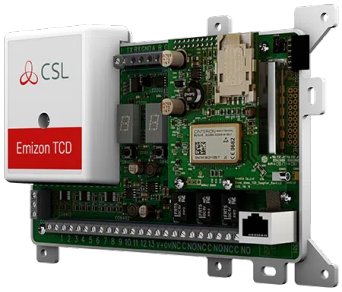
PRODUCT SUPPORT

Emizon TCD

Updated September 11, 2026



Emizon TCD can utilise a combination of IP, GPRS or LTE paths to provide secure, dual-path alarm signalling for intruder, fire & CCTV systems. It offers Upload/Download functionality on leading panels plus extended formats such as Contact ID and SIA, which provide ARCs with more detailed information about alarm events. As standard, the device arrives as 2G enabled but can be enabled for 4G signalling.

Latest information
https://www.csl-group.com/support/emizon-tcd/

Quick Guide

Introduction

IP/GPRS GPRS/PSTN & IP/PSTN – For alarm control panels using up to 16 pins, RS232, RS485 and Dial Capture.

For compliance with EN alarm signalling Grade 2, 3, 4, BS 8418 for CCTV monitoring

Emizon TCD is the always on, Dual-path, Alarm and CCTV communications monitoring device for Broadband, GPRS and PSTN networks. This guide contains a step-by-step guide to the installation and commissioning of the TCD, the gateway to the Emizon IP service.

COMPATIBLE WITH THE FOLLOWING

MAKE	MODEL
Bosch	Easy Series, Solution Series 16.64
Castle	Euro
Cooper Menvier	Scantronic 95EN, Menvier M series (not T900), ION Range / Mevier 30, 40, 100 & 300, Menvier M series (not T900), ION Range / Menvier 30, 40, 100 & 300
GE	ATS 200X/300X/400X, Aritech CD, ATS 200X/300X/400X Dial Capture, ATS 200X/300X/400X Dial Capture, ATS Advance Dial Capture
Guardall	All with RS232 Serial Port
Honeywell	Galaxy G2, Galaxy G3/Dimension, Galaxy (Dial Capture), Galaxy Flex 3 (Dial Capture), Galaxy G500, G512 and Flex 1 & 2, Galaxy Flex 3 RS485
DSC	All
RISCO	Prosys, Agility Lightsys
Gardtec	595 Series
Siemens	SPC Ethernet

Texecom	Premier, Premier Elite
HKC	SecureWave Range
Caddx	Nx,4,8,16 Dial-Capture, Via NX585/Serial Interface
GE Interlogic	Tecom System Challenger Version 8
Inner Range	Concept 3000/4000
Paradox	SP/MG (Dial Capture)
Satel	Integra (Dial Capture), Satel (Integra SIA over IP)
NOX	DC09 SIA over IP
Kentec Fire	Syncro / Solo
Orisec	CP Range

Before Starting

Online access for site diagnostics. Request Emizon OLM Software on the file access portal.

POWER DOWN THE DEVICE

As with the process for installing any type of alarm communications (Digi/STU) the panel must be on test and powered down.

Make a note of the TCD Serial Number (found on the white lid
You will need to give this number to your ARC during the commissioning process so that it can be matched with the customer details.

PROTECT AGAINST STATIC ELECTRICITY

To protect the electrical components of the TCD from static electricity we recommend that you are earthed whenever you handle the equipment using a wrist strap and a 1M resistor.

COMPLETE THE CUSTOMER IT SURVEY FORM

Emizon Customer IT Survey form available on the Emizon Installer Zone page. The TCD comes with DHCP enabled and will automatically request an IP address. A Static IP address can be assigned via Emizon Online Maintenance. A static IP can also be assigned by calling the CSL Technical Support if the GPRS path is up. LED 202 indicates the GPRS path is up. We will require IP, Subnet mask and Gateway details.

CHECK THE ROUTER / PORT CONNECTION

The TCD uses 50 TCP Outbound Ports 18000 to 18049 inclusive. The Ethernet port on the TCD connects to an Ethernet connection at the customer's premises using a standard unshielded Cat5 Ethernet cable. If required additional ports on a router can be made available by using an Ethernet hub, sourced from IT suppliers, who also supply Ethernet cable lengths. Instructions to make up a Cat5 patch cable can be found in the useful links & downloads section of Emizon Installer Zone Page.

FOR PSTN

If connecting via PSTN check if the line uses a dial prefix, if so this can be assigned via Emizon Online Maintenance software. If the GPRS path is available. A Dial prefix of 0 or 9 can be assigned via the Phone App / Emizon Online Maintenance or by calling the CSL Technical Support. Note, a primary IP or GPRS path is a prerequisite to the secondary PSTN path coming into contact.

CHECKING THE GPRS SIGNAL STRENGTH

The GPRS module is enabled but will require sufficient signal strength to operate. To check the GPRS signal strength tap SW402 once and observe the GS, GA and GR readings on the display. A reading of GS 12 is the minimum. Please be patient, the GPRS path can take a few minutes to activate LED 202 should be solid on indicating a GPRS path. For a quick indication, place a mobile phone next to the panel, 2 bars or more is usually sufficient. High Gain Antennas can be fitted to boost the GPRS.

DUAL-PATH SIGNALLING

Emizon is a dual-path service – The TCD must be commissioned with both paths fully activated & signalling to your ARC before leaving site.

IMPORTANT NOTES:

A Firmware update must be applied on every site visit or maintenance visit. A firmware update is applied by pressing both buttons for 10 seconds or until **U F** is displayed. **U A** indicates Update Available. **U F** indicates Updating Firmware.

Triggering a physical firmware update via the TCD buttons is enabled by default. To disable the firmware update local button press on the TCD via Emizon Online Maintenance, go to Configuration ⇒ Enable / Disable Local Firmware Updates. This would prevent an engineer with local physical access to the panel from initiating a firmware update. It would mean a firmware update could only be triggered by an authorised user with level 4

logical access, as defined in EN50136-2:2013, via Emizon Online Maintenance. If the installer presses both buttons for 10 seconds when the button press is disabled then the TCD will display **U d** – (Update Disabled). The TCD will still contact the Emizon platform to update the SIM details.

Each TCD has a unique Serial Number located on the white lid – you will need this number during the ARC commissioning process. The Serial number or the **E M** number will also be required when contacting the CSL Technical Support.

Step 1 - Commissioning

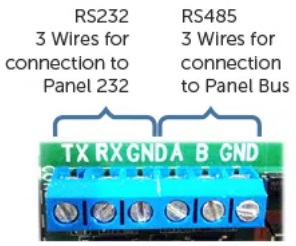
Fit the TCD in the alarm Control panel. The TCD can be connected using Pin inputs, RS 232/485 or Dial Capture.

USING PIN INPUTS

Carefully observing the correct polarity, connect the TCD pin inputs to the panel. The default is +Ve removed. Connect the Power supply to the TCD V+ and 0V power supply input

USING RS232/485

- For RS232 connect TX, RX & GND
- For RS485 connect A, B & GND



USING DIAL CAPTURE

- Unscrew and remove the Dial Capture Lid.
- Connect T and T1 on TCD to A on the Panel.
- Connect R and R1 on TCD to B on the Panel.
- Screw the Dial Capture lid back on.
- For Dial Capture the TCD is used as the input.



USING UDL WITH PSTN

Wiring for TCD Connection to the PSTN line for alarms and upload and download from Panel via GPRS. Please be aware: Dial capture of alarms is not possible with a PSTN connection. Unscrew and remove the Dial Capture Lid

- Connect T1 on TCD to A on the Panel.
- Connect T1 on TCD to A on the PSTN
- Connect R1 on TCD to B on the Panel
- Connect R1 on TCD to B on the PSTN
- Screw the Dial Capture lid back on



Step 2 - Connecting Paths

For IP (Broadband) For IP/GPRS connections, connect the Ethernet Port to the network connection Router in the customer's premises using Cat5 or higher "unshielded Cable. Connect the GPRS antenna.

For GPRS/PSTN Connect the GPRS antenna or the High Gain Antenna. For a PSTN connection remove the Dial Capture lid and connect the PSTN line to Terminals T1 and R1. NO OTHER COMBINATION WILL WORK! Check for voltage across T1 and R1 (should read approximately 50V).



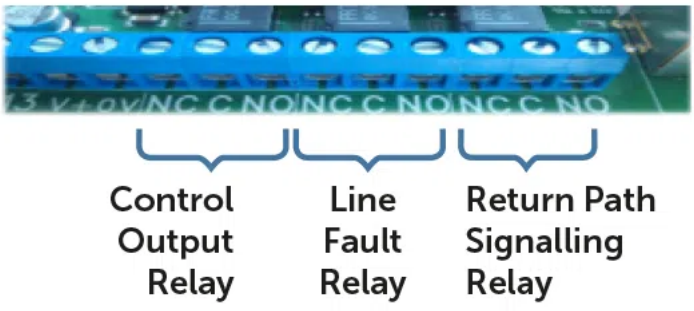
Step 3 - Connecting Relays

The three changeover relays are rated at 30 Volts DC @ 1A. All 3 relays are Non- Latching. The line fault relay will be in the N/O position when there is no line fault and fall back the N/C position when there is a line fault or other fault which would prevent the TCD from operating normally. The Line Fault relay can therefore be used as a fault output, signalling N/C to indicate a fault condition. Note: The Relays can be configured in a number of combinations via Online Maintenance Software.

Control Output – Controlled by the ARC and used for various purposes such as re-setting the alarm panel following an event.

Line Fault – N/C when the TCD is in line fault. This relay is defaulted to operate in BSIA Form 175 mode to report a path failure on either path. This relay can also be used to indicate a fault condition for the TCD.

Return Path Signalling (RPS) – activates when an alarm is sent and acknowledged by the ARC.



