DOMOSAPIENS MULTI INTERFACE DRIVER FOR SOMFY RTS AND DCT BLINDS

If you have used this driver in the past, please note that its architecture has changed significantly with the addition of the Multi Interface driver. Take the time to read this documentation.

Using an elaborate timing model, this driver set enables you to effectively control one-way Somfy RTS and DCT (Dry Contact) blinds/motors using one or more of the following control devices:

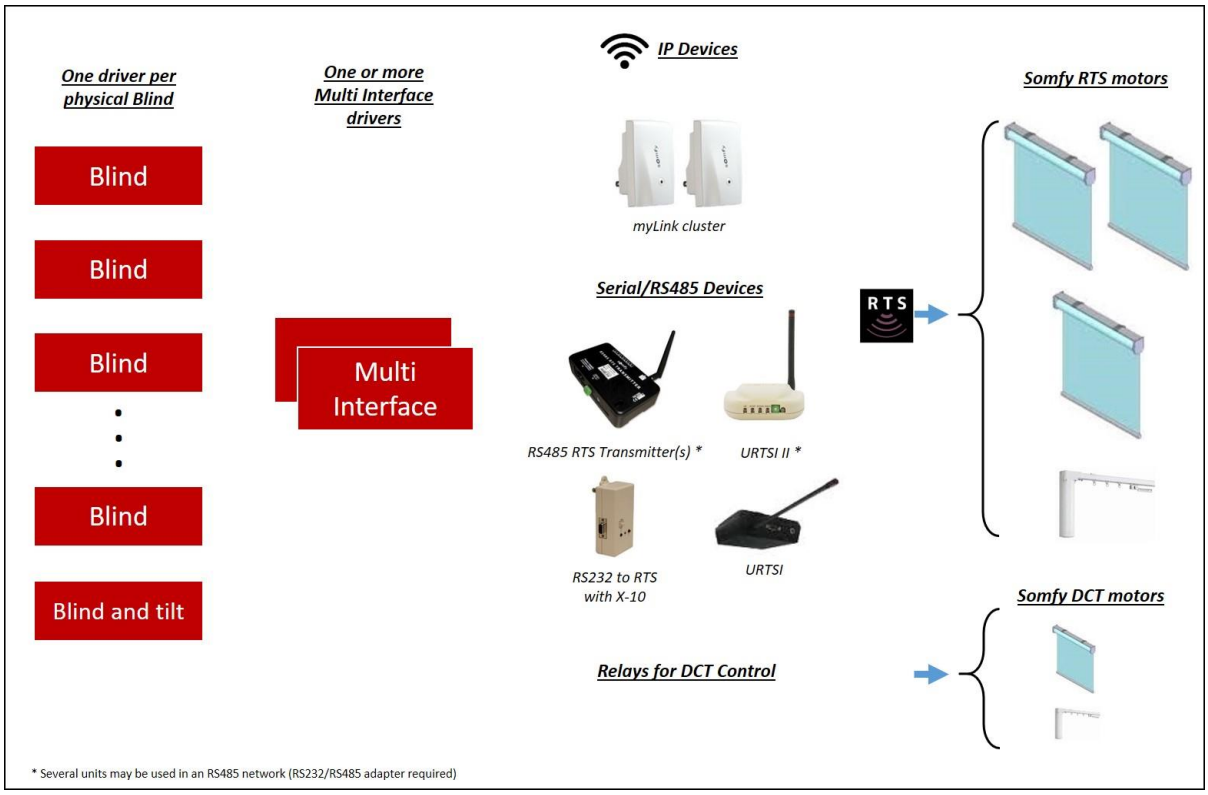
- Somfy myLink (16 channels each)
- Somfy RS485 RTS Transmitter (16 channels each)
- Somfy URTSI II (16 channels each)
- Somfy URTSI (5 channels each)
- Somfy RS232 to RTS with X-10 (16 channels)
- Dry contact motors (DCT - 2 or 3 contacts per motor for up/down/stop or open/close/stop)

This version of the driver implements a ***new*** architecture where the '*Somfy Multi Interface*' driver is new and replaces the former '*Generic V3 Somfy Main Interface*' driver. Several Multi Interface drivers may be present in the same project. This significantly increases the flexibility in connecting several RS485 RTS transmitters, several URTSI II, several clusters of myLink or even an elaborate mix of several of the above in the same project. In addition, the legacy '*Generic V3 Somfy RS485 Add-on*' driver for RS485 RTS Transmitters is no longer required, making this popular option simpler to install. A new '*Somfy 9600 Baud Conversion*' driver is now used for older 9600 baud devices, such as URTSI and URTSI II. See the section on **Migrating to the New Multi Interface Driver** below for more details.

