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Product Family: C-more

Number: AN-EA-003

Subject: Exporting and Importing Tags

Date Issued: 3-18-2010

Revision: 2

Export and Importing Tags DirectSoft, KEPDirect, Allen-Bradley, C-more Application Note

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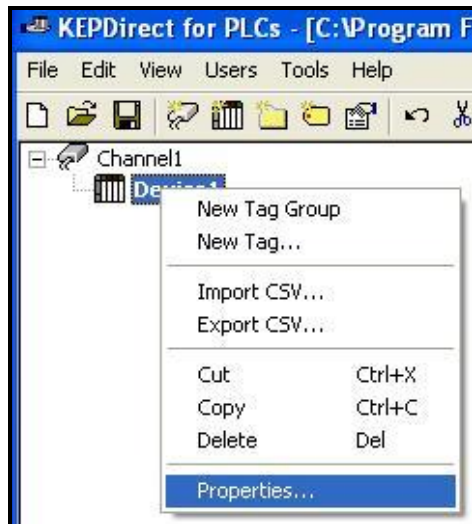
DirectSoft Exporting and Importing into KEPDirect

The KEPDirect help file should be enough for most users. Look for the driver specific help files as shown here:

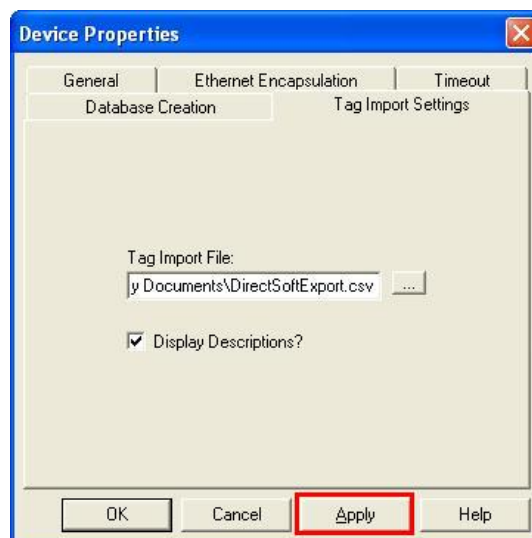
- 1) KEPDirect>Help>Contents
- 2) Select specific driver: Automation Direct EBC, ECOM, Direct-Net, or K-Sequence.
- 3) Then "Launch Driver Help" another help file will open.
- 4) Then click on the topic "Automatic Tag Database Generation"
- 5) Options are now:
 - 1) Create an export file from DirectSoft
 - or
 - 2) Configure the OPC Server to use the DirectSoft file for Automatic Tag Database Generation.

Walk-through of "Configure the OPC Server ..."

- 1) In the device driver, open up the Device Properties (right-click) for the device you want tags generated.



- 2) Select the Tag Import Settings tab.
- 3) Browse and select the location of the DirectSoft export file you have created **and click the "Apply" button.**



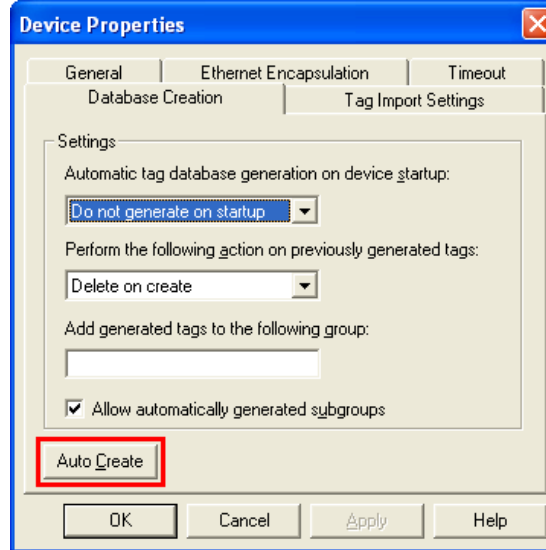


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- 4) Select the Database Creation tab.
- 5) Configure the Database Creation settings.
- 6) Select the "Auto Create" button to create the tag database.



- 7) The OPC Server will attempt to create the tag database while posting messages to the event log on the status of the import. When finished, it will state that the tag import has completed. All elements exported out of DirectSoft will appear in the OPC Server in the layout discussed in the Tag Hierarchy.

