



Thermal Printer Family eXtendo

Windows Driver
XP/7/8/10

S684015
R8-V2.04-2018JUL02
FINAL

Release Note

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Document History

Revision	Mod. Nr	Status	Description
1	4 211207 HOR2	Closed	Initial version: created for eXtendo XP-Driver S684015 / Release 1 / Version 1.00 / 21 December 2007
2	4 310508 HOR2	Closed	Second version: created for eXtendo XP-Driver S684015 / Release 2 / Version 1.01 / 31 May 2008
3	4 300410 HOR1	Closed	Third version: created for eXtendo XP-Driver S684015 / Release 3 / Version 1.02 / 30 April 2010
4	4 180713 HOR1	Closed	Fourth version: created for eXtendo XP-Driver S684015 / Release 4 / Version 2.00 / 18 July 2013
5	4 070515 HOR1	Closed	Fifth version: created for eXtendo XP-Driver S684015 / Release 5 / Version 2.01 / 05 May 2015
6	4 250516 HOR1	Closed	Sixth version: created for eXtendo XP-Driver S684015 / Release 6 / Version 2.02 / 25 May 2016
7	4 200417 HOR1	Closed	Seventh version: created for eXtendo XP-Driver S684015 / Release 7 / Version 2.03 / 20 April 2017
8	4 020718 HOR1	Closed	Eight version: created for eXtendo XP-Driver S684015 / Release 8 / Version 2.04 / 02 July 2018

Applicable Documentation and Software

Id	Part Nr	Description
[1]	D 684 112	Thermal Printer Family Extendo - Emulation Command Set Reference Manual - Types: X-56 and X-80
[2]	S 684 015	Windows Driver for Thermal Printer Family eXtendo
[3]	D 684 131	Thermal Printer Family Extendo – Windows Driver Manual
[4]	D 684 307	Extendo Application Note Bundle

Comments

Revision	Comments
-	-

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4 EXTENDO XP-DRIVER S684015-R3-V1.02-2010APR30	18
5 EXTENDO XP/7/8 DRIVER S684015-R4-V2.00-2013JUL18.....	25
6 EXTENDO XP/7/8 DRIVER S684015-R5-V2.01-2015MAY07	34
7 EXTENDO XP/7/8/10 DRIVER S684015-R6-V2.02-2016MAY25	40
8 EXTENDO XP/7/8/10 DRIVER S684015-R7-V2.03-2017APR20	46
9 EXTENDO XP/7/8/10 DRIVER S684015-R8-V2.04-2018JUL02 (OPEN)	53

1 Introduction

This release note describes all modifications done to the eXtendo printer driver with HENGSTLER part number S684015 for Windows-XP, Windows 7 (32/64 Bit) and Windows 8 (32/64 Bit) since the first release R1-V1.00 on 21. December 2007.

The latest released Windows-XP printer driver is S684015-R5-V2.01-2015MAY07.

This Windows printer driver is regarded to be backward compatible to earlier released and/or beta versions them and replaces them all.

2 EXTENDO XP-DRIVER S684015-R1-V1.00-2007DEC21

Description

The eXtendo printer driver S684015-R1-V1.00- 2007DEC21 is developed for Windows-XP (2000) and is operational with all currently (2007DEC21) available eXtendo type printers (X56/X80. USB/RS232) that have firmware S684014-R1-V1.00-2007DEC21 installed.

List of modifications

=> R1-V1.00 – 2007 DEC 01 – RELEASED FINAL VERSION

Initial version of the eXtendo printer driver for windows XP. There is no modification history for earlier beta or pre-release versions of this printer driver.