IMPORTANT: previous versions of this driver supported Bond Bridge and Somfy TaHoma devices, which is no longer the case. Existing and already configured installations will retain the ability to support the Bond Bridge and Somfy TaHoma. For new installations, please use the upgrade paths outlined below:

- For **Bond Bridge**: use the new Domosapiens Advanced Blind Control driver available on DriverCentral (see below for special licensing).
- For **Somfy TaHoma**: use the official free driver available from Somfy Systems or Control4. If you plan to control one-way RTS devices using TaHoma and wish to use the Control4 slider model, you may wish to install the new Domosapiens Advanced Blind Control driver (see below for special licensing) and 'encapsulate' the TaHoma blind drivers assigned to RTS devices.

If you already have a valid license for the current Somfy Multi Interface Driver in your project (likely if you are reading this), the same license will also activate the new Domosapiens Advanced Blind Control driver (the reverse is not true).



Each Multi Interface driver is capable of simultaneously controlling one **IP** device:

- A cluster of one or more Somfy myLinks (Wi-Fi)

as well as one **Serial** device:

- One Somfy RS485 RTS Transmitter or several Transmitters connected in an RS485 fashion
- **OR** one Somfy URTSI II or several URTSI IIs connected in an RS485 fashion
- **OR** one Somfy URTSI or one RTS with X-10

as well as up to 16 Somfy DCT motors via **Relay** sets.

If the project has more complex requirements, such as several clusters of myLinks, simply install additional instances of the Multi Interface driver. The selection of which Multi Interface driver to use and which specific motor to control is done at each Blind driver.

KEY FEATURES OF THE SOMFY DRIVER SET BY DOMOSAPIENS

- ✓ An elaborate timing and programming model estimates the current position and status of each blind at all times, based on timing values provided by the installer.
- ✓ New blind features in OS 2.9 are supported, including setting the blind to a % open or closed.
- ✓ Venetian blinds/louvers are supported in addition to regular blinds. Dual operation (roll and tilt) is also supported via a separate driver when using the RS485 RTS Transmitter.

- ✓ More than one Multi Interface drivers may be installed in the same project, allowing for very complex Somfy RTS/DCT control schemes (only one license is required per project).
- ✓ Blinds drivers may be positioned in the appropriate rooms for easier Navigator access.
- ✓ Somfy myLink transmitters are supported using a Wi-Fi connection.
- ✓ Somfy RS485 RTS Transmitters (5061182) are supported, including setting IP and programming the channel.
- ✓ Multiple URTSI II devices are supported if connected in an RS485 network.
- ✓ Property to allow multiple sends (retransmissions) when using URTSI II and RS485 Transmitters.
- ✓ Property to allow feedback to individual blinds when grouped RTS channels are used.
- ✓ Support for up to 30 driver scenes (new concept).
- ✓ RTS485 Action to set motor in PROG mode.
- ✓ RTS485 Action and programming command to send TILT (+ or –) with optional amplitude.
- ✓ Dry contact operation (2 relays per motor with an optional 3rd STOP relay) is supported for up to 16 motors (32 to 48 relays overall).
- ✓ Driver tested with Global Caché devices (iTach and iTach Flex) to allow for more connection possibilities.
- ✓ Interface driver stacks consecutive commands so that delays between commands are observed, as per Somfy requirements.
- ✓ Programming control is available to set blinds to specific positions.
- ✓ Programming feedback is provided on current blind position and status.
- ✓ Action ("Print Blind Report") to print a summary of all blinds configured in the project.
- ✓ Action ("Print Status Report") to simplify reporting of issues.

Some sample configurations:

- Several blind drivers to one Multi Interface driver to a myLink cluster to control corresponding RTS blinds.

