EMiZON IP

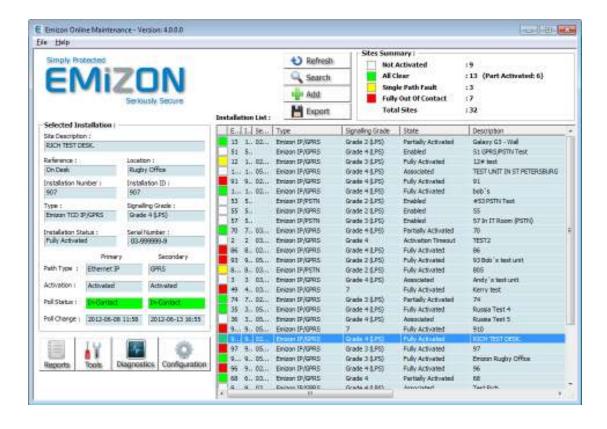# Emizon Online Maintenance

Site Diagnostics

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1.   Introduction

Emizon Site Diagnostics is a software application that allows authorised users from registered installation companies to access online their TCDs connected to Emizon IP, using a secure encrypted connection. The service is aimed at helping installers provide faster more efficient customer service while at the same time ensuring more effective use of their engineering resource.

1.1. Features

Use Site Diagnostics to Check:

- The alarm status across your monitored systems
- The poll state and signalling grade of each installation
- GPRS signal strength, registration state and GPRS network provider
- IP related information e.g. to determine potential IP issues such as the cable being removed
- Alarm data sent to the monitoring centre

Use Site Diagnostics to Configure:

- The panel type, required for direct panel connectivity
- The channel inputs
- Static IP address
- Dial Prefix for the Emizon GPRS / PSTN Service
- Relays – the TCD has 3 relays that can be set and unset
- Remotely send test Alarms from the TCD over one or both activated paths
- Plus more.

Also you can use Site Diagnostics to:

- Remotely control relays on the TCD.
- Keep reference information against the installation for ease of use.

1.2. Security

Upon successful registration of your installation company you will be sent a security certificate. Client authentication for the security certificate uses industry standard SSL (secure socket layer) with high encryption communications.

Please ensure access by authorised uses only and that your certificate and your login credentials are kept secure at all times. Emizon is not responsible for the security of your account details. If we suspect an account has been compromised we will suspend or terminate access.

1.3. Multiple Users

Security certificates are issued to successfully registered installation companies. Each certificate grants one 'manager' user who can grant or deny access to an unlimited number of additional users, each with their own password and user name (see 4.3.7). Use is restricted to 2 concurrent sessions.

From V3 onwards, data will be held on Emizon Servers, which will allow multiple users within the same company to share the same Data.

1.4. Restrictions

Restrictions are in place regarding the types of commands, accessible information and frequency of requests for information retrieval. Emizon reserves the right to modify these restrictions at any time to protect the integrity of its overall operations.

2. Installation and Setup

2.1. Certificate Application

In order to use this software you must have applied for and obtained a security certificate that has been issue by Emizon for this service along with the necessary login information.

For applications please visit the Emizon website or speak to your local Emizon Sales Manager.

2.2. System Requirements

This software is designed to run on Microsoft Windows XP/Vista/7/2008 operating systems.

2.3. Software Installation

The installer .msi file can be run like any other standard windows software installer. Follow the instructions on screen.

After installation you can run the software and on first run you should be presented with a screen asking the certificate to be configured:-

You will need to import the security certificate that was supplied to you by Emizon. This file is usually sent in a compressed file. You should extract the certificate from this file and place somewhere convenient on your PC so that you can use the screen above to import the certificate.

Once this has been completed, you can then log into the software.

3. Installation List

The installation list contains all of the installation that have been added to you Online Maintenance account. The grid includes information about what type of installation and signalling grade it is along with other information about its activation/polling status.

Additionally there are also several fields which are designed to be user edited. So you can reference the sites with your own information.

