CHIPKIN

# SIA
# Codes Driver
# FS-8705-19

Chipkin - Enabling Integration

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# TABLE OF CONTENTS

**TABLE OF CONTENTS** ..... **2**

**1 SIA CODES DRIVER DESCRIPTION** ..... **3**

**2 DRIVER SCOPE OF SUPPLY** ..... **5**

2.1 Supplied by FieldServer Technologies for this driver ..... 5
2.2 Provided by the Supplier of 3rd Party Equipment ..... 5
*2.2.1 Required 3rd Party Hardware* ..... *5*
*2.2.2 Required 3rd Party Software* ..... *5*
*2.2.3 Required 3rd Party Configuration* ..... *5*

**3 HARDWARE CONNECTIONS** ..... **6**

**4 CONFIGURING THE FIELDSERVER AS A SIA PANEL PASSIVE CLIENT** ..... **7**

4.1 Data Arrays/Descriptors ..... 7
4.2 Client Side Connection Descriptions ..... 8
4.3 Client Side Node Descriptors ..... 11
4.4 Client Side Map Descriptors ..... 12
4.5 How Data Arrays are used to Store Events ..... 12
*4.5.1 Method 1 - Most Recent Event Data* ..... *12*
*4.5.2 Method 2 – Storing Data for Any Zone, Door, Line … etc* ..... *13*
*4.5.3 Method 3 – Using Acc# to differentiate Zones, Door, Line … etc* ..... *15*
*4.5.4 Method 4 – Storing Data for a Specific Zone, Door, Line … etc* ..... *17*
*4.5.5 Event Codes – Event Code Numbers* ..... *18*
4.6 ZoneCodes Table ..... 32
4.7 Driver Limitations ..... 32

**5 CONFIGURING THE FIELDSERVER AS A SIA SERVER** ..... **33**

**6 REVISION HISTORY** ..... **34**

**APPENDIX A. ADVANCED TOPICS** ..... **35**

Appendix A.1. How to add / change security Codes ..... 35
Appendix A.2. The Default Event code list ..... 37
Appendix A.3. Driver Error Messages ..... 42
Appendix A.4. Driver Statistics ..... 46
Appendix A.5. Exposing Driver Stats ..... 46
Appendix A.6. Message Formats ..... 48

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# 1 SIA Codes Driver Description

The driver provides an interface to alarm panels that support the Security Industry Association (SIA) codes and which produce event messages formatted as described in this document. The DSC system III is a device which meets these requirements. Take care – The SIA codes are a table of two letter event codes and their meanings. Many security panels use these codes BUT they do not all format messages in the same way.

When combined with another protocol driver the security panel event data can be served using another protocol such as BACnet, Lonworks, Johnson Controls N2, Rockwell, XML etc. A block diagram showing potential connectivity is provided below.

This is a passive client driver – it waits passively to receive event notifications. It cannot poll for data – this means this driver cannot send a message to the panel to obtain the status of the panel or some device. A consequence of this is that the user must be involved in synching the panel and the data collected by this driver. For information on synchronization is provided in this document.

The driver allows new codes to be added and existing codes to be modified providing some future proofing.

It is possible to configure this driver to store some events and not others. When events are received for which no storage location has been defined then the driver will print messages and update operation statistics. This will allow you to ensure you are not missing the events you need to monitor.

Each SIA code has been allocated an (arbitrary) integer value. When an event is received, the driver extracts the SIA code, looks it up in a table and stores the corresponding number. It is your job to interpret these numbers (suing the table provided in this manual) Each event type is also allocated a code_state. This is similar to the code number except that by default the large range of code numbers is mapped onto a small range of code states. Code numbers are better for analog variables. Code States are better for Multi state variables. The driver also allows certain events to 'self-restore' after a configurable timer. Some events report the event but don't send an event message when the condition is restored. The self restore model works for these. By default no events self restore. The user must configure the driver appropriately.

The driver can only be used as a passive client. Minimal active server functionality is provided only to support our ongoing quality assurance program by facilitating automated testing of the driver. This functionality allows the driver to send messages as if it were in fact a security panel. It is not documented or supported.

**Synchronization**

Special steps are required for synchronization. On startup the driver will have no knowledge of prior events. Its internal database will be empty and thus a remote system monitoring the gateway data might think that all devices are in a normal state. Thus synchronization is important. It requires manual actions by you. Firstly clear devices to their normal states. Now reset the FieldServer.

If the event state for each zone is mapped onto a BACnet multistate object there could be a problem – Multistate objects are not allowed to be in state zero in BACnet. For this reason the driver initializes all event state data to state=1. The upstream device should take this to mean 'the corresponding field point has not reported an event so its status is unknown."

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**Driver Functionality**

The driver waits for messages from the Panel. It cannot initiate communications nor read the status of a device.

Normally, the panel requires that each message it sends is acknowledged. The driver can be configured to send these acknowledgements. The default behavior is to not send the acknowledgements. Typically a panel will report a trouble if it does not receive an acknowledgement message within 4 seconds of sending a message.

The panel sends a message each time there is an event. In addition the panel sends a empty message periodically. When an acknowledgement is sent in response to the empty message (or in response to other messages) the panel knows that the connection is good and that the messages are being monitored.

When an event message arrives, the driver breaks out the data, determining the event type. The event type tells the driver whether the event applies to a zone, printer, line, door, area etc. Now the driver can determine, the zone, printer, door (… etc) number. This gives the driver enough information on where to store the event data. If a new event occurs for that zone (for example) then the previous event data is overwritten.

In addition, the driver can store the most recent event data in a particular location. Each new event overwrites the previous data. There is no queue of data.

**Max Nodes Supported**

| FIELDSERVER MODE | NODES | COMMENTS |
|---|---|---|
| Passive Client | 1 | Only one panel can be connected to a single FieldServer . If this limitation has significant impact for your project, contact us, we might be able to change this limitation. |
| Active Server<br>(Simulate a Panel) | 0 | Not supported or documented. |

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# 2 Driver Scope of Supply

## 2.1 Supplied by FieldServer Technologies for this driver

| FIELDSERVER TECHNOLOGIES PART # | DESCRIPTION |
|---|---|
| - | No specific cables are shipped with this driver.<br>A generic RJ45 Ethernet cable must be shipped with this driver. |
| - | A generic male and Female connector kit must be shipped with this driver. |
| FS-8705-19 | Driver Manual. |
| | |
| | |
| | |

## 2.2 Provided by the Supplier of 3rd Party Equipment

### 2.2.1 Required 3rd Party Hardware

| PART # | DESCRIPTION |
|---|---|
| | |

### 2.2.2 Required 3rd Party Software

### 2.2.3 Required 3rd Party Configuration

None Known.

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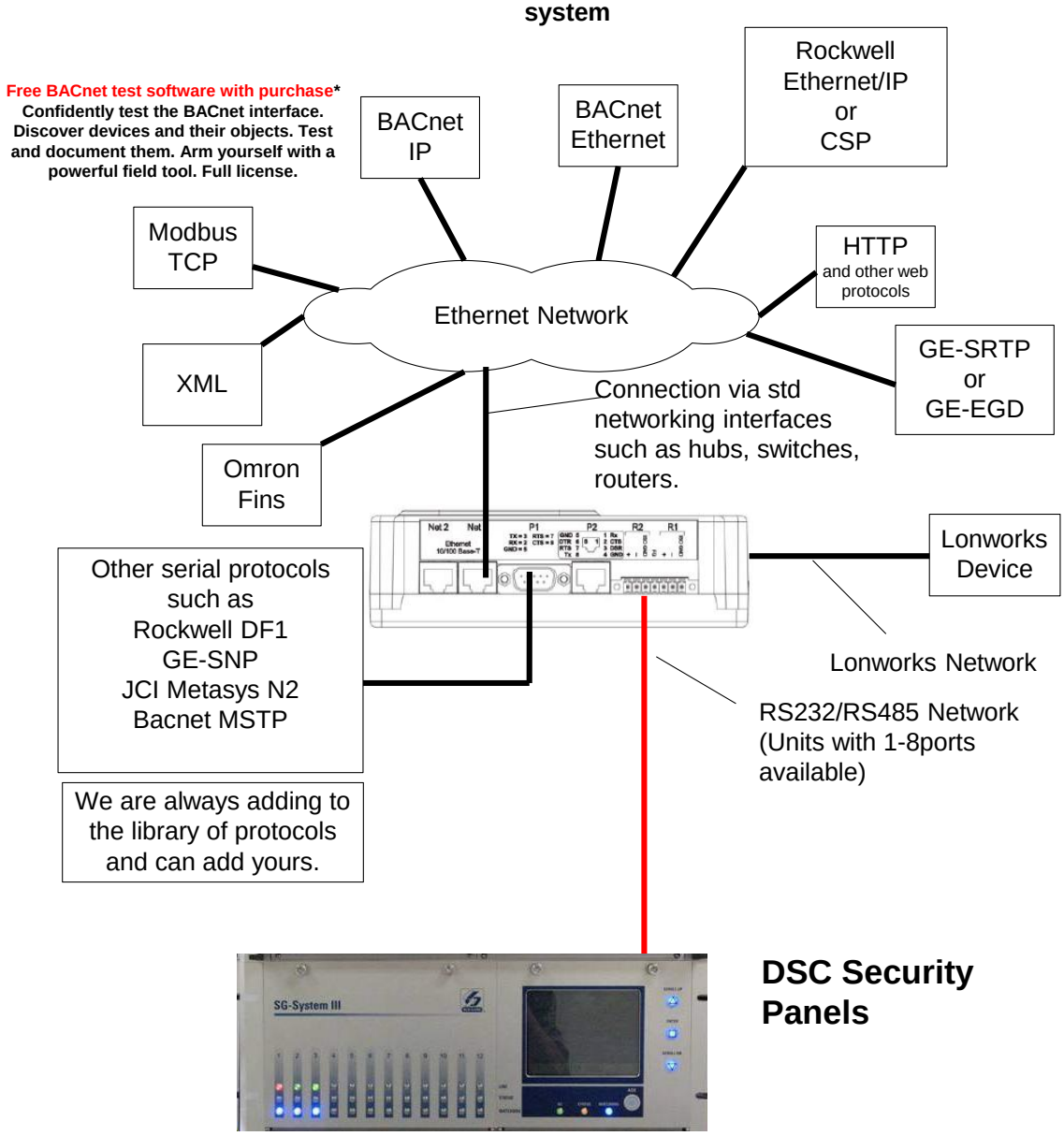
# 3 Hardware Connections

Multiple upstream protocols and connection supported. See list of FieldServer Drivers.

