



**iris**  
**touch**  
Alarm over IP

IRIS Touch **4** NG  
SERIES

Vanderbilt / Siemens SPC Panel Range  
Quick Installation &  
Maintenance Guide

Version 1.1



**EN**  
50131/6  
Independently  
certified



EN54-21 CPR



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## 1. Introduction

The IRIS Touch 4<sup>Secure</sup> offers cost effective Alarm over IP (AoIP) for the commercial and residential sectors. All IRIS Touch 4<sup>Secure</sup> diallers are certified as suitable for all Grade 4 systems with an Alarm Transmission System (ATS) configuration up to SP6 for single path, or ATS configuration DP4 for dual path (IRIS Touch 440NG only).

The IRIS Touch 4<sup>Secure</sup> is based on Chiron’s successful IRIS Touch range of AoIP diallers with the same hardware and software used in all IRIS diallers; with the same level of security and features provided to military, governments, banks and commercial industry markets.

The IRIS Touch 4<sup>Secure</sup> offers a touch screen as standard for configuration, local alerts, and allows diagnostic and tests to be performed by the engineer.

Polling and alarm transmission are performed via the Ethernet or GPRS/3G communication paths (4G and CDMA on request) to the monitoring centre using the IRIS Secure Apps monitoring software.

This manual describes a quick guide to the installation of products from the IRIS Touch 4<sup>Secure</sup>. For the full Engineer manual, including multi-lingual versions, please visit our website at:

[http://www.chironsc.com/downloads\\_security.html](http://www.chironsc.com/downloads_security.html)

## 2. Product Features

Features	IRIS Touch		
	400NG	420NG	440NG
Touch Screen	●	●	●
Ethernet	–	2	2
GPRS/3G	●	–	●
Dial capture	●	●	●
Relays	4	4	4
Inputs (Pins)	4 standard + 12 with add-on expansion board		
Serial RS485	●	●	●
Serial TTL	●	●	●
RS232 (Basic or Full)	1 x Full or 2 x Basic		
CAN bus	●	●	●
Text messaging	●	–	●
Multi language menus	●	●	●
VoIP & SIP services	●	●	●
HVAC and Home Automation interface	●	●	●
Option available on request	4G / CDMA		

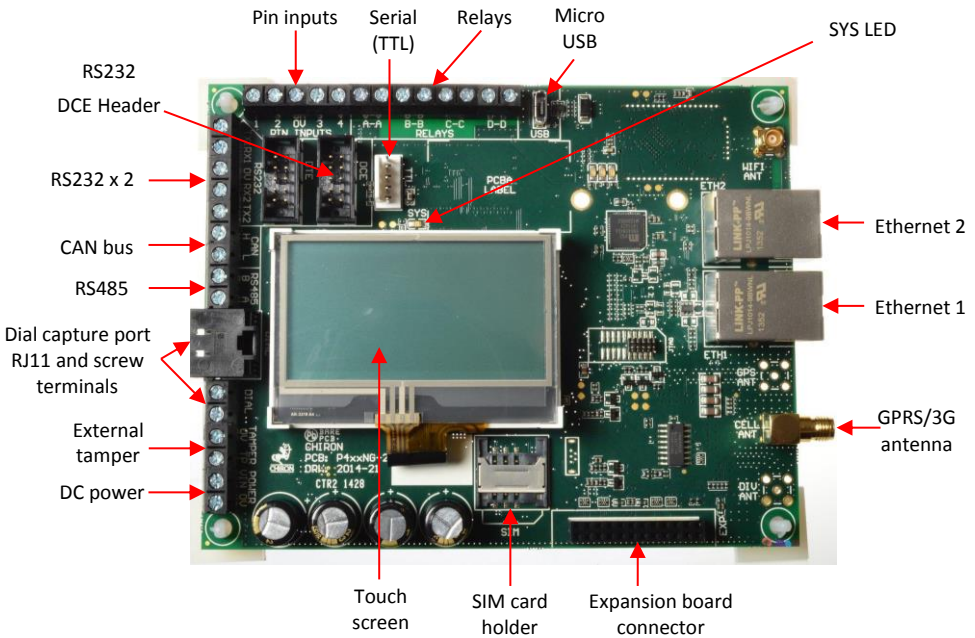
### 3. Package Contents

Contents dependent on model type:



- Dialler board
- Ethernet cable (IRIS Touch 420NG & 440NG)
- GPRS/3G antenna (IRIS Touch 400NG & 440NG)
- Stylus
- RJ11 cable
- 18k Ohms sense resistor

### 4. Board Configuration

IRIS Touch 4<sup>series</sup>



#### SYS LED

LED Colour	Indication
 Yellow flashing	Not currently configured or indicating that there are some current faults outstanding.
 Yellow constant	Communicating and no current faults (flickers on every poll).