Note: If you choose to use the feature "Allow automatically generated subgroups" then your Nicknames from DirectSoft will be the KEP tag name. If you choose not to allow subgroups then the KEP tag name will become the address and the Nickname will be ignored.

Example Import using subgroups (Preferred method)

The screenshot shows the 'KEPDirect for PLCs' software interface. The left pane shows a tree view with 'Channel1' containing 'Device1' and subgroups 'C', 'V', 'X', and 'Y'. The main pane displays a table of tags:

Tag Name	Address	Data Type	Scan Rate	Scaling	Description
HOAAuto	X004	Boolean	100	None	HOA Switch in Auto Position
HOAManual	X005	Boolean	100	None	HOA Switch in Manual Position
MotorOverload	X002	Boolean	100	None	Motor Overload Relay
MotorRunning	X003	Boolean	100	None	Motor Aux Contactor
StartPB	X000	Boolean	100	None	Start Push Button
StopPB	X001	Boolean	100	None	Stop Push Button

Example Import without subgroups (Not as useful)

The screenshot shows the 'KEPDirect for PLCs' software interface. The left pane shows a tree view with 'Channel1' containing 'Device1'. The main pane displays a table of tags:

Tag Name	Address	Data Type	Scan Rate	Scaling	Description
C0	C000	Boolean	100	None	Bit Active when Auto Run Requested
v2000	V02000	Short	100	None	Current Value
X0	X000	Boolean	100	None	Start Push Button
X1	X001	Boolean	100	None	Stop Push Button
X2	X002	Boolean	100	None	Motor Overload Relay
X3	X003	Boolean	100	None	Motor Aux Contactor
X4	X004	Boolean	100	None	HOA Switch in Auto Position
X5	X005	Boolean	100	None	HOA Switch in Manual Position
Y0	Y000	Boolean	100	None	Motor Run Output



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Same Information, Very Different Views

The different XLS/CSV files appear very different, but contain much of the same information. Below it is shown the same project in the different software packages.

What a KEPCDirect Import looks like

Native view within DirectSoft of the Documentation Editor:

Element	Nickname	Wiring Info	Description
----	Set Value		
X0	Start PB		Start Push Button
X1	Stop PB	N/C	Stop Push Button
X2	Motor Overload		Motor Overload Relay
X3	Motor Running		Motor Aux Contactor
X4	HOA Auto		HOA Switch in Auto Position
X5	HOA Manual		HOA Switch in Manual Position
X6			

This is the DirectSoft CSV Export for KEPCDirect:

	A	B	C	D
1	UW1	Set Value		
2	X0	Start PB		Start Push Button
3	X1	Stop PB	N/C	Stop Push Button
4	X2	Motor Overload		Motor Overload Relay
5	X3	Motor Running		Motor Aux Contactor
6	X4	HOA Auto		HOA Switch in Auto Position
7	X5	HOA Manual		HOA Switch in Manual Position
8	Y0	Motor Run		Motor Run Output
9	C0	Auto_Run		Bit Active when Auto Run Requested
10	V2000	Current Value		Current Value
11				

This is the KEPCDirect import of the above CSV:

Tag Name	Address	Data Type	Scan Rate	Scaling	Description
HOAAuto	X004	Boolean	100	None	HOA Switch in Auto Position
HOAManual	X005	Boolean	100	None	HOA Switch in Manual Position
MotorOverload	X002	Boolean	100	None	Motor Overload Relay
MotorRunning	X003	Boolean	100	None	Motor Aux Contactor
StartPB	X000	Boolean	100	None	Start Push Button
StopPB	X001	Boolean	100	None	Stop Push Button



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What a C-more Import Looks like

Native view within DirectSoft of the Documentation Editor:

Element	Nickname	Wiring Info	Description
----	Set Value		
X0	Start PB		Start Push Button
X1	Stop PB	N/C	Stop Push Button
X2	Motor Overload		Motor Overload Relay
X3	Motor Running		Motor Aux Contactor
X4	HOA Auto		HOA Switch in Auto Position
X5	HOA Manual		HOA Switch in Manual Position
X6			

This is the DirectSoft CSV Export for C-more:

