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USER MANUAL

Disclaimer Notice, Safety Recommendations & Important Information

Thank you for purchasing POWERTXT®. This product is a plug/socket designed to control AC power remotely by SMS through the GSM (mobile) network, allowing users to remotely control power to any equipment connected to it. It also sends an instant power outage/power cut alert (and power restore alert). It is a completely wireless M2M (machine to machine) device, it only requires power. This product uses any 2G network SIM (this product is not designed to work with 3G ONLY networks e.g. the Three Network), it will work with 3G SIMs that are 2G backward compatible (this is most networks & SIMs). This instruction manual provides both a quick start set up and also more advanced settings.

Powertxt® is designed for any electrical appliance for business use up to 13 Amps for the UK version and 16 Amps for the EU version with a power consumption of up to 3 Kw. It can be used for any type of device and UK/EU plug to IEC13 converters for servers etc are available.

We operate a policy of continuous development and therefore we reserve the right to make changes and improvements to the design, functionality or any part of this product as described in this document without prior notice. For the latest information please contact your supplier. We cannot be held responsible in anyway should this product be used other than for the intended purpose. Every effort has been taken to ensure the accuracy of this document however we accept no responsibility for any damage, injury, loss or expense resulting from errors or omissions whether consequential or indirectly and however caused due to the use of this product.

The power loss SMS alert/notification is by default automatically ON and alerts are always sent when the power is lost or restored (network dependent).

Please read this important information;

- ALL services and functions of this product need to be supported by the GSM (mobile) network and a SIM card
- The SIM card mobile number is referred to as the mobile number in this manual
- Before using this product check that mobile phones can be used in the area
- We recommend before choosing your network SIM provider you check the network signal strength where you intend to use the product to make sure it is sufficient
- Be sure to keep the password and mobile number safe and do not disclose this information to anyone other than the authorised users in order to ensure there is no misuse
- A SIM card is required to use this product, we recommend using a M2M (machine to machine)/Contract SIM card but if a PAYG (Pay as you go) SIM card is used please ensure that the SIM card has credit at all times for this product to be effective
- The password must be a 4 digit number
- The maximum digits that are allowed for the mobile number is sixteen
- Powertxt® will reply to each SMS command that is sent to it (network dependent) (except when changing the master number)
- The # symbol must not be ignored when typing an SMS command
- Do not include any spaces within the commands

- Should Powertxt® not function as detailed in this instruction book, please contact your supplier for technical support
- The power loss/restore feature is automatically enabled
- Please keep the password safe

Warning – Powertxt® is not designed for use in, and should not be used for, domestic or medical applications. This product doesn't guarantee a safe power source disconnection, only functional switching of power is performed.

The product contains no serviceable parts and no internal adjustments are required. No attempt must be made to repair this product. Faulty units must be returned to the supplier. Improper use, disassembling or product modification causes warranty loss.

- This product is designed for indoor use only, do not use in a wet, chemically aggressive or dusty environment
- Do not use alcohol, acetone and other similar solvents to clean it, simply wipe the outside of the product with a soft moist cloth
- Powertxt® contains no serviceable parts and no internal adjustments are required
- Powertxt® uses wireless signal transmissions, please keep it away from electronic equipment that may be likely to cause interference
- Keep Powertxt® and it's accessories out of reach of children
- Do not attempt to programme it except as instructed, if there is a problem please try and resolve it through the general troubleshooting section, if the problem cannot be solved please contact your supplier for technical support

Warranty

Powertxt® has a 12 month return to base warranty when purchased. The seller undertakes to replace or repair, at its option, any goods supplied by the seller if a fault occurs that cannot be resolved with telephone/email support under conditions of normal and proper use and maintenance (fair wear and tear accepted), provided that all of the following are true;
1) The goods were operated and maintained in accordance with the sellers operating instructions
2) The faulty unit is reported promptly to the seller in writing
3) The defect occurs within 12 months from the date of purchase of the goods by the buyer from the seller or reseller/distributor (proof of purchase date is required)
4) The goods have not been repaired or modified by anyone other than the seller or at the sellers direction
5) The device has not been tampered with in anyway

A replacement physical good or part assumes the remaining warranty of the original physical good or 180 days from the date of the replacement of the repair, whichever is longer. If you believe your unit is faulty or not functioning in the way as laid out in this manual in the first instance please contact your supplier with the following information;
Product Description, Fault Description, Serial Number & Proof of Purchase (inc date & seller information)