## 5. Before You Start

### Monitoring Centre (ARC)

Make sure that the monitoring centre to which the IRIS Touch device will send alarm signals is equipped with the appropriate IRIS Secure Apps receiving system. The following information should be obtained from the monitoring centre.

Dialler account number	<input type="text"/>
Monitoring centre IP address	<input type="text"/>

### Ethernet Connection Details

The customer's Ethernet (LAN) network details are required in order to connect the IRIS Touch. The following information should be obtained from the customer.

Fixed IP address or DHCP	Fixed <input type="checkbox"/>	DHCP <input type="checkbox"/>
	<i>If using DHCP then the following information will not be required as it will be assigned by the network.</i>	
IP address	<input type="text"/>	
Gateway address	<input type="text"/>	
Subnet mask address	<input type="text"/>	

### GPRS/3G SIM Card and Access Point Name

If the installation uses GPRS/3G then a SIM card will be required. The IRIS Touch will also need to be given a GPRS/3G 'Access Point Name' (APN) and other possible configurations as shown below. These can be obtained from the SIM card provider.

Access Point Name (APN)	<input type="text"/>
User Name (USR)	<input type="text"/>
Password (PWD)	<input type="text"/>
SIM Pin	<input type="text"/>

## 6. Installing the IRIS Touch Dialler

Use the following procedure to install your IRIS Touch dialler:

### 6.1. Mounting

Choose a suitable location taking into consideration the routing of both power and dialler interface cables, within the alarm panel or separate enclosure. Secure the dialler within the enclosure using the fitted standoff or the alternative self-adhesive feet.

**Note: For EN50131-10 compliance you must use the supplied standoff and not the self-adhesive feet.**

### 6.2. Power

The IRIS Touch dialler can be powered from a separate or Aux 9-28V DC power supply specified to deliver up to 1A current using the screw terminals indicated in [Section 4 "Board Configuration"](#).

**Note: For Radio & Telecoms Terminal Equipment Directive compliance the power cable must be no longer than 3 meters in length.**

Fit the power cable. DO NOT APPLY POWER TO THE DIALLER UNTIL INDICATED.

### 6.3. Connections

Connect cables to the PCB for your system as shown on in [Section 4 "Board Configuration"](#).

- Ethernet enabled systems (IRIS Touch 420NG & 440NG): Ethernet socket ETH1.  
Connect the Ethernet cable from 'ETH1' to the local IP router/switch or socket that has been allocated for the LAN/WAN network IP connection.
- GPRS/3G enabled systems (IRIS Touch 400NG & 440NG): Cell Ant. Fit the supplied T-bar GPRS/3G antenna but do not fix in place until after performing the GPRS/3G network scan.

**Note: An external GPRS/3G antenna can be fitted if required.**

#### Panel Connections:

With the IRIS Touch dialler you have 2 connection methods for the alarm and upload/download communications as detailed below:

#### Dial Capture + RS232

- Dial capture port for alarm connection from the PSTN module.
- RS232 DCE Header for upload/download connection (RS232RJ45 cable required).

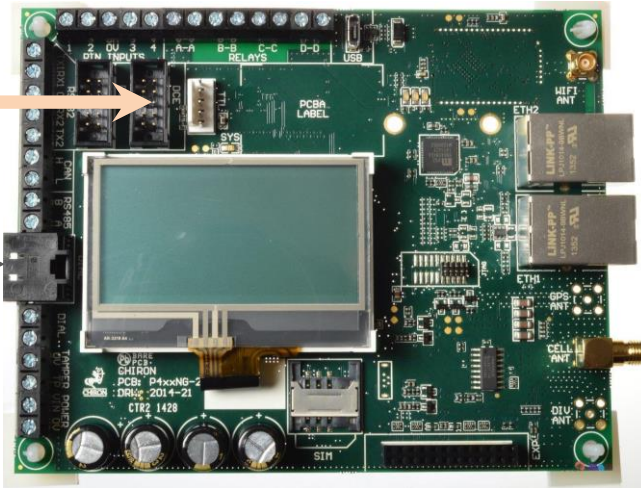
#### Ethernet EDP

- Ethernet ETH2 for alarm and upload/download connections to the Siemens SPC Ethernet (RG45) connector. This connection uses the EDP alarm protocol (Converting to SIA alarm format for receipt via the IRIS Secure Apps software package).

