support, enter a value in seconds (range is 30-764000) for the Update Period, enter the DDNS service provider and other required pieces of information indicated below.

The Update Period determines how often the ENVIROMUX will check with the DDNS provider to verify that it has the correct IP address associated with the DDNS hostname. If the IP address they have is different than that in the ENVIROMUX, the recorded IP address will be updated with the IP address in the ENVIROMUX.




**Configuration Page from E-xD Web Interface**

(**Administration->Network->DDNS Settings**)

# DNS Provider List

| DDNS Provider | Provider Name To Use | DDNS Provider | Provider Name To Use |
|---|---|---|---|
| ChangeIP | changeip | gira.de | gira |
| OVH | ovh | sitelutions.com | sitelutions |
| Strato | strato | dnsomatic.com | dnsomatic |
| cloudxns | cloudxns | dynsip.org | dynsip |
| ddnss.de | ddnss.de | no-ip.com | no-ip |
| dhis | dhis | 3322.org | 3322 |
| dnsexit | dnsexit | he.net | he |
| dtdns | dtdns | spdyn.de | spdyn |
| duckdns | duckdns | nsupdate.info | nsupdate |
| duiadns | duiadns | loopia.com | loopia |
| dyndns.org | dyndns | domains.google.com | domains.google |
| dynv6.com | dynv6 | tzo.com | tzo |
| easydns.com | easydns | zerigo.com | zerigo |
| freedns.afraid.org | freedns | zoneedit.com | zoneedit |
| freemyip.com | freemyip | | |

# Install SIM card in E-3GU Modem

E-3GU Modem

1- Slide cover down about 1/8"

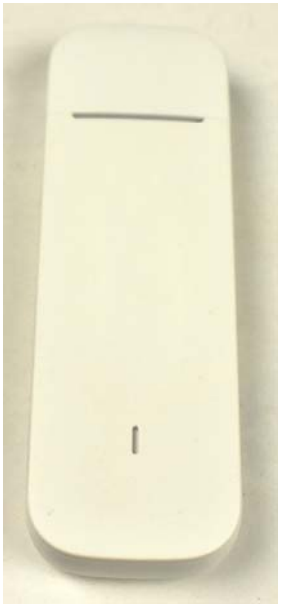
2- Remove cover

3- Set SIM card on modem below card slot. The chamfered corner is at bottom right.

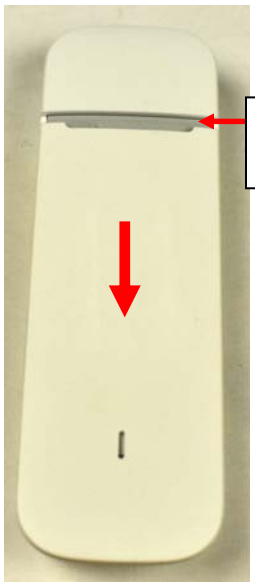
4- Slide SIM card into slot fully. (Card is fully in slot above)

5 - Replace cover

# Install SIM card in E-4GU Modem



E-4GU Modem

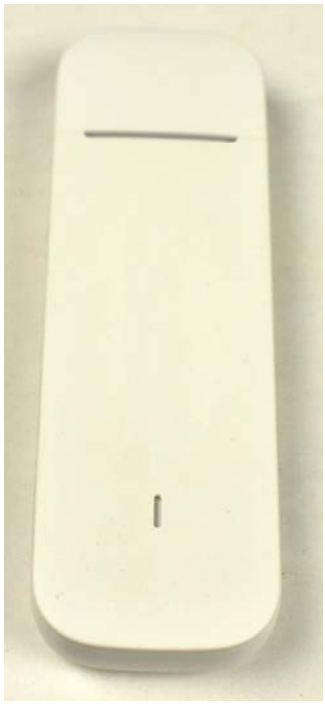



1- Slide cover down about 1/8"

2- Remove cover

3- Set SIM card on modem above card slot. The chamfered corner is at top left.

4- Slide SIM card into slot fully. (Card is fully in slot above)



5 - Replace cover

## Specifications

**E-3GU-4**

| | |
|---|---|
| Protocol Supported | SMS |
| SIM Card supported | Mini (25x15x0.76mm) and Micro (15x12x0.76mm) (w/Adapter) |
| Cellular Standard supported | 2G/3G |
| Connector | USB Type A Male |
| 3G Network Band supported | HSPA+/HSUPA/HSDPA/HSPA/UMTS(WCDMA)-2100 MHz |
| 2G Network Band supported | GSM/GPRS/EDGE-850/900/1800/1900 MHz |
| Compatibility | E-2D/5D/16D and E-MINI-LXO |
| Regulatory Approvals | CE,RoHS |

**E-4GU-x**

| | |
|---|---|
| Protocol Supported | SMS |
| SIM Card supported | Mini (25x15x0.76mm) and Micro (15x12x0.76mm)(w/Adapter) |
| Cellular Standard supported | 2G/3G/4G |
| Connector | USB Type A Male |
| External Antenna | Two CRC-9 ports provided (antenna not included) |
| Compatibility | E-2D/5D/16D with firmware version 2.60 or later |
| Regulatory Approvals | CE,RoHS |

| NTI# | 4G LTE Bands Supported* | 4G Frequencies Supported | 3G Support | 2G Support |
|---|---|---|---|---|
| E-4GU-1 | 1/2/4/5/7/28 | FDD 700/850/1700/1900/ 2100/2600 MHz | WCDMA(UMTS) DC-HSPA+/ HSPA+/HSPA/UMTS 850/1700/ 1900/2100MHz | GSM/GPRS/EDGE 850/900/1800/1900 MHz |
| E-4GU-2 | 1/3/7/8/20 | FDD 800/900/1800/2100/ 2600 MHz | UMTS: 900/2100 MHz | GSM:850/900/1800/ 1900 MHz |
| E-4GU-3 | 1/3/7/8/28/40 | FDD 700/900/1800/2100/ 2600 Mhz, TDD 2300 MHz | WCDMA(UMTS) DC-HSPA+/ HSPA+/ HSPA/UMTS 900/ 2100MHz | GSM/GPRS/EDGE 850/ 900/1800/1900 MHz |

***Check with your service provider to determine what band(s) must be supported by your modem for your area to determine what model is right for you.**

The E-4GU-x modem requires E-xD firmware revision 2.60 or newer to be compatible with E-2D/5D/16D.