EstateView Software

Powertxt® can be controlled easily by a mobile phone however for control of multiple Powertxt® units we have developed a dedicated management software solution called EstateView. EstateView is an online portal that allows you to control your equipment just like you would through your mobile phone,

EstateView makes it much easier to control multiple devices as you can send the same command to many devices (e.g. setting up/initialising the devices), power loss alerts all come in to one central place and from EstateView these alerts can be emailed out. Note – not all commands for Powertxt® are within EstateView, just the main control commands. For a free trial of EstateView please contact your supplier.

Features and Accessories

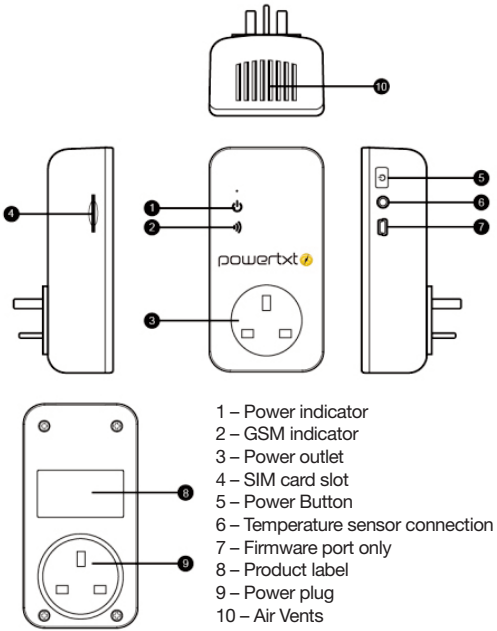
1.1. Main Functions

- Powertxt® needs a live SIM card
- Powertxt® is operated remotely by SMS command
- It supports 1 master user and 4 additional users
- Automatic Time / Date Synchronisation (from the SIM mobile network provider)
- Output Max: 13 Amp for UK version and 16 Amp for EU version
- Power Button: To manually control the power (output) on/off
- Control power (output) by SMS command
- Automatic power (output) loss/restore SMS alert
- Automatic power (output) control by time/day
- Automatic power (output) control by temperature
- Automatic power (output) control by time delay
- Automatic temperature SMS alert
- Signal strength check

1.2. List of Contents

1 x Powertxt® GSM Power Socket
1 x Plug In Temperature Sensor
1 x User Manual

1.3. Schematic Drawing



1 – Power indicator
2 – GSM indicator
3 – Power outlet
4 – SIM card slot
5 – Power Button
6 – Temperature sensor connection
7 – Firmware port only
8 – Product label
9 – Power plug
10 – Air Vents

Figure 1

1.4. Temperature Sensor Drawing

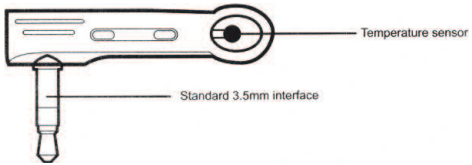


Figure 2

1.5. LED Light Indicator (KEY)

Indicator	Action	Status
Power Light (Blue LED)	No Light	No Mains Power Available
	Constant Light	Mains Power Available
GSM Light (Blue LED)	No Light	NO GSM Signal / Socket Switched Off
	Slow Flashing Light (Fading ON/OFF)	Connected to GSM Network / GSM Signal Available
	Rapid Flashing Light	Device sending/receiving an SMS

Quick Start

2.1. Inserting the SIM card and Temperature Sensor

1. Insert the SIM into the side of the device (see figure 1), push the SIM all the way in until it clicks (to release the SIM simply push down on the SIM until it pops out).

2. Insert the temperature sensor into the side of the socket (see figure 1 & 2). Note - the temperature sensor needs to be pushed all the way in otherwise it can give inaccurate readings.

When the SIM is inserted correctly if the mobile network is available and the device is ready to be programmed the GSM LED Light should be fading ON/OFF (see point 1.5.).

2.2. User Authorisation Levels

All the settings in this device are controlled by SMS command only. Powertxt® has two levels of authorisation, a master user and an additional user. The SMS command format for additional users is #Command#Password# (see 'Full SMS Command List' for additional user commands).