Future-Proof: Designed specifically for IP networks. Compatible with fibre and Next Generation-Networks EN Signalling Grade 2, 3, 4

PIN CONFIGURATION

The default Pin Configuration is set to the following:

• Pin 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13 Positive Removed

• Pin 4 Set / Unset Positive Applied.

• Pin 14 & 15 Disabled Reserved for Primary & Secondary Path Test.

• Pin 16 is set for BSIA Form 175 (Positive Removed)

Pins 1 to 16 can be set to the following options via Online Maintenance Software, The Emizon TCD Phone App or by calling the CSL Technical Support.

• Positive Applied

• Positive Removed

• Set/Unset (Positive Applied)

• Set/Unset (Positive Removed)

• Disabled

ASSIGNING STATIC IP ADDRESS

This is for when no other Path is available.

To assign a static IP address, a Laptop is required. A network connection is not required. The minimum firmware must be 1.5.4.

> **THE TCD MUST BE DE-ACTIVATED EITHER BY THE ARC OR BY CSL PRIOR TO ASSIGNING A STATIC IP ADDRESS.**

The TCD is set to DHCP by default. If a static IP is required, using an Ethernet cable, connect directly from a laptop to the TCD Ethernet port and follow the steps below.

1 – Open browser & go to **165.254.37.93**

2– At Pages available: select IP Address Configuration

3 – Select Fixed IP Address, enter the Static details (IP, Netmask and Gateway) and press Submit

Step 4 – Boot Up & Signal Check

Turn on the power supply to the panel, wait for approximately 30 seconds

• The power status Green LED 101 will illuminate.

• Upon boot up the following sequence is displayed.

b u = Boot up

b c = Boot up complete

t 1 = TCD Initial State

• Check Ethernet activity LED 301 is lit, it flickers if data present.

• If this is the first time this TCD is being installed, wait for **t L** on the display then press and hold the Set and Mode buttons together for 10 seconds or until the display shows **U F**. The TCD will make contact with the Emizon Service Platform and download the latest firmware.
Rr indicates the update has taken place, **U c** indicates the TCD already has the latest software.

• The TCD will automatically REBOOT after 20 seconds.

• Allow the TCD to boot up (30 seconds) and go to **t L** state

Step 5 – Commissioning With ARC

- Call the ARC with the TCD serial number. The ARC will then 'associate' or link the TCD to the customer details on their system and 'activate' the TCD.
- Press the 'Set' (**R H**) button for 5 seconds.
- The display will then alternate between **t L 0 1** and then display **CA** (Completely Activated) indicating a successful activation.
- The IP LED **2 0 1** and GPRS LED **2 0 2** will change to solid green to indicate that both paths are communicating with the Emizon Service Platform.
- For added security there is a time out period, usually 20mins, to press the set button following ARC • activation.
- The following codes are shown on the display:

t L 0 1 (TCD initial State) ⇒ **C A** (Completely Activated)

If the TCD is re-powered at any time you will need to repeat the ARC commission process

Step 6 – Testing

Following successful activation, test all alarms on both signalling paths. (First send a set of alarms, then disconnect the Ethernet cable, forcing alarms over the GPRS path. NB: The Ethernet LED will start flashing to indicate failure mode). Remember to reconnect Ethernet connection when testing complete. Testing complete,

affix the antenna in place on top of the panel. For Reporting times please refer to Emizon Section of the Installzer Zone.

> THE TCD MUST BE COMMISSIONED WITH BOTH PATHS FULLY ACTIVATED BEFORE LEAVING SITE. THE MINIMUM RECOMMENDED GPRS SIGNAL STRENGTH IS 12, THE MAXIMUM IS 31. TO SEND A TEST SIGNAL TO THE ARC ON BOTH PATHS, PRESS THE SET BUTTON SW401 FOR 5 SECONDS.

You can improve signal strength by purchasing a CSL HGA (High Gain Antenna) with a 5M lead & fitted connector.

POSITING HGA

The HGA must not be fitted right next to the alarm panel, likewise the 5M of cable must not be coiled up and placed inside the panel as this will not improve the signal strength. Instead utilize the 5M of cable by placing the HGA in a higher position than the alarm panel (loft space) to maximise the chance of a better signal strength. It is also advised to fit the HGA away from any Conduit, Electrical cable etc. If fitting the HGA inside a roof space, be aware that in modern buildings the insulation bats may have foil fitted. Where the site has a metal clad roof it is advisable to fit the HGA externally and high as possible and away from the Panel and in free space. When securing the HGA to a wall please ensure you use the bracket provided. This ensures that the HGA is at the required distance from the wall.

CONNECTING HGA

Prior to connecting the HGA to the TCD the power must be removed from the TCD. Connect the MMCX male connector to the TCD and apply power to the TCD. On the power up wait for T1 01 on the display. LED 101 on the small GPRS PCB should flash every 2 seconds.

TAKING A SIGNAL STRENGTH

Check the signal strength with a signal tap of the left hand button SW402, then read the GS, GA and GR values on the display. The values will be display for 1 minute. The minimum signal strength is GS 12 and the maximum signal strength is GS 31. Do not press the left hand button SW402 repeatedly. An example of a good signal strength reading is GS 24 – GA , 05 GR – 05

- LED 202 indicates a valid GPRS path if on an IP/GPRS Grade
- LED 201 indicates a valid GPRS path if on a GPRS/PSTN Grade

> THE GS VALUE MUST READ 12 OR ABOVE. THE GS AND GA VALUE MUST READ 05 FOR GSM/GPRS REGISTRATION.

IF THE SIGNAL STRENGTH IS STILL LOW THE SIGNAL MAY BE IMPROVED BY RELOCATING TH HGA.

CSL CAN SUPPLY A 5M EXTENSION CABLE FOR AREAS WHERE DISTANCE IS A PROBLEM. **EAN CODE 5060386680093**

Step 7 – Diagnostics & Faults

To take a signal strength tap the Mode button once (SW402). The display will show a code for the parameter on the display for example **GS** is for signal strength together with the associated value. The display will remain in a diagnostic mode for 1 minute.

GPRS SIGNAL STRENGTH (GS)

Signal strength value ranges from 0 (zero strength) to 31 (maximum strength). A value of 12 or more is normally acceptable. **GS99** indicates that the GPRS modem cannot properly detect the signal strength. Please be patient, the GPRS path (LED 202) can take a few minutes to find a good signal strength.

GPRS REGISTRATION STATUS (GA & GR)

The display will then show the GPRS registration status.
G A 0 5 indicates successful GPRS Registration.
G r 0 5 indicates successful GSM Registration.
G A and **G r** readings must display **0 5**

Any other value will not allow a GPRS connection.

SIGNALS TO THE ARC & CSL

Press SW401 for 5 seconds. A test signal will be sent over any paths that are available

EMIZON ONLINE MAINTENANCE

Site Diagnostics – Allows you to communicate securely with TCD's across all your installations. Use OLM to check the alarm status, change the pin configuration, check the signal strength, enter static IP addresses, apply F/W updates, set the panel type or set and unset relays connected to CCTV systems

Upload Download (UDL) For panel maintenance – a secure connection from the TCD to the panel, using RS232, RS485 or dial capture.

BEFORE YOU CAN ADD A SITE TO OLM, THE TCD MUST BE ASSOCIATED FIRSTLY BY YOUR ALARM RECEIVING CENTRE (ARC).

ADDING A SITE TO (OLM)

To add a site to OLM you will require the EM number and the Serial number of the TCD. Register for Emizon Online Maintenance. Available of the Emzion section of the Installer Zone

FAULT CODES & GPRS DIAGNOSTIC

Error and fault conditions are shown on the display. The display may show a number code to indicate the nature of the problem. The most common codes together with the potential reasons and solutions are shown on the table

CODE	POSSIBLE REASON AND SOLUTION
E0	Error Code 0: IP Path not connected. Check Ethernet cable from TCD to Router/ Network connection electrically OK
E1	Error Code 1: TCD has No IP address
E2	GPRS Registration State not 1 or 5. If this persists, it indicates poor GPRS coverage or an antenna location problem
E3	GPRS Connection not available. If this persists it indicates the TCD is unable to connect to the GPRS IP Network.
E6	No ARP Response. Cannot detect local gateway/router. Indicates no response from router. Most likely causes; TCD plugged into wrong network, router not online or has different IP address
E7	Cannot detect Emizon Service Platform. Most likely causes; customers internet connection is down or firewall is blocking internet access on the desired port range Outbound Ports TCP 18000 – 18049 Inclusive)
FIRMWARE UPDATE CODE	
UR	**UA** Firmware Update Available. Apply a Firmware update by pressing both buttons for 10 Seconds or until **UF** is displayed
UE	Update Error

U F	**U F** Followed by a value of between **0 0** and **9 9** or displays hexadecimal characters indicates that the firmware update is in progress
F E	FE followed by a value indicates an error in firmware update process. Repeat process, if the result is the same check network connection
r r	**r r** TCD is rebooting followed by **B U**, **B C**, **t 1**, **O 1**
U c	Firmware Update Complete. followed by **t 1**, **0 1** indicates the firmware update is complete and awaiting signalling both paths
FOR GPRS SIGNAL STRENGTH TAP THE LEFT HAND BUTTON ONCE (SW402)	
G S	Signal strength. 12 is the minimum, 31 is the Maximum. Recommended minimum usable signal is 12. 99 indicates no signal.
G A	GPRS Registration state which must read 0 5
G R	GSM Registration state must read **0 5**
G d	Grade type **L 3**, **L 4**
A G	Age of GPRS reading (values in shown in seconds
O P	Operating mode **I G**, **G P**, I **P**, **G –**, **I –**,

