



# I/O QuickConnect System Configurator Software

## Manual

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#### **1** Introduction

The QuickConnect Configurator is a stand alone software independent of the simulator software drivers. It directly connects to all QuickConnect controllers that it finds on the LAN network. It does not need any other software to do that.

Its purpose is to test all connected hardware and to generate a text file that contains a list of the switches and lights of the overhead panel that are connected to the QuickConnect system. This list informs the simulator software driver about the hardware address of each simulated aircraft switch in the QuickConnect network and some calibration information. For example when the aircraft simulation software switches on a virtual Korry indicator the QuickConnect software driver needs to know the UM controller and driver board address as well as the switch number where the physical Korry switch is connected to so it can give the correct command to switch the physical Korry light on.

For this to work, every single physical switch needs to have its own unique address. The address of each UM controller board can be selected with jumpers between 0 and 15. Each connected UM board needs a different address. Each UD driver board has jumpers to select an address between 0 and 2. When more than one driver board is connected to the same UM controller Bus, each of the drivers needs to have a different address.

The QuickConnect Configurator will run on Windows 10 or 11 systems. To start it, just click on the exe file. When the pop up "Windows protected your PC" appears, click on "More info" and then "Run anyway". This is necessary because the application does not have a Microsoft certificate.

## When a popup from Windows defender appears, allow the Application access to private LAN networks so it can communicate with the controller boards.

The application is designed for a monitor resolution of 1920x1080 or greater. The "scale and layout" setting under Windows display settings should be set to 100%.



#### 2 Configuration file format

The text file generated by the QuickConnect Configurator passes the information generated by the user on to the driver software. It is a simple text file. Usually it will be generated and edited with the configurator software, but it can also be read and manually edited with any text editor if needed. The photo below shows a sample file with 4 Korry switch configuration entries:

📗 test.ini - Notepad	
File Edit Format View Help	
[FUEL_CTK1]	
Controller	= 1
Bus	= 1
Driverboard	= 0
Korry_Number	= 1
[FUEL CTK2]	
Controller	= 1
Bus	= 1
Driverboard	= 0
Korry_Number	= 2
[FUEL LTK1]	
Controller	= 1
Bus	= 1
Driverboard	= 0
Korry_Number	= 3
[FUEL LTK2]	
Controller	= 1
Bus	= 1
Driverboard	= 0
Korry Number	= 4

IMPORTANT: The name of the config file must always be **QuickConnect.ini** to be recognized by the driver software. The file must be placed in the same folder as the driver.



#### **3 Startup and Connection**

When an UM Controller board is connected to the LAN network and powered up without any SW running on the host PC, it will show an orange light. This light indicates that the board is not "talking" to any SW. Once a connection is established, the orange light will go out. When there has been no connection for more than 20 seconds, the orange light will flicker for 1 second to indicate that the controller is doing a reset. This is a recovery feature in case that the controller software has malfunctioned.

When the QuickConnect configurator exe file is started, this menu should be show:

First you have to choose your aircraft simulation target software. Depending on what software you choose this number and labels of the available aircraft switches will change.



CAKOKSIM QuickConnect Configurator	- 🗆 X
Detected QuickConnect Boards:	Select target from list Select target from list Toliss A340-600 (X-Plane) Toliss A340-600 (X-Plane) Dechell FMGS A320 ProSim A320
	Target System. Not selected

This image shows how to select the target software. Once it is selected it will be always shown in the lower right corner of the screen.

CAKOKSIM QuickConnect Configurator		- 0	×
Detected QuickConnect Boards:			
expand controllers to view driver boards			
Refresh List			
Load Configuration File			
Save Configuration File			
Calibrate Voltmeter Interface	Target System: Jeehell FMGS A320		

Any UM boards that are found on the network will be shown in the list on the left side. In this example, one UM-1 board with the address 1 has been found. The orange light on this board will go out to indicate that the controller is connected to the configurator SW.