**Note: The IRIS Dialler will need to be software version 2.20.0 or higher to support this feature.**

For more details on the cable requirements / connections please see detail on next page.

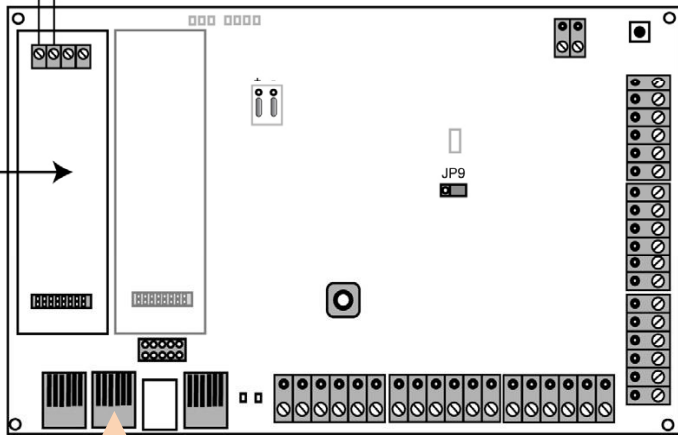
**IRIS Touch to SPC panels using Dial capture and Serial connections:**



**Dial Capture for the Alarms:**  
Connect the centre two wires (Red & Green) to the A & B Terminal Blocks (Polarity not important).

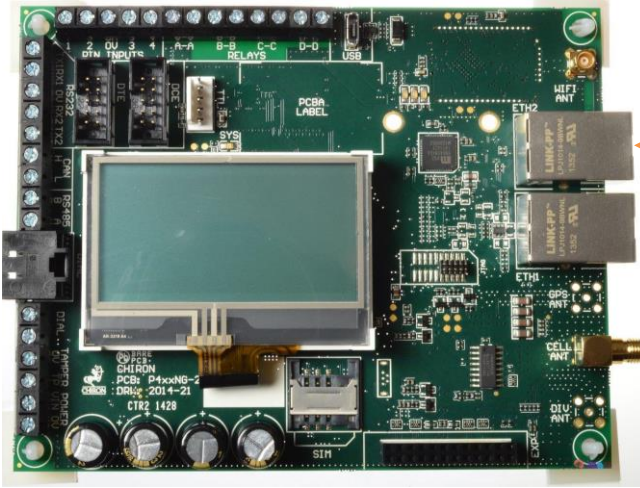
Telephone Line

PSTN  
Modem  
Module

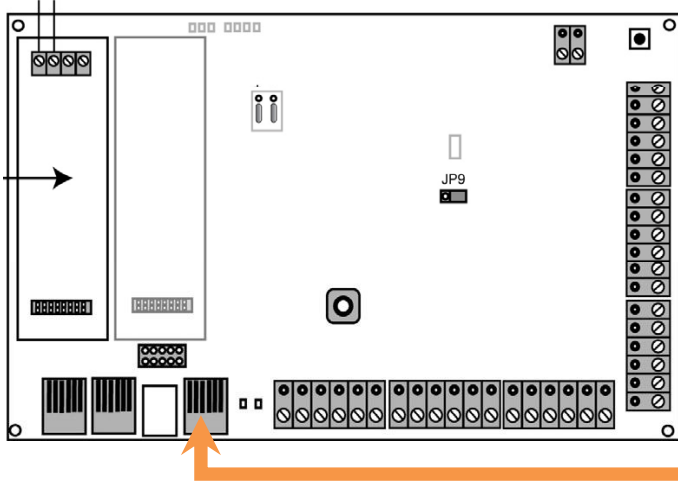


**Serial DCE Header Connection for Upload/download:**  
Connect the Serial (DCE) connector from the Iris to the SPC Serial Port 2 (RJ45) connector.  
RS232RJ45 connection cable (ordered separately).