Troubleshoong Guide for IP/GPRS, GPRS/PSTN & Bi-Path IP/PST

FOR IP FAILURE	FOR GPRS FAILURE	FOR PSTN FAILURE
IP LED 201 indicates the IP path is up	GPRS LED 202 indicates the path is up if IP/GPRS. If GPRS/PSTN the GPRS is LED 201	PSTN LED 202 indicates the PSTN path is up
Has the Quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?	Has the Quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?	Has the quick Start Guide been followed? Has the TCD been Associated and Activated by the ARC?
Is the RJ45 physically connected to the TCD and the Router/Switch?	Is the Emizon antenna physically connected to the TCD and positioned correctly?	Is the PSTN wired to T1 and R1 terminals? Unscrew White SLIC cover to check the wiring

Is LED 301 next to the RJ45 Cable flashing? LED 301 only indicates data is passing. LED 201 indicates the IP path is signalling.	Take a signal strength on the TCD by pressing SW402 once, then Observe the GS reading, Minimum is 12, maximum is 31. The GA and GR reading must read 05. E.g. GS 27, GA 05, GR 05	With a Multi-meter check if there is approximately 50V present on PSTN connections between T1 and R1
Has the RJ45 cable been tested for data? e.g. Can you connect to the Internet? Try rebooting the router for two minutes. Try a speed test on a laptop	If a standard Antenna (matchbox sized white) is currently fitted and the signal is below 12, try installing an Emizon High Gain Antenna Internally or externally to improve the signal strength. A 5M Extension is also available from CSL	Press SW401 for 5 seconds to force a poll and wait 5 minutes, observe LED 202. LED 202 should flash then go solid on to indicate the PSTN path is up
Does the TCD require a Static IP Address? The TCD is DHCP enabled by default. To apply a Static IP Address, Subnet mask and Gateway, use Emizon Online Maintenance / Phone app or call CSL	If the GPRS signal is still low, relocate the High Gain Antenna externally to improve signal strength to 12 or above. The minimum recommended signal is 12 and the maximum is 31. The higher the GS reading the better the signal. GS 99 indicates no signal	Can an outside call be made with a Butt phone tester?
Have ports 18000 – 18049 inclusive TCP outbound been opened on the Firewall by the person who is responsible for the network?	LED 101 located on the GPRS Daughter board should indicate a double flash once every 3 seconds	Does an external call require a Dial Prefix e.g. 9 or 0? If so, use Emizon Online Maintenance / Phone app or call CSL to apply a Dial prefix
The IT department may require our Destination IP addressees? If so, ask the IT department to request the Destination IP Addresses via email to: support-emizon@csl-group.com referencing the Serial number of the TCD or the EM number. We will send the Destination IP Addresses via email on request	To identify if both paths are signalling **For IP/GPRS:** LED 201 is IP & LED 202 is GPRS **For GPRS/PSTN:** LED 201 is GPRS & LED 202 is PSTN **For IP/PSTN:** LED 201 is IP & LED 202 is PSTN	Does the Phone line require a PSTN filter? Investigate the line further or get the phone line checked by the phone provider

Step 8 – Further Information

EMIZON RS232 CONVERTER FOR THE TEXECOM RANGE

The Texecom RS232 Converter supplied by CSL should be used for connection between the TCD RS232 terminals and a Texecom TTL COM port. This has a 5 way Molex connector on one end for connecting to the panel and 3 trailing wires on the other for connection to the TCD RS232 terminals.

The Black wire should be connected to the TCD RS232 GND terminal. The Yellow wire connects to the TCD TX terminal and the Blue wire connects to the RX terminal. The Molex connector on the other end of the PC-Com adaptor should be connected to COM1 or COM2 on the alarm panel.

Black – TCD RS232 GND Terminal
Yellow – TCD RS232 TX Terminal
Blue – TCD RS232 RX Terminal
Molex Connector – Panel COM1 or COM 2

TCD INTERNALLY GENERATED ALARMS

Alarms and restores are shown together. Some events do not have an associated restore. Internal Alarms Contact Id
E350 00 315 R350 00 315 – External Panel Connection Failure
E306 00 830 – Configuration changed (whilst activated)
E305 00 831 – System Restarted (UP_WAS_RESET)
E354 00 832 R354 00 832 – Previous Alarm was discarded due to timeout
E302 00 833 R302 00 833 – Low Battery
E307 00 834 – Self Test Fail (probably flash CRC fail)
E351 00 840 R351 00 840 – Primary Path Local Fault
E352 00 841 R352 00 841 – Secondary Path Local Fault
E411 00 835 – UDL session start
E412 00 835 – UDL session end
E306 00 836 – FW Updated
E602 00 837 – Periodic Test Alarm
E354 00 838 – ACKED bad panel data to prevent panel getting stuck in a loop
E354 00 839 – Alarm data was lost e.g. no zero block at end of SIA events

SIA ALARMS

External Panel Connection Failure

[#XXXXXX|Nti00:00:00/YS315|ATCD PANEL FAULT]
[#XXXXXX|Nti00:00:00/YK315|ATCD PANEL RESTORED]
Config change (whilst activated)
[#XXXXXX|Nti00:00:00/YG830|ATCD CONFIG CHANGED]
System Restarted (UP_WAS_RESET)
[#XXXXXX|Nti00:00:00/YW831|ATCD RESTARTED]
Previous Alarm discarded
[#XXXXXX|Nti00:00:00/YS832|ATCD EVENT DELIVERY FAIL]
[#XXXXXX|Nti00:00:00/YK832|ATCD EVENT DELIVERY RESTORED]
Low Battery fault
[#XXXXXX|Nti00:00:00/YT833|ATCD PSU VOLTAGE LOW]
[#XXXXXX|Nti00:00:00/YR833|ATCD VOLTAGE RESTORED]

Self Test Fail (flash CRC fail)
[#XXXXXX|Nti00:00:00/YF834|ATCD SELF TEST FAIL]

Primary Path Local Fault

[#XXXXXX|Nti00:00:00/NT840|ATCD PRI IFACE FAIL]
[#XXXXXX|Nti00:00:00/NR840|ATCD PRI IFACE RESTORE]
Secondary Path Local Fault
[#XXXXXX|Nti00:00:00/NT841|ATCD SEC IFACE FAIL]
[#XXXXXX|Nti00:00:00/NR841|ATCD SEC IFACE RESTORE]
Upload / download session
[#XXXXXX|Nti00:00:00/RB835|ATCD UDL START]
[#XXXXXX|Nti00:00:00/RS835|ATCD UDL END]
Firmware Updated (whilst activated)
[#XXXXXX|Nti00:00:00/YG836|ATCD FIRMWARE UPDATED]
Periodic Test Alarm
[#XXXXXX|Nti00:00:00/RP837|ATCD PERIODIC TEST]
ACK bad panel data to prevent panel getting stuck in a loop
[#XXXXXX|Nti00:00:00/YS838|ATCD BAD PANEL DATA ACKED]
Alarm data was lost e.g. no zero block at end of SIA events
[#XXXXXX|Nti00:00:00/RT839|ATCD DATA LOST]

PATH TESTS CONTACT ID

E601 01 801 – Ethernet Primary
E601 02 801 – Ethernet Secondary
E601 01 802 – GSM Primary
E601 02 802 – GSM Secondary
E601 01 803 – PSTN Primary
E601 02 803 – PSTN Secondary

SIA
[#XXXXXX|Nti00:00:00/pi001/TX801|ATCD IP PRI TEST] – Ethernet Primary
[#XXXXXX|Nti00:00:00/pi002/TX801|ATCD IP SEC TEST]- Ethernet Secondary
[#XXXXXX|Nti00:00:00/pi001/TX802|ATCD GPRS PRI TEST]- GSM Primary
[#XXXXXX|Nti00:00:00/pi002/TX802|ATCD GPRS SEC TEST]- GSM Secondary
[#XXXXXX|Nti00:00:00/pi001/TX803|ATCD PSTN PRI TEST]- PSTN Primary
[#XXXXXX|Nti00:00:00/pi002/TX803|ATCD PSTN SEC TEST – PSTN Secondary

EN-COMPLIANT INSTALLATIONS

To achieve EN-Compliant installation, additional and/or specific requirements may be applicable.

1 – The Emizon TCD should be placed in EN-compliant /installation/housing, related to the grade/security levels.

2 – In order to use the Emizon service and obtain support services, an authorized person with level 2 access as defined in EN50136-1:2012 should grant Emizon access at level 4.

3 – The compliance with EN50136-1:2012 defines the Emizon service as a dual path system and customers should note that a single path system, where the alternate path is either not configured or not working at the point of installation may not comply with the desired standards.

4 – EN50136-1:2012 requires that a failure of the ATS communications path is signaled to the alarm system. The Emizon TCD is designed to signal a communications path fault to the alarm system using relay output 2 on the TCD, when the relay configuration is set to the default normal mode. In order to maintain compliance, installers should ensure that the appropriately configured relay output 2 is connected to an input on the alarm system for notification of an ATS path fault.

5 – EN50136-1:2012 defines a new requirement for signaling to the alarm system from the communicating device (Emizon TCD) where the Emizon TCD must indicate to the alarm system if an alarm is not delivered within the performance requirements maximum delivery time in the standard. The Emizon TCD can be configured to use relay output 3 to indicate this condition. In order to maintain compliance, installers should ensure that the appropriately configured relay output 3 is connected to an input on the alarm system for notification of a failure to deliver performance event.

6 – Availability as defined in EN50136-1:2012 is calculated on per path, per ATS and by ATSN as required. However, it is now possible for the Emizon TCD (or any SPT) to define what caused each failure. For accurate calculations it is advisable to record all causes of downtime such that calculations of relevant ATS downtime can be made more accurately.

7 – When the TCD is NOT placed in the AS System housing and therefore the parallel interface interconnect cable is not protected by this system housing special configuration is needed to achieve tamper detection. In such case installer needs to connect two wires within the interconnect cable, each to a parallel input. One input should be configured as Pos-applied
and the other Pos-removed. Corresponding input alarms should be defined at the ARC as Interconnect Tamper between Alarm system and TCD.