**Monitor and Control DSC Security Panels with SIA codes using BACnet, Lonworks or a PLC system**

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# 4 Configuring the FieldServer as a SIA Panel Passive Client

For a detailed discussion on FieldServer configuration, please refer to the FieldServer Configuration Manual. The information that follows describes how to expand upon the factory defaults provided in the configuration files included with the FieldServer (See ".csv" sample files provided with the FS).

This section documents and describes the parameters necessary for configuring the FieldServer to communicate with a DSC SIA Panel

## 4.1 Data Arrays/Descriptors

The configuration file tells the FieldServer about its interfaces, and the routing of data required. In order to enable the FieldServer for FSC - Electronic Siren Controllers Serial Driver communications, the driver independent FieldServer buffers need to be declared in the "Data Arrays" section, the destination device addresses need to be declared in the "Client Side Nodes" section, and the data required from the servers needs to be mapped in the "Client Side Map Descriptors" section. Details on how to do this can be found below.

Note that in the tables, * indicates an optional parameter, with the bold legal value being the default.

| SECTION TITLE |
|---|
| Data_Arrays |

| COLUMN TITLE | FUNCTION | LEGAL VALUES |
|---|---|---|
| Data_Array_Name | Provide name for Data Array | Up to 15 alphanumeric characters |
| Data_Array_Format | Provide data format. Each Data Array can only take on one format. | Float, Bit, UInt16, Uint32, SInt16, Packed_Bit, Byte, Packed_Byte, Swapped_Byte |
| Data_Array_Length | Number of Data Objects. Must be larger than the data storage area required by the Map Descriptors for the data being placed in this array. | 1-10,000 |

**Example**

```
// Data Arrays
Data_Arrays
Data_Array_Name,        Data_Format,    Data_Array_Length,

sia-stats,              UNT16,          200
```

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## 4.2 Client Side Connection Descriptions

Create one connection for each PRO2000 port. Each connection can only be used to connect to a single PRO2000 interface/port.

| SECTION TITLE |
| --- |
| Connections |

| COLUMN TITLE | FUNCTION | LEGAL VALUES |
| --- | --- | --- |
| Port | Specify which port the device is connected to the FieldServer | P1-P8, R1-R2[1] |
| Protocol | Specify protocol used | SIA |
| Baud* | Specify baud rate | Driver Supports : 110; 300; 600; 1200; 2400; 4800; **9600**; 19200; 28800; 38400; 57600 Baud |
| Parity* | Specify parity | Driver Supports : 7,**8** |
| Data_Bits* | Specify data bits | Driver Supports : **1**,2 |
| Stop_Bits* | Specify stop bits | Driver Supports : Odd, Even, **None** |
| Handshaking* | Specify hardware handshaking | **None** |
| Poll _Delay* | This parameter is not used. | |
| SIA_Ack_Suprvisor | Default is No.<br>When enabled with a 'Yes' in the configuration file, the driver will send an ack each time it receives a keep-alive message (used for port supervision) message. This is different from acking messages. | **No**, Yes |
| SIA_Ack_Msgs | Default is No. | **No**, Yes |

[1] Not all ports shown are necessarily supported by the hardware. Consult the appropriate Instruction manual for details of the ports available on specific hardware.

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| | | |
|---|---|---|
| | When enabled with a 'Yes' in the configuration file, the driver will send an ack each time it receives an event message. This does not include ack's to the keep-alive message. | |
| SIA_RLL_Digits | This corresponds to a setup option on the panel. Depending on the setting, the length of the message and hence this driver ability to process them is affected to.<br>Driver Default = 3.<br>Also tested with value=5<br><br>Panel Setting:<br>Option[11]:Output RRLLL Digits - Default[5] | **3**,5 |
| SIA_State_or_Number | By default the driver stores a number that corresponds to the event type. Eg. 128 for Fire Alarm and 130 for return to normal from a Fire Alarm.<br><br>If you set this parameter to state, then the driver stores a 2ndary value (usually a 1 or zero) associated with the event. | **Number,** State |
| SIA_Parse_Option | Some messages don't carry a useful payload. The driver ignores them but reports them as potential errors since it doesn't know what to do with the payload. If you are concerned then you can have them ignored and the messages suppressed. | **0**,1,2 |

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| | | |
|---|---|---|
| | If set to 1 then all messages that don't have a 'S' at the begin are ignored.<br><br>If set to 2 then all messages with NYK, NYC, NNT , NNR codes are ignored/ | |

**Example**

```
//      Client Side Connections

Connections
Port,           Baud,           Parity,     Protocol,
P1,             9600,           None,       SIA,
```

Suitable for acking the keep-alive message but does not ack event messages.

```
//      Client Side Connections

Connections
Port,           Baud,           Parity,     Protocol,   SIA_Ack_Suprvisor
P1,             9600,           None,       SIA,        Yes
```

Suitable for acking the keep-alive message AND event messages.

```
//      Client Side Connections

Connections
Port,           Baud,     Parity,     Protocol,     SIA_Ack_Suprvisor, SIA_Ack_Msgs
P1,             9600,     None,       SIA,          Yes,Yes
```

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## 4.3 Client Side Node Descriptors

Create one Node per connection only.

| SECTION TITLE |
|---|
| Nodes |

| COLUMN TITLE | FUNCTION | LEGAL VALUES |
|---|---|---|
| Node_Name | Provide name for node | Up to 32 alphanumeric characters |
| Node_ID | Station address of physical server node<br><br>This parameter is not used directly by the driver. We recommend that a unique Node ID's be given to each node. | 1-258 |
| Protocol | Specify protocol used | SIA |
| Connection | Specify which port the device is connected to the FieldServer | P1-P8, R1-R2[2] |
| | | |

**Example**

```
// Client Side Nodes


Nodes
Node_Name,      Node_ID,    Protocol,    Connection
Pro2kPanel,     1,          SIA,         P1
```

[2] Not all ports shown are necessarily supported by the hardware. Consult the appropriate Instruction manual for details of the ports available on specific hardware.

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## 4.4 Client Side Map Descriptors

For Passive Client configurations, normally the Map Descriptors define the storage location for incoming data. This driver is different. No Map Descriptors are required for this protocol. Storage is based on creating Data Arrays which are suitably named.

## 4.5 How Data Arrays are used to Store Events

Each event report contains the 'address' of the device as well as information about the event type. By creating and naming data arrays appropriately you can define storage for the event data.

Each event may be stored in 4 ways.

### 4.5.1 Method 1 - Most Recent Event Data

If you create a data array named 'sia_recent' the driver will store information about the most recent event in this array. Each location in the array has a specific meaning. Each new event causes this data to be overwritten. (Using Moves and Logic in the configuration) it is possible to make a small queue of these recent events.

| OFFSET | CONTENTS |
|---|---|
| 0 | Source |
| 1 | Receiver |
| 2 | Line Card |
| 3 | Account Number |
| 4 | Partition |
| 5 | Event Code – 1st of 2 characters |
| 6 | Event Code – 2nd of 2 characters |
| 7 | Spare |
| 8 | Code Number<br>Each code is represented by an index number. Eg. QA(Emergency alarm)=128<br>For a full list of these numbers see Appendix A |
| 9 | Zone Code |
| 10 | Number - Zone, door, area, line … etc |
| 11 | Code State<br>Similar to Event Code but this is the 2ndary value associated with each event and it is intended to represent a active or normal state. |
| | |
| | |

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### 4.5.2 Method 2 – Storing Data for Any Zone, Door, Line … etc

Only use this method if zone001 (for example ) is unique to the entire system. If there the same zone exists on different accounts / receivers etc this method is not suitable.

This method works this way – There is a data array to store (for example) zone data. If zone 21 reports an event, then the event number is stored in location/offset 21. If zone 1 reports then the storage location/offset is 1. In General offset x for Zone x.

You do not need to store data you are not interested in. The only consequence to ignoring some events, is that the driver will print some message warning you that some events are not being stored.

If you create the following set of data arrays then all 12 types of events can be captured. The length of the data array is important. In this example, the length is 200. This if zone 200 reports an event, the data array will be too short. Reason – the lengfth is 200 , the 1st element is offset 0, the last element is offset 199. Therefore there is no offset 200 to store the zone event.

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Data_Arrays

Data_Array_Name ,Data_Format ,Data_Array_Length

Sia_allUN ,UINT16 ,200

Sia_allUSER ,UINT16 ,200

Sia_allZONE ,UINT16 ,200

Sia_allAREA ,UINT16 ,200

Sia_allDOOR ,UINT16 ,200

Sia_allEXP ,UINT16 ,200

Sia_allREL ,UINT16 ,200

Sia_allMANU ,UINT16 ,200

Sia_allDEAL ,UINT16 ,200

Sia_allLINE ,UINT16 ,200

Sia_allPRNT ,UINT16 ,200

Sia_allPT ,UINT16 ,200

(Read section 4.6 ZoneCodes Table to see how we came to these array names).

Each time a new event occurs the previous data at that location is overwritten.

Example: QA009

QA is event number 128. It applies to zones. (zonecode column of table in section **Error! Reference source not found. Error! Reference source not found.**

Thefore the value 128 will be stored at offset 9 in the table Sia_allZONE

Example: DD027

DD is event number 29. It applies to doors. (zonecode column of table in section **Error! Reference source not found. Error! Reference source not found.**

Thefore the value 29 will be stored at offset 27 in the table Sia_allDOOR

What happens if you have the same zone/door/line etc number allocated in two different areas of you site ? The driver is able to differentiate between zone x on one Receiver/LineCard/Partition and zone x on another one. Contact support for more information.

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### 4.5.3 Method 3 – Using Acc# to differentiate Zones, Door, Line … etc

If you have a system with many panels, its possible that each panel uses the same zone numbers. Ie. You might find zone001 exists in multiple panels. We can use the account number to differentiate them.

This method works this way – There is a data array to store (for example) zone data for each account. If zone 21 reports an event, then the event number is stored in location/offset 21. If zone 1 reports then the storage location/offset is 1. In General offset x for Zone x. but the account number must be matched too.

You do not need to store data you are not interested in. The only consequence to ignoring some events, is that the driver will print some message warning you that some events are not being stored.

If you create the following set of data arrays then all 12 types of events can be captured. The length of the data array is important. In this example, the length is 200. This if zone 200 reports an event, the data array will be too short. Reason – the length is 200 , the 1st element is offset 0, the last element is offset 199. Therefore there is no offset 200 to store the zone event.