Master User
The master user is the first number to send Powertxt® the first command. Only the master user has authorisation to use all the features of Powertxt®. Only one master user number can be programmed per socket. The master number can be changed to another mobile number by sending an SMS command. If the additional user changes the state of the output/power the master user is notified by SMS.

Additional Users
Up to four additional users can be added. Additional users can; turn the socket power (output) on or off and receive the power loss/restore and temperature alerts.

Other Users
Any users who have not been programmed into this device have no authorisation to control Powertxt®.

2.3. Setting the Master User

The first user to send the first SMS command to Powertxt® will become the master user.

We advise you set the Powertxt® SIM mobile number up as a contact in your phone so you can easily send text messages (SMS commands) to it.

Please send the following SMS command to add a master user: **#00#**

The GSM LED Light will flash rapidly when the device is sending / receiving an SMS (see point 1.5.)

2.4. Changing the Password

The password is automatically set at 1234 by default. We recommend you change this password immediately, please keep this password safe.

Please send the following command to change the password: **#04#OldPassword#NewPassword#**

e.g. #04#1234#5678#

2.5. Setting the Time/Date

Note – If Powertxt® is being used for the first time or it has been reset, the master user needs to set the time/date with this command. The time/date is set according to the SMS centre (the mobile network operator). If the time/date is not set the device may use the original pre-set start date 00:00:00 1st June 2004.

Please send the following SMS command to set the time: **#152#**

(Note the reply format is YYYY/MM/DD)

2.6. Controlling the Power (Output) by SMS (e.g. Turning Your Connected Equipment ON/OFF)

Master User
Send the following command to turn the power (output) ON: **#01#**

Send the following command to turn the power (output) OFF: **#02#**

Additional User
Send the following command to turn the power (output) ON: **#01#Password#**

e.g. #01#1234#
Send the following command to turn the power (output) OFF:
#02#Password#

e.g. #02#1234#

2.7. Controlling the Power (Output) Manually

Press the Power Button (see figure 1) on the side of Powertxt® for 1 second until the power (output) light goes off/on and then again to turn power (output) back on/off.

2.8. Power Loss/Restore SMS Alerts

External Power Supply Lost
If Powertxt® is disconnected from external AC power or a loss of the AC power occurs all functions of the socket are deactivated including the Power Control button. Powertxt® will notify the master user and any additional users 'Mains Power Lost' together with a temperature reading (if applicable). If the power supply is lost and restored within 5 seconds a power loss SMS may not be generated. The power loss/ restore alerts go to all programmed users.

External Power Supply Restored
If Powertxt® is reconnected with external AC power or the external AC power is restored all functions of the socket are reactivated. Powertxt® will notify the master user and any additional users 'Mains Power Restored' together with a temperature reading (if applicable). When the external power supply is resumed the output of Powertxt® will remain in the same state as before power was disconnected. For example, if

the equipment connected to Powertxt® was 'ON' before the external power supply was cut off the equipment will turn back 'ON' when power is restored.

Defining the Users

3.1. Changing the Master User

To change the master user's number please send the following SMS command: **#14#NewMasterNumber#**

e.g. #14#07590111222#

Note – When you have sent the command you will not receive a reply as the master number has now changed. The new master number will receive an SMS.

Warning - Please use this function carefully as once the master user's number has been changed the original user has no authority within Powertxt®.

3.2. Adding an Additional User

Up to 4 additional users (family numbers) can be programmed into Powertxt® to control it and receive SMS alerts. For additional user information & command formats see point 2.2.

To add one additional user please send the following SMS command: **#06#AdditionalNumber#**

e.g. #06#07866123456#

To add several additional users at the same time please send the following SMS command:
#06#AdditionalNumber#AdditionalNumber#

e.g. #06#07866123456#07866222333#
(up to 4 additional users can be added within this command)

3.3. Deleting an Additional User

To delete an additional user please send the following SMS command: **#113#AdditionalNumber#**

e.g. #113#07866123456#

To delete several additional users at the same time please send the following SMS command:
#113#AdditionalNumber#AdditionalNumber#

e.g. #113#07866123456#07866222333#

To delete all additional numbers please send the following SMS command: **#113#**

Controlling the Power (Output) by Time/Day & Delay

4.1. Setting the Time/Day Parameters

When the time/day has been set successfully the scheduled parameters will be saved in Powertxt®. These settings are saved in Powertxt® and will remain until the socket is reset to its factory settings or the settings are changed by this method again. If Powertxt® loses external power or is turned off these parameters are still saved.