8 – Installer has to verify and arrange the ATS in such manner that in situations transmission links are shared with other alarm and/or non-alarm applications this will not prevent the ATS to meet its performance, operation and maintenance requirements of the European Standards applicable.

9 – The installer should record in the site log where alternative facilities are provided such that accurate availability can be determined, as it is impossibility for an ATS to detect this situation, and the ATS will therefore treat record and define any outage of the ATS as unavailable. The installer needs to verify the performance of the ATS according table 2 and 3 of the EN50136-1:2012 at commissioning of the ATS and following any changes (ATE and/or transmission network)

10 – Logical access at level 4 is defined in EN50136-2:2013.

Connecting – Fire Panel

For an EN54-21 Type 1 compliant fire installation Fire Type1 EN54-21 (IP/GPRS) product should be chosen.

ALARM PRIORITY

The hard-wired pin inputs of the TCD should be used for signalling. To comply with EN54-21 clause 7.4.1 TCD pin 1 should be used for a fire alarm and pin 2 should be used as fire fault. This will ensure that a fire alarm will be transmitted before any other event. It is recommended to configure the pins as positive removed. The pins should therefore be wired to the alarm panel output relay such that a voltage is applied continuously to the TCD input when the alarm panel is in its normal, non-alarm state. Wire a DC supply to the panel relay common and wire the panel N/C terminal to the TCD input pin. Logic low (alarm condition) is – 0.5v DC to +0.8v DC. Logic high (no alarm condition) ranges from 3.6v DC to 30v DC. The TCD should be configured as either Original or Hybrid internal alarm format to ensure that the pin input events are transmitted as Fast Format.

Ensure that the ARC is informed that the pin labelled as 1 is used as fire alarm and that the pin labelled 2 indicates a fire fault. Other pin inputs may be used for other non EN54-21 purposes by arrangement with the ARC.

The output relay terminals are labelled NO C NC and are numbered left to right 1, 2 and 3. Relay 1 is the control relay and can be used for non-EN54-21 purposes. Relay 2 is the fault relay. When there is no fault, the relay is held in the activated NO position. A fault condition will cause the relay to deactivate into the NC position. A fault is triggered on this relay when: there is a communication network fault, there is a line fault, there is a hardware or software failure, there is a power failure or the ARC acknowledgment was not received within 100 s (Type 1). Relay 2 should be wired to the alarm panel fault input or to a separate light emitting indicator as required by EN54-21 5.3.b. Relay 3 is the RPS relay and should be used to indicate the successful receipt of an ARC acknowledgement either at the fire alarm panel or by a separate light emitting indicator, as required by EN54-21 5.3.a.

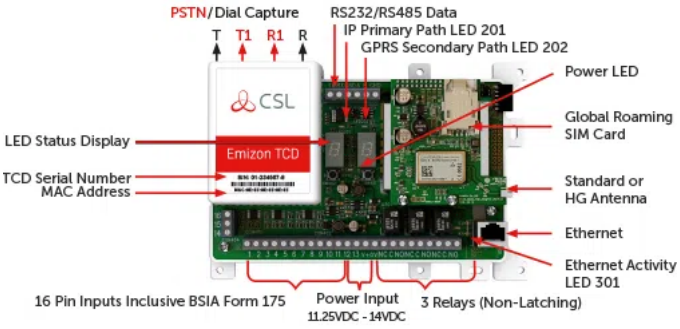
MOUNTING AN EN54-4 COMPLIANT POWER SUPPLY

To comply with EN54-21, the TCD must be mounted within the fire alarm panel enclosure or within an EN54-4 compliant power supply housing. This housing must be of a robust, metal construction to a minimum of IP30 of EN 60529:1991. The TCD should be fixed securely within the enclosure using the two 90mm x 15mm tapes provided. These should be affixed to the TCD's rear plastic base and the enclosure as per picture below.

The power supply should be capable of supplying 150mA (typical) and 350mA (peak) at 12V DC. To comply with EN54-21, a power supply shall conform at the minimum to the same availability level as the power supply for the fire alarm panel in accordance with EN54-4. Please affix the enclosed EN54-21 label supplied with the TCD to the outside of the TCD enclosure.

Technical Specs

Technical Specifications



TO TAKE A GPRS SIGNAL STRENGTH – TAP LEFT HAND BUTTON ONCE

TO SEND A TEST SIGNAL – PRESS RIGHT HAND BUTTON FOR 5 SECONDS

TO APPLY A FIRMWARE UPDATE – PRESS BOTH BUTTONS FOR 10 SECONDS

Dimensions	123 mm (h), 180 mm (w), 29 mm (d)
Weight	250 grams
Pins	16 Pin alarm inputs
Power Supply Requirements	11.25v DC to 14v DC Logic low -0.5V to +0.8V Logic high 3.6V to +30V Note -The EN54 version of TCD will accept 24V. Please check the TCD
Relays	3 Relays Non-Latching – Contact rating is: 1A@30V DC resistive 10 °C to +50 °C
Lower Battery Threshold	Low battery threshold 10.8V +/- 0.2v DC

WARRANTY

CSL will refurbish or replace, at our discretion, any Stand-Alone TCD developing a fault within 5 Years. All returns must be accompanied with a CSL Returns Number, this can be obtained by calling the CSL Technical Support as detailed in the procedure below.

OPEN SOURCE LICENSING

Details of open source software used within the CSL Group service, and the license conditions associated are available within the document entitled “Emizon Open Source Licensing” available from the CSL website.

The document details open source licensed code used within the Emizon TCD 1.X hardware environment. Details of licensed source code which is modified or linked to by Emizon applications are included. Details of licensed code which is not modified or linked to, and used only as part of Linux command line operations are not detailed here, code, configuration and license details can be found in the Emizon Open Source Package.

OPEN SOURCE SOFTWARE ACCESS

A copy of the Emizon open source software package, which contains all the information, source code, build environment setups and configuration data to build the current Emizon open source platform environment are available. To obtain access, please send a large stamped self addressed envelope to the CSL main office address, including details of the Emizon TCD device (serial number and purchase details). CSL will then return a copy of the Emizon Open Source Package relevant to the device in which it was distributed.

The works on 10/100 Ethernet switches and router

COMPLIANCE

Emizon TCD is suitable for installation in systems complying with EN 50131- 1 and is available to comply with EN Grades 2, 3 and 4. Emizon TCD is tested and certified for EN50136-1:2012, EN50136-2:2013, 50130-4/2011 and 50130-5/2011. As a transmission system it is certified to EN50136-1:2012 for ATS Categories SP1, SP2, SP3, SP4, SP5, over Ethernet only, and DP1, DP2, DP3, DP4, EN54-21:2006 Type 1 where EN-installation instructions in this manual apply. It only meets the EN 50131-10:2014 requirements when it is installed in an EN 50131-3:2009 or EN 50131-6:2008 compliant housing.

ENVIRONMENTAL COMPLIANCE

EN50130-5 Environmental Class II (-10 to +55)
EN50136-2:2013 -Signalling operation: Pass-thru
EN50136-2:2013 Acknowledgment operation: By RCT (end-to-end)
EMC 55032 Class B

Restrictions/instruction for EN-installation:
Placement in EN-certified housing to be provided separately.

MAX CABLE LENGTH

- **PSTN** – Max 30mtrs, Serial BUS no restrictions, specifications panel manufacturer apply,
- **Parallel inputs** – Max 3 mtr.

Network Interface Monitoring operation EN50136-2:2013: Encrypted polls to the service-platform with timed acknowledgements and timed intervals so SPT, Platform and RCT monitors operation.

Information Security – All connections between SPT, Service-platform and RCT are at least AES128 encrypted.

Substitution Security – The TCD is supplied without a key and that key is generated during commissioning of the installation. The key will be a minimum of a 128 bit AES key. Once the key has been produced there is no other method of gaining direct access to the TCD without using the existing authorised connection. As the TCD initiates the access there is no way that an unauthorised party can attempt to gain access directly to the TCD.

Panel Guides

Emizon TCD Panel Guides

Please visit this website (https://online.emizon.com/supported_panels.php) to access information regarding Emizon TCD Panel Guides.

FAQs

How do I sign up for the Emizon Online Maintenance Account?

Important Information:

- Please note that all applications for this service are manually vetted, and we may need to contact you for further information.
- Only one application is allowed per company.
- Signups can only be completed after your company has at least one Emizon Signalling connection.
- Please email: support-emizon@csl-group.com, providing all the information outlined below:

Company Details

- Company Name:
- Company Address:
- City:
- County/state/region:
- Postcode/zip code:
- Country:

Contact Details

- Contact Name:
- Contact Telephone:
- Email Address:

Validation Information

- Emizon Installation Number:
- Primary Alarm Receiving Centre (ARC):

What signalling variants are available for Emizon TCD?

IP/GPRS, GPRS/PSTN, IP Only & GPRS Only. The TCD can also be configured to IP/PSTN, however, this is a Bi-Path signalling device.

What signalling variant of Emizon TCD is suitable for EN54-21 compliant devices?

For EN54-21 compliant Fire installation, an IP/GPRS product should be chosen

How do I enable Control Output, Line Fault and Return Path Signalling?

These can be enabled via Emizon TCD's 3 changeover Non-latching Relays rated at 30 V DC @1A.

What connections are available on the Emizon TCD?

Available connections for the control panel are via the 16 Pin outputs, Serial connections RS232, RS485 or Dial Capture

What grades is Emizon TCD available at?

Grades 2, 3, 4 (DP1 – DP3)

How can I commission the Emizon device?

We have a short commissioning YouTube video here: Click here (https://www.youtube.com/c/CSLGroup/videos)

What ports need opening on my client's IP network?

A residential IP connection does not require any opening of ports. However, for commercial premises Ports 18,000 to 18,049 TCP Outbound may need opening. We can also set a static IP address on the TCD if required.

What types of signalling formats can the Emizon TCD send to the ARC (Alarm Receiving Centres)?