CAKOKSIM QuickConnect Configurator	- 0	
Detected QuickConnect Boards: UD-1 driver, Bus: 1 - Address: 0 Bus 1: Switch input option Bus 1: A/D option		
expand controllers to view driver boards		
Load Configuration File		
Save Configuration File		
Calibrate Voltmeter Interface	Target System: Jeehell FMGS A320	

Press the triangle symbol to the left of each controller item to view an expanded list that shows all boards that are connected to the 3 controller busses and all of their installed options. Driver boards and options are listed separately because there can be up to 3 driver boards on a bus, but only one switch or A/D option is allowed per bus.



### 4 Main menu

There are 4 buttons shown on the left side of the main menu:

Refresh List	Force a refresh of the controller List. Useful when a controller status has changed and the list has not been updated automatically
Load Configuration File	If you have previously created a configuration file and want to load and modify it, you use this button
Save Configuration File	When you are finished modifying a configuration file or want to save a new one for the first time, press this button
Calibrate voltmeter Interface	Opens a menu to create voltmeter calibration data. Only 1 controller with voltmeter option for up to 2 voltmeters can be installed.

When you create a new configuration for the first time, all changes are initially stored in temporary lists in RAM. When the "save" button is pressed, this configuration is written into a text file. You can give the file any name, but usually it should be named "QuickConnect.ini" so the driver SW can find it. This file must be placed in the same folder as the Cavoksim driver for the target aircraft SW. It is recommended to make a backup copy of this file.



## **5** Configuration of Korry type switches

Detected QuickConnect Boarde:	UD-1 Driver Board Korry Sw	vitches
Delected QuickConnect Doards.	Controller No: 1 Bus: 1 Board Address	s: 0
- UM-1 Address 1	r	
Bus 1: Switch input option Bus 1: A/D option	Korry 1 Korry 2 Korry 3	Korry 4 Korry 5
	Light Light Light	Light Light
	Pressed Pressed Pressed	Pressed Pressed
	Korry 6 Korry 7 Korry 8	Korry 9 Korry 10
	Light Light Light Light	Light Light
	Pressed Pressed Pressed	Pressed Pressed
expand controllers to view driver boards	Linked function of selected Korry: NONE	
Refresh List		NOT ASSIGNED
Load Configuration File	All Lights Off All Lights On	
Save Configuration File	Target System: Jeehell FM	GS A320
Save configuration file		

After pressing on a driver board entry in the list, the Korry configuration menu is shown on the right side. Each of the 10 Korry connections is represented by a box. The numbering is the same as on the UD board.





AKOKSIM QuickConnect Configurator	- 0
Detected QuickConnect Boards:	UD-1 Driver Board Korry Switches Controller No: 1 Bus: 1 Board Address: 0
Bus 1: Switch input option Bus 1: A/D option	Korry 1     Korry 2     Korry 3     Korry 4     Korry 5       Light     Light     Light     Light     Light       Pressed     Pressed     Pressed     Pressed
	Korry 6     Korry 7     Korry 8     Korry 9     Korry 10       Light     Light     Light     Light     Light       Pressed     Pressed     Pressed     Pressed
expand controllers to view driver boards	Linked function of selected Korry: NONE
Refresh List	Change function of selected Korry to: NOT ASSIGNED
Load Configuration File	All Lights Off All Lights On
Save Configuration File	Target System: Jeehell FMGS A320
Calibrate Voltmeter Interface	

When you press the "All Lights On" button, all Korry indicators connected to the selected UD driver board will illuminate and the menu will look as shown above. If the Korry lights do not illuminate, check the wiring and the annunciator power supply to the driver board. Also consider that some lamps or switches might be defective.



CACINISM QuickConnect Configuration         Pelected QuickConnect Boards:         UD-1 Address 1         UD-1 address 1	UD-1 Driver Board Korry Switches         Controller No.1       Bus 1       Board Address 0         Image Sector 1       Bus 1       Board Address 0         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         Image Sector 1       Image Sector 1       Image Sector 1         I	ELC_SAM1     ELC_SAM2     ELC_GAM2     ELC_DAT2     ELC_CAME     ELC_DAT2     ELC_CAME     ELC_DAT2     ELC_CAME     ELCC_CAME     ELC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC_CAME     ELCC     E	-
		HILE, MODE, SEL HRE, ENG J. AGENT HRE, ENG J. HRE, LIANDLE AIR, PAM, JIR AIR, APU, BLEED AIR, ENG2, BLEED AIR, ENG2, BLEED	

Select a single Korry switch by pressing the "Light" button in the center of the box. The respective Korry will illuminate and can easily be identified. Next click on the box to the right of "Change function of selected Korry to". You will see the selection menu as shown above. Select the label that describes the function of the selected Korry switch. The label names are dependent on the target software. Depending on this software the same switch can have different names. For example Toliss calls a switch "AIR\_APU\_BLEED" while ProSim calls the same switch "PNEUMATIC\_APU\_BLEED". In any case it should be no problem to identify the correct switch in the list. If in doubt, please contact us for advice.