**IRIS Touch to SPC panels using Ethernet Connection (EDP alarm integration):**



**Ethernet Connection for EDP alarms & Upload/download:**  
Connect the ETH2 (RJ45) connector from the Iris to the SPC Ethernet (RJ45) connector.





## 6.4. GPRS/3G SIM card (IRIS Touch 400NG or 440NG)

DO NOT FIT SIM card until after you have performed the GPRS/3G Network Scan detailed in the [Section 6.9 "Configuration"](#) you will be prompted when to insert the SIM card.

## 6.5. Dial Capture

*Dial capture enabled systems:* Connect either the dial port RJ45 or the 2 dial screw terminals with the supplied RJ11 dialler cable to the alarm panel dialler telecoms line connection. If the alarm panel has screw connections, cut the connector off the cable and strip the cable using the 2 inner wires.

**Note: Polarity is not important in this instance.**

Fit the supplied 18K sense resistor in parallel with the dialler output of the alarm panel, at the alarm panel end of the cable.

**Note: This resistor enables the dialler to detect cable faults and/or tampers and must be fitted at the alarm panel end of the cable to function correctly, the monitoring centre will also need to enable the dial port monitoring from the IRIS Secure Apps software to receive alarm notifications.**


## 6.6. RS232

*RS232 upload/download enabled systems:* Connected the RS232 DCE header to the RS232 RJ45 connection socket on the SPC panel with the RS232RJ45 connection cable (ordered separately).

## 6.7. Ethernet

*Ethernet EDP alarms and upload/download enabled systems:* Connected the ETH2 (RJ45) to the Ethernet (RJ45) connection socket on the SPC panel with a standard Ethernet cable.

## 6.8. Switch On and Test

To confirm power is applied, look for the indicator SYS LED flashing yellow  on the IRIS Touch dialler board.

## 6.9. Configuration

To configure your dialler, use any of the following methods:


- Touch screen.
- Connect the board's Micro USB connector to a laptop / PC running the IRIS Toolbox software. Download the IRIS ToolBox user guide from [http://www.chironsc.com/downloads\\_security.html](http://www.chironsc.com/downloads_security.html).

### Defaulting

If at any point you want to completely default the dialler you can use the following procedure:

1. Enter the Installer menu on the dialler touch screen and enter the installer password.
2. Go to the 'Settings' option and scroll down with the scroll bar on right until you see option for 'Default All'.
3. Enter the 'Default All' and confirm that the dialler is to be defaulted.

### Configuration via Touch Screen

IRIS Touch  can be configured directly using the on board touch screen with the supplied stylus.

Installers Password	
7 8 9	Delete
4 5 6	Clear
1 2 3	Cancel
0	OK
*****	

Enter the default installer code: 111111 and then click 'OK'.

You will be prompted to change the password, please record the new password.

Enter and confirm a new password and press 'Save'.

Installers Menu
Installation Wizard
Settings
Test
Run Network Scan
Back

The Main Menu is displayed.

### IRIS Touch 400NG or 440NG with GPRS/3G connection:

#### GPRS/3G Network Scan

Select the 'Run Network Scan'.

The scan must be carried out **without** the SIM card fitted.

The dialler listens for every base station in range, requests operator name and records the signal strength. This will take a few minutes to complete.

Scan In Progress
Looking For Providers
...
Back



Provider	B/Stn	CSQ	
	1	2	3
02 - UK	22	14	13
vodafone U	21	15	14
Orange UK	19	19	17
T-Mobile U	11	11	9
Back			

For a reliable GPRS/3G connection it is recommended that for the chosen network (SIM card) used there should be at least two base stations with signal strength (CSQ) of 10 or more.

If the signal strength is below or close to minimum then try to reposition the antenna/IRIS Touch dialler in different location or you can use an external building or high gain antenna (if necessary), and rerun the network scan to check signal strength.

Once you have the required GPRS/3G signal strength power down the dialler and insert the SIM card into the SIM card holder, then power the dialler back up.

Go back into the 'Installers Menu' and enter in the installer code that you had setup beforehand and then select the Installation Wizard as indicated next.