The TCD can be configured to send Fast Format Pins, Contact ID, and SIA messaging.

Fast Format Pins are all enabled by default. A combination of SIA messaging and Pins is possible.

Is my Alarm Panel compatible with the Emizon TCD?

A list of supported Panels that have been tested with the TCD can be found at the link below. The link also includes Panel Connection Guides with wiring and programming information – Click here (https://www.csl-group.com/panel-guides/)

Does the Emizon TCD require any maintenance?

Yes, get the absolute best out of your TCD by applying a Firmware Update on every maintenance site visit.

Firstly, place your site on test with the ARC. Apply the Firmware Update by pressing both buttons (SW 401 & SW 402) on the TCD for 10 seconds or until UF (Updating Firmware) is displayed. The Firmware Update status will display UF (Updating Firmware) followed by a reboot.

Can the Emizon TCD be configured remotely?

Yes, a remote configuration can be applied via CSL's Emizon Online Maintenance software. To apply for an Account please visit the link below. Once the Webform has been submitted, our team will process your application promptly and send you further instructions.

How do I troubleshoot the Emizon TCD?

Refer to the Quick Start Guide (https://www.csl-group.com/support/emizon-tcd/)

Can I configure the Emizon TCD remotely?

If you are based remotely, our Emizon Online Maintenance software allows remote diagnostics. The software allows you to see Signal strengths, Path failures, Alarm Logs, apply remote Firmware Updates, Set Static IP addresses, configure Pins/Panel settings and much more. All this, right at your fingertips!

Can the signalling paths be changed from GPRS/PSTN to IP/GPRS?

Yes, this is known as a Grade Change request. Contact your ARC to authorise the Grade change. The ARC will email CSL detailing your Grade change requirements. We will process the Grade Change and confirm the changes with the ARC. If the ARC copies you into the email request, we will copy you into our reply.

How do I take a signal strength reading?

Press the left-hand button (SW402) once, then observe the GS reading on the display. GS 12 is the minimum recommended signal strength and GS 31 is the maximum signal strength.

Please refer to mobile operator coverage checkers.

How can I improve the signal strength reading?

If the signal strength reading is below 12 or at 99, consider relocating your existing Antenna away from any source of interference such as metal, electrical conduit or any power distribution sources.

You may find that your site visit is at a remote location, or the site is in a poor signal area. If this is the case, you can purchase a 5m High Gain Antenna from the CSL installer shop.

Having a spare High Gain Antenna on hand can often help and remove the need for a return site visit. A 5m Extension cable (https://installershop.csldual.com/5M_Extension_Cable_with_MMCX_Connector_White-p.aspx) can also be ordered. This combined with the 5m High Gain Aerial (https://installershop.csldual.com/High_Gain_Aerial_with_SMA_Connector_MMCX_Converter_5M-p.aspx) provides a total cable length of 10m.

Can Emizon TCD use 4G instead of 2G?

As standard, the device arrives as 2G. To change it to use 4G please contact your sales representative for more details or use our online contact us form.

Useful Links & Downloads

Diagnostic Tips for Engineers

1. Check LED 201 is on, this indicates a valid IP path. LED 201 is located above the left-hand segment display.
2. Check LED 202 is on, this indicates a valid GPRS Path. LED 202 is located above the right-hand segment display. LED 301 which is situated to the right of the RJ45 socket indicates there is a physical connection from the Network.
3. LED 101 indicates voltage has been applied to the TCD. LED 101 is located just below the segment displays and is always on when the voltage has been applied to the TCD.
4. If LED 201 (IP) is on, apply a Firmware update by pressing both buttons SW401 & SW402 for 10 Seconds. UF will be displayed. The TCD will reboot, and both paths should be up within a few minutes (if both paths are available)
   Firmware updates must be applied to the TCD on every maintenance visit. A failed Firmware update is indicated by FE 52. Check the RJ45 Cable, reboot the router or any Network faults. Check if ports 18,000 – 18,049 TCP outbound are open with the Network manager on site. An IT survey form is also available from our website. Does the IT Department require our destination IP addresses? If so, ask the IT Manager to request this information from us at helpdesk@emizon.com as detailed in the Emizon IT Survey form.
5. Check the signal strength by tapping the left-hand button SW402 once. GS indicates the signal strength which should read between 12 Min – 31 Max. GA 05 / GR 05 indicates GSM SIM Registration. GA and GR reading must read 05 for a valid GPRS Path. When the left-hand button SW402 is tapped, this enters a diagnostic mode which will time out automatically after 2 Mins. Within the 2 minute time frame, the Modem is not operational. It is therefore advised to take a GPRS reading prior to calling the Emizon Helpdesk as we cannot undertake full diagnostics without an available path.
6. When fitting a High Gain Antenna, always disconnect the power from the TCD. When the High gain has been fitted, power up the TCD and wait for T1. Check the signal strength by tapping the left-hand button once, and read the diagnostics GS, GA and GR. If the Signal strength is below 12, the signal may be improved by relocating the HG Antenna. It is advised to fit the HG Antenna away from any conduit, Electrical cable or Power distribution board. Where the site has a metal clad roof it is advisable to fit the HG antenna externally and high as possible, utilising the 5M of cable.
7. LED 101 on the GPRS board will flash once every 3 seconds, LED 101 is located on the GPRS Daughter board, next to the SIM.
8. Pressing the right-hand button SW401 for 5 seconds sends a test signal on both paths (if both paths are in contact)
9. Panel Connection Guides can be found at http://online.emizon.com/supported_panels.php

Fault Codes & GPRS Diagnostic

Error and fault conditions are shown on the segment displays.
The display may show a number code to indicate the nature of the problem. The most common codes together with the potential reasons and solutions are shown on the
table below.

Code Possible Reason and Solution

E 0 – Error Code 0: IP Path not connected. Check Ethernet cable from TCD to Router/ Network connection electrically OK.
E 1 – Error Code 1: TCD has No IP address
E 2 – GPRS Registration State not 1 or 5. If this persists, it indicates poor GPRS coverage or an antenna location problem.
E 3 – GPRS Connection not available. If this persists it indicates the TCD is unable to connect to the GPRS IP Network.
E 6 – No ARP Response. Cannot detect local gateway/router. Indicates no response from router. The TCD may be plugged into wrong network, router not online or has
a different IP address.
E 7 – Cannot detect Emizon Service Platform. The internet connection is down or firewall is blocking internet access on the desired port range
(Outbound Ports TCP 18000 – 18049 Inclusive)

Code Firmware Update Codes

U A – UA Firmware Update Available. Apply a Firmware update by pressing both buttons for 10 Seconds or until U F is displayed.
U F – UF Followed by a value of between 00 and 99 or displays hexadecimal characters indicates that the firmware update is in progress.
F E – FE followed by a value indicates an error in firmware update process. Repeat process, if the result is the same check network connection.
R R – rr TCD is in the process of rebooting, this will be followed by B U, B C, t1, O 1
U C – Firmware Update Complete. followed by t1, 01 indicates the firmware update is complete and awaiting signalling both paths.

For codes for GPRS signal strength tap the left-hand button once (SW402)

G S – Signal strength 12 is the minimum, and 31 is the Maximum. The recommended minimum signal is 12. A signal strength of 99 indicates no signal.
G A – GPRS Registration state which must read 0 5
G R – GSM Registration state must read 0 5
G D – Grade type L3, L4
A G – Age of GPRS reading (values shown in seconds)
O P – Operating mode IG, G P, IP, G-, I-

Admin Console

Visit this website (https://online.emizon.com/download.php?f=EmizonAdminConsole_Installer.msi) to access the software download for Admin Console.

For more information about Admin Console, please contact (https://www.csl-group.com/contact-us/) our team.

Virtual Modem

Visit this website (https://online.emizon.com/download.php?f=EmizonVirtualModem_Installer.msi) to access the software download for the Virtual Modem.

UDL Client

Visit this website (https://online.emizon.com/download.php?f=EmizonUDLClient_Installer.msi) to access the software download for the UDL Client.

Online Maintenance

Visit this website (https://online.emizon.com/download.php?f=EmizonOnlineMaintenance_Installer.msi) to access the software download for Online Maintenance.

Emizon IT Survey Form

Introduction:

Please complete the following information to enable an IP connection to the TCD.

Section 1 is to be completed by the Alarm installer.

Section 2 will need completion by a network administrator, or an IT department / third party that manages their communications.

Section 1 (To be completed by the Alarm installer)

Site Address:
Alarm Installer:

TCD Serial Number:

Physical Connection to Local Network.

Emizon requires an RJ45 male terminated Ethernet Connection adjacent to the alarm panel, ideally with 0.5m excess cable for termination into the alarm panel, with direct connectivity through to the internet. The final connection within the security panel will be made by the installer.

Once section 2 has been completed by a Network administrator, send this form via email to support@csl-group.com or call the Helpdesk on 01895 474444 (Option 5 for Emizon) with the site on test with your ARC. We will then enter the Static IP address details via the GPRS path if the path is available with a GPRS signal of 12 or above. Alternatively, a Static IP address can be added to the TCD via Emizon Online Maintenance, Emizon Phone App or with a laptop via an RJ45 cable connected to the TCD (Refer to TCD Installation Guide)

Note: **The MAC address is printed on the white plastic lid of the TCD**. The network administrator will need the MAC address to reserve an IP address for the TCD.

The MAC address will be similar to: 98:7E:48:00:01:35

Section 2: Network connection. (To be completed by the network administrator)

The Primary signalling path on the TCD (Telemetry Communications Device) requires a direct connection to the customer's network to the Emizon IP service across the internet, the TCD will therefore require an IP address – as do all network devices.

By default, the TCD assigns IP addresses by DHCP (Dynamic Host Configuration Protocol).