Component	Version	Description
-	-	-

Package overview

```
| D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf
| Extendo-WindowsXpDriver-S684015-R1-V1_00-FINAL-2007DEC21.zip
|
+---Driver
|   | Hengstler-Extendo-X56.inf
|   | Hengstler-Extendo-X80.inf
|   |
|   \---i386
|       Exo_Api.dll
|       Exo_PrintMon.dll
|       Exo_PrintMonPlugin.dll
|       Exo_Tb.dll
|       Exo_Tb2.dll
|       Exo_UniDrv.dll
|       Exo_UniDrv.ini
|       Exo_UserInterface.dll
|       Exo_X56.dat
|       Exo_X56.dll
|       Exo_X56.gpd
|       Exo_X56.prn
|       Exo_X80.dat
|       Exo_X80.dll
|       Exo_X80.gpd
|       Exo_X80.prn
|       MFC71.dll
|       msvcr71.dll
|
+---Fonts
|   Exo-Font-Std-01.08x16.ExoCs
|   Exo-Font-Std-01.12x24.ExoCs
|   Exo-Font-Std-01.16x32.ExoCs
|   Exo-Font-Std-01.20x40.ExoCs
|   Exo-Font-Std-02-20x40.ExoCs
|   Exo-Font-Std-02.08x16.ExoCs
|   Exo-Font-Std-02.12x24.ExoCs
|   Exo-Font-Std-02.16x32.ExoCs
|   Exo-WideFont-Korean.20X20.ExoWcs
|   Exo-WideFont-Mall.24X24.ExoWcs
|
+---Other
|   NET_START_SPOOLER.lnk
|   NET_STOP_SPOOLER.lnk
|
+---Samples
|   Exo-GdiDemo-X56-056x125.doc
|   Exo-GdiDemo-X56-Test.doc
|   Exo-GdiDemo-X80-080x125.doc
|   Exo-GdiDemo-X80-Test.doc
```

```

|
+---Sdk
|   Exo_Api.h
|   Exo_Api.lib
|   Exo_PrintMonPlugin.h
|
+---Sources
|   Exo_PrintMonPlugin.zip
|   Exo_PrintMonPluginTest.zip
|
\---Tools
    Exo-CommandTool.exe
    Exo-ConfigurationTool.exe
    Exo-DiagnosticTool.exe
    Exo-FontTool.exe
    Exo-FwPatchTool.exe
    Exo-ImageTool.exe
    Exo-PrintTerminal.exe
    Exo-Uninstaller.exe
    Exo-UploadTool.exe
    Exo-WideFontTool.exe
    Exo_Api.dll
    Exo_PrintMonInfo.exe
    Exo_PrintMonPluginTest.exe
    Exo_Tb.dll
    Exo_Tb2.dll
    MFC71.dll
    msvc71.dll

```

List of files/components					
Date	Time	Size	File	Version	Description
N/A	N/A	N/A	Extendo-WindowsXpDriver-S684015-R1-V1_00-FINAL-2007DEC21.zip	R1-V1.00	Complete driver package as zip file
N/A	N/A	N/A	D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf	R1-V1.00	Release note of the driver package
31.01.2007	23:29	11.224	Hengstler-Extendo-X56.inf	R1-V1.00	Driver component => information file required for installation of the X56 driver
21.12.2007	04:45	5.792	Hengstler-Extendo-X80.inf	R1-V1.00	Driver component => information file required for installation of the X80 driver
21.12.2007	01:05	12.288	Exo_Api.dll	R1-V1.00	Driver component => application programming interface
21.12.2007	03:44	86.016	Exo_PrintMon.dll	R1-V1.00	Driver component => print job monitor
21.12.2007	04:03	10.240	Exo_PrintMonPlugin.dll	R1-V1.00	Driver component => print job monitor plugin
21.12.2007	04:29	40.448	Exo_Tb.dll	R1-V1.00	Driver component => tool box
21.12.2007	04:31	159.744	Exo_Tb2.dll	R1-V1.00	Driver component => tool box 2
21.12.2007	04:35	31.232	Exo_UniDrv.dll	R1-V1.00	Driver component => uni-driver
21.12.2007	04:48	85	Exo_UniDrv.ini	R1-V1.00	Driver component => uni-driver
21.12.2007	08:02	684.032	Exo_UserInterface.dll	R1-V1.00	Driver component => user interface / printer properties
21.12.2007	04:48	725	Exo_X56.dat	R1-V1.00	Driver component => settings file for the X56 driver
21.12.2007	04:49	5.120	Exo_X56.dll	R1-V1.00	Driver component => resource file for the X56 driver
21.12.2007	04:45	13.363	Exo_X56.gpd	R1-V1.00	Driver component => general printer definition file for the X56 driver
21.12.2007	04:49	24.649	Exo_X56.prn	R1-V1.00	Driver component => test print file for the X56 driver

