



iris
touch
Alarm over IP

IRIS Touch **4** NG
SERIES

Quick Installation &
Maintenance Guide

Version 1.0

EN
50131/6
Independently
certified



EN54-21 CPR



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1. Introduction

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

The IRIS Touch 4^{SP6} 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^{SP6} offers a touch screen as standard for configuration, local alerts, and allows diagnostic and tests to be performed by the engineer. Polling and alarm over communication paths of Ethernet and GPRS (3G, 4G and CDMA on request) to the monitoring centre.

This manual describes a quick guide to the installation of products from the IRIS Touch 4^{SP6}. For the full manual, including multi-lingual versions, please visit our website at: http://www.chironsc.com/downloads_security.html

2. Product Features

Features	IRIS Touch		
	400	420	440
Touch Screen	●	●	●
Ethernet	–	2	2
GPRS	●	–	●
Dial capture	●	●	●
Relays	4	4	4
Inputs (Pins)	4 standard + 12 with add-on daughter 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	3G / 4G / CDMA		

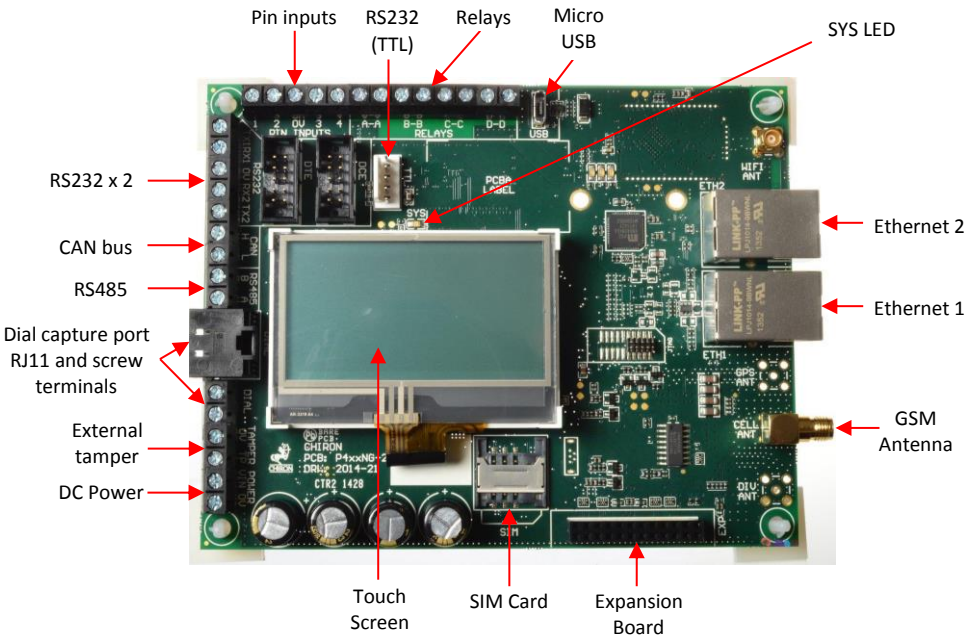
3. Package Contents

Contents dependent on model type:

- Dialler board
- Ethernet cable (IRIS Touch 420 & 440)
- GSM antenna (IRIS Touch 400 & 440)
- Stylus
- RJ11 cable
- 18k Ohms sense resistor

4. Board Configuration

IRIS Touch 4^{series}



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

GPRS SIM Card and Access Point Name

If the installation uses GPRS then a SIM card will be required. The IRIS Touch will also need to be given a GPRS '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

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 delivery up to 1A current using the screw terminals indicated in [Section 4 "Board Configuration"](#)

Note: For Radio & Telecoms Terminal Equipment Directive the power cable needs to 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 420 & 440): 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 enabled systems (IRIS Touch 400 & 440): Cell Ant. Fit the supplied T-bar GSM antenna.
Note: An external GSM antenna can be fitted if required.
- Dial capture port (optional and for more information see section below).
- Expansion board for addition PIN inputs and PSTN dial out (optional).

Optional serial connection

The following 5 connections are optional and depend on the panel connection method to be used.

By default the IRIS Touch RS485 connection is for Honeywell Galaxy panels and the Serial TTL header is for Texecom Premier panels. For alternative selections for other panel manufactures use the touch screen on the IRIS Touch Installers menu – settings to select the option required.

- RS485 currently available for Honeywell Galaxy data bus connections (optional).
- RS232 (TTL) currently available for Texecom Com1 connections (optional).
- RS232 port 1 screw terminal (optional for Hayes command terminal).
- RS232 port 2 screw terminal (optional for integrated panel connection).
- CAN bus screw terminals (optional).