### IRIS Touch 420NG or 440NG without GPRS/3G or after network scan completed:

#### Installation Wizard

Installation Wizard
Select interfaces
Ethernet <input checked="" type="checkbox"/>
GPRS/3G <input checked="" type="checkbox"/>
PSTN <input checked="" type="checkbox"/>
Exit
Continue

Select the Installation Wizard and follow the on screen prompts.

Once you have completed the Installation Wizard and setup any additional panel interface configuration via the settings menu you will need to check / configure the panel for the connection method you are using:

#### Panel Interface

##### RS232 DCE

Using the RS232 DCE header to connect to the SPC panel for an upload/download connection then perform the following:

Go into the 'Installers Menu' and enter in the installer code that you had setup beforehand and then select the 'Settings' Menu.

Then scroll down till you see the option for 'Panel Interface' and select this option, you will see the following screen:

Now select the option for 'Serial Port RS232\_1' then 'Configuration' and select 'Full (DCE)'.

Panel Interface
Dial Port
Serial Port Com
Serial Port RS232_1
Serial Port RS232_2
Serial Port RS485
Back

Serial Port RS232_1
Normal
Full (DCE) <input checked="" type="checkbox"/>
Full (DTE)
Serial settings
RS232_2 disabled
Back

**Note: You will need to ensure that the Monitoring station (ARC) have setup the correct account details using a Remote Service Template with the correct Panel Config for SPC. Please contact Chiron Technical support for more information if needed.**

## Ethernet ETH2

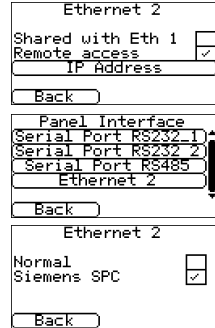
Using the ETH2 Ethernet connection to the SPC Ethernet socket to run the EDP protocol then perform the following:

Go into the 'Installers Menu' and enter in the installer code that you had setup beforehand and then select the 'Settings' Menu.

Scroll down till you see the option for 'Ethernet 2' and select this option. Untick 'Shared with Eth1' and then tick the option for 'Remote access'. The IP address should be set to 172.16.25.1.

Go back to the main settings menu and then scroll down till you see the option for 'Panel Interface' and select this option:

Now select the option for 'Ethernet 2' and select 'Siemens SPC'.



The first screenshot shows the 'Ethernet 2' configuration screen. It has a 'Shared with Eth 1' checkbox (unchecked), a 'Remote access' checkbox (checked), and an 'IP Address' field. A 'Back' button is at the bottom.

The second screenshot shows the 'Panel Interface' selection screen. It lists 'Serial Port RS232 1', 'Serial Port RS232 2', 'Serial Port RS485', and 'Ethernet 2'. 'Ethernet 2' is highlighted. A 'Back' button is at the bottom.

The third screenshot shows the 'Ethernet 2' configuration screen again, but with 'Normal' selected and 'Siemens SPC' checked. A 'Back' button is at the bottom.

**Note: You will need to ensure that the Monitoring station (ARC) have set up the correct account setup using a Remote Service setup with the correct Panel Config for SPC. Please contact Chiron Technical support for more information if needed.**

## 6.10. Panel Configuration

### Panel configuration for dial capture

If you are connecting the IRIS Touch dialler via the dial capture method which is connecting the Telecoms module to the dial port of the IRIS Touch, you will need to configure the following options:

Telephone Number = The 12 digit format of the monitoring centre IP address (e.g. 192.168.0.34 would become 192168000034).

To select routing of an alarm over PSTN, place an extra digit "9" in front of the Tel 2 receiver telephone number. This tells the IRIS communicator that it should route the call over PSTN if available. If there is a PABX that requires a "9" to dial out of the site then place two '9's' in front of the Tel 2 number.

Account Number: 4 – 6 digit account number allocated by the monitoring centre.