When a selection is made, the configurator SW will save the link between the hardware address and the label in an internal list. There is no "Save" button. Selecting a label from the list is enough to update the list instantly.

When you select a different Korry switch by pressing its light button and then go back to your last modified switch, you should see the current label selection under "Linked function of selected Korry".



### **5** Configuration of other switches

For detailed instructions on how to connect switches, please refer to the QuickConnect installation manual.

CAKOKSIM QuickConnect Configurator	-	D X
Detected QuickConnect Boards:	UD-1 Driver Board Switch Option Configuration Controller No: 1 Bus: 1	
UM-1 Address 1 UD-1 drive, Bus: 1 - Address: 0 Bus 1: Switch input option Bus 1: A/D option	Switch: 1 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
	Switch: 2 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
	Switch: 3 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
expand controllers to view driver boards	Switch: 4. Current position reading: 0	
Refresh List	Assigned label, not assigned Linked Function: not assigned	
Load Configuration File		
Save Configuration File		
Calibrate Voltmeter Interface	Target System: Jeehell FMGS A320	

When pressing on a "switch input option" list item, the switch as shown above will be visible. Each of the 4 switch terminal blocks S1-S4 has its own configuration box.

The configuration box shows the following information:

- Switch number: Same as S1-S4 printed on the driver board
- Current position reading: Raw data value between 0-15 that is generated from the 4 input lines of the switch as described before. This value should change to a different unique number for each selectable switch position. If not, the switch wiring needs to be changed.
- Assigned Label: Name of the switch position linked to the current position reading value, for example a wiper selector switch can have the position labels "OFF", "SLOW" and "FAST".
- Linked function: Selected aircraft function of the switch, for example "SWITCH\_WIPER\_LEFT"



CAKOKSIM QuickConnect Configurator		-	
Detected QuickConnect E	loards:	UD-1 Driver Board Switch Option Configuration	
Edit Switch Configuration		Controller No: 1 Bus: 1	
First adjust the linked function Then adjust the switch position and save	in for the switch if required. ion values for each position	Switch: 1 Current position reading: 8 Assigned label: not assigned Linked Function: not assigned	
Linked funct	on of Switch 1: SIGNED	Switch: 2 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
Switch Position 1: Switch Position 2:	Value: 0 Value: 0	Switch: 3 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
Switch Position 3: Switch Position 4: Switch Position 5:	Value: 0 Value: 0 Value: 0	Switch: 4 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
SAVE	CANCEL		
Calibrate Voltmeter Interfa		Target System: Jeehell FMGS A320	

When pressing the edit button for a switch the above pop up menu will be shown. Move this menu a little to the left so that you can see the current position readings of the switches. To configure a new switch first select the function label of the switch from the drop down list:

Switch Jake, PACK, FLOW         Switch Any, IRE, TEST         Switch Jake, PACK, FLOW         Switch Jake, PACK, FLOW         Switch Jake, PACK, FLOW         Switch Any, IRE, TEST         Switch Jake, PACK, FLOW         Switch Configuration         Switch Configuration         Switch Position 1:         Switch Position 2:         Switch Position 3:         Switch Position 4:         Switch Position 5:         Switch Position 7:         Switch Position 7:		
SWITCH_STROBE SWITCH_WING SWITCH_WINPER_LEFT SWITCH_WIPER_RIGHT Target System: Jeehell FMGS A320	Switch Position 1: NO Switch Position 2: F Switch Position 3: Switch Position 4: Switch Position 5: Switch P	UD-1 Driver Board Switch Option Configuration Controller No:1 Bus:1 Switch: 1 Current position reading: 6 Assigned label: not assigned Inked Function: not assigned Inked Function: not assigned Switch: 3 Current position reading: 0 Assigned label: not assigned Inked Function: not assigned Switch: 4 Current position reading: 0 Assigned label: not assigned Switch: 4 Current position reading: 0 Assigned label: not assigned Inked Function: not assigned Edit Switch: 4 Current position reading: 0 Assigned label: not assigned Inked Function: not assigned Inked Function
Calibrate V SWITCH_WIPERRIGHT Target System: Jeehell FMGS A320	SWITCH_STROBE SWITCH_WING SWITCH_WIPER_LEFT	
	Calibrate Ve SMICH_WIPER_RIGHT	Target System: Jeehell FMGS A320