MotorStartStop Cmore.csv				
	A	B	C	
1	Start PB	DISCRETE	X0	
2	Stop PB	DISCRETE	X1	
3	Motor Overload	DISCRETE	X2	
4	Motor Running	DISCRETE	X3	
5	HOA Auto	DISCRETE	X4	
6	HOA Manual	DISCRETE	X5	
7	Motor Run	DISCRETE	Y0	
8	Auto_Run	DISCRETE	C0	
9	Current Value	BCD_INT_16	V2000	
10				

This is the C-more import of the above CSV:

Tag Name Database				
Device Name: ALL				
<input checked="" type="checkbox"/> Display System Tags		<input type="checkbox"/> Display Internal Tags		<input type="checkbox"/> Highlight Unused
<input type="checkbox"/> Highlight		<input type="checkbox"/> Highlight		
No.	Tag Name	Data Type	PLC Address	Device Name
1	AUTO_RUN	Discrete	C0	DEV001
2	CURRENT VALUE	BCD int 16	V2000	DEV001
3	HOA AUTO	Discrete	X4	DEV001
4	HOA MANUAL	Discrete	X5	DEV001
5	MOTOR OVERLOAD	Discrete	X2	DEV001
6	MOTOR RUN	Discrete	Y0	DEV001
7	MOTOR RUNNING	Discrete	X3	DEV001
8	START PB	Discrete	X0	DEV001
9	STOP PB	Discrete	X1	DEV001



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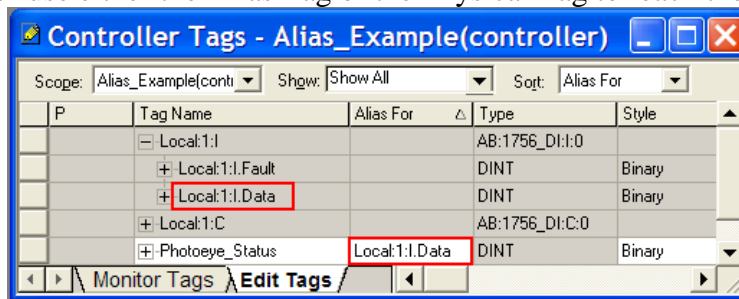
Export from RSLogix5000 and Import into C-more

RSLogix5000, ControlLogix and CompactLogix

Note: Support for Alias Tags was introduced in the C-more Programming Software Version 2.1 (a free upgrade is available on our website.) Aliased I/O other than discrete bits can not be directly imported because of unknown configuration of I/O modules and associated data types of those auto-created tags. But Aliases will be supported and an Alias of an I/O tag will also be allowed. Using Aliases to I/O is recommended due to the flexibility it creates if the physical I/O mapping needs to change for any reason.

What is an Alias Tag?

In the following image you can see what an Alias Tag looks like within RSLogix5000. In this example the "Local Base" has a Digital Input Card "1756_DI" in "Slot 1". These tags are created automatically for us by RSLogix when the I/O Card is added to the project configuration. These tags can not be edited (note that they are grayed out.) By using an Alias Tag we can write our rung code using more meaningful tag names. So the Alias Tag "Photoeye_Status" has been created, it is an "Alias For" the actual data source "Local:1:I.Data". We can use either the Alias Tag or the Physical Tag to reach the same data.



Importing I/O Space Tags

Beginning with C-more Programming Software Version 2.1, Alias Tags to discrete I/O bits will be directly imported through the L5K file. Other data types with I/O space Tags and Alias Tags are not imported through the L5K. A method to import these is described in the following application note.

Please download and read AN-EA-002 and the associated XLS file.

http://support.automationdirect.com/technotes.html#oi_ea

Using Pre-Defined Data Types (Special Data Types from Allen-Bradley)

There are very many Pre Defined data types in this Allen Bradley ControlLogix and CompactLogix PLCs. A Pre defined data type is a data type that is already created in the RS Logix 5000 software when starting a new project. Some common Pre Defined data types are TIMER and COUNTER.

The complication of importing Pre Defined data type is that there are very many Pre Defined data types in the RS Logix 5000 software and within many of these data types, there are many different data type members. Many/most of these members of these Pre Defined data types, while useful in the PLC application, will not be needed in the C-more project.