21.12.2007	04:50	725	Exo_X80.dat	R1-V1.00	Driver component => settings file for the X80 driver
21.12.2007	04:51	5.120	Exo_X80.dll	R1-V1.00	Driver component => resource file for the X80 driver
21.12.2007	04:45	13.382	Exo_X80.gpd	R1-V1.00	Driver component => general printer definition file for the X80 driver
21.12.2007	04:50	29.634	Exo_X80.prn	R1-V1.00	Driver component => test print file for the X80 driver
30.07.2007	10:24	117.558	Exo-Font-Std-01.08x16.ExoCs	N/A	Character set: standard font #1, 08x16
30.07.2007	10:25	249.654	Exo-Font-Std-01.12x24.ExoCs	N/A	Character set: standard font #1, 12x24
30.07.2007	11:04	430.902	Exo-Font-Std-01.16x32.ExoCs	N/A	Character set: standard font #1, 16x32
31.07.2007	11:20	661.302	Exo-Font-Std-01.20x40.ExoCs	N/A	Character set: standard font #1, 20x40
31.07.2007	11:25	661.302	Exo-Font-Std-02-20x40.ExoCs	N/A	Character set: standard font #2, 08x16
22.08.2005	20:28	117.558	Exo-Font-Std-02.08x16.ExoCs	N/A	Character set: standard font #2, 12x24
22.08.2005	20:28	249.654	Exo-Font-Std-02.12x24.ExoCs	N/A	Character set: standard font #2, 16x32
30.07.2007	17:48	430.902	Exo-Font-Std-02.16x32.ExoCs	N/A	Character set: standard font #2, 20x40
09.01.2006	16:50	3.811.318	Exo-WideFont-Korean.20X20.ExoWcs	N/A	Character set: Korean KS5601 wide font, 20x20
10.11.2005	14:27	4.551.078	Exo-WideFont-Mall.24X24.ExoWcs	N/A	Character set: sample wide font, 24x24
13.10.2005	16:07	1.456	NET_START_SPOOLER.lnk	N/A	Command for starting the spooler
13.10.2005	16:11	1.658	NET_STOP_SPOOLER.lnk	N/A	Command for stopping the spooler
13.08.2007	09:05	137.216	Exo-GdiDemo-X56-056x125.doc	N/A	Sample document for GDI printing
21.12.2007	04:49	161.280	Exo-GdiDemo-X56-Test.doc	N/A	Sample document for GDI printing
29.08.2007	19:18	137.216	Exo-GdiDemo-X80-080x125.doc	N/A	Sample document for GDI printing
21.12.2007	04:50	161.792	Exo-GdiDemo-X80-Test.doc	N/A	Sample document for GDI printing
21.12.2007	00:53	15.076	Exo_Api.h	R1-V1.00	Header file describing the application programming interface (API)
21.12.2007	01:05	4.392	Exo_Api.lib	R1-V1.00	API library, included in applications
21.12.2007	04:02	18.122	Exo_PrintMonPlugin.h	R1-V1.00	Header file describing the print monitor plugin interface
21.12.2007	04:03	43.058	Exo_PrintMonPlugin.zip	R1-V1.00	Zip file containing the Visual C++ sources of the print monitor plugin.
21.12.2007	04:05	32.702	Exo_PrintMonPluginTest.zip	R1-V1.00	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
21.12.2007	01:06	36.864	Exo-CommandTool.exe	R1-V1.00	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket)
21.12.2007	01:11	61.440	Exo-ConfigurationTool.exe	R1-V1.00	Configuration tool which is used for configuring the X56 and X80 type printers.
21.12.2007	01:10	47.104	Exo-DiagnosticTool.exe	R1-V1.00	Diagnostic tool which is used for displaying printer status

					and other information.
21.12.2007	01:18	49.152	Exo-FontTool.exe	R1-V1.00	Font tool which is used for generating a font upload file from windows bitmaps.
21.12.2007	01:21	32.256	Exo-FwPatchTool.exe	R1-V1.00	Firmware patch tool which is used for enable/disable specific firmware patches.
21.12.2007	03:38	53.248	Exo-ImageTool.exe	R1-V1.00	Image tool which is used of creating an image upload file from windows bitmaps.
21.12.2007	04:14	61.440	Exo-PrintTerminal.exe	R1-V1.00	Terminal tool which is used for evaluating emulation commands.
21.12.2007	04:37	217.088	Exo-Uninstaller.exe	R1-V1.00	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
21.12.2007	04:38	34.304	Exo-UploadTool.exe	R1-V1.00	Upload tool which is used for upload of firmware, fonts, wifonts and images.
21.12.2007	04:43	34.304	Exo-WideFontTool.exe	R1-V1.00	Wide font tool which is used for generating a wide font upload file from windows bitmaps.
21.12.2007	03:57	26.624	Exo_PrintMonInfo.exe	R1-V1.00	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
21.12.2007	04:05	26.112	Exo_PrintMonPluginTest.exe	R1-V1.00	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
19.03.2003	06:20	1.060.864	MFC71.dll	N/A	Windows XP library, used in various tools and/or applications
21.02.2003	13:42	348.160	msvcr71.dll	N/A	Windows XP library, used in various tools and/or applications

Installation

To prevent a eXtendo file version mismatch, it is required that the Exo-Uninstaller tool is used before installation of a different eXtendo printer driver version.