These parameters have to be set first then the function needs to be turned ON/OFF with a second SMS Command (see points 4.2. & 4.3.).

Please send the following SMS command to set the time/day control parameters: #129#WorkDay#StartTime#EndTime#

'WorkDay' This value lies in the range of '0' to '9', the following table contains the descriptions of each value.

Value	Corresponding Day	Value	Corresponding Day	Value	Corresponding Day
0	Everyday	4	Thursday	8	Monday - Friday
1	Monday	5	Friday	9	Saturday - Sunday
2	Tuesday	6	Saturday		
3	Wednesday	7	Sunday		

The 'StartTime' and 'EndTime' consists of 4 digits (hh:mm) and works on a 24 hour clock, the 'StartTime' and 'EndTime' should be in the same day and the 'EndTime' must be later than the 'StartTime' during the period.

The power (output) will switch ON at the 'StartTime' and switch OFF at the 'EndTime'.

eg. #129#5#0730#2130# . Powertxt® will switch power ON at 7.30am and switch power OFF at 9.30pm every Friday.

4.2. Controlling the Power (Output) by Time/Day - ON

Once the time/day parameters have been set (see point 4.1) the function needs to be turned ON.

Please send the following SMS command to turn the control by time/day function ON: **#128#1#**

4.3. Controlling the Power (Output) by Time/Day - OFF

Please send the following SMS command to turn the control by time/day function OFF: **#128#0#**

4.4. Controlling the Power (Output) by Time Delay – Power ON

Powertxt® can be set by SMS command so there is a delay in turning the power (output) ON or OFF.

Note: When the 'Time Delay' function is applied the pre-set 'Time/Day Control' switching of Powertxt® power (output) will be over-ridden (e.g. If you send an SMS command to Powertxt® to turn the power off after 10 minutes and then you send an SMS command to turn the power off 2 minutes later the 'time delay' function will be cancelled as Powertxt® power is now off. This is also the same if Powertxt® is set to be on between 9am-5pm Monday to Friday and an SMS command is sent to Powertxt® to turn it off at 3pm (or by pressing the Power Control button on the side). To reset these functions they need to be turned on again by sending #128#1# (see point 4.2.).)

Please send the following SMS command to turn the power (output) ON after a set number of minutes: **#138#1#Minutes#**

e.g. #138#1#60#
This will turn the power (output) ON in 60 minutes (1 hour).

Note: Minutes are the parameters to be set and the range is 1-720. If the minute range is set at 0 the function will be invalid and the power (output) of Powertxt® will not be changed.

4.5. Controlling the Power (Output) by Time Delay – Power OFF

Please send the following SMS command to turn the power (output) OFF after set a number of minutes: **#138#0#Minutes#**

e.g. #138#0#125#

This will turn the power (output) OFF in 125 minutes (2 hours and 5 minutes).

Controlling the Power (Output) by Temperature

5.1. Setting the Temperature Range Parameters

There are two modes for controlling the power (output) by temperature, ***Heating Mode & Cooling Mode***. These parameters have to be set first then you turn the function ON with another SMS Command (see points 5.2. & 5.3.).

Warning – Do not exceed any voltages as stated in this manual and only connect to electrically safe and reliable equipment. We do not recommend you leave a heating/cooling device on for

long periods unattended.

Note – When the temperature range has been set successfully the scheduled parameters will be saved in Powertxt®. These settings are saved in Powertxt® and will remain until the socket is reset to its factory settings or the settings are changed by this method again. If the socket loses external power or is turned off these parameters are still saved.

Heating Mode
Heating mode is used when Powertxt® is connected to a heating device e.g. in winter when the temperature is low and Powertxt® might be used to turn on a heater to keep the room/environment warm. When the room/environment temperature goes below the minimum set value it will turn the power (output) ON then when the room/environment temperature reaches the maximum set value it will turn the power (output) OFF.

Please send the following SMS command to set the temperature control parameters for heating mode:
#159#0#MinimumTempValue#MaximumTempValue#

e.g. #159#0#10#20#

When the room/environment temperature drops below 10 degrees centigrade the power (output) will automatically turn ON and when the room/environment temperature goes above 20 degrees centigrade the power (output) will automatically turn OFF.