The installation list will need to be manually refreshed in order to update and changes to the sites that may have happened since the last time the list was refreshed.
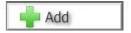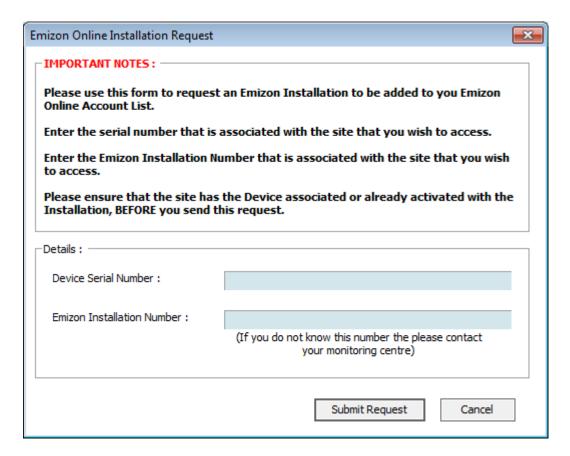

3.1. Adding Installations

For installations to be added to your Online Maintenance account they need to be added to the list. To do this you will need to provide us with two unique pieces of information relating to that account. The Emizon Installation Number and the TCD Serial Number. **The TCD must have been associated with the installation for this feature to be possible.**

The add/request installation button on the main screen is used to add installations to the list.

Once this has been completed successfully the installation will be automatically added to your list.

3.2. Searching the List

You can search the user define text in the list by clicking on the search button on the main window:-

3.3. Exporting the List

The list can be exported in T.S.V. (Tab Separated Values) format and saved to a text file. Which can then be used by spreadsheet application such as Excel or database applications.
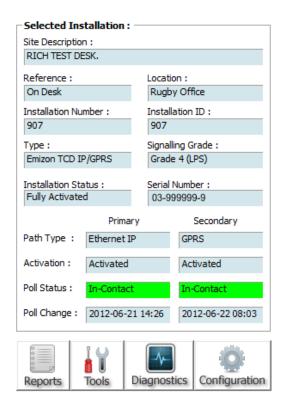
To export the current list click on the Export button on the main window:-

4. Installation Details

The main window will display information about the currently selected installation in the "Selected Installation" frame on the left side of the window.

This information replicates the information in the list with the addition of some more specific information relating to the state of the activation and polling status of the site.

Most sites will be dual path as indicated by the primary and secondary column in the display. You can then see what path type it is and whether that path has been activated/commissioned. You can also see if a particular path is in line fail and if so what was the time of the last line fail/restore.

For an explaination of Installation Status and Poll Status please see sections 11 and 12.

Below that are button menus that will give you access to additional features/functions for the selected site. More on that in the following sections.

5. Reports

These functions are for producing lists of various types in relation to the selected installation. The following sections will give more detail about these functions.
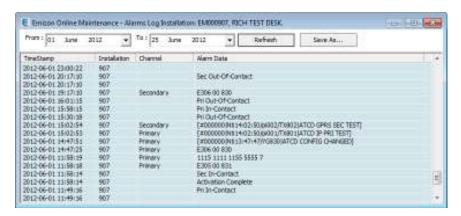
NOTE: Depending on your permissions you may or may not have access to these and other features.

5.1. View Alarms

The alarm history for an installation can be viewed using this feature. Date ranges can be selected and the information can be exported to file.

The information includes the time of the alarm, the installation number, channel over which the signal was sent from the TCD (Primary/Secondary) and the alarm data.

There are four types of alarm that can be displayed. Standard FastFormat, Contact ID, SIA and Emizon specific status alarms (EG: Primary Out-Of-Contact).

5.2. View GPRS History

The GPRS history window will give a history of when you have took a GPRS diagnostic from the TCD associated with the selected installation. These diagnostics are stored in out database for future reference.

The type of information displayed includes The time at which the diagnostic was taken, the signal strength, bit error rate, GPRS/GSM registration status and the mobile network that the TCD was attached to.

This information can be exported to file if needed.

5.3. View Path Availability

Site path availability can be viewed using this feature. This will display the number of line fails over a given path and period for the selected installation.