**Note: If the 'Alarm Override' mode is selected, the IRIS Touch dialler replaces the phone number and the account number used by the alarm dialler with the IP address of the monitoring centre and account number entered during configuration, so there is no need to change any settings on the alarm panel.**

**If using the PSTN Expansion board do not use alarm override.**

## Panel configuration for Ethernet EDP

For connections using the Ethernet EDP connection you will need to configure the following settings in the panel:

### EDP Receiver

- Receiver ID: Set to 1
- Protocol version: Set to Version 2
- Encryption Enabled: Disable / Untick
- Network Enable: Enable / Tick
- Network Protocol: TCP/IP
- Receiver IP Address: Set to 172.16.25.1 to match the IRIS dialler Ethernet 2 IP Address)
- Receiver IP Port: Set to 58212
- Always Connected: Enable / Tick
- Panel Master: Disable / Untick
- Polling Interval: Set to 15

### EDP Settings (Panel)

- Enable: Enabled / Ticked
- EDP Panel ID: Set to the 4 - 6 digit Account number allocated by the Monitoring Station

### Ethernet Settings (Panel)

- Panel IP Address: 172.16.25.2
- Netmask: 255.255.255.0
- Gateway: 172.16.25.1
- DHCP Enabled: Disable / Untick

## 6.11. Testing



Once all configurations are complete perform a full commissioning test with the monitoring centre. This will normally involve testing normal alarm transmissions over all communication paths from the alarm panel to the monitoring centre, and verifying that these are successfully received.

## 7. Maintenance

There is no requirement for any onsite maintenance on the IRIS Touch 4<sup>SD</sup>.

If engineers want to carry out a maintenance inspection please perform the following:

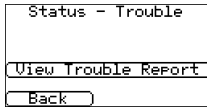
- Confirm the status of the IRIS Touch unit.
- Clear any faults on the dialler.
- Reflash IRIS Touch software to latest version.
- Test the configured communication paths (Ethernet / GPRS / 3G).
- Perform full test of alarms from the alarm panel and confirm these are received at the monitoring centre.

The IRIS Touch dialler will give a visual indication of the current system status via the SYS LED. If this is yellow constant  the current setup of the dialler is reporting OK, yellow flashing  means the dialler is reporting some trouble events.

To further investigate any faults or to perform checks, the IRIS Touch dialler gives engineers the option via the touch screen, to see current faults, reflash to latest software and perform communication path checks.

Engineers will need to touch the screen to exit the screen saver mode and should now be presented with the welcome screen. Engineers will now see the option indicating status and the option to enter the installer menu. The engineer will now be able to perform the following checks:

### 7.1. Confirm Current Status



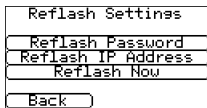
The IRIS Touch dialler will indicate “Status – ok” if the current dialler setup is all working correctly, and if the status is showing “Status – Trouble” the dialler has a trouble reported. To view the reported trouble click on the “Status – Trouble” option then “View Trouble Report”.

Engineers can now check the current system troubles that are being reported and then look to resolve these issues. For further information please refer to the IRIS Touch 4<sup>series</sup> Engineer Manual available from [http://www.chironsc.com/downloads\\_security.html](http://www.chironsc.com/downloads_security.html).

### 7.2. Check Software Version / Reflash

The engineers will need to go into the settings menu and then select the ‘Reflash’ option. On first entry to the reflash option which could be during installation or maintenance, the engineer will be required to change the password as required for EN50136-2 compliance. Please record the password on the installation documentation.

Enter the correct reflash password and you will then have the following options.



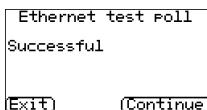
The Chiron Reflash server IP address will already be setup under the ‘Reflash IP Address’ but if using an alternative Reflash IP address then change the IP address.

Once you have the correct reflash IP address entered press the ‘Reflash Now’ to connect to the server and check if there is a later version, and if there is, it will start to reflash.

The reflash will take up to 15 minutes if via GPRS/3G and approximately 2 minutes with the Ethernet connection. Once completed the dialler will reboot and switch to the new software. All configurations are saved and there is no need to reconfigure the IRIS Touch.

**Note: During the reflash process please do not remove power until dialler has completed and reset.**

### 7.3. Communication Paths Checks



The engineers can test the communication paths for both polling and alarm communications using the ‘Test’ option in the Main installer menu, this will test all configured communication paths.

Please refer to the IRIS Touch 4<sup>series</sup> Engineer Manual for more details available from [http://www.chironsc.com/downloads\\_security.html](http://www.chironsc.com/downloads_security.html).

### 7.4. Test alarm panel alarms and communication to ARC

Depending on the monitoring centre (ARC) engineers will now be required to perform alarm test and possibly other tests to the ARC. Before the engineer leaves site get confirmation from the ARC that all is working correctly.