- Several blind drivers to one Multi Interface driver controlling some of the blinds using a myLink device and the others using an URTSI II (via the new 9600 Baud Adjustment driver).

- Several blind drivers to one Multi Interface driver controlling the blinds using three RS485 RTS Transmitters arranged in an RS485 network. Only one RS232 to RS485 adapter is required and the legacy Add-on driver is no longer required.

- And many more… Each blind driver selects which Multi Interface driver it needs to connect to and, from a drop-down list, which of the controlled blinds it is assigned to.

INSTALLATION STEPS

- Use the free trial period or activate the driver at any time with the license you purchased from our website. If a previous version of this driver was installed, see the section **MIGRATING TO THE NEW MULTI INTERFACE DRIVER** below.

- Copy the four drivers from the distribution package to your Control4\Drivers directory. In Composer Pro, you will find these drivers under Manufacturer "Somfy" and they will be identified as '*Somfy Multi Interface (Domosapiens)'*, '*Somfy 9600 Baud Adjustment (Domosapiens)*' , 'Generic *Somfy Blind (Domosapiens)'* and '*Generic Somfy Bind with Tilt*

(Domosapiens)'.

The Multi Interface driver is new and replaces the former Main Interface driver which is no longer required if you migrate to the new Multi Interface driver (see the section **MIGRATING TO THE NEW MULTI INTERFACE DRIVER** below). Otherwise, leave it unchanged in your project. The two Blind drivers are direct updates to the former Blind drivers (simply a new version of each) and are compatible with both Interface drivers. Please note that the dates/versions may differ from the picture above.

The new '*Somfy 9600 Baud Adjustment*' driver is used between a Multi Interface driver's Serial Connection and a Control4 serial port, **but ONLY** for URTSI II, URTSI and RTS to X-10 devices. It is **NOT** to be used for the RS485 RTS Transmitter, where the Multi Interface driver's Serial Connection must be connected directly to a Control4 serial port. The former '*Generic V3 RS485 Add-on*' driver is no longer part of the package.

- If a single URTSI II used in RS232 mode, use 1 as its address (including its rotary dial). If several URTSI IIs are used in an RS485 setup (via an appropriate RS232 to RS485 adapter), enter the addresses of each, as set on their rotary dials (they must all be different). For example, if you have 3 URTSI IIs and their dials are set to 1, 5 and C respectively, enter 15C in the Address(es) property. **Also note that in some URTSI II documentation, the RS485 connections may be mislabeled.** They should be labeled **RS485 A(-)** and **RS485 B(+)**.

  IMPORTANT: Do not try to mix URTSI II and RS485 RTS Transmitters on the same RS485 network, as they use different baud rates.

- If you wish to use one or more Somfy **myLink**(s) in your project, configure them first with the Somfy iOS/Android application and make sure you can control the blinds using the Somfy application. If several myLinks are thus configured in the same application, they are referred to as a 'cluster'. Ensure one of the myLink units in the cluster has a fixed IP address, either by configuration or with a MAC-based reservation. If a cluster uses several myLinks, only one needs to be connected to the driver as it will automatically act as a "master" for the other myLink units. Enter a System ID in the Somfy application's *Integration* tab and specify the exact same System ID in the appropriate Interface driver Property.

- Install one or more Multi Interface driver(s) in your Project. For each, specify which IP device (if any) is to be controlled and enter the device's IP address.

Similarly, specify which Serial device (if any) is to be controlled and connect the Multi Interface driver's serial connection. If a Multi Interface driver is to be connected to a 9600 baud device (URTSI II, URTSI, RTS to X-10), install an instance of the '*Somfy 9600 Baud Adjustment*' driver and connect it between the Multi Interface driver's Serial Connection and the Control4 serial port. Otherwise, the port is a 4800 baud port and may be connected directly to a Somfy RS485 RTS Transmitter via an RS232 to RS485 adapter.

- Finally, specify the number of relay sets (if any) to be used for DCT blinds/motors. If relay sets are used for DCT blinds/motors, connect the UP and DOWN relay contacts to appropriate relay bindings corresponding to the physical connections. Somfy usually allows a STOP command to be issued by closing the UP and DOWN relay simultaneously. The driver will support this if you do not connect the STOP relay contact. However, if you wish to use a specific STOP relay contact, you may connect it to a Control4 relay binding and the driver will use it instead of simultaneous UP/DOWN.