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB.

The eXtendo printer driver information files are "Hengstler-Extendo-X56.inf" for the X56 type printer and "Hengstler-Extendo-X80.inf". for the X80 type printer.

The eXtendo printer driver manual contains more detailed information on eXtendo printer driver installation.

Un-Installation

The Exo-Uninstaller tool is to be used for the Uninstallation of installed eXtendo printer drivers and driver files.

List of anomalies and bugs

Id	Version	Description
B-R1-001-HOR	R1-V1.00	Print speed, print density, formfeed and end-of-print are not added when printing large pages through GDI.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

Currently no restrictions are known.

Documentation

At this time there is no eXtendo printer driver manual available.

The eXtendo emulation command set manual is available as Hengstler document D-684-112 [1].

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

3 EXTENDO XP-DRIVER S684015-R2-V1.01-2008MAY31

Description

The eXtendo printer driver S684015-R2-V1.01- 2008MAY31 is developed for Windows-XP (2000) and is operational with all currently (2008MAY31) available eXtendo type printers (X56/X80. USB/RS232) that have firmware S684014-R1-V1.00 to S684014-R2-V1.01 installed.

List of modifications

=> R2-V1.01 – 2008 MAY 31 – RELEASED FINAL VERSION

2 nd released version of the eXtendo printer driver for windows XP.			
Mod-Id	Component	Version	Description
M-R2-001-HOR	Exo-ConfigurationTool	R2-V1_01	Park position #2 added (rubber roll, 0,5 mm before the dot-line).
M-R2-002-HOR	Exo-UniDrv.dll Exo-UserInterface.dll Exo-Tb.dll Exo_X56.dat Exo_X80.dat	R2-V1_01	Improvement of the rendering engine. Pattern rendering has been replaced by error correction rendering. Gray shift has been renamed to brightness. Gray squeeze has been renamed to contrast.
M-R2-003-HOR	Exo-ExhibitionTool2008	R2-V1_01	New tool for the KIOSK 2008.
M-R2-004-HOR	Exo-Uninstaller	R2-V1_01	Deletion of Extendo X80 oem*.inf files corrected.
M-R2-005-HOR	Exo-PrintMon	R2-V1_01	Data logging timestamp corrected.
M-R2-006-HOR	Exo-ManufacturingTool	R2-V1_01	Paper park position #0 and #1 are exchanged. Position #0 is relative to cutter and position #1 is relative to the dot line.
M-R2-007-HOR	Exo-UniDrv.dll	R2-V1.01	Print speed, print density, formfeed and end-of-print are also added when printing large pages through GDI.
M-R2-008-HOR	Exo-Api.dll	R2-V1.01	Wrong value for packet identifier D_EXO_API_PID_TX_PRINTER_FLASH changed to 0x05.
M-R2-009-HOR	Exo-Tb.dll	R2-V1.01	Compression of dot lines improved.
M-R2-010-HOR	Exo-PrintMon.dll	R2-V1.01	Failure in event logging of print manager corrected.
M-R2-011-HOR	Exo-ManufacturingTool Exo-ConfigurationTool	R2-V1.01	Current printer settings are requested during the initialization phase of the tool.
M-R2-012-HOR	Exo-PrintMon.dll	R2-V1.01	All spooled print jobs are removed from the spooler at start of the print monitor.
M-R2-013-HOR	Hengstler-Extendo-X56.inf Hengstler-Extendo-X80.inf	R2-V1.01	Corrected a windows vista installation failure.
M-R2-014-HOR	Exo-ConfigurationTool	R2-V1.01	The 16 checksum of the configuration data updated when configuration data is saved into a file.
N/A	All applications	R2-V1.01	All application icons have been improved.
N/A	All files	R2-V1.01	Changed the version information of all files to R2 / 2008MAY31.