The user/customer can customize their own "L5KPreDefine.txt" file to include just the tag elements that they need. This can reduce the Tags in the C-more software and makes it easier to find the correct tag quickly.

Please download and read AN-EA-001 for complete information.

http://support.automationdirect.com/technotes.html#oi_ea



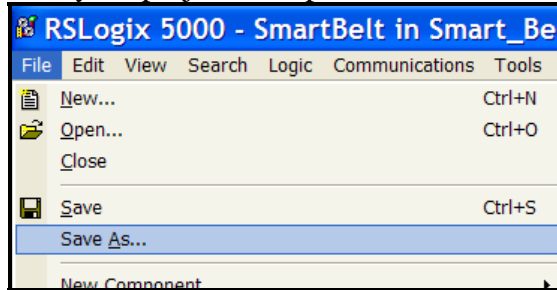
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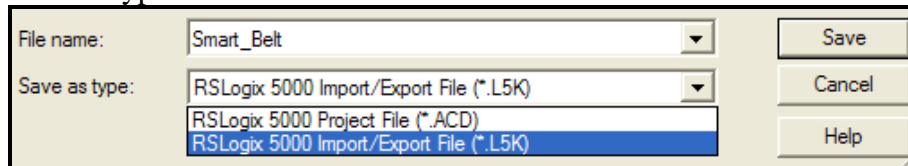
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Step-by-Step, Exporting Tags from RSLogix5000 and Importing into C-more:

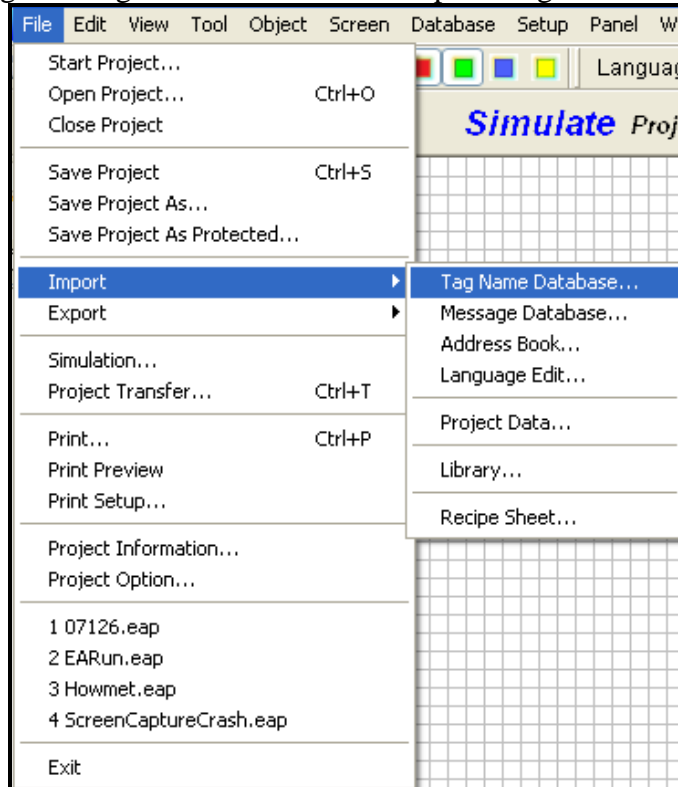
1. Within RSLogix 5000 and with your project file open, Select File>SaveAs



2. Change the "Save as type" to L5K



3. Open the C-more Programming Software and select Import>Tag Name Database





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4. Import Tag Database into C-more Programming, Import>Tag Database>Select L5K File

Import Tag name Database from Excel/CSV File

File Path: C:\Documents and Settings\user\Smart_Belt.L5K

Import Option

Overwrite Existing Tags

My file contains a Header Row
1st Row is not imported.

L5K Import Option

Device: DEV001 Add..

Protocol: Allen-Bradley EtherNet/IP Client Tag-Based (Control/Co

Append Text:

Import Array Element Count Limit(1-30000): 3000

Import Cancel Help

Note: If many errors are reported these are probably from tags which are Aliases or Physical I/O. See the application notes mentioned above for information on how to import these separately through another process.