- Add individual Blind drivers to the project, in the appropriate rooms and select their Multi Interface driver. Then, select their specific motor interface/channel from the drop-down list. Use the Action '*Refresh Interface Devices List*' if required. Two specific Blind drivers are available: use the normal '*Generic Somfy Blind*' driver for fall single-function blinds/shades. Alternatively, you may use the dual-function '*Generic Somfy Blind with Tilt*' driver for blinds which may move up/down as well as tilt when they are fully closed. **IMPORTANT**: the latter are only supported by the RS485 to RTS Transmitter.

- To ensure the driver's internal timing model is in sync with the actual blinds, synchronize the position of each blind by issuing "DOWN", wait 3 seconds, "UP", wait the full duration of the course (defaults to 4 or 10 seconds) until the next step is performed.

- For each Blind driver, it is important to measure and enter the Full Course Duration (in seconds). If the Intermediate Position (IP) is to be used, also enter the duration from Open to IP in seconds.

- When you are done, Refresh Navigators.

PROPERTIES

- **Driver Version** displays the version of this driver.

- **Debug Mode** turns Debug Mode Off or On (with output to the Lua Output window).

- **Debug Duration in Minutes** sets the duration of Debug On.

- **Driver Information/Driver Information IP/Driver Information Serial** display various status messages about the driver.

MULTI INTERFACE DRIVER

- ***** Device Controlled via Network** specifies which IP device (if any) the Multi Interface driver will control. Depending on the selection, some properties below will become visible.

- **Enter myLink IP Address** is used to enter the pre-assigned fixed IP address of the master myLink device.

- **System ID from myLink** specifies the System ID you have previously entered under *Integration* in the iOS or Android myLink application. Any string may be entered ('myHouse', for example), but it is important that the value entered here match EXACTLY what was entered in the app.

- **Device Available via IP** indicates if the Network Connection has been established with the master myLink device.

- ***** Device Controlled via Serial** specifies which Serial device (if any) the Multi Interface driver will control. The various options indicate when the '*Somfy 9600 Baud Adjustment*' driver is required. Depending on the selection, some properties below will become visible.

- **Send Retransmission Count** (RS485 RTS Transmitter and URTSI II only) allows each command to be retransmitted once or multiple times. This should normally be left at 0 (the default) but may set up to 9 if some blinds respond only intermittently because they are located at/near the limit of the transmission range. Use only when necessary, while understanding that this parameter will not solve all transmission problems.

- **URTSI II Address(es)** If one or more URTSI II are used, specify its/their unit address(es). Leave at "1" for a single URTSI II in RS232 mode. If several URTSI II are connected in an RS485 network, ensure their individual addresses (rotary switches) are all set differently and enter all the addresses as a string. For example, if you are using three URTSI II in RS485 mode (via an RS232 to RS485 Converter) and their rotary switches are set to 1, 5 and C respectively, enter 15C in the Address(es) property.

- ***** Number of Relay Sets** specify the number of relay sets (one set for each such DCT blind/motor). A relay set is either 2 or 3 relays, depending on whether a STOP relay is used.

- **Number of Driver Scenes** specifies the number of Driver Scenes used in this project. Driver Scenes may be activated via programming and will position each assigned blind to its memorized (captured) position. Please note that Driver Scenes apply to all interfaces and are separate from myLink scenes which are defined in the myLink App and apply only to the myLink environment. See the **USAGE NOTES** section for more information on Driver Scenes.

- **Driver Scene x Blinds** is used to specify the blind(s) targeted by a specific Driver Scene.

- **Driver Scene x Name and States** is used to name a specific Scene and capture the state of its targeted blinds using the '*Capture Driver Scene*' Action. Alternatively, you may manually specify the desired state of each blind in the Scene after the Scene name, all separated by commas (O = Open, C = Closed, X = Unkown/ignore). Example: My Night Scene,C,C,O.