## 8. Specifications

Transmission paths		400NG	420NG	440NG
Ethernet	Standard	–	UTP 10/100 Base T with auto-negotiation	
	Connection	–	RJ45 socket for CAT5 cabling	
	IP addressing	–	Dynamic (DHCP) or fixed	
	Connection fault detection	–	Loss of Ethernet synchronisation	
GPRS/3G (4G/CDMA optional on request)	Standard	Dual band GSM 900/1800 MHz Dual band UMTS 900/2100 MHz	–	Dual band GSM 900/1800 MHz Dual band UMTS 900/2100 MHz
	Connection	SMA socket for GPRS/3G antenna connection	–	SMA socket for GPRS/3G antenna connection
	Connection fault detection	Loss of registration with network	–	Loss of registration with network
<b>IP</b>				
TCP ports (outbound)		53165 (Alarms & Polling), 51292 (Diagnostic & Reflashing), 10001 (Upload/Download)		
<b>Alarm transmission</b>				
Interface to monitoring centre		IRIS Secure Apps or IRIS Management Suite via EN 50136-2 pass-through mode		
Dial capture interface to alarm panel		Two wire interface via RJ45 socket or terminal block		
Serial interface to alarm panel		RS485, TTL, RS232 x 2 <b>Note: RS232 cabling must not exceed 30 meters</b>		
PIN Inputs interface to alarm panel		Maximum input voltage range 0V to +24V		
		Input 'low' (alarm) threshold < 1V		
		Input 'high' (restore) threshold > 2V		
		Internal pull-up impedance 10K to 3.3V supply		
Alarm protocols		SIA (level 1 to 3) reference SIA DC-03-1990.01(R2003.10)		
		Contact ID reference SIA DC-05-1999.09		
		Fast format (Scancom)		
		Robofon (Dial capture only)		
Tamper detection reporting to monitoring centre		Dial capture interface, Serial interface, Pin inputs		
Fault reporting to monitoring centre		Transmission interface/path fault		
<b>Relay outputs</b>				
Maximum operating voltage		24V DC		
Maximum current rating		100mA DC		
<b>Power supply</b>				
Supply voltage		9V to 28V DC		
Typical current		151mA @ 12V DC	151mA @ 12V DC	153mA @ 12V DC
Maximum current		1A @ 12V DC		
Recommended external PSU		12V DC 1A 12 Watt <b>Note: For Radio &amp; Telecoms Terminal Equipment Directive the power cable needs to be no longer than 3 meters in length</b>		
<b>Environmental</b>				
Operating temperature range		-10°C to 55°C		
Operating humidity range		95% max, non-condensing		
<b>Weights and dimensions</b>				
Physical dimensions		15 cm x 11 cm		
PCB weight		300 grams		
Fully packaged weight		500 grams		

## Safety

Care should be taken when connecting telecommunications equipment to ensure only like interfaces are connected to avoid safety hazards.

- SELV: SELV (Safety Extra-Low Voltage) is defined as a secondary circuit which is so designed and protected that under normal and single fault conditions the voltage between any two accessible parts does not exceed a safe value (42.4V peak or 60V dc maximum)

The interfaces on the IRIS Touch have the following safety classifications:

- Dial capture interface: SELV suitable for connection to the TNV interface of single line telecommunications equipment such as telephones, alarm panels, etc.
- Power Interface: SELV for connection to a DC supply
- Inputs: SELV for connection to alarm output pin.

## Conformance

### European Directives

The IRIS Touch complies with the following European Directives:

- 1999/5/EC (Radio & Telecoms Terminal Equipment Directive)
- 2006/95/EC (Low Voltage Directive)
- 2004/108/EC (Electromagnetic Compatibility Directive)

### EN50131, EN50136 (VdS Certified)

The dialler is compliant with the requirements of European Standards:

EN50131-1: 2006 & EN50131-10: 2014

EN50136-1: 2012 & EN50136-2: 2013

Security Grade 4

ATS-SP6 over Ethernet, ATS-SP5 over GPRS/3G, ATS-DP4 (IRIS Touch 440NG)

When using PSTN ATS-SP2 over PSTN, ATS-DP1 (IRIS Touch 4xxNG)

Environmental Class II

### EN54-21 CPR (VdS Certified)

EN54-21 CPR fire approved

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