More information can be found on the page itself. The page can be saved and printed as needed.
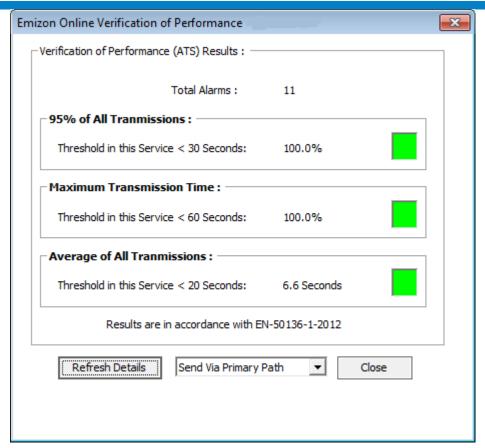

5.4. Verification of Performance (VoP)

This report will display the ATS Performance results for the selected installation. Please note this will only display meaningful data if you installation cluster is enabled for this.

The results are measured against EN-50136-1-2012 (relating to Verification of Performance). Please refer to this publication for more information.

6. Tools

The tools menu is used for performing miscellaneous functions on the selected installation.

NOTE: Depending on your permissions you may or may not have access to these and other features.

6.1. Refresh Details
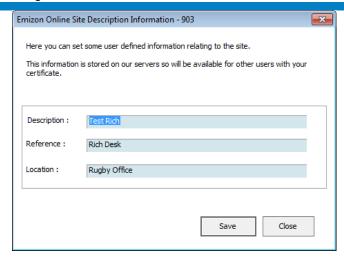
This is similar to the site list refresh but will do it for the selected installation. Once completed, all the information for the selected installation will have been updated.
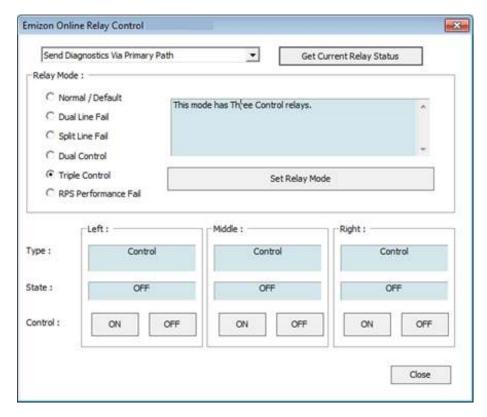
6.2. Edit Information

Each installation has some extra user fields that can be edited. This information is stored centrally at our severs and can be exported using the site list export feature mentioned earlier.

6.3. Relay Control

The TCD has three relays on it which can be configured to perform difference tasks.

There are several relay mode configurations that can be selected. When you click on each mode there is an explanation as to what each mode is and what the relay functions will do.
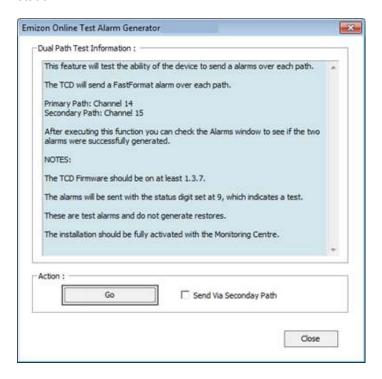
When a relay is configured as a control output, you can use the On/Off buttons to control the state of the relay.

6.4. Send Device Test Alarm

Once an installation has been commissioned you can instruct the TCD to send a set alarm over all available signalling paths. This is useful for ensuring that all paths are capable of sending a test alarm.

You can review the sent alarms with the View Alarms Report and/or your monitoring station.

6.5. Remove Installation From List

If you need to remove the installation from the list you can use this menu option to do so. It will remove the installation from your account.

PLEASE NOTE: It will **NOT** remove the installation from the Emizon Platform it **ONLY** removes it from the Online Maintenance/UDL list for your certificate.

7. Diagnostics

The Diagnostics menu is used to query status information about the TCD and its interfaces. This information can be used to diagnose problems on site.

NOTE: Depending on your permissions you may or may not have access to these and other features.

7.1. View GPRS Information

GPRS information that is retrieved from the TCD includes the signal strength, bit error rate, GSM/GPRS registration status, the mobile network provider and whether the GPRS session is currently online or not.

The history of these checks can be viewed on the Reports menu.

7.2. View Device Firmware Information

TCD firmware version information can be obtained and checked to see if it is up to date.