Data_Arrays

Data_Array_Name ,Data_Format ,Data_Array_Length

Sia_acc***nnnn***UN ,UINT16 ,200

Sia_acc***nnnn***USER ,UINT16 ,200

Sia_acc***nnnn***ZONE ,UINT16 ,200

Sia_acc***nnnn***AREA ,UINT16 ,200

Sia_acc***nnnn***DOOR ,UINT16 ,200

Sia_acc***nnnn***EXP ,UINT16 ,200

Sia_acc***nnnn***REL ,UINT16 ,200

Sia_acc***nnnn***MANU ,UINT16 ,200

Sia_acc***nnnn***DEAL ,UINT16 ,200

Sia_acc***nnnn***LINE ,UINT16 ,200

Sia_acc***nnnn***PRNT ,UINT16 ,200

Sia_acc***nnnn***T ,UINT16 ,200

Where ***nnnn is*** a 4 digit number (padded with zeroes if required)

Eg

Sia_acc0118ZONE ,UINT16 ,200

The driver will store zone events from account 118 in this data array. If you have multiple accounts create multiple arrays, each with the correct account number.

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(Read section 4.6 ZoneCodes Table to see how we came to these array names).

Each time a new event occurs the previous data at that location is overwritten.

Example: [#9040]QA009

QA is event number 128. It applies to zones. (zonecode column of table in section **Error! Reference source not found. Error! Reference source not found.**

Therefore the value 128 will be stored at offset 9 in the table Sia_acc9040ZONE

Because the account number matches

Example: [#9041]QA009

Therefore the value 128 will be stored at offset 9 in the table Sia_acc9041ZONE

Because the account number matches

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### 4.5.4 Method 4 – Storing Data for a Specific Zone, Door, Line … etc

This method works this way – You create a data array for a specific zone/door/area etc and the driver stores the event number at offset zero in that array.

You do not need to store data you are not interested in. The only consequence to ignoring some events, is that the driver will print some message warning you that some events are not being stored.

To know how to form the data array name you will need manual section

4.6 ZoneCodes Table

To see the base name.

Eg. Base name for zones is 'ZONE'

Eg. Base name for doors is 'DOOR'

Data Array Names are formed as follows

Sia_xxxx001 where xxxx is 2 to 4 characters from the 4.6 ZoneCodes Table

Eg.,

In this example, Data arrays exist to store events for zones 1 to 4 and for Door #5.

Data_Arrays

Data_Array_Name ,Data_Format ,Data_Array_Length

Sia_ZONE001 ,UINT16 ,1

Sia_ZONE002 ,UINT16 ,1

Sia_ZONE003 ,UINT16 ,1

Sia_ZONE004 ,UINT16 ,1

Sia_DOOR005 ,UINT16 ,1

What happens if you have the same zone/door/line etc number allocated in two different areas of you site ? The driver is able to differentiate between zone x on one Receiver/LineCard/Partition and zone x on another one. Contact support for more information.

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### 4.5.5 Event Codes – Event Code Numbers

SIA codes are two alpha characters. Each pair represents a different event type. The SIA codes actually infer two items of information.

1) the event type – eg. QA Emergency alarm

2)what the event applies to. Eg. Zone, Door ….

Using the table below you can see the driver will store the value 128 when it receives a 'QA' event. Using the table you can see that the QA event reports the Zone number. You can also see that if you have configured the driver to store the state (as opposed to the number) then it will store state 1. (When code QH is received the driver will store 130 (number) or 0 (state).

Using the table below you can see the driver will store the value 138 when it receives a 'RC' event. Using the table you can see that the RC event reports the Relay number.

| EVENT CODE0 | EVENT CODE1 | CODE NUMBER | DESCRIPTION OF EVENT | CODE STATE | ZONECODE |
|---|---|---|---|---|---|
| | | 1 | This value is used to report that a status update has not been received for the point. The gateway initializes data arrays with this value. | | |
| A | T | 2 | AC trouble AC power has been failed | | SIA_ZONECODE_UNUSED |
| B | A | 3 | Burglary alarm Burglary zone has been violated while armed | | SIA_ZONECODE_ZONE |
| B | B | 4 | Burglary bypass Burglary zone has been bypassed | | SIA_ZONECODE_ZONE |
| B | C | 5 | Burglary cancel Alarm has been cancelled | | SIA_ZONECODE_USER |
| B | H | 6 | Burglary A. rest. Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| B | J | 7 | Burglary T. rest. Trouble condition eliminated | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| B | R | 8 | Burglary restoral Alarm/trouble condition eliminated | | SIA_ZONECODE_ZONE |
| B | S | 9 | Burglary supervisory. Unsafe intrusion detection system condition | | SIA_ZONECODE_ZONE |
| B | T | 10 | Burglary trouble Burglary zone activated during testing | | SIA_ZONECODE_ZONE |
| B | U | 11 | Burglary unbypass Zone bypass has been removed | | SIA_ZONECODE_ZONE |
| B | V | 12 | Burglary Verified More than 3 burglary zones have been triggered | | SIA_ZONECODE_ZONE |
| B | X | 13 | Burglary test Burglary zone activated during testing | | SIA_ZONECODE_ZONE |
| C | A | 14 | Automatic closing System armed automatically | | SIA_ZONECODE_AREA |
| C | E | 15 | Closing extend Extend closing time | | SIA_ZONECODE_USER |
| C | F | 16 | Forced closing System armed  some zones not ready | | SIA_ZONECODE_USER |
| C | G | 17 | Close area System has been partially armed | | SIA_ZONECODE_USER |
| C | I | 18 | Fail to close An area has not been armed at the end of the closing window | | SIA_ZONECODE_USER |
| C | J | 19 | Late close An area was armed after the closing window | | SIA_ZONECODE_USER |
| C | K | 20 | Early close An area was armed before the closing window | | SIA_ZONECODE_USER |
| C | L | 21 | Closing report System armed normal | | SIA_ZONECODE_USER |
| C | P | 22 | Automatic closing System armed automatically | | SIA_ZONECODE_USER |
| C | R | 23 | Recent Closing An alarm occurred within five minutes after the system was closed | | SIA_ZONECODE_USER |
| C | S | 24 | Closing switch Account has been armed by Keyswitch | | SIA_ZONECODE_ZONE |
| C | T | 25 | Late to open System was not disarmed on time | | SIA_ZONECODE_AREA |

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| | | | | | |
|---|---|---|---|---|---|
| C | W | 26 | Was force armed Header for a force armed session- forced point msg. may follow | | SIA_ZONECODE_AREA |
| C | Z | 27 | Point closing A point- as opposed to a whole area or account- has closed. | | SIA_ZONECODE_ZONE |
| D | C | 28 | Access closed Access to all users prohibited | | SIA_ZONECODE_DOOR |
| D | D | 29 | Access denied Access denied- unknown code | | SIA_ZONECODE_DOOR |
| D | F | 30 | Door forced Door opened without access request | | SIA_ZONECODE_DOOR |
| D | G | 31 | Access granted Door access granted | | SIA_ZONECODE_DOOR |
| D | K | 32 | Access lockout Access denied- known code | | SIA_ZONECODE_DOOR |
| D | O | 33 | Access open Access to authorised users allowed | | SIA_ZONECODE_DOOR |
| D | R | 34 | Door restoral access alarm/trouble condition eliminated | | SIA_ZONECODE_DOOR |
| D | S | 35 | Door station Identifies door for next report | | SIA_ZONECODE_DOOR |
| D | T | 36 | Access trouble Access system trouble | | SIA_ZONECODE_UNUSED |
| D | U | 37 | dealer ID Zone description gives dealer ID # dealer | | SIA_ZONECODE_DEALER |
| E | A | 38 | Exit Alarm an exit zone remained violated at the end of the exit delay period | | SIA_ZONECODE_ZONE |
| E | E | 39 | Exit error an exit zone remained violated at the end of the exit delay period | | SIA_ZONECODE_USER |
| E | R | 40 | Expansion rest. Expansion device trouble eliminated | | SIA_ZONECODE_EXPANDER |
| E | T | 41 | Expansion trouble Expansion device trouble | | SIA_ZONECODE_EXPANDER |
| F | A | 42 | Fire alarm Fire condition detected | | SIA_ZONECODE_ZONE |
| F | B | 43 | Fire bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| F | H | 44 | Fire Alarm restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| F | I | 45 | Fire test begin The transmitter area's fire test has begun | | SIA_ZONECODE_AREA |
| F | J | 46 | Fire Trouble restore Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| F | K | 47 | Fire test end The transmitter area's fire test has ended | | SIA_ZONECODE_AREA |
| F | R | 48 | Fire restoral Alarm/trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| F | S | 49 | Fire supervisory Unsafe fire detection system condition | | SIA_ZONECODE_ZONE |
| F | T | 50 | Fire trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| F | U | 51 | Fire unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| F | X | 52 | Fire test Fire zone activated during test | | SIA_ZONECODE_ZONE |
| F | Y | 53 | Missing fire Trouble A fire point is now logically missing | | SIA_ZONECODE_ZONE |
| G | A | 54 | Gas alarm Gas alarm condition detected | | SIA_ZONECODE_ZONE |
| G | B | 55 | Gas bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |
| G | H | 56 | Gas A. restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| G | J | 57 | Gas T. restore Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| G | R | 58 | Gas restoral Alarm \ trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| G | S | 59 | Gas supervisory Unsafe gas detection system condition | | SIA_ZONECODE_ZONE |
| G | T | 60 | Gas trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| G | U | 61 | Gas unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| G | X | 62 | Gas test gas Zone activated during test | | SIA_ZONECODE_ZONE |
| H | A | 63 | Hold-up alarm Silent alarm- user under duress | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| H | B | 64 | Hold-up bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |
| H | H | 65 | Hold-up A. rest. Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| H | J | 66 | Hold-up T. rest. Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| H | R | 67 | Hold-up restoral Alarm \ trouble condition eliminated | | SIA_ZONECODE_ZONE |
| H | S | 68 | Hold-up supervisory. Unsafe holdup system condition | | SIA_ZONECODE_ZONE |
| H | T | 69 | Hold-up trouble Zone disabled by default | | SIA_ZONECODE_ZONE |
| H | U | 70 | Hold-up unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| J | A | 71 | User code tamper Too many unsuccessful attempts have been made to enter a user ID | | SIA_ZONECODE_AREA |
| J | D | 72 | Date changed The date was changed in the transmitter/receiver | | SIA_ZONECODE_USER |
| J | H | 73 | Holiday changed The transmitter's holiday schedule has been changed | | SIA_ZONECODE_USER |
| J | L | 74 | Log threshold The transmitter's log memory has reached its threshold level | | SIA_ZONECODE_UNUSED |
| J | O | 75 | Log overflow The transmitter's log memory has overflowed | | SIA_ZONECODE_UNUSED |
| J | R | 76 | Schedule execute An automatic scheduled event was executed | | SIA_ZONECODE_AREA |
| J | S | 77 | Schedule change An automatic schedule was changed | | SIA_ZONECODE_USER |
| J | T | 78 | Time changed The time was changed in the TX\RX | | SIA_ZONECODE_USER |
| J | V | 79 | User code change A user's code has been changed | | SIA_ZONECODE_USER |
| J | X | 70 | User code delete A user's code has been removed | | SIA_ZONECODE_USER |