Check box if DHCP
Or, If the TCD requires a Static IP address, please enter the Static IP details below:

IP Address:
Subnet Mask:
Gateway:
Once section 2 has been completed, please return this form to the alarm installer.
Note to Network Administrator Telemetry Communications Device (TCD) installed within the alarm control panel uses an **OUTBOUND TCP/IP connection only.**

The TCP/IP destination port range of **18,000 to 18,049 inclusive** (Total of 50 Ports) will need to be opened for the Emizon TCD to operate correctly on IP. **If the Network administrator restricts the outbound connection they may need to contact us for our Destination IP addresses, this information is available by sending your request to helpdesk@emizon.com along with the Serial Number of the TCD.**

The TCD does not accept inbound connections and does not require any inbound ports to be opened on the firewall or router. GPRS connectivity exists between the GPRS, IP and landline IP networks in the TCD and **No IP bridging is permitted** between the networks within the TCD. The TCD contains an internal firewall to isolate the TCD from any unauthorised connections or IP traffic.

Emizon Site Diagnostics

Introduction

Emizon Site Diagnostics Mobile apps are designed for Android devices. They allow authorised users from registered installation companies to access their TCDs connected to Emizon using an encrypted secure connection.

The apps are designed to help installers provide more efficient customer service, whilst on the move, or simply to provide a method of putting the information needed at the tip of your fingers.

KEY FEATURES

1 – Add Installation

2- Device Overview

3 – GPRS / IP / Extended Diagnostic

4 – GPRS History

5 – Firmware Update

6 – Send test alarm

7 – View alarm logs

8 – Control relays

CONFIGURE

IP / Panel Type / Pin Setup / Relay Mode / Proxy Settings / PSTN Dial Prefix / Internal message alarm format / UDL Panel ID / UDL Message Enable / UDL IP Address / Ethernet Speed

Pre Requisites

SYSTEM REQUIREMENTS

The Android app is designed to run on phones or tablets running Android 3.0 Honeycomb or higher.

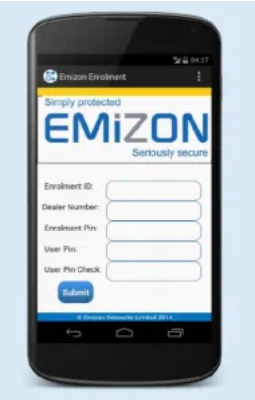
ENROLLMENT

Before using this application, you must first enrol your device. If you have already done this before using another Emizon application you will not have to repeat it.

To enrol your device, select the 3 dots button (Android) in the top right of your screen, then select Enrolment.

You will need to contact your installation manager for the details to put in here. “User Pin” is set by you, and is what you will use to login to the Apps.

To remove enrolment from your device, go back to the enrolment page and select the “Remove Enrolment” button.



Site List

The site list is shown immediately after successfully logging in to the application. It lists up to 10 sites on phones and 20 on tablets along with the EM – installation number, and current status.

Installation lists can be navigated using the Previous and Next buttons, as well as using the search function, by Installation number, Serial Number, or Description.

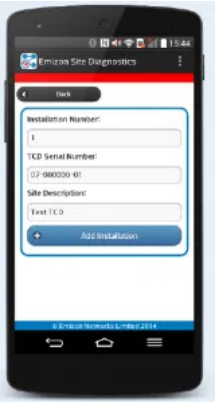
Green	All Clear
Amber	Single Path Fault
Red	Dual Path Fault
Grey	Not Activated



Add Installation

To add an installation, select “Add Installation” from the site list.

You will need to know the installation number and TCD Serial number before proceeding. Site Description is optional, if empty this will default to the installation number.



Overview

The overview function displays information such as the TCD Serial number, description, grade, and the state of the two paths. “Description, Reference, and Location” can all be edited using the Emizon online maintenance windows software.

POLL STATUS

Each path of the TCD will be in one of the following states

Not Activated	Installation or path not activated
In Contact	Polling is OK
Out Of Contact	Polling has failed and the path is in line fault

IP Diagnostic

To view an IP diagnostic, select IP from the diagnostic panel.

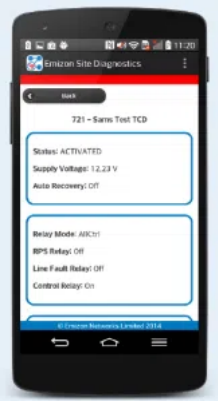
Type	This can be DHCP or Static
IP Address	IP address assigned to TCD, either dynamically or statically
MAC Address	The hardware address of the TCD – also written on the TCD itself.
Subnet mask	The Subnet Mask
Gateway Address	Usually the internet router’s IP address

Link Status	Extra information about the connection, such as whether the TCD can see the router(Router[]) and whether the TCD can see the Emizon servers (Upstream[]) (If upstream is down, check TCP outbound ports 18000 – 18049 are open on the network)



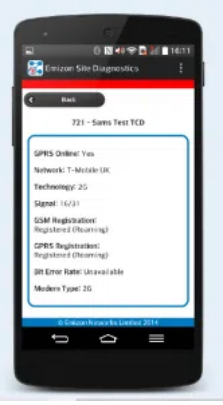
Extended Diagnostic

Status	TCD activation state
Supply Voltage	Voltage supplied to the TCD
Auto Recovery	Used on old TCDs without LPS to reactivate after power failure
Relay Mode	This can be changed in the configuration
RPS Relay	Right Relay
Line Fault Relay	Middle Relay
Control Relay	Left Relay
PSTN Dial Prefix	Number required to access an outside line
PSTN Line Voltage	The voltage supplied across T1 and R1 terminals on the TCD



GPRS Diagnostic

GPRS Online	If the TCD is polling successfully
Network	Network provider TCD is connected to
Technology	2G or 3G network
Signal	This should be 12 or above
GSM Registration	Registration on a GSM network (Roaming) indicates SIM can use multiple networks
GPRS Registration	Registration on the GPRS network (Roaming) indicates SIM can use multiple networks
Bit Error Rate	Only older TCDs can report this
Modem Type	States whether it has a 2G or 3G modem



GPRS HISTORY

GPRS History shows the date, signal strength, registration state, and network provider for the last 50 GPRS diagnostics taken.



Firmware Update

To remotely firmware update a TCD, it must be on test, have LPS and be on “u – 1.5.4” or higher.

If this is not the case, the TCD must first be deactivated, this can be done through your ARC, calling the Emizon helpdesk, or by using Emizon Online maintenance.

Once the request to update is sent, allow around 5 minutes, then revisit the firmware page to ensure it has been done successfully.

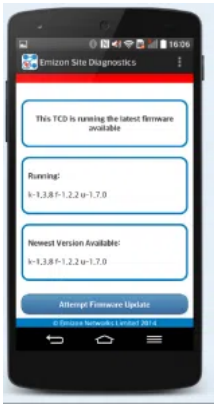
Test Alarm

Before sending a test alarm, ensure the system is on test and the TCD is activated.

This feature is useful to ensure both paths are signalling correctly.

Once the test alarm has been requested you will need to check in alarm logs to ensure it has been sent successfully. Depending on the setup of internal alarms, you will need to check for one of the following for both the primary and secondary panels.

Fast Format (Primary Path)	5555 5555 5555 5155 9
Fast Format (Secondary Path)	5555 5555 5555 5515 9
Contact ID (Primary Path)	E601 01 801
Contact ID (Secondary Path)	E601 02 802
SIA (Primary Path)	[#000000|Nti10:01:06/pi001/TX801|ATCD IP PRI TEST]
SIA (Secondary Path)	[#000000|Nti10:01:08/pi002/TX802|ATCD GPRS SEC TEST]



ALARM LOGS

By default, alarm logs will show all alarms from the current day.

You can search by date, and optionally by a search term.

Alarms will be in Fast Format, Contact ID, or SIA depending on your setup.

TCD PIN ALARMS

Each number represents a pin, in order, the final digit is the current status:

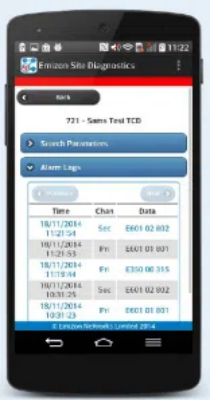
Fast Format	5554	**5**555	5555	5555	**7**
		PIN 5			**STATUS**

PIN VALUES

1	New Alarm
2	Unset
3	Restore
4	Set
5	Normal (no change)
6	Outstanding

STATUS VALUES

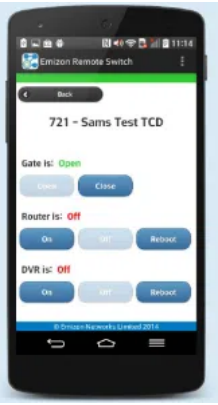
7	Normal
8	Low Voltage
9	Test



Relay Control

This function only gives access to the relays that are set as “control” This is can be set using the relay configuration function.

Labels for each relay, along with the buttons can be set using Emizon online maintenance windows software.



Configuration

IP CONFIG

IP Setting	If DHCP you do not need to enter any more IP settings
IP Address	IP address to be statically assigned to the TCD – Required for Static IP
Subnet mask	The Subnet Mask – Required for Static IP
Gateway	Usually Internet router IP address – Required for Static IP
DNS1 & DNS2	Optional settings

PANEL TYPE

If connecting your TCD using external interfaces set to the correct one for the panel you have connected the TCD to. We are constantly supporting new panels, contact Emizon for an up to date list of panel types.