CAKOKSIM QuickConne	ect Configurator				-	
Detected	QuickConnect Boards:				UD-1 Driver Board Switch Option Configuration	
Edit Switch Configura	tion		- 🗆	×	Controller No: 1 Bus: 1	
First ar Then a and sa	djust the linked function for the sv djust the switch position values f ve	vitch if required. for each position			Switch: 1 Current position reading: 8 Assigned labet: not assigned Linked Function: not assigned	
	Linked function of Switc	h 1: _ON			Switch: 2 Current position reading: 0 Assigned label: not assigned Unked Function: not assigned	
Switch Position 1:	NOT PRESSED	Value: Value:	0		Switch: 3 Current position reading: 0 Assigned label: not assigned Edit	
Switch Position 3:		Value:	✓ 0 1 2		Unked Function: not assigned	
Switch Position 4:		Value:	3		Switch: 4 Current position reading: 0 Assigned label: not assigned Linked Function: not assigned	
Switch Position 5:		Value:	5			
Calibr	SAVE ate Voltmeter Interface		6 7 9 10 11 12 13 14 15		Target System: Jeehell FMGS A320	

After a switch function label is selected all possible switch position labels are automatically shown in the switch position list. These labels can not be changed. The number of positions is also determined by the selected switch. In the example above a simple push button has been selected. It has only 2 possible positions: 'not pressed' and 'pressed'. All switch positions in use must now be linked to a position value. Move the switch to all selectable positions one by one and read the current position label to link it to the switch position, as shown above. When finished press the "SAVE" button to save the selections in a temporary list for as long as the program is running. After saving, the pop up menu will close. Note that each selectable switch position needs to have a different value assigned to it. When that is not the case a warning message will appear to remind you that the value assignment is not correct.

After saving the changes cycle the switch though all possible positions again and check that the correct assigned labels are shown.



#### 6 Configuration of A/D inputs (Potentiometers)

UD boards can have the A/D option installed. In this case 2 A/D inputs are present on the board which can be connected to panel potentiometers for analog inputs. Airbus uses only a few potentiometers on the overhead panel. The number varies, but they are all used for temperature control and landing elevation selection.

The UD board provides a voltage of 5V to the potentiometer and reads the output voltage. The raw data reading of the A/D channel equals the measured voltage in volt multiplied by 100. So the normal range of readings is between 0 and about 5000.

To configure the A/D converter inputs press the "A/D option" item in the expanded controller treeview. This option is only displayed when it is installed and detected.

AKOKSIM QuickConnect Configurator	- 0
Detected QuickConnect Boards:	UD-1 Driver board Analog Converter Option Setup Controller No: 1 Bus: 2
→ UM-1 Address 1 UD-1 driver, Bus: 2 - Address: 0 Bus 2: Switch input option Bus 2: A/D option	Channel A1 Raw data reading: 1025 Linked function: NOT ASSIGNED Min value: 0 Max value: 0 Reverse direction: •
expand controllers to view driver boards	Channel A2 Raw data reading: 4 Linked function: NOT ASSIGNED
Load Configuration File	Min value: 0 Max value: 0 Reverse direction:
Calibrate Voltmeter Interface	Save changes Target System: Toliss A340-600 (X-Plane)

When this item is selected, the analog converter configuration menu is shown as above

In this menu, you can see the current raw data reading of each of the 2 channels. When a potentiometer is connected, you should see a change of the raw data value when you turn the selector. If there is no change, check the wiring.