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| | | | | | |
|---|---|---|---|---|---|
| K | A | 81 | Heat alarm High temperature detected on premise | | SIA_ZONECODE_ZONE |
| K | B | 82 | Heat bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |
| K | H | 83 | Heat Alarm restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| K | J | 84 | Heat Trouble restore Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| K | R | 85 | Heat restoral Alarm/Trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| K | S | 86 | Heat supervisory Unsafe heat detection system condition | | SIA_ZONECODE_ZONE |
| K | T | 87 | Heat trouble Zone disable by fault | | SIA_ZONECODE_ZONE |
| K | U | 88 | Heat unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| L | B | 89 | Local program Begin local programming begin | | SIA_ZONECODE_UNUSED |
| L | D | 90 | Local program Denied access code incorrect | | SIA_ZONECODE_UNUSED |
| L | E | 91 | Listen-in ended The listen-in session has been terminated | | SIA_ZONECODE_UNUSED |
| L | F | 92 | Listen-in begin The listen-in session with the receiver has begun | | SIA_ZONECODE_UNUSED |
| L | R | 93 | Phone line rest. Phone line restored to service | | SIA_ZONECODE_LINE |
| L | S | 94 | Local program Local programming successful | | SIA_ZONECODE_UNUSED |
| L | T | 95 | Phone line Trouble Phone line report | | SIA_ZONECODE_LINE |
| L | U | 96 | Local program fail Local programming unsuccessful | | SIA_ZONECODE_UNUSED |
| L | X | 97 | Local program ended A local programming session has been terminated | | SIA_ZONECODE_UNUSED |
| M | A | 98 | Medical alarm Emergency assistance request | | SIA_ZONECODE_ZONE |
| M | B | 99 | Medical bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| M | H | 100 | Medical Alarm restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| M | J | 101 | Medical T. rest. Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| M | R | 102 | Medical restoral Alarm/trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| M | S | 103 | Medical supervisory Unsafe system condition exists | | SIA_ZONECODE_ZONE |
| M | T | 104 | Medical trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| M | U | 105 | Medical unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| N | A | 106 | No activity There has been no activity for a programmed amount of time | | SIA_ZONECODE_UNUSED |
| N | F | 107 | Forced perimeter arm Some zones/points not ready | | SIA_ZONECODE_AREA |
| N | L | 108 | Perimeter armed An area has been perimeter armed | | SIA_ZONECODE_AREA |
| O | A | 109 | Automatic opening System has disarm automatically | | SIA_ZONECODE_AREA |
| O | C | 110 | Cancel report Untyped zone cancel | | SIA_ZONECODE_USER |
| O | G | 111 | Open area System has been partially disarmed | | SIA_ZONECODE_AREA |
| O | I | 112 | Fail to open An area has not been armed at the end of the opening window | | SIA_ZONECODE_AREA |
| O | J | 113 | Late open An area was disarmed after the opening window | | SIA_ZONECODE_USER |
| O | K | 114 | Early open An area was disarmed before the opening window | | SIA_ZONECODE_USER |
| O | P | 115 | Opening report Account was disarmed | | SIA_ZONECODE_USER |
| O | R | 116 | Disarm from alarm Account in alarm was reset/disarmed | | SIA_ZONECODE_USER |

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| | | | | | |
|---|---|---|---|---|---|
| O | S | 117 | Opening Keyswitch account has been disarmed by Keyswitch | | SIA_ZONECODE_ZONE |
| O | T | 118 | Late to close System was not armed on time | | SIA_ZONECODE_USER |
| O | Z | 119 | Point opening A point- rather than a full area or account-disarmed | | SIA_ZONECODE_ZONE |
| P | A | 120 | Panic alarm Emergency assistance request- manually activated | | SIA_ZONECODE_ZONE |
| P | B | 121 | Panic bypass Panic zone has been bypassed | | SIA_ZONECODE_ZONE |
| P | H | 122 | Panic Alarm restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| P | J | 123 | Panic Trouble restore Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| P | R | 124 | Panic restoral Alarm/trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| P | S | 125 | Panic Supervisory Unsafe system condition exists | | SIA_ZONECODE_ZONE |
| P | T | 126 | Panic trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| P | U | 127 | Panic unbypass Panic zone bypass has been removed | | SIA_ZONECODE_ZONE |
| Q | A | 128 | Emergency alarm Emergency assistance request | 1 | SIA_ZONECODE_ZONE |
| Q | B | 129 | Emergency bypass Zone has been bypassed | | SIA_ZONECODE_ZONE |
| Q | H | 130 | Emergency. A. rest. Alarm condition has been eliminated | 0 | SIA_ZONECODE_ZONE |
| Q | J | 131 | Emergency. T. rest. Trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| Q | R | 132 | Emergency. Restoral Alarm/trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| Q | S | 133 | Emergency. Supervisory Unsafe system condition exists | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| Q | T | 134 | Emergency Trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| Q | U | 135 | Emergency. Unbypass Bypass has been removed | | SIA_ZONECODE_ZONE |
| R | A | 136 | Remote Programmer Called failed Transmitter failed to communicate with the remote programmer | | SIA_ZONECODE_UNUSED |
| R | B | 137 | Remote Program begin Remote programming session initiated | | SIA_ZONECODE_UNUSED |
| R | C | 138 | Relay close The relay specified in the address field (optional) has energised | | SIA_ZONECODE_RELAY |
| R | D | 139 | Remote Program Denied Access passcode incorrect | | SIA_ZONECODE_UNUSED |
| R | N | 140 | Remote reset A transmitter was reset via a remote programmer | | SIA_ZONECODE_UNUSED |
| R | O | 141 | Relay open The relay specified in the address field (optional) has deenergised | | SIA_ZONECODE_RELAY |
| R | P | 142 | Automatic test Automatic communication test report | | SIA_ZONECODE_UNUSED |
| R | R | 143 | Power up System lost power- is now restored | | SIA_ZONECODE_UNUSED |
| R | S | 144 | Remote Program success Remote programming successful | | SIA_ZONECODE_UNUSED |
| R | T | 145 | Data lost Dialer data lost- transmission error | | SIA_ZONECODE_LINE |
| R | U | 146 | Remote Program fail Remote programming unsuccessful | | SIA_ZONECODE_UNUSED |
| R | X | 147 | Manuel test Manuel communication test report | | SIA_ZONECODE_USER |
| S | A | 148 | Sprinkler alarm Sprinkler flow condition exist | | SIA_ZONECODE_ZONE |
| S | B | 149 | Sprinkler. Bypass Sprinkler zone has been bypassed | | SIA_ZONECODE_ZONE |
| S | H | 150 | Sprinkler. Alarm restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| S | J | 151 | Sprinkler. Trouble restore trouble condition eliminated | | SIA_ZONECODE_ZONE |
| S | R | 152 | Sprinkler. Restore Alarm/Trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| S | S | 153 | Sprinkler. supervisory. Unsafe sprinkler system condition | | SIA_ZONECODE_ZONE |
| S | T | 154 | Sprinkler. Trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| S | U | 155 | Sprinkler. unbypass Sprinkler zone bypass has been removed | | SIA_ZONECODE_ZONE |
| T | A | 156 | Tamper alarm Alarm equipment enclosure opened | | SIA_ZONECODE_ZONE |
| T | B | 157 | Tamper bypass Tamper detection has been bypassed | | SIA_ZONECODE_ZONE |
| T | E | 158 | Test end Communicator restored to operation | | SIA_ZONECODE_UNUSED |
| T | R | 159 | Tamper restoral Alarm equipment enclosure has been closed | | SIA_ZONECODE_ZONE |
| T | S | 160 | Test start Communicator taken out of operation | | SIA_ZONECODE_UNUSED |
| T | U | 161 | Tamper unbypass Tamper detection bypass has been removed | | SIA_ZONECODE_ZONE |
| T | X | 162 | Test Report an unspecified (manual or automatic) communicator test | | SIA_ZONECODE_ZONE |
| U | A | 163 | Untyped zone Alarm Alarm condition from zone of unknown type | | SIA_ZONECODE_ZONE |
| U | B | 164 | Untyped zone Bypass Zone of unknown type has been bypassed | | SIA_ZONECODE_ZONE |
| U | H | 165 | Untyped Alarm restoral Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| U | J | 166 | Untyped Trouble restoral Trouble condition eliminated | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| U | R | 167 | Untyped zone restoral Alarm/Trouble condition eliminated from zone of unknown type | | SIA_ZONECODE_ZONE |
| U | S | 168 | Untyped zone sup. Unsafe condition from zone OK unknown type | | SIA_ZONECODE_ZONE |
| U | T | 169 | Untyped zone Trouble Trouble condition from zone of unknown type | | SIA_ZONECODE_ZONE |
| U | U | 170 | Untyped zone unbypass Bypass on zone of unknown type has been removed | | SIA_ZONECODE_ZONE |
| U | X | 171 | Undefined An undefined alarm condition has occurred | | SIA_ZONECODE_UNUSED |
| U | Y | 172 | Untyped missing Trouble A point which was not armed is now logically missing | | SIA_ZONECODE_ZONE |
| U | Z | 173 | Untyped missing Alarm A point which was armed is now logically missing | | SIA_ZONECODE_ZONE |
| V | I | 174 | Printer paper in Transmitter or receiver paper in | | SIA_ZONECODE_PRINTER |
| V | O | 175 | Printer paper out Transmitter or receiver paper out | | SIA_ZONECODE_PRINTER |
| V | R | 176 | Printer restore Transmitter or receiver trouble restored | | SIA_ZONECODE_PRINTER |
| V | T | 177 | Printer trouble Transmitter or receiver trouble | | SIA_ZONECODE_PRINTER |
| V | X | 178 | Printer test Transmitter or receiver test | | SIA_ZONECODE_PRINTER |
| V | Y | 179 | Printer on line The receiver's printer is now on line | | SIA_ZONECODE_UNUSED |
| V | Z | 180 | Printer off line The receiver's printer is now off line | | SIA_ZONECODE_UNUSED |
| W | A | 181 | Water alarm Water detected at protected premise | | SIA_ZONECODE_ZONE |
| W | B | 182 | Water bypass Water detection has been bypassed | | SIA_ZONECODE_ZONE |
| W | H | 183 | Water alarm restoral Alarm condition eliminated | | SIA_ZONECODE_ZONE |