Cooling Mode
Cooling mode is used when Powertxt® is connected to a cooling device e.g. in summer when the temperature is high and Powertxt® might be used to turn on an air conditioner to keep the room/environment cool. When the room/environment temperature goes above the maximum set value it will turn the power (output) ON and when the room/environment temperature reaches the minimum set temperature it will turn the power (output) OFF.

Please send the following SMS command to set the temperature control parameters for cooling code:
#159#1#MinimumTempValue#MaximumTempValue#

e.g. #159#1#15#25#

When the room/environment temperature reaches 25 degrees centigrade the power (output) will automatically turn ON and when the room/environment temperature drops to 15 degrees centigrade the power (output) will automatically turn OFF.

5.2. Controlling the Power (Output) by Temperature Range – ON

Please send the following SMS command to turn the control by temperature range function ON: **#159#1#**

5.3. Controlling the Power (Output) by Temperature Range – OFF

Please send the following SMS command to turn the control by temperature range function OFF: **#159#0#**

SMS Temperature Alert (No Power/Output Change)

6.1. Setting the Temperature Range Parameters

This function sets the temperature parameters for an automatic SMS temperature alert. When the room/environment temperature goes out of the programmed range Powertxt® will send an SMS alert to the master user and any additional users.

Note – When the temperature range has been set successfully the temperature parameters will be saved in Powertxt®. These settings are saved in Powertxt® and will remain until the socket is reset to its factory settings or the settings are changed by this method again. If the socket loses external power or is turned off these parameters are still saved.

Please send the following SMS command to set the temperature values: **#170#MinimumTempValue#MaximumTempValue#**

e.g. #170#05#20#

When the room/environment temperature goes below 5 degrees centigrade or above 20 degrees centigrade Powertxt® will send an SMS alert.

Once the temperature parameters have been set the function needs to be turned ON/OFF (see points 6.2 & 6.3.).

6.2. SMS Temperature Alert – ON

Please send the following SMS command to turn the SMS Temperature Alert ON: **#170#1#**

6.3. SMS Temperature Alert – OFF

Please send the following SMS command to turn the SMS Temperature Alert OFF: **#170#0#**

Additional Commands

7.1. Signal Strength

The signal strength scale is 0-33.

Please send the following SMS command to check the SIM mobile network signal strength: **#AM#7#**

Note - a reading lower than 10 is a low signal, Powertxt® will still function with a poor mobile signal however it may affect the power loss messages depending on how poor the signal strength is. Unless the signal is very low it shouldn't affect any other messages providing mains power is connected. We recommend you use a SIM with good mobile signal strength or move Powertxt® to a different area where possible.

7.2. Status – General Status

This Powertxt® general status gives you information on the power, temperature and control functions; Output Status (Power ON/OFF), Temperature Reading, Temperature Control Function (ON/OFF), Schedule Control (ON/OFF) and Delay Control (ON/OFF).

Please send the following SMS command to check the status: **#07#**

7.3. Status – Time/Day Parameters for Automatic Power (Output) Control

Please send the following SMS command: **#128#**

7.4. Status – Time Delay Parameters for Automatic Power (Output) Control

Please send the following SMS command: **#138#**

7.5. Status – Temperature Parameters for Automatic Power (Output) Control

Please send the following SMS command: **#159#**

7.6. Status – Temperature Parameters for SMS Alert

Please send the following SMS command: **#170#**

7.7. Reset

Please send the following SMS command: **#08#**

Full Command List
Master User

Function	Command
Setting the Master User	#00#
Changing the Password	#04#OldPW#NewPW#
Setting the Time/Date	#152#
Turn the Power (Output) ON	#01#
Turn the Power (Output) OFF	#02#
Changing the Master User	#14#NewMasterNumber#
Add One Additional User	#06#AdditionalNumber#
Add Several Additional Users (max 4)	#06#AdditionalNumber# AdditionalNumber#
Delete One Additional User	#113#AdditionalNumber#
Delete Several Additional Users	#113#AdditionalNumber# AdditionalNumber#
Delete All Additional Users	#113#
Setting the Time/Day Parameters for Automatic Power (Output) Control	#129#WorkDay#StartTime #EndTime#
Controlling the Power (Output) by Time/Day – ON	#128#1#
Controlling the Power (Output) by Time/Day – OFF	#128#0#
Controlling the Power (Output) by Time Delay – ON	#138#1#Minutes#