BLIND DRIVERS

- **Select Multi Interface Driver** allows you to select which Multi Interface driver controls the current Blind. Leave this blank if you are still using the legacy Main Interface driver, but

ensure the Blind driver is connected to the Main Interface driver's SOMFY_GENERIC binding. This connection is not required (nor available) when using the new Multi Interface driver.

- **Available Interface Devices** allows you to select which physical blind this driver will be assigned to (or associated with). You may request a new list by using the Actions '*Refresh Interface Devices List*'.

- **Full Course in Seconds** - this is a very important step: for each Blind driver, you should measure the Full Course duration and update the property (the default of 10 seconds is rarely appropriate). The recommended procedure is to fully open the blind and use a timer or chronometer to measure the time between when the DOWN command is issued and the moment when the blind reaches its fully closed position and stops. It is better to enter a slightly longer time than cutting it short. Enter the value in seconds. If an RTS channel controls more than one blind simultaneously, use the longest value for the Full Course Duration.

- **From Open to IP in Seconds:** the Somfy protocol allows for an optional Intermediate Position to be programmed for each blind. The steps to set this up are detailed in the Somfy programming instructions for each specific motor. This Intermediate Position is normally reached by pressing STOP when the blind is currently stopped. If you have defined an Intermediate Position (IP) for any blind, time it from the fully OPEN position (as with the Full Course Duration above) and enter the value in seconds. For blinds controlled by the RS485 RTS Transmitter, an Action is available to set the IP, for convenience.

- **When in Tilt/Louver Mode** (regular Blind only): specify the action of the Control4 'horizontal' tilt command. If some blinds are the venetian blind/louver tilting type, use the Action '*Set Shade/Tilt Mode*'. The default course will be set to 4 seconds which is typical of Somfy J4-type motors. DO NOT use the Blind Type Property, as the driver is not notified of changes.

- **Invert Up Down Commands** is used to invert the Up and Down commands if you notice that they yield reverse operations. Normally, this is determined at initial motor installation, but this property may be used if required.

- **Invert Tilting Commands** (Blind with Tilt only) is used to invert the tilting commands if you notice that they yield reverse operations.

- **Blinds Responding to this Group Command:** if a specific blind RTS channel is used to operate several blinds simultaneously (a 'group' channel) AND if you have also installed separate blind drivers (and RTS channels) for each blind, you may specify these blinds in the group channel blind driver. This way, when you operate the group channel, the driver will also notify the member blinds to update their state.

The following are Informational Properties (shown when appropriate)

- **Blind Controlled by Interface** shows which Interface this driver has been assigned to control.

- **RTS Channel or RELAY Set** shows which RTS channel or RELAY set this driver has been assigned to control.

- **Current Position** displays the current position of the blind, as currently understood/calculated by the driver. If this is not accurate, re-sync the driver by pressing the following: "DOWN", wait 3 seconds, "UP", wait the full duration of the course.

- **RTS485 Ergonomics** (RS485 RTS Transmitter only) displays the current US/CE Ergonomics of the motor. This may be requested using the Action '*Get Parameters from Blind*' and modified using the Action '*Set Channel Mode*'.

- **RTS485 Mode** (RS485 RTS Transmitter only) displays the current Rolling/Tilting Mode of the motor. This may be requested using the Action '*Get Parameters from Blind*' and modified using the Action '*Set Channel Mode*'.

- **RTS485 Modulis** (RS485 RTS Transmitter only) displays the current Modulis Mode of the motor. This may be requested using the Action '*Get Parameters from Blind*' and modified using the Action '*Set Channel Mode*'.

- **RTS485 Tilt Framecount** (RS485 RTS Transmitter only) displays the current Tilt Framecount of the motor. This may be requested using the Action '*Get Parameters from Blind*' and modified using the Action '*Set Tilt Framecount'*.

- **RTS485 Sun Auto** (RS485 RTS Transmitter only) displays the most current Sun Auto command sent to the motor. This may be sent using the Action '*Set Sun Auto*'.

- **RTS485 Set IP** (RS485 RTS Transmitter only) displays the most current Set Intermediate Position (IP) command sent to the motor. IP may be set using the Action '*Set Intermediate Position (IP)*'.