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| | | | | | |
|---|---|---|---|---|---|
| W | J | 184 | Water trouble restoral Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| W | R | 185 | Water restoral Alarm/Trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| W | S | 186 | Water supervisory Unsafe water detection system condition | | SIA_ZONECODE_ZONE |
| W | T | 187 | Water trouble Zone disable by fault | | SIA_ZONECODE_ZONE |
| W | U | 188 | Water unbypass Water detection bypass has been removed | | SIA_ZONECODE_ZONE |
| X | E | 199 | Extra point The panel has sensed an extra point not specified for this site | | SIA_ZONECODE_POINT |
| X | F | 200 | Extra RF point The panel has sensed an extra RF point not specified for this site | | SIA_ZONECODE_POINT |
| X | I | 201 | Sensor reset A user has reset a sensor | | SIA_ZONECODE_ZONE |
| X | R | 202 | TX battery restoral Low battery has been corrected | | SIA_ZONECODE_ZONE |
| X | T | 203 | TX battery trouble Low battery in wireless transmitter | | SIA_ZONECODE_ZONE |
| X | W | 204 | Forced point A point was forced out of the system at arm time | | SIA_ZONECODE_ZONE |
| Y | B | 205 | Busy seconds Percent of time receiver's line card is on-line | | SIA_ZONECODE_LINE |
| Y | C | 206 | Communication fail Receiver and transmitter | | SIA_ZONECODE_UNUSED |
| Y | D | 207 | RX line card trouble A line card identified by the passed address is in trouble | | SIA_ZONECODE_LINE |
| Y | E | 208 | RX line card restoral A line card identified by the passed address is restored | | SIA_ZONECODE_LINE |

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| | | | | | |
|---|---|---|---|---|---|
| Y | F | 209 | Parameter checksum fail System data corrupted | | SIA_ZONECODE_UNUSED |
| Y | G | 210 | Parameter changed A transmitter's parameters have been changed | | SIA_ZONECODE_UNUSED |
| Y | K | 211 | Communication Restoral The transmitter has resumed communication with a receiver | | SIA_ZONECODE_UNUSED |
| Y | M | 212 | System battery missing The transmitter/receiver battery is missing | | SIA_ZONECODE_UNUSED |
| Y | N | 213 | Invalid report The transmitter has sent a packet with invalid data | | SIA_ZONECODE_UNUSED |
| Y | O | 214 | Unknown message An unknown message was received from automation or the printer | | SIA_ZONECODE_UNUSED |
| Y | P | 215 | Power supply trouble The transmitter/receiver has a problem with the power supply | | SIA_ZONECODE_UNUSED |
| Y | Q | 216 | Power supply restored The transmitter/receiver's power supply has been restored | | SIA_ZONECODE_UNUSED |
| Y | R | 217 | System battery restoral Low battery has been corrected | | SIA_ZONECODE_UNUSED |
| Y | S | 218 | Communication trouble Receiver and transmitter | | SIA_ZONECODE_UNUSED |
| Y | T | 219 | System battery trouble Low battery in control/communicator | | SIA_ZONECODE_UNUSED |
| Y | W | 210 | Watchdog reset The transmitter created an internal reset | | SIA_ZONECODE_UNUSED |
| Y | X | 221 | Service required A transmitter/receiver needs service | | SIA_ZONECODE_UNUSED |
| Y | Y | 222 | Status report This is a header for an account status report transmission | | SIA_ZONECODE_UNUSED |

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| | | | | | |
|---|---|---|---|---|---|
| Y | Z | 223 | Service completed required transmitter / receiver service completed | | SIA_ZONECODE_MANUF |
| Z | A | 224 | Freeze alarm Low temperature detected at premise | | SIA_ZONECODE_ZONE |
| Z | B | 225 | Freeze bypass Low temperature detection has been bypassed | | SIA_ZONECODE_ZONE |
| Z | H | 226 | Freeze A. restore Alarm condition eliminated | | SIA_ZONECODE_ZONE |
| Z | J | 227 | Freeze T. restore Trouble condition eliminated | | SIA_ZONECODE_ZONE |
| Z | R | 228 | Freeze restoral Alarm/Trouble condition has been eliminated | | SIA_ZONECODE_ZONE |
| Z | S | 229 | Freeze supervisory Unsafe freeze detection system condition | | SIA_ZONECODE_ZONE |
| Z | T | 230 | Freeze trouble Zone disabled by fault | | SIA_ZONECODE_ZONE |
| Z | U | 231 | Freeze unbypass Low temperature detection bypass removed | | SIA_ZONECODE_ZONE |
| A | R | 232 | AC restoral AC power has been restored | | SIA_ZONECODE_UNUSED |

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## 4.6 ZoneCodes Table

If you want to store events that report for zone you need to create data arrays that are appropriately named. This table provides part of those table names.

**Input Device**

| INDEX NUMBER | ZONECODE<br><br>CORRESPONDS TO THE ZONECODE COLUMN IN THE EVENTS CODES TABLE. | DATA ARRAY NAME PREFIX | EXAMPLE – METHOD 2<br>DATA ARRAY NAME |
|---|---|---|---|
| | | | |
| 1 | Unused | “UN” | Sia_allUN |
| 2 | User | “USER” | Sia_allUSER |
| 3 | Zone | “ZONE” | Sia_allZONE |
| 4 | Area | “AREA” | Sia_allAREA |
| 5 | Door | “DOOR” | Sia_allDOOR |
| 6 | Expander | “EXP” | Sia_allEXP |
| 7 | Relay | “REL” | Sia_allREL |
| 8 | Manufacturer | “MANU” | Sia_allMANU |
| 9 | Dealer | “DEAL” | Sia_allDEAL |
| 10 | Line | “LINE” | Sia_allLINE |
| 11 | Printer | “PRNT” | Sia_allPRNT |
| 12 | Point | “PNT” | Sia_allPT |
| | | | |
| | | | |
| | | | |

## 4.7 Driver Limitations

Only messages formatted as described in this document can be processed.

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# 5 Configuring the FieldServer as a SIA Server

This driver cannot be used to emulate an SIA Security panel.

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# 6 Revision History

| DATE | RESP | FORMAT | DRIVER VER. | DOC. REV. | COMMENT |
|---|---|---|---|---|---|
| 20 Oct 2010 | PMC | | 1.00a | 0 | Document Created |
| 10 Nov 2010 | PMC | | 1.01a | 1 | Added notes on how acc number can be used to select the correct Data Array for event storage. |
| 12 Nov 2010 | PMC | | 1.10a | 2 | Reallocated code=1 to =232<br>Data arrays are now initialized to value=1 |
| 15 Nov 2010 | PMC | | 1.20a | 3 | New connection params<br>SIA_Ack_Msgs<br>SIA_Ack_Suprvisor<br>SIA_RLL_Digits<br>Some new error messages |
| 29 Nov 2010 | PMC | | 1.4 | 4 | Driver supports events which self-restore to a NextState. Siacode.ini now supports ability to configure the restore timers and NextStates.<br>New connection parameter: SIA_State_or_Number |
| 20 Mar 2011 | PMC | | 1.7 | 5 | Now supports 285 codes (previously was 250)<br>New connection param “SIA_Parse_Option”<br>Some new stats |
| 10 May 2021 | YC | | 1.7 | 6 | Updated to latest template |

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# Appendix A. Advanced Topics

This section is blank.

## Appendix A.1. How to add / change security Codes

The driver can handle a list of 285 codes. That leaves space for about 50 additional ones. You can add or amend entries in the table.

Create a comma separated file called **siacode.ini** and download it to the FieldServer. Each time the FieldServer restarts it will look for and read this file. It uses the contents to add new codes or to change some aspect of an existing one.

Items shown in red are optional. If included then the code_state is updated as well.

(Another example is shown on the next page)

```
#New code = AA, code number=999, It's a zone event
AA,999,3,2
#New code = AB, code number=321, It's a door event
AB,321,5 ,2
#code = QA, code number=998, It's a zone event
#  driver will find this code and change code number from 128 # to 998. It was and still is a zone event code.
QA,998,3 ,2
#---------zonecode (last field - choose from one of these)
#define SIA_ZONECODE_UNUSED     1
#define SIA_ZONECODE_USER       2
#define SIA_ZONECODE_ZONE       3
#define SIA_ZONECODE_AREA       4
#define SIA_ZONECODE_DOOR       5
#define SIA_ZONECODE_EXPANDER   6
#define SIA_ZONECODE_RELAY      7
#define SIA_ZONECODE_MANUF      8
#define SIA_ZONECODE_DEALER     9
#define SIA_ZONECODE_LINE       10
#define SIA_ZONECODE_PRINTER    11
#define SIA_ZONECODE_POINT      12
```

Any line with a # at the begin will be ignored.

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**In this example**, only one event is being updated.

The event QA is allocated to ZoneCode=3 ie when QAnnn reports, the nnn will be treated like a zone number. If the driver is configured to store a value (default configuration) then it will store 128 for each zone that report event=QA. If however, the driver has been configured to store states, then when event QA is received for a zone, the data for that zone will be set to state=2 and a 10 second timer will start. After 10 seconds the data stored will be set to 31 the next state.

```
#comment line
#
#
# In this example, The Code QA is allocated a self restore timer of 10secs and an active state=2.
# After the 10 sec timer has expired the driver will set the state of a point reporting QA to state=1
# (The Next State)
#
#
#
 QA,    128 ,3        ,2       ,10 ,1 ,/*Emergency alarm Emergency assistance request */



#---------zonecode (field #2 - choose from one of these)
#define SIA_ZONECODE_UNUSED     1
#define SIA_ZONECODE_USER       2
#define SIA_ZONECODE_ZONE       3
#define SIA_ZONECODE_AREA       4
```

