SIENNA® **Serial Gateway version 1.1**

This driver provides 2-way communication to the
Sienna serial gateway delivered by Secyourit GmbH, Germany

The SIENNA® elements form a bus system consisting of sensors and actuators which use the in-house power lines as a communication bus. SIENNA® uses LON, the world's leading device networking technology from Echelon. The communication between the SIENNA® elements is confined to the CENELEC C-Band and/or the B-band and the system is compliant with the CENELEC EN50065-1 standards. (Origin by Secyourit GmbH)
More information at http://www.secyourit.com

The gateway supports the control of up to 64 Channels/Elements within 8 Groups.
To use the gateway with this driver, it must be configured first with the SIENNA® professional software. Only (pre)configured channels interacts with the driver.
Actually the gateway supports following types of devices or functions:

- Group control
- Actuator
- Actuator toggle
- Actuator with measurement (current)
- Dimmer
- Motor A (old revision)
- Motor B (new revision)
- Thermostat

More types will be enabled in a later revision of the driver.
In addition every channel supports sensor control.
Actually two types of sensors exits:

- Single push button
- Double push button

Sensors have the ability to trigger controller macros

Driver operates in **trial mode** as long as the right license number is not typed in.
Trial Mode enables only 4 channels and 2 events for active using.
Anyway, integrators can create the whole project, even if driver is running in trial mode.
Driver is lisenced per controller.
To control greater projects use different instances of this driver with different gateways.
Using a Globalcache device with latest firmware let control one gateway by up to 4 different XPx controller = Multiple ports enabled

Important: *Use driver at your own risk! No warranty given by the author, especially to damages, which occured with this driver. Integrators are fully responsible, when using this driver in their projects.*
Driver support only within RTI Integrator forum: *http://forums.rticorp.com*

Configuration

General Settings

- Choose connection type
- Native serial or serial via Globalcache device
  - All Globalcache devices with serial ports are supported.
  - Serial parameters of the devices must be set up first with baudrate = 9600, flow control = none, parity = none, Data bits = 8, Stop bits = 1.
- Choose RS232 Port which communicate to gateway.
- Enter IP-Address of the device (hint:make sure it is a static one)

Enter Portaddress which matched to the serial port of the device
S1: 4999, S2:5000, S3:5001 ....
For more information refer to Globalcache device documentation
Fill in license number or omit for trial mode

Channel 0-63

Optional enter name/description to use in Integration Designer
Set the right device or function to the corresponding channel
- 0:No Device
- 1:Group control
- 2:Actuator
- 3:Actuator toggle
- 4:Actuator with measurement (current)
- 5:Dimmer
- 6:Motor A (old revision)
- 7:Motor B (new revision)
- 8:Thermostat

Enter group address [A-Z] of the channel {**mandatory**}
Choose sensor type, if needed to control actions on XP(x)
- 0:None
- 1:Single push button
- 2:Double push button

Enter number of triggered macro for single push/double push up
Enter number of triggered macro for double push down
- value 0 = macro is disabled

Events 0-29

Optional enter name/description of the event
Enter device/channel which triggered this event [0-63]
Choose trigger type to use
- 0:Actuator on
- 1:Actuator off
- 2:Upper/rising value
- 3:Lower/falling value

Define upper/rising value
Define lower/falling value
- power consumption range 0-340
- brightness/level range 0-100
- temperature range 0-30

hint: see also section events

V a r i a b l e s

MacAddress of Controller as **string**
License mode as **boolean**
- false = trial
- true = licensed

Name/Description of the channel as **string**
Device/Function as **integer** with string assignment
- 0:No device
- 1:Group
- 2:Actuator
- 3:Actuator Toggle
- 4:Actuator w. Measurement
- 5:Dimmer
- 6:Motor A
- 7:Motor B
- 8:Thermostat

Actuator state as **boolean**
- false = off

true = on
Sensor push state as **boolean**
false = released
true = pushed
Power consumption as **integer** [0-~340]
Dimmer brightness as **integer** [0-100]
Motor A state as **integer** with string assignment
0:closed,1:unknown,2:open
Motor B level as **integer** [0-100] 100 = open
Motor A/B direction on move as **integer** with string assignment
0:not moving,1:moving down,2:moving up
Motor blocked state as **boolean**
false = off
true = on
Temperature as **integer** with factor 10
[Range 0-35 degree]
support 1 digit behind decimal seperator [e.g. 20.5]
Temperature hardware Setpoint/Threshold as **integer** with factor 10
[Range 5-30 degree]
support 1 digit behind decimal seperator [e.g. 18.7]

Functions

Control

Switching to on, off or toggle
works with groups, actuators, actuator toggles and dimmers
exeption: switching on blocks a motor, switching off unblocks
Sensor push as single push button and double push button up or down
Sensor release as push stop and generic stop
recommendation: push and push stop only should used together in a macro, like a hardware sensor works.
exeption: to controlling **groups** a single command must be sent.
Dimmer/Motor: double push up or down and generic stop
Actuator: switch on or off
hint: single generic stop generates an actuator ackknowledgement

Set Values

Dimmer brightness 0-100 percent
also works as group command/control
Motor level (Rev B only) 0-100 percent, 100 = open
Temperature setpoint 5-30 degrees as hardware rising threshold

Events

Use Event 0-19, defined in driver configuration, as driver event.
Important: Upper/rising value uses the upper threshold value to trigger the choosen event. To avoid jitters the event only will retrigger if the lower defined value is crossed below (less). For example: upper value =20, lower value =18. Rising event will be triggered if >=20 and retriggered if first condition <18 and second condition >=20. The lower/falling value works vise versa.

Known Issues and Limitations

-- Due to actually driver limitation all variables appear even they are not used or don't fit to function/device. This will be fixed in a later revision of the driver.
-- At initial time serial gateway can't fetch status of motors, thermostats and power consumption. All values will set to not applicable (-1). After first change sent by the device(s), the values get updated. If this is changed by manufacturer, it will be fixed in a later revision.

-- Value power consumption of device type 'Actuator with measurement' is limited to a value of approximate 340 Watt by the gateway. If this is changed by manufacturer, it will be fixed in a later revision.
-- If a channel/element address includes more then a single actuator, one device will act as master and others as slaves. Declaring a master is a random process and maybe changed during operation. To avoid disfunction, make sure to use same types of actuators and same firmware versions.
-- If function group is used, it is recommended to control groups with same type of actuactors to avoid unexpectable results. Sending commands to groups, acknowledge from actuators will resent to the group channel and not to the specific element address. This is mandatory, because one actuator acts as master and synchronize other actuators which acts as slaves within a group. However, elements will updated since version 1.1 .
-- Rising/falling values triggered by an event, will not work with function group.

Have success and a bit of fun using the driver
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http://www.digital4home.de