

User Manual

sCOM Plug-in



Somi·t 

Small Office Management Integrated Tools
Solutions de gestion intégrée pour l'entreprise

USER MANUAL OF sCOM PLUG-IN FOR FILEMAKER PRO

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PREAMBLE

- This manual assumes you have basic knowledge about the FileMaker Pro database development platform, the use of plug-in with external functions and custom functions.
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- "FileMaker" used in the descriptions in this manual generally refers to software versions FileMaker Pro and FileMaker Pro Advanced.
- Somi-t Inc. is a proud FileMaker Business Alliance (FBA) member since 2006.
- Does Somi-t Inc. assumes no liability for errors or inaccuracies in this manual.
- Do not hesitate to contact us at **guideinfo@somi-t.com**
- Web site: **<http://www.somi-t.com>** or **<http://www.FollowTheGuide.ca>**
- Last update made to this manual: June 27th, 2012 for version 1.0 of sCOM plug-in.

INTRODUCTION

Summary

- The sCOM plug-in allows your FileMaker Pro solution to communicate with serial devices using the Windows operating system.
- After installing the sCOM plug-in, you can easily use the seven external functions that are automatically displayed in the calculation dialog box of FileMaker Pro.

Examples of use

- Open or close a relay on an USB-Serial hardware relay (GCE Electronics, USB-X220 for example) to connect to an alarm system or an open-close door management system;
- Interact with a telephone modem;
- Control equipment with a serial or USB interface (barcode reader or magnetic card reader, balance, cash drawer, etc.).

Plug-in installation

- Note that the copy of sCOM plug-in will display a message requesting registration of the copy after each five (5) uses of functions sCOM_Write(), sCOM_Read() and sCOM_WriteToRead().

You need to enable the sCOM plug-in in your FileMaker Pro solution for its state to changes from **Demonstrator** to **Registered**. Use the external function sCOM_Register() in the file opening script of your the FileMaker Pro solution to activate your extension.

If you experience problems during the installation process, you can contact our technical support using our "Application form for assistance or information" located in the support page of our website at www.somi-t.com.



- Summary of installation steps:
 - 1) The sODBC.fmx plug-in must be located under C:\Program Files\FileMaker\FileMaker Pro [version]\Extensions\ folder before opening FileMaker Pro.
 - 2) The external functions of sCOM plug-in are now available using external functions of FileMaker Pro.



EXTERNAL FUNCTIONS

List of external functions for sCOM plug-in

- sCOM_Dcb("" ; ParamName ; Value)
- sCOM_Read("" ; ComName ; NumBytesToRead)
- sCOM_Register(Name ; Key)
- sCOM_Timeouts("" ; ReadIntervalTimeout ; ReadTotalTimeoutMultiplier ; ReadTotalTimeoutConstant ; WriteTotalTimeoutMultiplier ; WriteTotalTimeoutConstant)
- sCOM_Version({ Format })
- sCOM_Write("" ; ComName ; Data)
- sCOM_WriteToRead("" ; ComName ; Data ; NumBytesToRead)

sCOM_Dcb("" ; ParamName ; Value)

- Description: This feature allows you to control various communication parameters such as speed and XON/XOFF.
- Parameter "": Not used, stay empty with "".
- "ParamName" Parameter: Parameter name to change.
- "Value" Parameter: New parameter value.
 - Example:
 - sCOM_Dcb("" ; "BaudRate" ; 14400)
- Note: For more information please visit the following website,
<http://msdn.microsoft.com/en-us/library/windows/desktop/aa363214.aspx>

sCOM_Read("" ; ComName ; NumBytesToRead)

- Description: This function reads the selected communication port.
- Parameter "": Not used, stay empty with "".
- "ComName" Parameter: Name of the communication port.
- "NumBytesToRead" Parameter: Number of characters to read.
 - Example:
 - sCOM_Read("" ; "COM1" ; 5)
- Result: Returns a code starting with !! if an error occurred, otherwise returns the read character.



sCOM_Register(Name ; Key))

- Description: Activate the plug-in.
- "Name" Parameter: Name of the organisation you provided to Somi-t for the registration of the plug-in.
- "Key" Parameter: Registration key provided by Somi-t.

sCOM_Timeouts("" ; ReadIntervalTimeout ; ReadTotalTimeoutMultiplier ; ReadTotalTimeoutConstant ; WriteTotalTimeoutMultiplier ; WriteTotalTimeoutConstant)