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## Appendix A.2. The Default Event code list

```
# CodePai,Value,Type,State,SelfRestoreTimer,SelfRestoreState
#
#Types
#   UNUSED      1
#   USER        2
#   ZONE        3
#   AREA        4
#   DOOR        5
#   EXPANDER    6
#   RELAY       7
#   MANUF       8
#   DEALER      9
#   LINE        10
#   PRINTER     11
#   POINT       12
#
#If SelfRestoreTimer=0 then no self restore
#
#


AT,      2 ,1         ,2       ,0 ,2 ,/*AC trouble AC power has been failed */
BA,      3 ,3         ,2       ,0 ,2 ,/*Burglary alarm Burglary zone has been violated while armed */
BB,      4 ,3         ,2       ,0 ,2 ,/*Burglary bypass Burglary zone has been bypassed */
BC,      5 ,2         ,2       ,0 ,2 ,/*Burglary cancel Alarm has been cancelled */
BH,      6 ,3         ,1       ,0 ,2 ,/*Burglary A. rest. Alarm condition eliminated */
BJ,      7 ,3         ,1       ,0 ,2 ,/*Burglary T. rest. Trouble condition eliminated */
BR,      8 ,3         ,1       ,0 ,2 ,/*Burglary restoral Alarm/trouble condition eliminated */
BS,      9 ,3         ,2       ,0 ,2 ,/*Burglary supervisory. Unsafe intrusion detection system condition */
BT,     10 ,3         ,2       ,0 ,2 ,/*Burglary trouble Burglary zone activated during testing */
BU,     11 ,3         ,2       ,0 ,2 ,/*Burglary unbypass Zone bypass has been removed */
BV,     12 ,3         ,2       ,0 ,2 ,/*Burglary Verified More than 3 burglary zones have been triggered */
BX,     13 ,3         ,2       ,0 ,2 ,/*Burglary test Burglary zone activated during testing */
CA,     14 ,4         ,2       ,0 ,2 ,/*Automatic closing System armed automatically */
CE,     15 ,2         ,2       ,0 ,2 ,/*Closing extend Extend closing time */
CF,     16 ,2         ,2       ,0 ,2 ,/*Forced closing System armed- some zones not ready */
CG,     17 ,2         ,2       ,0 ,2 ,/*Close area System has been partially armed */
CI,     18 ,2         ,2       ,0 ,2 ,/*Fail to close An area has not been armed at the end of the closing window */
CJ,     19 ,2         ,2       ,0 ,2 ,/*Late close An area was armed after the closing window */
CK,     20 ,2         ,2       ,0 ,2 ,/*Early close An area was armed before the closing window */
CL,     21 ,2         ,2       ,0 ,2 ,/*Closing report System armed normal */
CP,     22 ,2         ,2       ,0 ,2 ,/*Automatic closing System armed automatically */
CR,     23 ,2         ,2       ,0 ,2 ,/*Recent Closing An alarm occurred within five minutes after the system was closed */
CS,     24 ,3         ,2       ,0 ,2 ,/*Closing switch Account has been armed by Keyswitch */
CT,     25 ,4         ,2       ,0 ,2 ,/*Late to open System was not disarmed on time */
CW,     26 ,4         ,2       ,0 ,2 ,/*Was force armed Header for a force armed session - forced point msg. may follow */
CZ,     27 ,3         ,2       ,0 ,2 ,/*Point closing A point- as opposed to a whole area or account- has closed. */
```

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```
DC,     28 ,5         ,2       ,0 ,2 ,/*Access closed Access to all users prohibited */
DD,     29 ,5         ,2       ,0 ,2 ,/*Access denied Access denied- unknown code */
DF,     30 ,5         ,2       ,0 ,2 ,/*Door forced Door opened without access request */
DG,     31 ,5         ,2       ,0 ,2 ,/*Access granted Door access granted */
DK,     32 ,5         ,2       ,0 ,2 ,/*Access lockout Access denied- known code */
DO,     33 ,5         ,2       ,0 ,2 ,/*Access open Access to authorised users allowed */
DR,     34 ,5         ,1       ,0 ,2 ,/*Door restoral access alarm/trouble condition eliminated */
DS,     35 ,5         ,2       ,0 ,2 ,/*Door station Identifies door for next report */
DT,     36 ,1         ,2       ,0 ,2 ,/*Access trouble Access system trouble */
DU,     37 ,9         ,2       ,0 ,2 ,/*dealer ID Zone description gives dealer ID # dealer */
EA,     38 ,3         ,2       ,0 ,2 ,/*Exit Alarm an exit zone remained violated at the end of the exit delay period */
EE,     39 ,2         ,2       ,0 ,2 ,/*Exit error an exit zone remained violated at the end of the exit delay period */
ER,     40 ,6         ,1       ,0 ,2 ,/*Expansion rest. Expansion device trouble eliminated */
ET,     41 ,6         ,2       ,0 ,2 ,/*Expansion trouble Expansion device trouble */
FA,     42 ,3         ,2       ,0 ,2 ,/*Fire alarm Fire condition detected */
FB,     43 ,3         ,2       ,0 ,2 ,/*Fire bypass Zone has been bypassed */
FH,     44 ,3         ,1       ,0 ,2 ,/*Fire Alarm restore Alarm condition eliminated */
FI,     45 ,4         ,2       ,0 ,2 ,/*Fire test begin The transmitter area's fire test has begun */
FJ,     46 ,3         ,1       ,0 ,2 ,/*Fire Trouble restore Trouble condition eliminated */
FK,     47 ,4         ,2       ,0 ,2 ,/*Fire test end The transmitter area's fire test has ended */
FR,     48 ,3         ,1       ,0 ,2 ,/*Fire restoral Alarm/trouble condition has been eliminated */
FS,     49 ,3         ,2       ,0 ,2 ,/*Fire supervisory Unsafe fire detection system condition */
FT,     50 ,3         ,2       ,0 ,2 ,/*Fire trouble Zone disabled by fault */
FU,     51 ,3         ,2       ,0 ,2 ,/*Fire unbypass Bypass has been removed */
FX,     52 ,3         ,2       ,0 ,2 ,/*Fire test Fire zone activated during test */
FY,     53 ,3         ,2       ,0 ,2 ,/*Missing fire Trouble A fire point is now logically missing */
GA,     54 ,3         ,2       ,0 ,2 ,/*Gas alarm Gas alarm condition detected */
GB,     55 ,3         ,2       ,0 ,2 ,/*Gas bypass Zone has been bypassed */
GH,     56 ,3         ,1       ,0 ,2 ,/*Gas A. restore Alarm condition eliminated */
GJ,     57 ,3         ,1       ,0 ,2 ,/*Gas T. restore Trouble condition eliminated */
GR,     58 ,3         ,2       ,0 ,2 ,/*Gas restoral Alarm \ trouble condition has been eliminated */
GS,     59 ,3         ,2       ,0 ,2 ,/*Gas supervisory Unsafe gas detection system condition */
GT,     60 ,3         ,2       ,0 ,2 ,/*Gas trouble Zone disabled by fault */
GU,     61 ,3         ,2       ,0 ,2 ,/*Gas unbypass Bypass has been removed */
GX,     62 ,3         ,2       ,0 ,2 ,/*Gas test gas Zone activated during test */
HA,     63 ,3         ,2       ,0 ,2 ,/*Hold-up alarm Silent alarm- user under duress */
HB,     64 ,3         ,2       ,0 ,2 ,/*Hold-up bypass Zone has been bypassed */
HH,     65 ,3         ,1       ,0 ,2 ,/*Hold-up A. rest. Alarm condition eliminated */
HJ,     66 ,3         ,1       ,0 ,2 ,/*Hold-up T. rest. Trouble condition eliminated */
HR,     67 ,3         ,1       ,0 ,2 ,/*Hold-up restoral Alarm \ trouble condition eliminated */
HS,     68 ,3         ,2       ,0 ,2 ,/*Hold-up supervisory. Unsafe holdup system condition */
HT,     69 ,3         ,2       ,0 ,2 ,/*Hold-up trouble Zone disabled by default */
HU,     70 ,3         ,2       ,0 ,2 ,/*Hold-up unbypass Bypass has been removed */
JA,     71 ,4         ,2       ,0 ,2 ,/*User code tamper Too many unsuccessful attempts have been made to enter a user ID */
JD,     72 ,2         ,2       ,0 ,2 ,/*Date changed The date was changed in the transmitter/receiver */
JH,     73 ,2         ,2       ,0 ,2 ,/*Holiday changed The transmitter's holiday schedule has been changed */
JL,     74 ,1         ,2       ,0 ,2 ,/*Log threshold The transmitter's log memory has reached its threshold level */
JO,     75 ,1         ,2       ,0 ,2 ,/*Log overflow The transmitter's log memory has overflowed */
JR,     76 ,4         ,2       ,0 ,2 ,/*Schedule execute An automatic scheduled event was executed */
JS,     77 ,2         ,2       ,0 ,2 ,/*Schedule change An automatic schedule was changed */
```

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JT,     78 ,2         ,2       ,0 ,2 ,/*Time changed The time was changed in the TX\RX */
JV,     79 ,2         ,2       ,0 ,2 ,/*User code change A user's code has been changed */
JX,     70 ,2         ,2       ,0 ,2 ,/*User code delete A user's code has been removed */
KA,     81 ,3         ,2       ,0 ,2 ,/*Heat alarm High temperature detected on premise */
KB,     82 ,3         ,2       ,0 ,2 ,/*Heat bypass Zone has been bypassed */
KH,     83 ,3         ,1       ,0 ,2 ,/*Heat Alarm restore Alarm condition eliminated */
KJ,     84 ,3         ,1       ,0 ,2 ,/*Heat Trouble restore Trouble condition eliminated */
KR,     85 ,3         ,1       ,0 ,2 ,/*Heat restoral Alarm/Trouble condition has been eliminated */
KS,     86 ,3         ,2       ,0 ,2 ,/*Heat supervisory Unsafe heat detection system condition */
KT,     87 ,3         ,2       ,0 ,2 ,/*Heat trouble Zone disable by fault */
KU,     88 ,3         ,2       ,0 ,2 ,/*Heat unbypass Bypass has been removed */
LB,     89 ,1         ,2       ,0 ,2 ,/*Local program Begin local programming begin */
LD,     90 ,1         ,2       ,0 ,2 ,/*Local program Denied access code incorrect */
LE,     91 ,1         ,2       ,0 ,2 ,/*Listen-in ended The listen-in session has been terminated */
LF,     92 ,1         ,2       ,0 ,2 ,/*Listen-in begin The listen-in session with the receiver has begun */
LR,     93 ,10        ,2       ,0 ,2 ,/*Phone line rest. Phone line restored to service */
LS,     94 ,1         ,2       ,0 ,2 ,/*Local program Local programming successful */
LT,     95 ,10        ,2       ,0 ,2 ,/*Phone line Trouble Phone line report */
LU,     96 ,1         ,2       ,0 ,2 ,/*Local program fail Local programming unsuccessful */
LX,     97 ,1         ,2       ,0 ,2 ,/*Local program ended A local programming session has been terminated */
MA,     98 ,3         ,2       ,0 ,2 ,/*Medical alarm Emergency assistance request */
MB,     99 ,3         ,2       ,0 ,2 ,/*Medical bypass Zone has been bypassed */
MH,    100 ,3         ,1       ,0 ,2 ,/*Medical Alarm restore Alarm condition eliminated */
MJ,    101 ,3         ,1       ,0 ,2 ,/*Medical T. rest. Trouble condition eliminated */
MR,    102 ,3         ,1       ,0 ,2 ,/*Medical restoral Alarm/trouble condition has been eliminated */
MS,    103 ,3         ,2       ,0 ,2 ,/*Medical supervisory Unsafe system condition exists */
MT,    104 ,3         ,2       ,0 ,2 ,/*Medical trouble Zone disabled by fault */
MU,    105 ,3         ,2       ,0 ,2 ,/*Medical unbypass Bypass has been removed */
NA,    106 ,1         ,2       ,0 ,2 ,/*No activity There has been no activity for a programmed amount of time */
NF,    107 ,4         ,2       ,0 ,2 ,/*Forced perimeter arm Some zones/points not ready */
NL,    108 ,4         ,2       ,0 ,2 ,/*Perimeter armed An area has been perimeter armed */
OA,    109 ,4         ,2       ,0 ,2 ,/*Automatic opening System has disarm automatically */
OC,    110 ,2         ,2       ,0 ,2 ,/*Cancel report Untyped zone cancel */
OG,    111 ,4         ,2       ,0 ,2 ,/*Open area System has been partially disarmed */
OI,    112 ,4         ,2       ,0 ,2 ,/*Fail to open An area has not been armed at the end of the opening window */
OJ,    113 ,2         ,2       ,0 ,2 ,/*Late open An area was disarmed after the opening window */
OK,    114 ,2         ,2       ,0 ,2 ,/*Early open An area was disarmed before the opening window */
OP,    115 ,2         ,2       ,0 ,2 ,/*Opening report Account was disarmed */
OR,    116 ,2         ,2       ,0 ,2 ,/*Disarm from alarm Account in alarm was reset/disarmed */
OS,    117 ,3         ,2       ,0 ,2 ,/*Opening Keyswitch account has been disarmed by Keyswitch */
OT,    118 ,2         ,2       ,0 ,2 ,/*Late to close System was not armed on time */
OZ,    119 ,3         ,2       ,0 ,2 ,/*Point opening A point- rather than a full area or account- disarmed */
PA,    120 ,3         ,2       ,0 ,2 ,/*Panic alarm Emergency assistance request- manually activated */
PB,    121 ,3         ,2       ,0 ,2 ,/*Panic bypass Panic zone has been bypassed */
PH,    122 ,3         ,1       ,0 ,2 ,/*Panic Alarm restore Alarm condition eliminated */
PJ,    123 ,3         ,1       ,0 ,2 ,/*Panic Trouble restore Trouble condition eliminated */
PR,    124 ,3         ,1       ,0 ,2 ,/*Panic restoral Alarm/trouble condition has been eliminated */
PS,    125 ,3         ,2       ,0 ,2 ,/*Panic Supervisory Unsafe system condition exists */
PT,    126 ,3         ,2       ,0 ,2 ,/*Panic trouble Zone disabled by fault */
PU,    127 ,3         ,2       ,0 ,2 ,/*Panic unbypass Panic zone bypass has been removed */
```