PIN SETUP

Pos Applied	Voltage applied to pin will trigger new alarm
Pos Removed	Voltage removed from pin will trigger new alarm
Set/unset Pos Applied	Voltage applied to pin will toggle between set / unset
Set/Unset Pos Removed	Voltage removed from pin will toggle between set / unset
Disabled	Pin will never send any alarms
BSIA Form 175 Pos Applied	Pin 16 only, this disables pins 14 and 15. Triggered when voltage applied to pin
BSIA Form 175 Pos Removed	Pin 16 only, this disables pins 14 and 15. Triggered when voltage removed from pin

RELAY MODE

SETTING	LEFT RELAY	MIDDLE RELAY	RIGHT RELAY
Normal / Default	Control	Line Fail	Return Path Signalling
Dual Line Fail	Control	Dual Path Line Fail	Single Path Line Fail

Split Line Fail	Control	Primary Path Line Fail	Secondary Path Line Fail
Dual Control	Control	Line Fail	Control
Triple Control	Control	Control	Control
RPS performance Fail	Control	Line Fail	RPS Performance Fail

PROXY SETTINGS

By default, the TCD requires a direct connection to the internet (or NAT'ed via a router). However it does support connection via a SOCKs proxy server. It will support SOCKS 4/5 with or without plain text authentication.

PSTN DIAL PREFIX

Some phone lines require a number to be dialled before the phone number to access an "Outside Line". The TCD accepts a maximum of 8 characters, including only digits, and commas to indicate a pause.

INTERNAL MESSAGE / ALARM FORMAT

By default, the TCD sends input pin alarms in fast format, and internal alarm messages as contact ID, you can change this using this function.

	PIN ALARMS	TEST SIGNAL	OTHER INTERNAL ALARMS
Original	Fast Format	Fast Format	Contact ID
Hybrid	Fast Format	Contact ID	Contact ID
Contact ID	Contact ID	Contact ID	Contact ID
SIA	SIA	SIA	SIA

UDL PANEL ID

When connected to certain panels, the TCD is required to have an ID that identifies itself to the panel. The ID must be an unsigned number.

UDL MESSAGE ENABLED

When a remote servicing request (UDL) is made, the TCD is able to generate an alarm to send to the alarm receiving centre to notify them of this event. This can be turned on or off. Default setting is off.

UDL IP ADDRESS

When doing a call back UDL session to the installers PC, there are some panels that cannot indicate to the TCD what the IP address should be. This setting allows the TCD to use this IP address to connect back to the installers PC and start a UDL session.

ETHERNET SPEED

The TCDs Ethernet interface can support speeds of up to 100MHz Full Duplex. Normally this setting is not needed as by default the interface is set to auto-negotiate with the switch to determine its correct speed.

PROXY SETTINGS

By default, the TCD requires a direct connection to the internet (or NAT'ed via a router). However it does support connection via a SOCKs proxy server. It will support SOCKS 4/5 with or without plain text authentication.

IF YOUR TCD IS ON OLD FIRMWARE YOU MAY NOT BE ABLE TO VIEW OR SET SOME OF THESE CONFIGURATIONS, A WARNING MESSAGE WILL NOTIFY YOU OF THIS.

CONTACT ID

This format is split into 4 sections

Type	Code	Group	Area
E	140	00	902

Example pin 1 alarm – **E140 00 901**

Example pin 2 alarm below – **E140 00 902**

SIA

A format that contains information such as time and date and a textual description of the alarm Pin 1 alarm example:

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

TCD GENERATED ALARMS

Ext. Panel Conn. Failure	E350 00 315	
Ext. Panel Conn. Restored	R350 00 315	
TCD Configuration Changed	E306 00 830	Doesn't Reset

TCD Restarted	E305 00 831	Doesn't Reset
Failure to Communicate	E354 00 832	Doesn't 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	

Settings

The settings menu can be accessed usually, from the top right corner of the app, (3 dots on Android – sometimes bottom right 3 lines)

From here you can set how often / quickly you want to be automatically logged out after closing the app.

Auto Logout	Will log you out every time the app is closed
Max Logout	Maximum allowed is 5 Minutes
Timed Logout	In seconds from 0 – 300

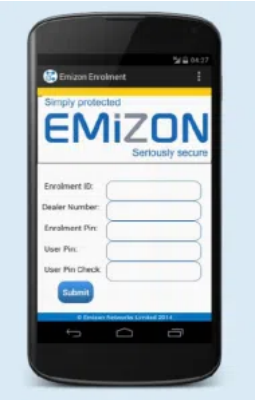
Mobile Enrollment

Enrolment Process

USER

Step 1 – On any Emizon App; Select the top right action button (3 dots on Android) and select enrolment

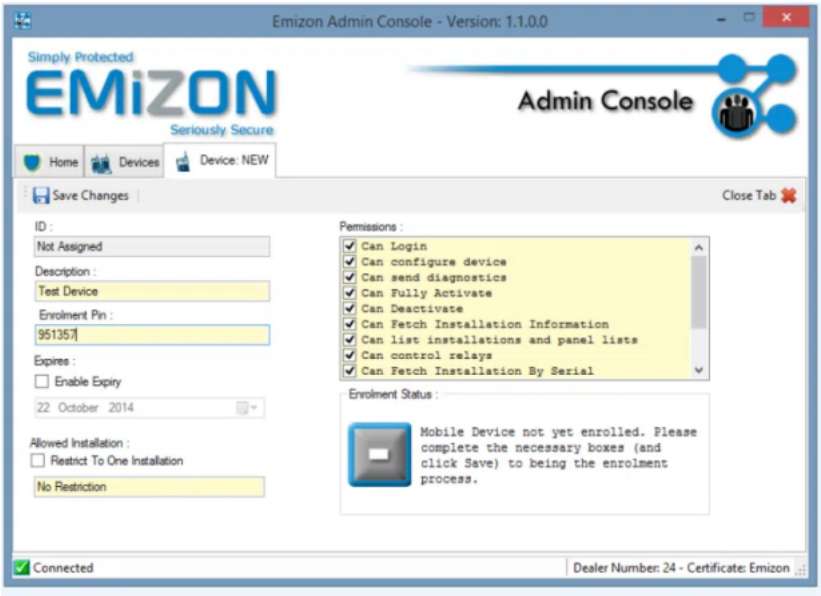
Step 2 – Contact your installation manager, they will give you the enrolment details, enter these, and create your user pin.



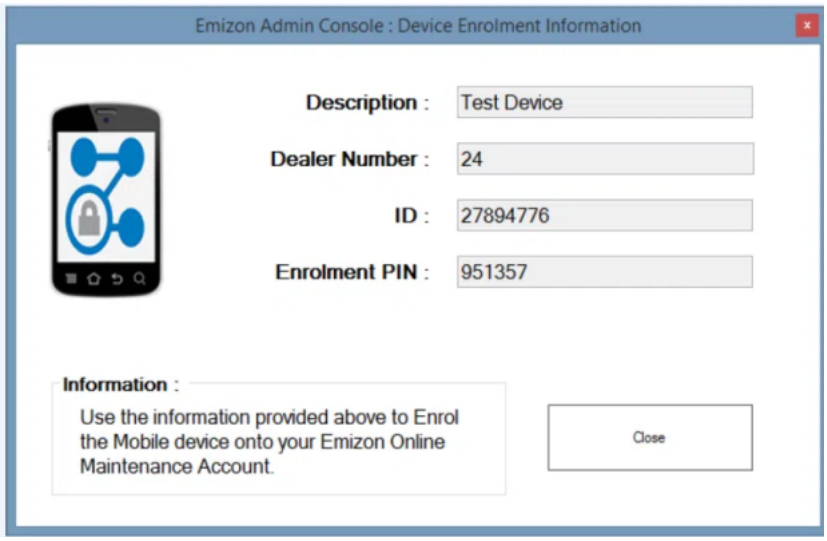
INSTALLATION MANAGER

Step 1 – Download Emizon Admin Console from **http://online.emizon.com/downloads/** Check the correct certificate is being used and click "Manage Devices"

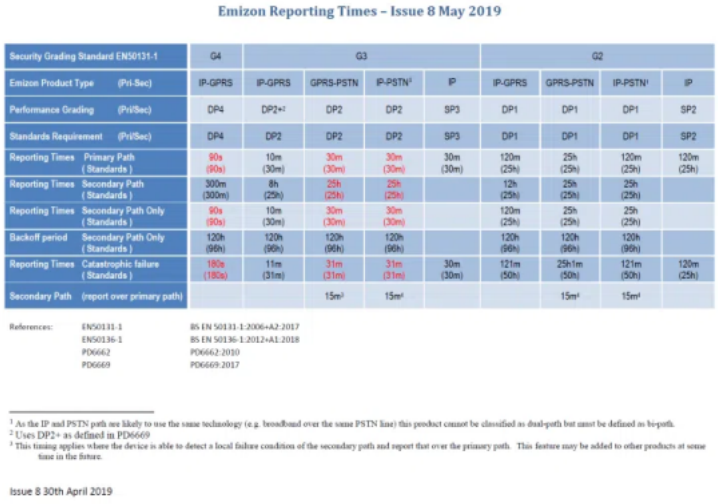
Step 2 – Select "Add Mobile Device", fill in the required fields and select permissions.



Step 3 – Save changes, and give your user the "Dealer Number", "ID", and "Enrolment PIN".