RS485 connections (Honeywell Galaxy panels)

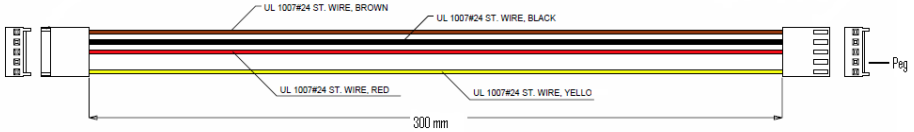
IRIS RS485 Screw terminal	To	Galaxy Data Bus Terminal
0V (Power)	← →	Galaxy (-)
VIN (Power)	← →	Galaxy (+)
A	← →	Galaxy (A)
B	← →	Galaxy (B)

TTL connections (Texecom Premier Range)

Ordered from Chiron

Description = Texecom RS232 Lead

Part No = Tex600



RS232 port 2 connections (HHL and ESPA)

IRIS Touch Device to HHL Panels

IRIS RS232 Screw terminal	To	HHL Com Port (X3)
TX2	← →	2 (RX)
RX2	← →	3 (TX)
0V	← →	1 (GRD)

IRIS Touch Device to ESPA fire Panels

IRIS RS232 Screw terminal	To	DB9 Male connector (Possible Screw Terminals)
TX2	← →	Pin 2 (RX)
RX2	← →	Pin 3 (TX)
0V	← →	Pin 5 (GRD)

6.4. GSM SIM card (IRIS Touch 400 & 440)

DO NOT FIT SIM card until after you have performed the GPRS 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 using 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.

6.6. PIN Inputs

The IRIS Touch dialler has 4 pin inputs that can be used to generate alarm messages, if you require more than 4 pin inputs then you can fit the IRIS Touch 4^{series} expansion board (ordered separately). These can be:

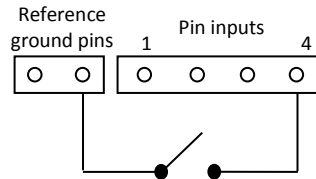
- Text messages via SMS (*GSM*).
- SIA, Contact ID and Fast Format alarm messages over IP to the monitoring centre.

Note: These pin alarm inputs can also be used when the dialler is directly connected to an alarm panel via the serial or RS485 connections.

Via Open/Close Contact Source

Each pin input is designed to be connected in a loop via an open/close contact source from an alarm panel, or other device, to a reference ground pin available on the IRIS dialler, as shown opposite.

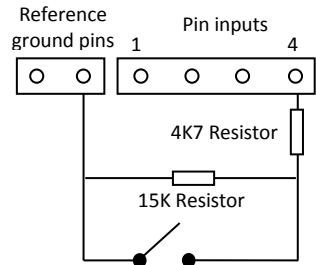
Opening the contact (i.e. loop is open circuit) generates an alarm signal. Closing the contact generates the equivalent restore signal.



Via Sense Resistors

It is also possible to link the contacts to the IRIS dialler via sense resistors so that an open or short circuit tamper on the loop can be detected and the monitoring centre alerted. In this case, the connections should be made as shown opposite.

Note: For this feature to work correctly it is essential that the resistors are connected at the contact end of the loop and not the dialler end. The monitoring centre must also enable the monitoring of this facility on the dialler within the IRIS Secure Apps receiving system.




6.7. Expansion board

The IRIS Touch 4^{series} has the option to add one of 2 expansion boards detailed below, which gives the options for additional pin inputs or the option for PSTN dial out (PSTN as an outbound transmission path for alarms).

- Pin inputs
- Pin inputs + PSTN dial out

For further information on the expansion board please refer to the IRIS Touch 4^{series} expansion board installation manual from http://www.chironsc.com/downloads_security.html.

6.8. Switch on and test

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

6.9. Configuration

To configure your dialler, use the following methods:

- Touch screen.
- Alarm panel integration e.g. Honeywell Galaxy (RS485 connection) Texecom Premier range (RS232 TTL connection).

Note: For connections to Honeywell Galaxy or Texecom Premier on the serial integration ensure you configure the alarm panel first as this will transmit configuration to the IRIS Touch dialler.

For more details on the alarm panel integration download the full panel installation manual from http://www.chironsc.com/downloads_security.html.

- 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.

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 till you see option for 'Default All'.
3. Enter the 'Default All' and confirm the default, this will cause the dialler to reboot and will now be defaulted.

Configuration via touch screen

IRIS Touch 4^{SECS} can be configured directly using the on board touch screen using 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 Logon.