- Description: This function changes the delay related to a writing and reading operation to the communication used port. The default values are respectively 1, 1, 100, 0, 0.
- Parameter "": Not used, stay empty with "".
- "ReadIntervalTimeout" Parameter: Delay in milliseconds.
- "ReadTotalTimeoutMultiplier" Parameter: Delay in milliseconds.
- "ReadTotalTimeoutConstant" Parameter: Delay in milliseconds.
- "WriteTotalTimeoutMultiplier" Parameter: Delay in milliseconds.
- "WriteTotalTimeoutConstant" Parameter: Delay in milliseconds.
 - Example:
 - sCOM_Timeouts("" ; 10 ; 10 ; 100 ; 1 ; 1)
- Note: For more information please visit the following website,
<http://msdn.microsoft.com/en-us/library/windows/desktop/aa363190.aspx>

sCOM_Version({ Format })

- Description: Indicates the version of the plug-in.
- "Format" Parameter: "long", Returns the extension name and version. "short", returns only the version of the plug-in.
 - Example:
 - sCOM_Version
 - sCOM_Version("long")
- Result: Returns the version of the plug-in.

sCOM_Write("" ; ComName ; Data)

- Description: This feature allows you to write to the selected communication port.
- Parameter "": Not used, stay empty with "".



- "ComName" Parameter: Name of the communication port.
- "Data" Parameter: Data to be written on the communication port.
 - Example:
 - `sCOM_Write( "" ; "COM1" ; "Hello World!" )`
- Result: Returns a code starting with !! if an error occurred, otherwise returns nothing.

`sCOM_WriteToRead( "" ; ComName ; Data ; NumBytesToRead )`

- Description: This feature allows you to write to the selected communication port and make a subsequent reading.
- Parameter "": Not used, stay empty with "".
- "ComName" Parameter: Name of the communication port.
- "Data" Parameter: Data to be written on the communication port.
- "NumBytesToRead" Parameter: Number of characters to read after write.
 - Example:
 - `sCOM_WriteToRead( "" ; "COM1" ; "Hello World!" ; 5 )`
- Result: Returns a code starting with !! if an error occurred, otherwise returns the read character.

sCOM error codes and meaning

- Applicable only to functions `sCOM_Write()`, `sCOM_Read()` and `sCOM_WriteToRead()` :
 - !!-1 : Parameter error
 - !!-2 : Error connecting to port (`E012_CreateFile_failed`)
 - !!-3 : Cannot change delay (`E013_SetCommTimeouts_failed`)
 - !!-4 : Could not define the parameters for controlling communication with the device (`E014_SetCommState_failed`)
- Applicable only to functions `sCOM_Write()` and `sCOM_WriteToRead()` :
 - !!-5 x : Writing error (`x_Unknown_error`)
The value x may give different results. Refer to:
<http://msdn.microsoft.com/en-us/library/windows/desktop/ms681381.aspx>
- Applicable only to the `sCOM_Register()` function:
 - !!Error registering : Recording error. Wrong combination of name and registration key.
 - !!Invalid Key : Recording error. Wrong registration key.



REFERENCES

Technical notes

- The sCOM plug-in requires the operating system Microsoft Windows XP or later.
- The sCOM plug-in is compatible with versions 9, 10, 11 and 12 of FileMaker Pro and FileMaker Pro Advanced.
- The sCOM plug-in is compatible with FileMaker Server-side scripting (SSS) technology.
- It can communicate with multiple ports in the same script.
- The maximum transmission speed when connected is 256 000 bps.
- There is no memory buffering with sCOM plug-in. sCOM_Read() and sCOM_WriteToRead() functions are using a parameter that determines how many bytes to read.

Troubleshooting

- As this is the first user manual for sCOM plug-in for FileMaker Pro, we invite users to communicate with us to help us build this section of the manual.

About FileMaker, Inc.

- FileMaker develops database program awards since 1990. Its products include the legendary FileMaker Pro product line for Windows, Mac and FileMaker Go for iPhone, iPod and iPad. FileMaker has won over 52 awards, more than his eight competitors combined from 2003 to 2009 in the United States, and a total of 134 awards in the world during those years. Millions of users - from individuals to large companies - rely on FileMaker to manage, analyze and share information. FileMaker, Inc. is a subsidiary of Apple Inc.



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