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QA,    128 ,3         ,2       ,0 ,2 ,/*Emergency alarm Emergency assistance request */
QB,    129 ,3         ,2       ,0 ,2 ,/*Emergency bypass Zone has been bypassed */
QH,    130 ,3         ,1       ,0 ,2 ,/*Emergency. A. rest. Alarm condition has been eliminated */
QJ,    131 ,3         ,1       ,0 ,2 ,/*Emergency. T. rest. Trouble condition has been eliminated */
QR,    132 ,3         ,1       ,0 ,2 ,/*Emergency. Restoral Alarm/trouble condition has been eliminated */
QS,    133 ,3         ,2       ,0 ,2 ,/*Emergency. Supervisory Unsafe system condition exists */
QT,    134 ,3         ,2       ,0 ,2 ,/*Emergency Trouble Zone disabled by fault */
QU,    135 ,3         ,2       ,0 ,2 ,/*Emergency. Unbypass Bypass has been removed */
RA,    136 ,1         ,2       ,0 ,2 ,/*Remote Programmr Called failed Transmitter failed to commun with the remote progrmmr */
RB,    137 ,1         ,2       ,0 ,2 ,/*Remote Program begin Remote programming session initiated */
RC,    138 ,7         ,2       ,0 ,2 ,/*Relay close The relay specified in the address field (optional) has energised */
RD,    139 ,1         ,2       ,0 ,2 ,/*Remote Program Denied Access passcode incorrect */
RN,    140 ,1         ,2       ,0 ,2 ,/*Remote reset A transmitter was reset via a remote programmer */
RO,    141 ,7         ,2       ,0 ,2 ,/*Relay open The relay specified in the address field (optional) has deenergised */
RP,    142 ,1         ,2       ,0 ,2 ,/*Automatic test Automatic communication test report */
RR,    143 ,1         ,2       ,0 ,2 ,/*Power up System lost power- is now restored */
RS,    144 ,1         ,2       ,0 ,2 ,/*Remote Program success Remote programming successful */
RT,    145 ,10        ,2       ,0 ,2 ,/*Data lost Dialer data lost- transmission error */
RU,    146 ,1         ,2       ,0 ,2 ,/*Remote Program fail Remote programming unsuccessful */
RX,    147 ,2         ,2       ,0 ,2 ,/*Manuel test Manuel communication test report */
SA,    148 ,3         ,2       ,0 ,2 ,/*Sprinkler alarm Sprinkler flow condition exist */
SB,    149 ,3         ,2       ,0 ,2 ,/*Sprinkler. Bypass Sprinkler zone has been bypassed */
SH,    150 ,3         ,1       ,0 ,2 ,/*Sprinkler. Alarm restore Alarm condition eliminated */
SJ,    151 ,3         ,1       ,0 ,2 ,/*Sprinkler. Trouble restore trouble condition eliminated */
SR,    152 ,3         ,1       ,0 ,2 ,/*Sprinkler. Restore Alarm/Trouble condition has been eliminated */
SS,    153 ,3         ,2       ,0 ,2 ,/*Sprinkler. supervisory. Unsafe sprinkler system condition */
ST,    154 ,3         ,2       ,0 ,2 ,/*Sprinkler. Trouble Zone disabled by fault */
SU,    155 ,3         ,2       ,0 ,2 ,/*Sprinkler. unbypass Sprinkler zone bypass has been removed */
TA,    156 ,3         ,2       ,0 ,2 ,/*Tamper alarm Alarm equipment enclosure opened */
TB,    157 ,3         ,2       ,0 ,2 ,/*Tamper bypass Tamper detection has been bypassed */
TE,    158 ,1         ,2       ,0 ,2 ,/*Test end Communicator restored to operation */
TR,    159 ,3         ,2       ,0 ,2 ,/*Tamper restoral Alarm equipment enclosure has been closed */
TS,    160 ,1         ,2       ,0 ,2 ,/*Test start Communicator taken out of operation */
TU,    161 ,3         ,2       ,0 ,2 ,/*Tamper unbypass Tamper detection bypass has been removed */
TX,    162 ,3         ,2       ,0 ,2 ,/*Test Report an unspecified (manual or automatic) communicator test */
UA,    163 ,3         ,2       ,0 ,2 ,/*Untyped zone Alarm Alarm condition from zone of unknown type */
UB,    164 ,3         ,2       ,0 ,2 ,/*Untyped zone Bypass Zone of unknown type has been bypassed */
UH,    165 ,3         ,1       ,0 ,2 ,/*Untyped Alarm restoral Alarm condition eliminated */
UJ,    166 ,3         ,1       ,0 ,2 ,/*Untyped Trouble restoral Trouble condition eliminated */
UR,    167 ,3         ,2       ,0 ,2 ,/*Untyped zone restoral Alarm/Trouble condition eliminated from zone of unknown type */
US,    168 ,3         ,2       ,0 ,2 ,/*Untyped zone sup. Unsafe condition from zone OK unknown type */
UT,    169 ,3         ,2       ,0 ,2 ,/*Untyped zone Trouble Trouble condition from zone of unknown type */
UU,    170 ,3         ,2       ,0 ,2 ,/*Untyped zone unbypass Bypass on zone of unknown type has been removed */
UX,    171 ,1         ,2       ,0 ,2 ,/*Undefined An undefined alarm condition has occurred */
UY,    172 ,3         ,2       ,0 ,2 ,/*Untyped missing Trouble A point which was not armed is now logically missing */
UZ,    173 ,3         ,2       ,0 ,2 ,/*Untyped missing Alarm A point which was armed is now logically missing */
VI,    174 ,11        ,2       ,0 ,2 ,/*Printer paper in Transmitter or receiver paper in- printer X */
VO,    175 ,11        ,2       ,0 ,2 ,/*Printer paper out Transmitter or receiver paper out- printer X */
VR,    176 ,11        ,2       ,0 ,2 ,/*Printer restore Transmitter or receiver trouble restored- printer X */
VT,    177 ,11        ,2       ,0 ,2 ,/*Printer trouble Transmitter or receiver trouble- printer X */
```

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```
VX,    178 ,11        ,2       ,0 ,2 ,/*Printer test Transmitter or receiver test- printer X */
VY,    179 ,1         ,2       ,0 ,2 ,/*Printer on line The receiver's printer is now on line */
VZ,    180 ,1         ,2       ,0 ,2 ,/*Printer off line The receiver's printer is now off line */
WA,    181 ,3         ,2       ,0 ,2 ,/*Water alarm Water detected at protected premise */
WB,    182 ,3         ,2       ,0 ,2 ,/*Water bypass Water detection has been bypassed */
WH,    183 ,3         ,1       ,0 ,2 ,/*Water alarm restoral Alarm condition eliminated */
WJ,    184 ,3         ,1       ,0 ,2 ,/*Water trouble restoral Trouble condition eliminated */
WR,    185 ,3         ,2       ,0 ,2 ,/*Water restoral Alarm/Trouble condition has been eliminated */
WS,    186 ,3         ,2       ,0 ,2 ,/*Water supervisory Unsafe water detection system condition */
WT,    187 ,3         ,2       ,0 ,2 ,/*Water trouble Zone disable by fault */
WU,    188 ,3         ,2       ,0 ,2 ,/*Water unbypass Water detection bypass has been removed */
XE,    199 ,12        ,2       ,0 ,2 ,/*Extra point The panel has sensed an extra point not specified for this site */
XF,    200 ,12        ,2       ,0 ,2 ,/*Extra RF point The panel has sensed an extra RF point not specified for this site */
XI,    201 ,3         ,2       ,0 ,2 ,/*Sensor reset A user has reset a sensor */
XR,    202 ,3         ,2       ,0 ,2 ,/*TX battery restoral Low battery has been corrected */
XT,    203 ,3         ,2       ,0 ,2 ,/*TX battery trouble Low battery in wireless transmitter */
XW,    204 ,3         ,2       ,0 ,2 ,/*Forced point A point was forced out of the system at arm time */
YB,    205 ,10        ,2       ,0 ,2 ,/*Busy seconds Percent of time receiver's line card is on-line */
YC,    206 ,1         ,2       ,0 ,2 ,/*Communication fail Receiver and transmitter */
YD,    207 ,10        ,2       ,0 ,2 ,/*RX line card trouble A line card identified by the passed address is in trouble */
YE,    208 ,10        ,2       ,0 ,2 ,/*RX line card restoral A line card identified by the passed address is restored */
YF,    209 ,1         ,2       ,0 ,2 ,/*Parameter checksum fail System data corrupted */
YG,    210 ,1         ,2       ,0 ,2 ,/*Parameter changed A transmitter's parameters have been changed */
YK,    211 ,1         ,2       ,0 ,2 ,/*Communication Restoral The transmitter has resumed communication with a receiver */
YM,    212 ,1         ,2       ,0 ,2 ,/*System battery missing The transmitter/receiver battery is missing */
YN,    213 ,1         ,2       ,0 ,2 ,/*Invalid report The transmitter has sent a packet with invalid data */
YO,    214 ,1         ,2       ,0 ,2 ,/*Unknown message An unknown message was received from automation or the printer */
YP,    215 ,1         ,2       ,0 ,2 ,/*Power supply trouble The transmitter/receiver has a problem with the power supply */
YQ,    216 ,1         ,2       ,0 ,2 ,/*Power supply restored The transmitter/receiver's power supply has been restored */
YR,    217 ,1         ,2       ,0 ,2 ,/*System battery restoral Low battery has been corrected */
YS,    218 ,1         ,2       ,0 ,2 ,/*Communication trouble Receiver and transmitter */
YT,    219 ,1         ,2       ,0 ,2 ,/*System battery trouble Low battery in control/communicator */
YW,    210 ,1         ,2       ,0 ,2 ,/*Watchdog reset The transmitter created an internal reset */
YX,    221 ,1         ,2       ,0 ,2 ,/*Service required A transmitter/receiver needs service */
YY,    222 ,1         ,2       ,0 ,2 ,/*Status report This is a header for an account status report transmission */
YZ,    223 ,8         ,2       ,0 ,2 ,/*Service completed required transmitter / receiver service completed */
ZA,    224 ,3         ,2       ,0 ,2 ,/*Freeze alarm Low temperature detected at premise */
ZB,    225 ,3         ,2       ,0 ,2 ,/*Freeze bypass Low temperature detection has been bypassed */
ZH,    226 ,3         ,2       ,0 ,2 ,/*Freeze A. restore Alarm condition eliminated */
ZJ,    227 ,3         ,1       ,0 ,2 ,/*Freeze T. restore Trouble condition eliminated */
ZR,    228 ,3         ,1       ,0 ,2 ,/*Freeze restoral Alarm/Trouble condition has been eliminated */
ZS,    229 ,3         ,2       ,0 ,2 ,/*Freeze supervisory Unsafe freeze detection system condition */
ZT,    230 ,3         ,2       ,0 ,2 ,/*Freeze trouble Zone disabled by fault */
ZU,    231 ,3         ,2       ,0 ,2 ,/*Freeze unbypass Low temperature detection bypass removed */
AR,    232 ,1         ,2       ,0 ,2 ,/*AC restoral AC power has been restored */
```