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RSLogix500, SLC500, MicroLogix 1500/1400/1200/1100/1000, RSLogix5, PLC-5

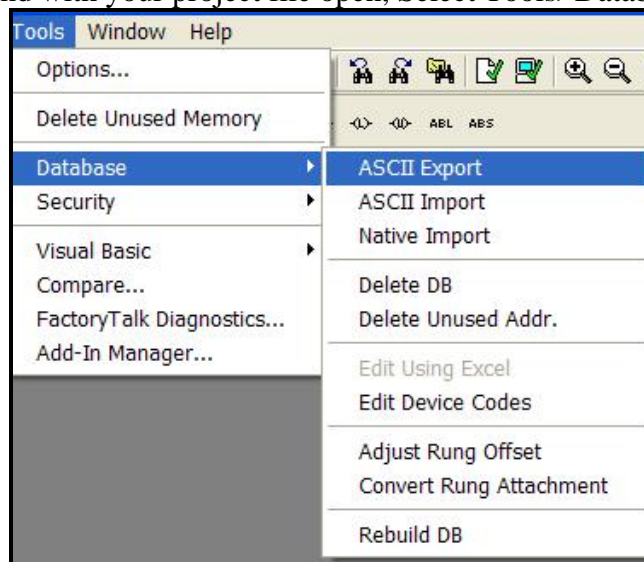
These series of processors use “Symbols” instead of “Tag Names”. These symbols operate much like our Nicknames in DirectSoft. The Symbol is just a name associated with a memory address. Within RSLogix500 the user is allowed to assign Symbols to Addresses and Symbols can also be organized into Symbol Groups. Additionally there is a Description field associated with each Symbol.

Note: The CSV exported from RSLogix will only contain elements which have either a Symbol Name or a Description field. If an address is used but is unassigned then it will not be listed in the CSV export. Upon Importing the C-more Tag Name will become the Symbol Name, if there is not a Symbol Name the Description Fields will be used as the C-more Tag Name. Name conflicts can't occur with Symbols but are possible with Descriptions; the user should resolve these before importing.

Note: The A-B CSV Import feature was introduced in C-more Programming Software Version 2.1 (a free upgrade is available on our website.) Support for String and Long data files was added in Version 2.40. System Data Files are not imported, but can be created manually by the user.

Step-by-Step, Exporting Symbols from RSLogix500 and Importing into C-more:

- 1) Within RSLogix 500 and with your project file open, Select Tools>Database>ASCII Export



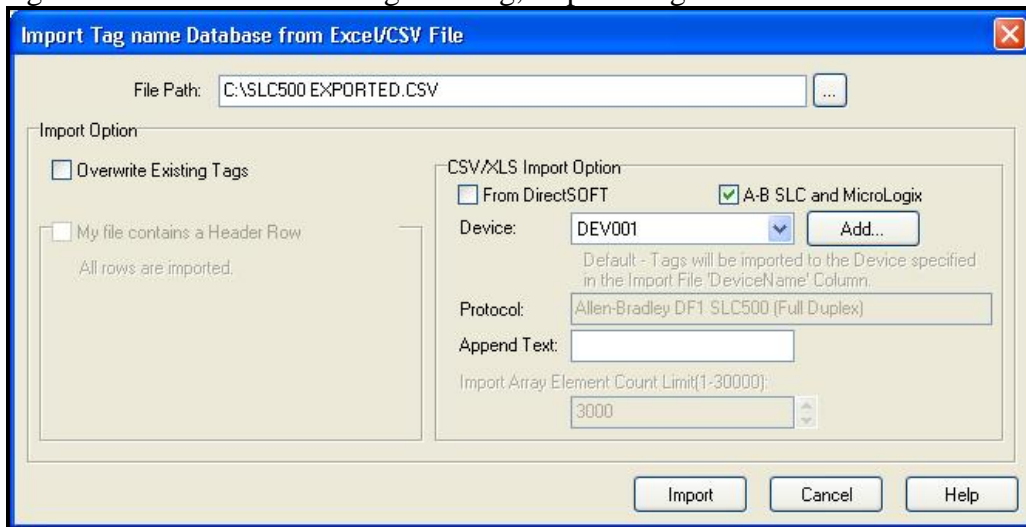


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2) Import Tag Database into C-more Programming, Import>Tag Database>Select CSV File



Version History

Version 1.0: Release version.

Version 1.1: Corrections and Improvements due to Programming Software Updates