If your permissions allow the TCD may be firmware updated using the "Attempt Firmware Update" button.

7.3. View Extended Diagnostics

Extended diagnostics will contain a lot of useful information about the status of the TCD. This information includes:-

- Activation status
- Supply voltage
- Auto recovery configuration
- Selected relay mode
- The status of all the three relays on the board.

8. Configuration

The configuration menu is used for sending/retrieving configuration settings to the TCD.

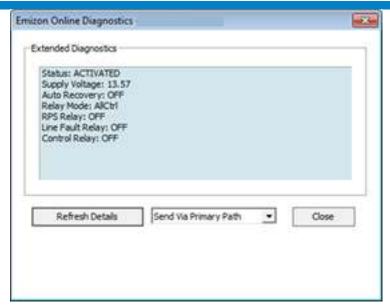**NOTE:** Depending on your permissions you may or may not have access to these and other features.

8.1. IP Configuration

This displays information on the TCD's physical Ethernet port and settings.

DHCP	Gets or sets whether the TCD is getting its IP address from a DHCP server. If you need to set a static IP address then uncheck this and complete the IP/Subnet Mask and Gateway addresses.
IP Address	The IP address that has been assigned to the TCD either dynamically or statically.
Subnet Mask	The subnet mask.

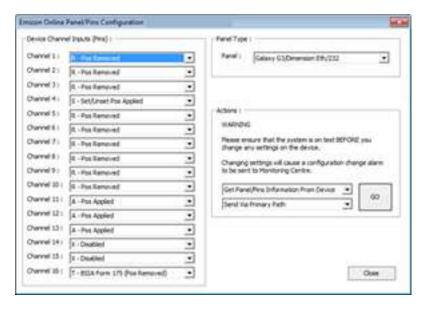| Gateway Address	The gateway address is usually the internet router IP address. This is where the TCD sends its data to reach our servers.
MAC Address	The hardware address of the TCD. This is often useful information to give to IT departments when trying to diagnose IP problems. (This information is read only)
Link Status	This contains extra information about the connectivity status of the TCD such as its connection to the local switch or router and its connection speed. Whether the TCD can see the router and whether the TCD can see the Emizon servers (Upstream). (This information is read only)

8.2. Panel / Pins Configuration

This feature allows you to configure the TCDs 16 channel inputs and connected panel type.

The channel inputs are digital inputs that can be triggered from a standard panel digi outputs. Each pin can be configured as pos applied/removed or open/close. Channel 16 can also be configured as a BSIA Form175 ATS test input (in which case channels 14/15 will be disabled)

The Panel Type dropdown list is to select a panel type that has been connected to the TCD via one of its additional peripheral interfaces (IE: RS232,RS485,Dial-Capture).

Emizon are constantly updating our list of supported panels so please to refer to our website for more information.

8.3. PSTN Configuration

The PSTN settings are used if the TCD has been setup for GPRS/PSTN signalling. In this case you can program in a telephone dial prefix if it is needed.

You can also view the phone line voltage.

8.4. Internal Message/Alarm Format

The TCD has some built in alarms that it can send in addition to the channel input alarms. For a list of the other types of messages please see section 10.

By default these are FastFormat for the channels and Contact ID for the other messages.

With this setting you can configure the format of the alarms to suit your own requirements.

Original FastFormat	Channels are sent as FastFormat, path test alarms are sent as channel 14,15 FastFormat and other internal TCD alarms as Contact ID
Hybrid FastFormat	Channels are sent as FastFormat. All other internal alarms as Contact ID
Contact ID	All internal TCD alarms including channels

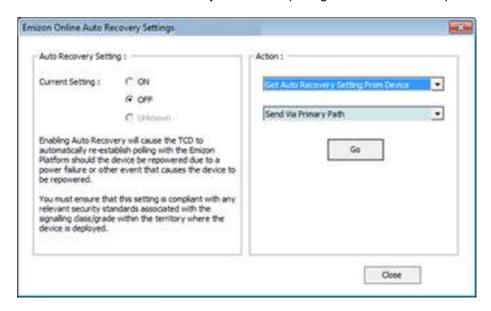|	are sent as Contact ID
S.I.A. Level 3	All internal TCD alarms including channels are sent as S.I.A. Level 3

8.5. Auto Recovery Settings

Auth recovery setting is used for installations that use the older Emizon signalling method in which the TCD would need to be reactivated if it was repowered. If auto recovery is enabled on these TCDs then they will retain it polling once it has been repowered.