Package overview

| D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf
| Extendo-WindowsXpDriver-S684015-R2-V1_01-FINAL-2008MAY31.zip
|

```
+---Driver
|   |   Hengstler-Extendo-X56.inf
|   |   Hengstler-Extendo-X80.inf
|   |
|   \---i386
|       Exo_Api.dll
|       Exo_PrintMon.dll
|       Exo_PrintMonPlugin.dll
|       Exo_Tb.dll
|       Exo_Tb2.dll
|       Exo_UniDrv.dll
|       Exo_UniDrv.ini
|       Exo_UserInterface.dll
|       Exo_X56.dat
|       Exo_X56.dll
|       Exo_X56.gpd
|       Exo_X56.prn
|       Exo_X80.dat
|       Exo_X80.dll
|       Exo_X80.gpd
|       Exo_X80.prn
|       MFC71.dll
|       msvcr71.dll
|       STDNAMES.GPD
|
+---Fonts
|   Exo-Font-Std-01.08x16.ExoCs
|   Exo-Font-Std-01.12x24.ExoCs
|   Exo-Font-Std-01.16x32.ExoCs
|   Exo-Font-Std-01.20x40.ExoCs
|   Exo-Font-Std-02-20x40.ExoCs
|   Exo-Font-Std-02.08x16.ExoCs
|   Exo-Font-Std-02.12x24.ExoCs
|   Exo-Font-Std-02.16x32.ExoCs
|   Exo-WideFont-Korean.20X20.ExoWcs
|   Exo-WideFont-Mall.24X24.ExoWcs
|
+---Documents
|   D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf
|   D-684-131_Extendo-WindowsXpDriver-Manual.pdf
|   S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf|
+---Other
|   NET_START_SPOOLER.lnk
|   NET_STOP_SPOOLER.lnk
|
+---Samples
|   Exo-GdiDemo-X56-056x125.doc
|   Exo-GdiDemo-X56-Test.doc
|   Exo-GdiDemo-X80-080x125.doc
|   Exo-GdiDemo-X80-Test.doc
|
+---Sdk
|   Exo_Api.h
|   Exo_Api.lib
|   Exo_PrintMonPlugin.h
|
+---Sources
|   Exo-PrintMonPluginTest.zip
|   Exo_PrintMonPlugin.zip
|
\---Tools
    Exo-CommandTool.exe
    Exo-ConfigurationTool.exe
    Exo-DiagnosticTool.exe
    Exo-Exhibition2008-X56-EmuSampleNr01.prn
    Exo-Exhibition2008-X56-EmuSampleNr02.prn
    Exo-Exhibition2008-X56-EmuSampleNr03.prn
    Exo-Exhibition2008-X56-Extendo.prn
    Exo-Exhibition2008-X56-Hengstler.prn
    Exo-Exhibition2008-X56-PrinterNr01.prn
    Exo-Exhibition2008-X56-PrinterNr02.prn
    Exo-Exhibition2008-X56-PrinterNr03.prn
    Exo-Exhibition2008-X56-PrinterNr04.prn
    Exo-Exhibition2008-X56-TicketNr01.prn
    Exo-Exhibition2008-X56-TicketNr02.prn
    Exo-Exhibition2008-X56-TicketNr03.prn
    Exo-Exhibition2008-X80-EmuSampleNr01.prn
```

```

Exo-Exhibition2008-X80-EmuSampleNr02.prn
Exo-Exhibition2008-X80-EmuSampleNr03.prn
Exo-Exhibition2008-X80-Extendo.prn
Exo-Exhibition2008-X80-Hengstler.prn
Exo-Exhibition2008-X80-PrinterNr01.prn
Exo-Exhibition2008-X80-PrinterNr02.prn
Exo-Exhibition2008-X80-PrinterNr03.prn
Exo-Exhibition2008-X80-PrinterNr04.prn
Exo-Exhibition2008-X80-TicketNr01.prn
Exo-Exhibition2008-X80-TicketNr02.prn
Exo-Exhibition2008-X80-TicketNr03.prn
Exo-ExhibitionTool2008.exe
Exo-FontTool.exe
Exo-FwPatchTool.exe
Exo-ImageTool.exe
Exo-PrintMonInfo.exe
Exo-PrintMonPluginTest.exe
Exo-PrintTerminal.exe
Exo-Uninstaller.exe
Exo-UploadTool.exe
Exo-WideFontTool.exe
Exo_Api.dll
Exo_Tb.dll
Exo_Tb2.dll
MFC71.dll
msvcr71.dll