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## Appendix A.3. Driver Error Messages

| ERROR MESSAGE | EXPLANATION AND CORRECTIVE ACTION |
|---|---|
| We have shown place holders for the parts of the message which change.<br><br>%s is a place holder for a text string.<br>%d is a place holder for a number<br>%c is a place holder for an alpha character. | ***FYI messages are informational and do not require a corrective action. Simply use them to confirm configuration / behaviors are what you expect.*** |
| SIA:#01 FYI Updated Code=%c%c Num=%d Zonecode=%d (%d) | Driver found the file siacodes.ini and is using it to update the codes table. A code which matches an existing entry is found and so the existing entry is updated. Each time this occurs the driver prints this message. The number printed in brackets is the Code State. |
| SIA:#02 Err. Cant Add code. No space. | Driver found the file siacodes.ini and is using it to update the codes table.<br><br>All the spare slots in the table have been used. Contact tech support. |
| SIA:#03 Err. Code=%c%c Num=%d Zonecode=%d | Printed each time msg#2 is printed. |
| SIA:#04 FYI Added Code=%c%c Num=%d Zonecode=%d (%d) | Driver found the file siacodes.ini and is using it to update the codes table. A code which does not matche an existing entry is found and a new entry is made. Each time this occurs the driver prints this message. The number printed in brackets is the Code State. |
| SIA:#05 FYI Processing file=siacodes.ini | Driver found the file siacodes.ini and is using it to update the codes table |
| SIA:#06 Err. Bad line=<%s> | Driver found the file siacodes.ini and is using it to update the codes table. However a row in the file is |

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| | |
|---|---|
| | not formatted correctly. Review the file, make corrections, download the modified file and then restart the FieldServer to give effect to the changes. |
| SIA:#07 Err. ZoneCode Unknown | The zonecode for an event is unknown. The driver dumps the event message. If this occurs rarely, it might be because the there is a corrupted message. If it occurs more than once for the same zone then there is a problem. Capture diagnostic info and contact tech support. |
| SIA:#08 Err. No DA to store %c%02d%d_%d_ZN%03d | Essentially this message reports to you the fact that an event was received but there was no place to store it using method 2. The information provided in the message tells you<br><br>Source<br>Receiver<br>LineCard<br>Partiion<br>Zonecode<br>ZoneNumber |
| SIA:#09 Err. No DA to store %c%02d%d_%d_ZN%03d | Essentially this message reports to you the fact that an event was received but there was no place to store it using method 3. The information provided in the message tells you<br><br>Source<br>Receiver<br>LineCard<br>Partiion<br>Zonecode<br>ZoneNumber |
| SIA:#10 Err. DA=%s too short (Rqd=%d) | The data array is to short. Modify the config, download to the FieldServer and restart. |
| SIA:#11 FYI. Configured to NOT ack msgs. | Printed once only. |

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| | |
|---|---|
| SIA:#12 Err Cant open File=%s | This message should only be printed during QA testing. Call tech support. |
| SIA:#13 Err : do diagnostic 1 | This message should only be printed during QA testing. Call tech support. |
| SIA:#14 Err : do diagnostic 2 | This message should only be printed during QA testing. Call tech support. |
| SIA:#15 Err. Passive Client Driver - Client for test only | This message should only be printed during QA testing. Call tech support. |
| SIA:#16 FYI. Use an Array called <%s> to expose diagnostic info. | Read Appendix A.4 Driver Statistics |
| SIA:#17 FYI DA=%s Initialized to 1's | Reports which data arrays were initialized by setting all data to value=1 |
| SIA:#18 FYI. Configured to NOT ack KeepAlive. | If port supervision is enabled on the panel it sends a keep-alive message every x seconds. If this message is not acknowledged then the port is locked.<br><br>This message draws your attention to this fact. |
| SIA:#19 FYI. You may need to reconfigure. | The driver has detected that the message length is not what is expected. This is often the case if Option[11]:Output RRLLL Digits - Default[5] on the panel is not set to correspond to the driver configuration. Read more in section<br>*4.2 Client Side Connection Descriptions* |
| SIA:#20 FYI Timer[%d]: %s[%d]=%d after %ld msecs. | Some events have been configured to self-restore after a period of time. This message is printed each time a self restore timer is initiated. It reports DA[offset]=NextState and a time interval.<br>The Data Array point will be set to the NextState value after the time has expired. Message #22 will be printed on expiry. Ignore these messages if they meet you expectations. If they don't please review the configuration file. The file called siacode.ini. |
| SIA:#21 Err No space to maintain self-restore timer. | The driver only has space for a limited number of self restore timers running simultaneously. At the time of development only 1000 timer slots were allocated. You should capture a diagnostic log and contact tech support. |
| SIA:#22 FYI Self Restore %s[%d]=%d | Read the notes for #20. |

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| | |
|---|---|

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## Appendix A.4. Driver Statistics

## Appendix A.5. Exposing Driver Stats

The diver makes some of its operating statistics available in a Data Array where they can be read by a remote client. The lines from the example below can be cut and pasted into a configuration file.

| | | |
|---|---|---|
| Data_Arrays, | | |
| Data_Array_Name, | Data_Format, | Data_Array_length, |
| SIA-stats, | UINT32, | 1000, |

| OFFSET | DESCRIPTION |
|---|---|
| 1 | |
| 2 | Increments each time an ack is received |
| 3 | Increments each time an ack is sent |
| 4 | Increments each time a message is received |
| 5 | If there was no method 2 storage location this info about the event is stored here.<br>Source |
| 6 | If there was no method 2 storage location this info about the event is stored here.<br>Receiver |
| 7 | If there was no method 2 storage location this info about the event is stored here.<br>Line Card |
| 8 | If there was no method 2 storage location this info about the event is stored here.<br>Partition |
| 9 | If there was no method 3 storage location this info about the event is stored here.<br>Source |
| 10 | If there was no method 3 storage location this info about the event is stored here.<br>Receiver |

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| OFFSET | DESCRIPTION |
|---|---|
| 11 | If there was no method 3 storage location this info about the event is stored here.<br>Line Card |
| 12 | If there was no method 3 storage location this info about the event is stored here.<br>Partition |
| 13 | If there was no method 3 storage location this info about the event is stored here.<br>Zone |
| 14 | Badly formatted msg received. |
| 15 | Increments each time the panel sends a periodic message with no event info. (Panel does this to check that the remote passive client is still present) |
| 18 | Each time SIA_Parse_Optionis set to 1 and a message is ignored this stat is incremented. In addition the 1st 20 bytes of the message are stored in offsets 19.. |
| 19..40 | See Above |
| 50 | Each time SIA_Parse_Optionis set to 2 and a message is ignored this stat is incremented. In addition the 1st 20 bytes of the message are stored in offsets 51... |
| 50..70 | See Above |

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## Appendix A.6. Message Formats

String breakdown

S013[#1118|Nri1/QA001^FIRE ALARM ^]09/16/1014:49:34ÿ

S - Represent that the message is a SIA string
01 - Receiver number
3 - Line Card number
#1118 - panel account #
Nri1 - New event on partition 1.
QA - SIA Code
001 - Zone is came on
^FIRE ALARM - Description
^09/16/1014:49:34 - Date and Time.

Typical poll to check gateway is present.
31 30 31 30 20 20 20 20 20 20 20 20 20 20 40 1010 @
20 20 20 20 14 .

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