NOTE: Newer installations do not need to use this setting as it is build into the service level.

8.6. UDL Settings

Upload Download (UDL) settings will configure the TCD's related UDL specific settings. The following window will be displayed.

Panel ID

Panel ID is currently only used in HKC panels they need to a panel ID set in the software for upload/download. The ID should be a number up to 9 digits.

UDL IP

The UDL IP is used for UDL session that are callbacks over the dial capture interface. This should be a valid IPv4 address or blank to clear.

Send Alarm For UDL Session

A lot of panels will send an alarm when a UDL session starts but some do not. The TCD has the option to send an alarm should a UDL session start. Check this box if you wish the alarm to be sent.

9. **File Menu**

9.1. **Advanced Settings**

Can be used to change specific aspects of the software.
Please note, that you should only change these settings if you are sure of what the effects will be.
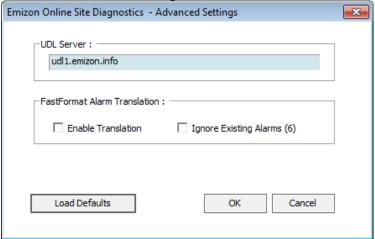
UDL Server
Shows the location of the Emizon Online Server – to be changed only following instruction from Emizon.

FastFormat Alarm Translation
This setting is used to enable the standard FastFormat alarms to be viewed translated in the View Alarms window. When translation is enabled a channel 1 will appear a PIN 1 NEW ALARM in the alarm log.

Emizon Online Site Diagnostics - Advanced Settings

UDL Server :

udl1.emizon.info

FastFormat Alarm Translation :

☐ Enable Translation   ☐ Ignore Existing Alarms (6)

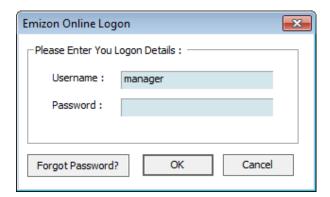Load Defaults   OK   Cancel

9.2. Change Password

You can use this to change you password. You need to be logged in to be able to do this.

If additional users need their password resetting because it has been forgotten then the manager can do this.

If the manager password needs resetting then there is a manager password reset mechanism that can be accessed at the logon screen.

Emizon Online Logon

Please Enter You Logon Details :

Username :   manager

Password :

Forgot Password?   OK   Cancel

This can be accessed by clicking on the "Forgot Password?" button and following the instructions.

9.3. User Manager

The user manager is used for adding additional users to the system that can access the software under this account.

The additional users will not have all of the Manager features available, but can perform most functions.

It is good practice to give engineers their own login so that there is a full audit trail of each person's actions.

9.4. View Audit Log

The audit log shows actions performed on this account by the users. It is stored remotely on our servers.

9.5. Disconnect

Disconnect from the online maintenance server.

10. TCD Generated Alarms

Along with the channel inputs on the TCD it is also capable of sending additional internally generated alarms to indicate changes and/or problems in the TCD. The following table lists these in Contact ID format.

Alarm Type	CID Message	Comment
Ext. Panel Conn. Failure	E350 00 315	
Ext. Panel Conn. Restored	R350 00 315	
TCD Configuration Changed	E306 00 830	**Does Not Reset**
TCD Restarted	E305 00 831	**Does Not Reset**
Failure to communicate	E354 00 832	**Does Not Reset**
Supply Voltage Low	E302 00 833	
Supply Voltage Restored	R302 00 833	
Self Test Failure	E307 00 834	
Self Test Restored	R307 00 834	

11. Installation Status

Each installation can be one of the following states.