```

List of files/components

Date	Time	Size	File	Version	Description
N/A	N/A	N/A	Extendo-WindowsXpDriver-S684015-R2-V1_01-FINAL-2008MAY31.zip	R2-V1.01	Complete driver package as zip file
N/A	N/A	N/A	D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf	R2-V1.01	Release note of the eXtendo driver package
N/A	N/A	N/A	D-684-131_Extendo-WindowsXpDriver-Manual.pdf	N/A	Manual of the eXtendo driver package
N/A	N/A	N/A	S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf	N/A	Release note regarding usage of the Windows XP driver with Windows Vista.
20.05.2008	21:01	5.878	Hengstler-Extendo-X56.inf	R2-V1.01	Driver component => information file required for installation of the X56 driver
20.05.2008	21:01	5.877	Hengstler-Extendo-X80.inf	R2-V1.01	Driver component => information file required for installation of the X80 driver
27.05.2008	16:33	12.288	Exo_Api.dll	R2-V1.01	Driver component => application programming interface
20.05.2008	15:34	86.016	Exo_PrintMon.dll	R2-V1.01	Driver component => print job monitor
27.05.2008	18:36	10.240	Exo_PrintMonPlugin.dll	R2-V1.01	Driver component => print job monitor plugin
26.05.2008	20:42	40.960	Exo_Tb.dll	R2-V1.01	Driver component => tool box
20.05.2008	20:16	159.744	Exo_Tb2.dll	R2-V1.01	Driver component => tool box 2
20.05.2008	20:42	31.232	Exo_UniDrv.dll	R2-V1.01	Driver component => uni-driver
21.12.2007	05:48	85	Exo_UniDrv.ini	N/A	Driver component => uni-driver
29.05.2008	13:17	684.032	Exo_UserInterface.dll	R2-V1.01	Driver component => user interface / printer properties
26.05.2008	20:42	718	Exo_X56.dat	N/A	Driver component => settings file for the X56 driver
26.05.2008	20:42	5.120	Exo_X56.dll	R2-V1.01	Driver component => resource file for the X56 driver

20.05.2008	21:03	13.444	Exo_X56.gpd	R2-V1.01	Driver component => general printer definition file for the X56 driver
21.12.2007	05:49	24.649	Exo_X56.prn	N/A	Driver component => test print file for the X56 driver
29.05.2008	13:18	717	Exo_X80.dat	N/A	Driver component => settings file for the X80 driver
29.05.2008	13:18	5.120	Exo_X80.dll	R2-V1.01	Driver component => resource file for the X80 driver
20.05.2008	21:03	13.463	Exo_X80.gpd	R2-V1.01	Driver component => general printer definition file for the X80 driver
21.12.2007	05:50	29.634	Exo_X80.prn	R2-V1.01	Driver component => test print file for the X80 driver
21.07.2001	19:41	14.362	STDNAMES.GPD	N/A	General printer definition file from Windows XP, used when installing in windows Vista.
30.07.2007	10:24	117.558	Exo-Font-Std-01.08x16.ExoCs	N/A	Character set: standard font #1, 08x16
30.07.2007	10:25	249.654	Exo-Font-Std-01.12x24.ExoCs	N/A	Character set: standard font #1, 12x24
30.07.2007	11:04	430.902	Exo-Font-Std-01.16x32.ExoCs	N/A	Character set: standard font #1, 16x32
31.07.2007	11:20	661.302	Exo-Font-Std-01.20x40.ExoCs	N/A	Character set: standard font #1, 20x40
31.07.2007	11:25	661.302	Exo-Font-Std-02-20x40.ExoCs	N/A	Character set: standard font #2, 08x16
22.08.2005	20:28	117.558	Exo-Font-Std-02.08x16.ExoCs	N/A	Character set: standard font #2, 12x24
22.08.2005	20:28	249.654	Exo-Font-Std-02.12x24.ExoCs	N/A	Character set: standard font #2, 16x32
30.07.2007	17:48	430.902	Exo-Font-Std-02.16x32.ExoCs	N/A	Character set: standard font #2, 20x40
09.01.2006	16:50	3.811.318	Exo-WideFont-Korean.20X20.ExoWcs	N/A	Character set: Korean KS5601 wide font, 20x20
10.11.2005	14:27	4.551.078	Exo-WideFont-Mall.24X24.ExoWcs	N/A	Character set: sample wide font, 24x24
13.10.2005	16:07	1.456	NET_START_SPOOLER.lnk	N/A	Command for starting the spooler
13.10.2005	16:11	1.658	NET_STOP_SPOOLER.lnk	N/A	Command for stopping the spooler
13.08.2007	09:05	137.216	Exo-GdiDemo-X56-056x125.doc	N/A	Sample document for GDI printing
21.12.2007	04:49	161.280	Exo-GdiDemo-X56-Test.doc	N/A	Sample document for GDI printing
29.08.2007	19:18	137.216	Exo-GdiDemo-X80-080x125.doc	N/A	Sample document for GDI printing
21.12.2007	04:50	161.792	Exo-GdiDemo-X80-Test.doc	N/A	Sample document for GDI printing
27.05.2008	16:33	15.078	Exo_Api.h	R2-V1.01	Header file describing the application programming interface (API)
27.05.2008	16:33	4.392	Exo_Api.lib	R2-V1.01	API library, included in applications
27.05.2008	18:36	18.254	Exo_PrintMonPlugin.h	R2-V1.01	Header file describing the print monitor plugin interface
27.05.2008	18:36	44.071	Exo_PrintMonPlugin.zip	R2-V1.01	Zip file containing the Visual C++ sources of the print monitor plugin.
21.05.2008	17:27	34.460	Exo_PrintMonPluginTest.zip	R2-V1.01	Zip file containing the Visual C++ sources of the print monitor plugin test tool.