CAKOKSIM QuickConnect Configurator	×
UM-1 Address 1         UD-1 Address 1         UD-1 driver, Bus: 2 - Address: 0         Bus 2: Switch input option         Bus 2: A/D option	UD-1 Driver board Analog Converter Option Setup Controller No: 1 Bus: 2 Channel A1 Raw data reading: 3 Linked function: Min value: Reverse direction:
expand controllers to view driver boards Refresh List Load Configuration File Save Configuration File Calibrate Voltmeter Interface	Raw data reading: 969   Linked function:   Min value:   0   Max value:   0   Reverse direction:    Save changes  Target System: Toliss A340-600 (X-Plane)

To configure the input, turn the selector all the way to one side until the raw data value is at the minimum (normally close to zero). This value should be shown when the selector is turned all the way counterclockwise. If it is shown when the selector is turned fully clockwise, the +/- wiring of the potentiometer is reversed. This is not a problem and no change to the wiring is required. In this case just tick the "reverse direction" box.

When the minimum raw data value is reached, read the value and type it into the "Min Value" field. Then turn the selector to the maximum value and type this value into the "Max Value" field.



CAKOKSIM QuickConnect Configurator	
Detected QuickConnect Boards:	UD-1 Driver board Analog Converter Option Setup Controller No: 1 Bus: 2
UD-1 driver, Bus: 2 - Address: 0 Bus 2: Switch input option Bus 2: A/D option	Channel A1 Raw data reading: 5004 Linked function: NOT ASSIGNED Min value: AD_AIR_COCKPIT_TEMP Max value: AD_AIR_FWD_CABIN_TEMP Reverse direction: AD_CARGO_AFT_TEMP AD_CARGO_AFT_TEMP AD_DAPECF LOVE
expand controllers to view driver boards Refresh List Load Configuration File Save Configuration File	Channel A2 Raw data reading: 1340 Linked function: NOT ASSIGNED Min value: 0 Max value: 0 Reverse direction: Save changes
Calibrate Voltmeter Interface	Target System: Jeehell FMGS A320

After the min and max values are entered, select the linked function of the connected potentiometer as shown above. When finished, press "Save changes" and the configuration of the potentiometer is completed.



### **7 Voltmeter Calibration**

Press the "Calibrate Voltmeter Interface" button to show the calibration menu:

CAKOKSIM QuickConnect Configurator	
Detected QuickConnect Boards:	UM-1 Voltmeter Output Option Setup NOTE: Only one Um-1 with voltmeter output option can be installed The selected Test voltage will be send to both voltmeter outputs
	Voltage to be displayed (Range 12.0V to 31.0V): Test voltage: 27.0
	Apply
expand controllers to view driver boards	Voltage calibration offset (range -1.0V to + 1.0V):
Refresh List Load Configuration File	Voltmeter 1: 0.1 Voltmeter 2: 0.2
Save Configuration File	Save offsets
Calibrate Voltmeter Interface	Target System: Jeehell FMGS A320

In this menu, you can enter a test voltage between 12.0V and 31.0V that will be generated on the voltmeter output terminals and displayed on the connected panel voltmeters. The test voltage will be sent to both voltmeter outputs simultaneously when the "Apply" button is pressed.

Note that the minimum voltage is set to 12V because Airbus panel voltmeters receive their own power supply from the voltage that they measure. They will start to malfunction and stop working when the input voltage falls to below approximately 10V. In the aircraft these voltmeters are directly connected to 28V batteries. A voltage below 12V would mean the battery is completely dead, so that would not be a useful reading anyway.

The panel voltmeters are not very accurate. If you notice a difference between the voltage shown on the virtual voltmeters and the real ones, you can enter a calibration offset to make the readings more accurate. For example when a voltmeter shows 28.0V in the simulation and 28.2V on the real panel, you can enter a calibration offset of -0.2. After pressing "saving offset" the voltage shown on the real voltmeter should then decrease to a value of 28.0V. The calibration is only perfectly accurate for a single voltage point. There can still be small differences for other voltage that are different from the calibration point. It is recommended to calibrate for the voltage that is most commonly shown, which is about 27V.