Reporting Times



Emizon Reporting Times – Issue 8 May 2019

Security Grading Standard EN50131-1	G4	G3				G2			
Emizon Product Type (Pri-Sec)	IP-GPRS	IP-GPRS	GPRS-PSTN	IP-PSTN[2]	IP	IP-GPRS	GPRS-PSTN	IP-PSTN[1]	IP
Performance Grading (Pri/Sec)	DP4	DP2+[2]	DP2	DP2	SP3	DP1	DP1	DP1	SP2
Standards Requirement (Pri/Sec)	DP4	DP2	DP2	DP2	SP3	DP1	DP1	DP1	SP2
Reporting Times Primary Path (Standards)	90s (90s)	10m (30m)	30m (30m)	30m (30m)	30m (30m)	120m (25h)	25h (25h)	120m (25h)	120m (25h)
Reporting Times Secondary Path (Standards)	300m (300m)	8h (25h)	25h (25h)	25h (25h)		12h (25h)	25h (25h)	25h (25h)	
Reporting Times Secondary Path Only (Standards)	90s (90s)	10m (30m)	30m (30m)	30m (30m)		120m (25h)	25h (25h)	25h (25h)	
Backoff period Secondary Path Only (Standards)	120h (96h)	120h (96h)	120h (96h)	120h (96h)		120h (96h)	120h (96h)	120h (96h)	
Reporting Times Catastrophic failure (Standards)	180s (180s)	11m (31m)	31m (31m)	31m (31m)	30m (30m)	121m (50h)	25h1m (50h)	121m (50h)	120m (25h)
Secondary Path (report over primary path)			15m[3]	15m[3]			15m[3]	15m[3]	

References: EN50131-1 BS EN 50131-1:2006+A2:2017
EN50136-1 BS EN 50136-1:2012+A1:2018
PD6662 PD6662:2010
PD6669 PD6669:2017

[1] As the IP and PSTN path are likely to use the same technology (e.g. broadband over the same PSTN line) this product cannot be classified as dual-path but must be defined as bi-path.
[2] Uses DP2+ as defined in PD6669
[3] This timing applies where the device is able to detect a local failure condition of the secondary path and report that over the primary path. This feature may be added to other products at some time in the future.

Issue 8 30th April 2019

Remote Mobile Switch

Introduction

Emizon Remote Switch mobiles Apps, are designed for Android devices. They allow authorised users to access their TCD's control relays, and manually change their state through a secure encrypted connection.

This app is aimed at the end user of the alarm system. The relays on the TCD, (rated at 30V DC @ 1A) can be connected to another suitable device the user wants simple, mobile control over.

Pre Requisites

SYSTEM REQUIREMENTS

The Android app is designed to run on phones or tablets running Android 3.0 Honeycomb or higher.

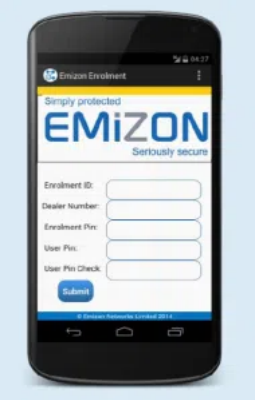
ENROLMENT

Before using this application, you must first enrol your device. If you have already done this before using another Emizon application you will not have to repeat it.

To enrol your device, select the 3 dots button (Android), in the top right of your screen, then select Enrolment.

You will need to contact your installation manager for the details to put in here. “User Pin” is set by you, and is what you will use to login to the apps.

To remove enrolment from your device, go back to the enrolment page and select the “Remove Enrolment” button.



RELAY SETTINGS

To gain access to the relays through this app they must be setup as “control”. Contact your alarm installation manager to ensure the correct settings are in the TCD.

Site List

The site list is shown immediately after successfully logging in to the application. It lists up to 10 site descriptions, along with their IDs.

Installation lists can be navigated using the Previous and Next buttons, as well as using the search function, by Installation number, Serial Number, or Description.



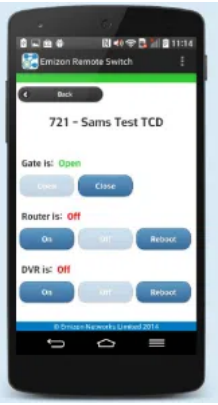
Select the site you want to control to view the relay options.

Relay Control

Once you have selected a site, the relay options will appear.

Greyed-out buttons indicate the current position of the relay, along with the text next to the title.

The relay and button labels are customisable, contact your alarm installation manager to do this.



Settings

The settings menu can be accessed usually, from the top right-hand corner of the app, (3 dots on Android – sometimes bottom right 3 lines)

From here you can set how often / quickly you want to be automatically logged out after closing the app.

Auto Logout	Will log you out every time the app is closed
Max Logout	The maximum allowed is 5 minutes

Timed Logout	In seconds from 0 – 300



Emizon Software License Terms

EMIZON Admin Console SOFTWARE

EMIZON Enrolment / Remote Switch / Site Diagnostics ANDROID & IOS APP SOFTWARE

These license terms are an agreement between Emizon Networks Limited (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Emizon

- updates,
- supplements,
- Internet-based services, and
- support services

for this software, unless other terms accompany those items. If so, those terms apply.

BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS. IF YOU DO NOT ACCEPT THEM, DO NOT USE THE SOFTWARE.

If you comply with these license terms, you have the rights below.

1. INSTALLATION AND USE RIGHTS. You may install and use any number of copies of the software on your devices.
2. ADDITIONAL LICENSING REQUIREMENTS AND/OR USE RIGHTS.

- Access Services You Are Entitled To. This software may give you access to certain services. You are entitled to use this software for this purpose if you comply with the terms below.
  - Any SSL certificates and/or login credentials or other information that is created for you or your company is held by you on the condition that you will to the best of your ability keep that information secure and will not knowingly let others, who are not entitled, to view or possess or otherwise get access to that information. Should this information be compromised then you will notify Emizon immediately so that Emizon can take such measures to secure your account from unauthorised access.
  - Emizon constantly monitor usage of its services and should Emizon consider that your account is being used inappropriately then those services can be restricted, suspended and/or terminated without prior notice and without the need to contact the account holder.
  - Mobile access to services should only be granted to those persons in your organisation who require it. All responsibility to remove access / permissions is your own, as well as any changes to services that occur through the apps.
  - You may not attempt to access parts of the services provided by Emizon that you have not been give explicit access rights to.
  - You may not attempt to acquire access to services that you are not wholly entitled to.
  - Access rights give maybe withdrawn or modified at any time and without notice unless there is another license or contract that takes precedence for such access.

3. SCOPE OF LICENSE. The software is licensed, not sold. This agreement only gives you some rights to use the software. Emizon reserves all other rights. Unless applicable law gives you more rights despite this limitation, you may use the software only as expressly permitted in this agreement. In doing so, you must comply with any technical limitations in the software that only allow you to use it in certain ways. You may not
   - work around any technical limitations in the software;
   - reverse engineer, decompile or disassemble the software, except and only to the extent that applicable law expressly permits, despite this limitation;
   - make more copies of the software than specified in this agreement or allowed by applicable law, despite this limitation;
   - publish the software for others to copy;
   - rent, lease or lend the software; or
   - attempt to disrupt or otherwise cause any harm to Emizon Network Infrastructure or Systems
   - You may use “Restrict to one installation” feature for employees or directors within your company only.
4. BACKUP COPY. You may make backup copies of the software. You may use it only to reinstall the software.
5. DOCUMENTATION. Any person that has valid access to your computer or internal network may copy and use the documentation for your internal, reference purposes.

6. SUPPORT SERVICES. Because this software is “as is,” we may not provide support services for it.
7. ENTIRE AGREEMENT. This agreement, and the terms for supplements, updates, Internetbased services and support services that you use, are the entire agreement for the software and support services.
8. APPLICABLE LAW.
    1. United Kingdom. If you acquired the software in the United Kingdom, UK law governs the interpretation of this agreement and applies to claims for breach of it, regardless of conflict of laws principles. The laws of the state where you live govern all other claims, including claims under state consumer protection laws, unfair competition laws, and in tort.
    2. Outside the United Kingdom. If you acquired the software in any other country, the laws of that country apply.
9. LEGAL EFFECT. This agreement describes certain legal rights. You may have other rights under the laws of your country. You may also have rights with respect to the party from whom you acquired the software. This agreement does not change your rights under the laws of your country if the laws of your country do not permit it to do so.
10. DISCLAIMER OF WARRANTY. THE SOFTWARE IS LICENSED “AS-IS.” YOU BEAR THE RISK OF USING IT. EMIZON GIVES NO EXPRESS WARRANTIES, GUARANTEES OR CONDITIONS. YOU MAY HAVE ADDITIONAL CONSUMER RIGHTS UNDER YOUR LOCAL LAWS WHICH THIS AGREEMENT CANNOT CHANGE. TO THE EXTENT PERMITTED UNDER YOUR LOCAL LAWS, EMIZON EXCLUDES THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

Emizon Statement of Compliance

Statement of Compliance

Emizon is the ‘always on’ alarm signalling and CCTV monitoring service designed specifically for digital networks. A secure dual-path service in which all messages are continuously monitored end to end, from the TCD to the 24-hour response centres. Because all messages are managed over both fixed and wireless networks, service resilience levels of 99.99% or better can be achieved – surpassing the highest industry standards. Emizon is available as a Grade 2, 3 and 4 service. The Grade 4 service has been tested and passed to LPS.1277 v2.2 by BRE/LPCB for compliance with the highest Grade 4 EN signalling standards.

IT Statement

The TCD uses outbound TCP/IP connections only, via the landline IP (Ethernet) and the GPRS IP networks. The TCD does not accept inbound connections and does not require any inbound IP ports to be opened on a customer firewall/router. GPRS connectivity is established via a private network connection (APN), and no internet connectivity is possible via GPRS in the TCD. No connectivity exists between the GPRS IP and landline IP networks in the TCD and no IP bridging is permitted between the networks in the TCD. The TCD also contains an internal firewall to isolate the TCD from any unauthorised connections or IP traffic.

Emizon Service Platform PD6662: 2004

European standards classify intruder alarm systems into four grades, grade 4 being the highest, based on skills, tools and the determination likely to be used by criminals at each level of risk. The standards that cover equipment and performance standards are covered under PD6662:2004 & tables 10 and 11 of prEN50131-1:2004.

ATS ratings	Grade 4C	Grade 3C	Grade 2C
Primary path: Broadband/IP	D4/M4/T4/S2/I3/A4	D4/M4/T3/S2/I3/A4	D4/M4/T2/S2/I3/A4
Secondary path: Wireless GPRS	D4/M4/T3/S2/I3/A4	D4/M4/T2/S2/I3/A4	D4/M4/T2/S2/I3/A4
Environmental Grade	2	2	2
EN Signalling Grade	4	3	2