MIGRATING TO THE NEW MULTI INTERFACE DRIVER

If your project is already using a previous version of this driver set (with the Main Interface driver), it is simple to update it to use the current version with the Multi Interface driver. Follow these simple steps:

1. The blind drivers themselves are upward compatible, so all you need to do is to update the current blind drivers to the most current version. If your blind drivers have been automatically updated to V14.0.0 or above, then simply proceed with step 2 below.

2. Install one or more instance(s) of the Multi Interface driver.

3. Configure the Multi Interface driver(s) and connect to the appropriate devices/ports. Use the '*Somfy 9600 Baud Adjustment Driver'* as appropriate.

4. At each blind driver, use the new property to '*Select Multi Interface Driver'*. Then, if required, run the Action '*Refresh Interface Devices List*' and select the appropriate device from the drop-down list. At this point, all the blind commands will be routed to the new Multi Interface driver(s), even if the blind drivers are still connected to the previous (legacy) Main Interface driver. Test that the new interfaces are operational.

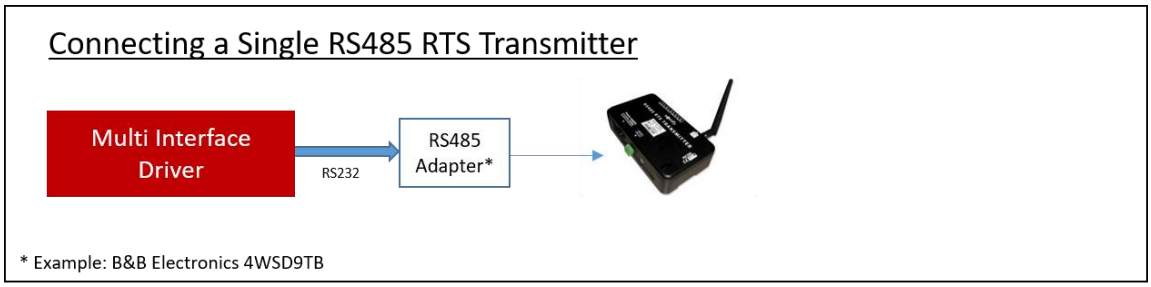
5. **IMPORTANT:** review the programming to make sure you run the myLink scenes and other commands pointing to the new Multi Interface driver(s).

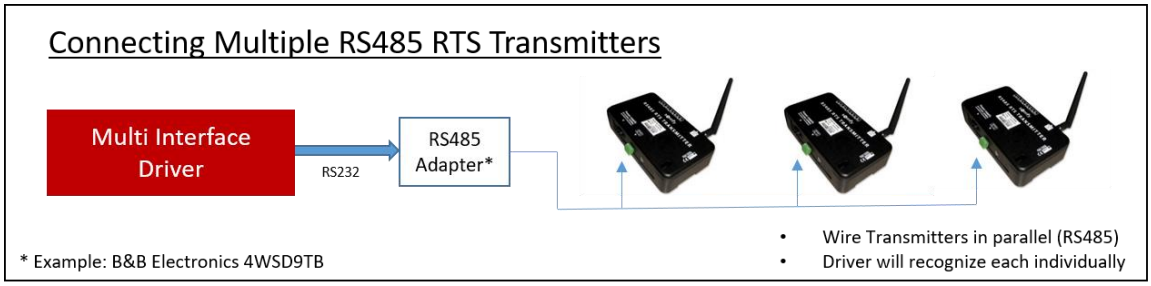
6. Once all is operational, you may delete the previous (legacy) Main Interface driver as well as the RTS485 Add-on driver if it was used.