Disabled	**Most common reason being due to a transfer or a cease.**
Enabled	**Enabled and ready to be associated with a TCD**
Associated	**Associated with a TCD – now awaiting activation for signalling.**
Full Activation Commencing	**Full activation has been initiated. The monitoring centre has issued the command to allow the device to start communicating with Emizon. This applies to activating on BOTH IP AND GPRS PATHS. The engineer on site needs to press the right button on the TCD.**
Part Activation Commencing	**Same as above but for single path where only the IP or GPRS signalling path has been activated. .**
Fully Activated	**The installation and device have now been successfully activated on both paths. The TCD can now send alarms to the monitoring centre. This applies to DUAL PATH Installations.**
Partially Activated	**Same as above but for SINGLE PATH installations. Single path activations are shown as green if the path is in contact,**
Activation	**The activation process has timed out because one**

Timeout	**or both paths failed to successfully activate with Emizon within the given time window specified by the monitoring centre. Note : The system is** NOT **Activated.**

12. Poll Status
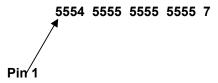
Each path of the TCD can be in one of the following states.

Not Activated	**Installation or path is not activated.**
In-Contact	**Polling is ok.**
Out-Of-Contact	**Polling has failed and path is in line fault.**

13. TCD Channel/Pin Alarms

The TCD has 16 input channels/pins that are by default pos removed (except for channel 4) these can be alerted in accordance with section 8.2.

Also the default format for the pins is FastFormat. But this can be changed to either Contact ID or SIA. Refer to section 8.4.

FastFormat

5554 5555 5555 5555 7

Pin 1

Values Displayed **:**
1 = New Alarm
2 = Unset (Pin 4)
3 = Restore
4 = Set (Pin 4)
5 = Normal (No change since last reset)
    6 = Outstanding (goes from 1 to 6 if a new alarm is received before this one has been reset)

*Note : **Unwired pins which have been set as + removed will show as '6'***

Status Values:
7 = Norm
8 = Low Voltage
9 = Test

Contact ID

This format looks different in the alarms logs and is split in to 4 parts.

Type of alarm, Alarm Code, Alarm Group, Alarms Area

Example: Channel 1 alarm.

E140 00 901

Channel 2 would give an area code of 902 etc.

SIA

SIA is another difference format. This contains other information such as time and data and also a textual decription of what happened.

Example 1: Channel 1 alarm

[#000000|Nti14:36:39/UA901|ATCD INPUT 1 ALARM]

Example 2: Configuration of the TCD has changed.

[#000000|Nti14:34:38/YG830|ATCD CONFIG CHANGED]

14. Glossary

Term	Description	Notes
Signal Strength	**The range is shown as a number between 1 and 31**	**12 or more is acceptable for normal operation**
Bit error rate	**Indicates electrical interference and shown as a numeric where 1=25%, 2=50%, 3=75% and 4=100%.**	**Any figure above 1 indicates a problem, most common causes are electrical interference due to equipment near the panel e.g. florescent lighting**
SIA	**Security Industry of America**	**Digital data sent from panel to ARC**
Poll	**A poll is an encrypted and sequenced message transmitted by the signalling system and acknowledged by the receiver. A loss of the polling sequence during a specified time constitutes an alarm**	**See emizon.com for a detailed listing of polling rates**
Polling Rates	**EN 50131 sets out the path fault reporting requirements by grade**	**See emizon.com for a more detailed listing**
DHCP	**Dynamic Host Configuration Protocol**	**An auto configuration protocol used on IP networks**
Static IP	**A Fixed IP Address**	**Ask customer to complete Customer IT Survey Form**
Router	**The router at the customer premises is the gateway into the global IP network and the benefits that it brings. It is the router that enables the alarm control panel to communicate**	

	with the Emizon platform and then onwards to the ARC.	
Upload/Download (UDL)	**The ability to connect to an alarm panel, retrieve the log information and change the configuration of the alarm panel remotely.**	**The TCD can be used to send information from the panel to the panel service software over a secure encrypted connection – see the iZone.**
TCD	**Telemetry Communications Device -the Emizon communications unit that is fitted in the alarm panel**	**Buy on line at Emizon.com**

15. Contact Details

Emizon Helpdesk: +44 (0) 844 412 9009

Website: http://www.emizon.com/

Email: online.maintenance@emizon.com