21.05.2008	12:49	36.864	Exo-CommandTool.exe	R2-V1.01	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket)
29.05.2008	18:01	61.440	Exo-ConfigurationTool.exe	R2-V1.01	Configuration tool which is used for configuring the X56 and X80 type printers.
27.05.2008	15:04	61.440	Exo-DiagnosticTool.exe	R2-V1.01	Diagnostic tool which is used for displaying printer status and other information.
18.03.2008	18:00	84.858	Exo-Exhibition2008-X56-EmuSampleNr01	N/A	Print files of the Exo-ExhibitionTool2008.
18.03.2008	16:39	27.799	Exo-Exhibition2008-X56-EmuSampleNr02.prn		
18.03.2008	16:42	14.856	Exo-Exhibition2008-X56-EmuSampleNr03.prn		
18.03.2008	16:46	3.601	Exo-Exhibition2008-X56-Extendo.prn		
18.03.2008	16:45	2.506	Exo-Exhibition2008-X56-Hengstler.prn		
25.03.2008	13:12	48.800	Exo-Exhibition2008-X56-PrinterNr01.prn		
25.03.2008	13:12	48.863	Exo-Exhibition2008-X56-PrinterNr02.prn		
25.03.2008	13:12	48.856	Exo-Exhibition2008-X56-PrinterNr03.prn		
25.03.2008	13:13	48.830	Exo-Exhibition2008-X56-PrinterNr04.prn		
25.03.2008	13:13	42.377	Exo-Exhibition2008-X56-TicketNr01.prn		
13.03.2008	20:39	39.055	Exo-Exhibition2008-X56-TicketNr02.prn		
13.03.2008	20:39	57.721	Exo-Exhibition2008-X56-TicketNr03.prn		
25.03.2008	13:08	157.004	Exo-Exhibition2008-X80-EmuSampleNr01.prn		
18.03.2008	17:52	53.405	Exo-Exhibition2008-X80-EmuSampleNr02.prn		
18.03.2008	17:52	26.835	Exo-Exhibition2008-X80-EmuSampleNr03.prn		
18.03.2008	17:45	6.325	Exo-Exhibition2008-X80-Extendo.prn		
18.03.2008	17:46	3.624	Exo-Exhibition2008-X80-Hengstler.prn		
25.03.2008	13:08	65.908	Exo-Exhibition2008-X80-PrinterNr01.prn		
25.03.2008	13:08	65.963	Exo-Exhibition2008-X80-PrinterNr02.prn		
25.03.2008	13:09	65.972	Exo-Exhibition2008-X80-PrinterNr03.prn		
25.03.2008	13:09	65.953	Exo-Exhibition2008-X80-PrinterNr04.prn		
25.03.2008	13:09	59.972	Exo-Exhibition2008-X80-TicketNr01.prn		
13.03.2008	21:39	68.170	Exo-Exhibition2008-X80-TicketNr02.prn		
13.03.2008	21:43	94.589	Exo-Exhibition2008-X80-TicketNr03.prn		