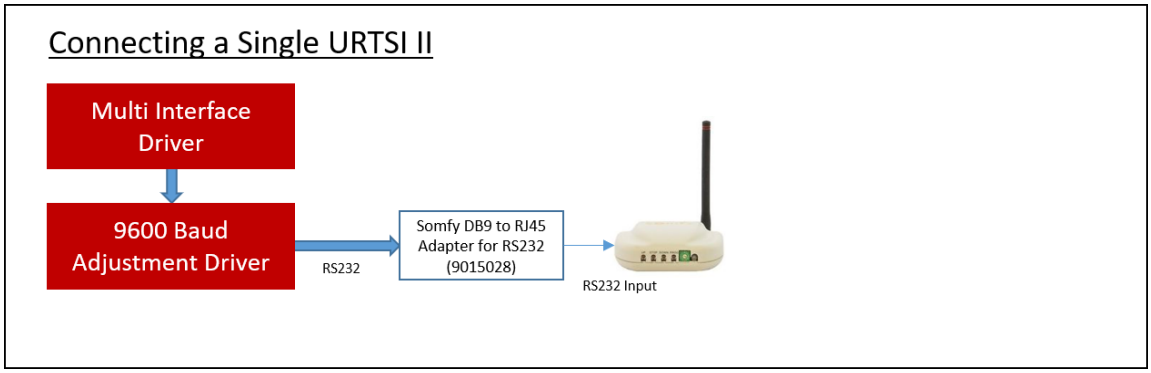
If you do not wish to migrate to the new Multi Interface driver, simply leave the former Main Interface driver (and also possibly the RS485 Add-on driver, if used) in your project with all the Blind drivers connected to its SOMFY_GENERIC connection, as before. You may update the Blind drivers themselves to the new version as they are compatible with the older Main Interface driver, but do not select a Multi Interface driver at each blind (leave the property empty).

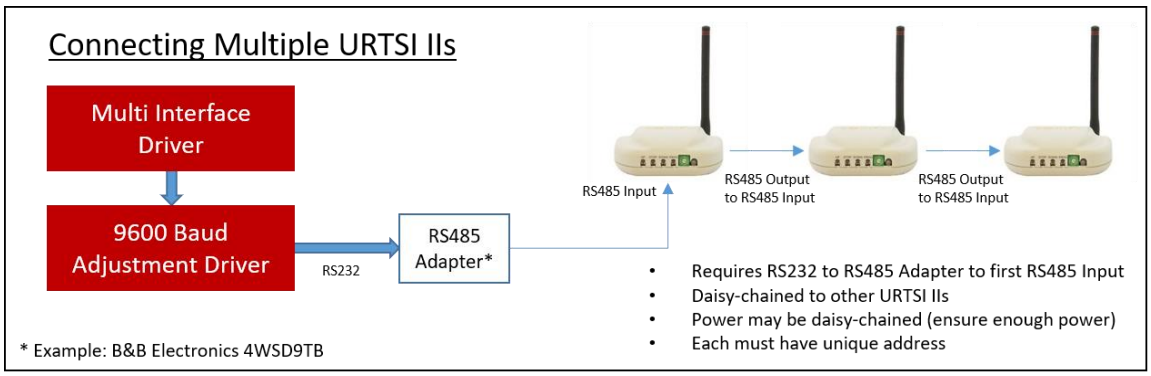
USAGE NOTES

Several connections are possible for the popular Serial control devices. See some examples below.









Although the Somfy RTS and DCT communications are **one-way only** (the driver does not receive positional feedback from the motors themselves and thus operates in the dark), this driver set uses an elaborate timing model to maintain at all times an estimated view of the status and position of each blind/motor. This allows relatively accurate feedback to the navigator interfaces as well as programming functions such as 'Set Blind to x% Closed'. The timing mechanism also allows the Interface driver to meet the Somfy requirements in terms of delay between commands as well as avoiding overlapping pulses of the control relays.

Somfy RTS blinds can be programmed as a single blind per RTS channel or can be grouped as several blinds per RTS channel. In this case, an UP, DOWN or STOP command would be executed by all the blinds programmed on the same RTS channel. If you have programmed individual blinds on RTS channels as well as grouped blinds on a separate RTS channel, the driver is able to send feedback to the individual blinds when the group channel is operated.

Since RTS blinds do not actually provide feedback, the driver is not updated when the blinds are operated manually, with a Somfy remote for example. This prevents the standard Control4 Snapshot driver, for example, from always working correctly. The new Driver Scenes available with this driver set solves this issue. Driver Scenes allow the capture and replay of various blind positions, and may be executed via programming, including with User Experience buttons. Up to 30 such Driver Scenes may be defined. **IT IS IMPORTANT THAT BLINDS BE OPERATED BY CONTROL4 (AND NOT BY A SOMFY REMOTE OR DEVICE) AS THE LAST OPERATION BEFORE THEIR CAPTURE**.