Controlling the Power (Output) by Time Delay – OFF	#138#0#Minutes#
Setting the Temperature Range Parameters (Heating Mode)	#159#0#MinTempValue #MaxTempValue#
Setting the Temperature Range Parameters (Cooling Mode)	#159#1#MinTempValue #MaxTempValue#
Controlling the Power (Output) by Temperature Range – ON	#159#1#
Controlling the Power (Output) by Temperature Range – OFF	#159#0#
Setting the Temperature Range Parameters for SMS Alert	#170#MinTempValue#Max TempValue#
SMS Temperature Alert – ON	#170#1#
SMS Temperature Alert – OFF	#170#0#
Signal Strength	#AM#7#
General Status	#07#
Status – Time/Day Parameters for Automatic Power (Output) Control	#128#
Status – Time Delay Parameters for Automatic Power (Output) Control	#138#
Status – Temperature Parameters for Automatic Power (Output) Control	#159#
Temperature Parameters for SMS Alert	#170#
Reset	#08#

Additional User

Function	Command
Turn the Output/Power ON	#01#Password#
Turn the Output/Power OFF	#02#Password#

Technical Information

Input	230-240v 50Hz
Output	Maximum 13A UK/16A EU
Operating Temperature	-10°C to +50°C
Store Temperature	-20°C to +60°C
Relative Humidity	10-90% Without Condensation
External Temperature Sensor	-10°C to +50°C
GSM Band	900/1800Mhz (Dual band)
Certification	CE Certified / RoHS Compliant
Socket/Plug Info	UK 13A three pin plug/socket **or** EU 16A two pin Schuko plug/socket

General Troubleshooting

Issue	Possible Reason	Solution
The power LED is not illuminated	Powertxt® has no mains power supply	1. Check that mains power is available on the required connection 2. Check the device is fully inserted into the mains power socket/supply
The GSM LED is not illuminated	Powertxt® can't find a network signal or the SIM card can't be identified	1. Check the SIM card is inserted correctly & wipe clean the gold contacts on the back of the SIM card 2. Check the SIM card is activated and live (making sure no PIN code is active on the SIM itself) Note – Occasionally you can get faulty SIM cards, check with your SIM provider
Powertxt® hasn't responded to my command	As Powertxt® needs the mobile network to operate very infrequently messages can be lost or not delivered	If Powertxt® has received the message/command then the required action will have been carried out however the return/reply message may have been lost or not delivered. In this case please either a) send a status request command and this will show you the status of Powertxt® and whether it has actioned your command or b) wait at least 2/3 minutes and try the command again
Powertxt® won't respond to any commands	1. The mobile signal strength in the area is not strong enough for this device to work 2. There is no mains power available in the area where Powertxt® is located 3. The SIM is not activated or live 4. An incorrect command is being sent 5. The mobile (GSM) network is down in the area where Powertxt® is located	1. Try a different mobile network provider or try Powertxt® in a different location 2. Check that mains power is available on the required connection 3. Check the SIM is activated and live 4. Check the command is correct and try again (refer to the user manual) 5. Check with your operator regarding coverage in that area
I have received a reply with 'incorrect parameters or invalid format'	The command you have entered is not in the right format or the command does not exist	Refer to the user manual

Issue	Possible Reason	Solution
I have received a reply saying 'the Master User already exists'	1. Another master user is already programmed 2. Powertxt® has received set up command twice	1. Check the device has not been previously set up by another user 2. The mobile number that sent #00# first will be the master user 3. Please contact your supplier for technical support
The Power Button is not turning the output on/off	There is no power available	Check there is external power available
The GSM LED keeps flashing	1. The network signal is busy 2. The SIM card is locked 3. The SIM card is not active	1. Take the SIM out and wipe the gold contacts on the back, then insert the SIM back into Powertxt® 2. Unlock the SIM card 3. Check with the network provider that the SIM card is still active
I have received a reply with 'No authorisation user'	The user is not programmed within this device	Refer to the user manual
Any other fault	If your device is experiencing a fault that cannot be rectified within this troubleshooting guide please contact your supplier for technical support	
Any other questions	If you have any other questions about this product please contact your supplier or email support@tekview-solutions.com	