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 400 or 440 with GPRS connection:

GPRS 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	
...	
[Progress Bar]	
Back	



Provider	B	S	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 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 or use an external high gain antenna (if necessary), and rerun the network scan to gain best signal strength.

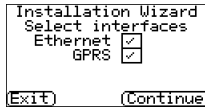
Once you have the required GPRS signal strength power down the dialler and insert the SIM card into the SIM card holder, then power the dialler back up.

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 420 or 440 without GPRS or after network scan completed:

Installation Wizard

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 using:

6.10. Panel configuration

Panel configuration for dial capture

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

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 dialler.

Alarm panel integration e.g. Honeywell Galaxy (RS485 connection) Texecom Premier range (RS232 TTL connection).

If you have not already made the changes to the relevant configurations in the panel for the integration, and require further details on these configurations then please download the full panel installation manual from http://www.chironsc.com/downloads_security.html.

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 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^{series}.

If you 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).
- Perform full test of alarms from the alarm panel and confirm these are received at the monitoring centre.

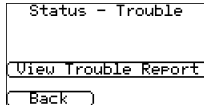
The IRIS Touch will give a visual indication of the current system status via the SYS LED. If this is yellow constant  the current setup of the dialler is all reporting OK, if yellow flashing  the dialler has some trouble events being reported.

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

Touch the screen to exit the screen saver and you should now see the option indicating status and to enter the installer menu. You will now be in the main menu and can perform the following checks:

7.1. Confirm current status

The IRIS Touch 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. Click on the “Status – Trouble” and go to the option for “View Trouble Report”.

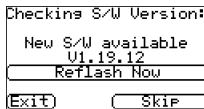


You can now check the current system troubles that are being reported and then look to resolve these issues. For further information please refer to the IRIS Touch 4^{GEN} Engineer Manual available from http://www.chironsc.com/downloads_security.html.

7.2. Check software version / Reflash

Go to 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. Please record the password on the installation documentation.

Enter the correct reflash password and the unit will try to connect to the Chiron reflash server and check if a later version is available. If a newer version is available you will have the option to ‘reflash now’.

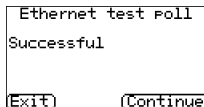


The reflash will take up to 15 minutes if via GPRS and around 2 minutes with the Ethernet connection. Once completed the dialler will reboot and switch to the new software. All configurations are saved and there is no need to reconfigure the IRIS Touch.

7.3. Communication paths checks

You 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^{GEN} Engineer Manual for more details available from http://www.chironsc.com/downloads_security.html.



7.4. Test alarm panel alarms and communication to ARC

Depending on the monitoring centre (ARC) you will now be required to perform alarm tests and possibly other tests to the ARC. If all working correctly you will then receive confirmation that you can leave site.

8. Specifications

Transmission paths		400	420	440
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	Quad band GSM 850/900/1800/1900 MHz	–	Quad band GSM 850/900/1800/1900 MHz
	Connection	SMA socket for GSM antenna connection	–	SMA socket for GSM antenna connection
	Connection fault detection	Loss of registration with network	–	Loss of registration with network
IP				
TCP ports (outbound)		53165 (Alarms & Polling), 51292 (Diagnostic & Reflashing), 10001 (Upload / Download)		
Alarm transmission				
Interface to monitoring centre		IRIS Secure Apps or IRIS Management suite		
Dial capture interface to alarm panel		Two wire interface via RJ45 socket & terminal block		
Serial interface to alarm panel		RS485, RS232 (TTL), RS232 x 2		
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)		
		Contact ID		
		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		
Relay outputs				
Maximum operating voltage		24V DC		
Maximum current rating		100mA DC		
Power supply				
Supply voltage		9V to 28V DC Note: For Radio & Telecoms Terminal Equipment Directive the power cable needs to be no longer than 3 meters in length		
Typical current		151mA @ 12V DC	151mA @ 12V DC	153mA @ 12V DC
Maximum current		1A @ 12V DC		
Recommended external PSU		12V DC 1A 12 Watt		
Environmental				
Operating temperature range		-10°C to 55°C		
Operating humidity range		95% max., non-condensing		
Weights and dimensions				
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, fax machines, 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 to the requirements of European Standards:

EN50131-1: 2006 & EN50131-10: 2014

EN50136-1: 2012 & EN50136-2: 2013

Security Grade 4 ATS-SP6 (IRIS Touch 400, 420 and 440), ATS-DP4 (IRIS Touch 440) / Environmental Class II

EN54-21 CPR (VdS Certified)

EN54-21 CPR fire approved

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