In addition to the normal programming functions available for a blind, the following additional facilities are available under the Blind driver in Programming:

1. Use the new commands "*Set Blind Percent Open*" and "*Set Blind Percent Closed*" to issue a Requested Position (RP) movement command to the blind. These are equivalent and a complement of each other. Use whichever is more convenient.

2. Use the new command "*Set Blind to Intermediate Position*" to issue an Intermediate Position (IP) movement command to the blind. This function is available only if the "*From Open to IP*" property has been set for the blind. Please note that this programming command does not issue a STOP command to the blind to reach the Intermediate Position. Instead, it issues a Requested Position (RP) movement to the appropriate Intermediate Position level.

3. Use the new command "*Reset Blind to Full Open*" to resynchronize the driver with the physical blind. No matter what the initial position of the blind is when it starts moving up, always wait for the full Course Duration before issuing another command.

4. When myLink scenes are used, the specific blinds involved do not receive feedback. A new programming command is therefore provided ("*Inform Blind*") to inform blinds of a myLink scene movement. If, for example, a myLink scene is run which instructs four blinds to go "Down", you would use one programming command to run the myLink scene, followed by four programming commands to inform each of the four blinds that they should show a "Down" state. This may appear cumbersome, but sometimes, it is better to use a myLink scene instead of several individual blind commands because the myLink scene may execute more quickly and the blinds would move somewhat more in unison.

5. Two new variables "*FULL_COURSE_DURATION*" and "*FROM_OPEN_TO_IP*" contain the value of the corresponding property.

6. The variables "*ESTIMATED_PERCENT_OPEN*" and "*ESTIMATED_PERCENT_CLOSED*" contain the driver's current estimate of the blind position. The two variables are a complement of each other. Use whichever is more convenient.

7. The variable "*CURRENT_STATUS*" contains the driver's current view of the blind. The possible values are:

    0 = Fully OPEN and stopped
    1 = Opening to fully OPEN
    2 = Closing to IP (Intermediate Position)
    3 = Stopped at IP while closing
    4 = Stopped at IP while opening
    5 = Opening to IP
    6 = Stopped other than at IP while closing
    7 = Stopped other than at IP while opening
    8 = Closing to RP (Requested Position) - available through programming only
    9 = Opening to RP
    10 = Closing to fully CLOSED
    11 = Fully CLOSED and stopped

    For venetian blinds/louver-type blinds, the status values are:

    0 = Closed - louvers up
    1 = Tilting to Closed - louvers up
    2 = Tilting to Intermediate Position
    3 = Stopped at Intermediate Position
    4 = Stopped at Intermediate Position
    5 = Tilting to Intermediate Position
    6 = Stopped mid-course
    7 = Stopped mid-course
    8 = Tilting to Requested Position
    9 = Tilting to Requested Position
    10 = Tilting to Closed - louvers down
    11 = Closed - louvers down

If you find that the driver is out-of-sync with the physical blind, this can also be corrected via programming or by pressing the following: "DOWN", wait 3 seconds, "UP", wait the full duration of the course.

SUPPORT

For support on this driver please go to https://help.drivercentral.io/. Give a detailed description of the problem and also include the version number of the driver and the version of Control4 OS that you are using.

AUTO UPDATE

This driver is updated with fixes and new features from time to time. To ensure your project uses the latest version, set the Automatic Updates property of the main driver to On. If required, companion drivers will also be updated automatically.

CHANGELOG

1.0.0	December 21 2014	Initial release
10.0.0	July 17, 2017	Migration to driverCentral
11.0.0	November 3, 2018	Support added for blinds with tilt, better IP, new contacts, issues fixed
12.0.0	May 3, 2019	Updated infrastructure and moved all documentation online
14.0.0	April 11, 2020	New architecture: added Multi Interface capability, documentation rewritten
15.0.0	October 7, 2020	Licensing Update
16.0.0	December 2, 2020	Streamlined device support
16.1.1	March 17, 2021	Fixed issues with Driver Scene properties
17.0.0	May 26, 2021	Added 2 Disabling Contacts and property to invert movement
17.0.1	August 2, 2022	Issues fixed with Relay operations and Available Devices in large projects
17.1.0	August 20, 2024	Fixed issue with some operations being missed