27.05.2008	15:07	1.761.280	Exo-ExhibitionTool2008.exe	R2-V1.01	Exhibition tool used in 2008.
21.05.2008	13:33	53.248	Exo-FontTool.exe	R2-V1.01	Font tool which is used for generating a font upload file from windows bitmaps.
21.05.2008	13:38	33.280	Exo-FwPatchTool.exe	R2-V1.01	Firmware patch tool which is used for enable/disable specific firmware patches.
21.05.2008	13:41	53.248	Exo-ImageTool.exe	R2-V1.01	Image tool which is used of creating an image upload file from windows bitmaps.
21.05.2008	15:34	65.536	Exo-PrintTerminal.exe	R2-V1.01	Terminal tool which is used for evaluating emulation commands.
21.05.2008	16:16	217.088	Exo-Uninstaller.exe	R2-V1.01	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
21.05.2008	16:21	36.352	Exo-UploadTool.exe	R2-V1.01	Upload tool which is used for upload of firmware, fonts, widefonts and images.
21.05.2008	16:25	49.152	Exo-WideFontTool.exe	R2-V1.01	Wide font tool which is used for generating a wide font upload file from windows bitmaps.
21.05.2008	15:28	28.672	Exo_PrintMonInfo.exe	R2-V1.01	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
21.05.2008	15:22	28.160	Exo_PrintMonPluginTest.exe	R2-V1.01	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
19.03.2003	06:20	1.060.864	MFC71.dll	N/A	Windows XP library, used in various tools and/or applications
21.02.2003	13:42	348.160	msvcr71.dll	N/A	Windows XP library, used in various tools and/or applications
20.05.2008	17:32	1.953	20080520-HowToUseTheExtendoDriverInWindowsVista.txt	N/A	Note which describes what to do to become this windows XP driver operational in windows XP.

Installation

To prevent a eXtendo file version mismatch, it is required that the Exo-Uninstaller tool is used before installation of a different eXtendo printer driver version.

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB.

The eXtendo printer driver information files are "Hengstler-Extendo-X56.inf" for the X56 type printer and "Hengstler-Extendo-X80.inf". for the X80 type printer.

The eXtendo printer driver manual contains more detailed information on eXtendo printer driver installation.

Un-Installation

The Exo-Uninstaller tool is to be used for the Uninstallation of installed eXtendo printer drivers and driver files.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

Currently no restrictions are known.

Documentation

At this time there is no eXtendo printer driver manual available.

The eXtendo emulation command set manual is available as Hengstler document D-684-112 [1].

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows XP driver within windows Vista.

4 EXTENDO XP-DRIVER S684015-R3-V1.02-2010APR30

Description

The eXtendo printer driver S684015-R3-V1.02-2010APR30 is developed for Windows-XP (2000) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have firmware S684014-R1-V1.00 to S684014-R3-V1.02 installed.

List of modifications

=> R3-V1.02 – 2010 APR 30 – – RELEASED FINAL VERSION

3rd release version of the eXtendo printer driver for windows XP.

Mod-Id	Component	Version	Description
M-R3-001-HOR	Exo-OptionsTool.exe Exo-ComponentsTool.exe Exo-Tb.dll	R3-V1_02a	New eXtendo options and components tool added.
M-R3-002-HOR	Exo-ManufactoryTool.exe Exo-OptionsTool.exe Exo-Tb.dll Exo-Tb2.dll	R3-V1_02a	The eXtendo manufactory tool and options tool only work when an USB dongle is installed.
M-R3-003-HOR	Exo-FwPatchTool.exe	R3-V1_02a	The firmware patch tool is extended with firmware patch 0x00000002. This patch is available from extendo firmware V1.02a-BETA. It is intended to be used in combination with early eXtendo printers which have an inverted print head up/down switch. The patch is not to be used for printers that are manufactured after june 2008.
M-R3-004-HOR	Exo-ConfigTool.exe Exo-Tb.dll	R3-V1_02a	Option "Add flag to USB serial number" added to the configuration tool. By setting this flag, up to 4 different printers can be distinguished by the USB.
M-R3-005-HOR	Exo-ConfigTool.exe	R3-V1_02a	The configuration tool automatically generates the filename from the part number when [save to file] is selected.
M-R3-006-HOR	Exo-Tb.dll	R3-V1_02a	Integrated new functionality for generating loop presenter control commands.
M-R3-007-HOR	Exo-Tb.dll Exo-EnduranceTest.dll	R3-V1_02a	Recorded data now contains number of presenter jams instead of number of sleep commands received
M-R3-008-HOR	Exo-Tb.dll Exo-UserInterface.dll Exo-UniDrv.dll	R3-V1_02a	Driver settings extended with bundler capacity and presentation timeout. Presenter control integrated in the driver.
M-R3-009-HOR	Exo-API.dll Exo-DiagnosticTool.exe	R3-V1_02a	The printer status error word is extended with presenter specific error information.
M-R3-010-HOR	Exo-ManufacturingTool.exe Exo-Tb.exe	R3-V1_02a	Manufacturing data extended with presenter unit selection.
M-R3-011-HOR	Exo-API.dll Exo-Tb2.dll Exo-DiagnosticTool.exe	R3-V1_02a	New presenter status packet added and diagnostic tool dialog extended with presenter status information.
M-R3-012-HOR	Exo-ConfigTool.exe	R3-V1_02a	Dot history can be defined from 0%-100% (instead of 0%-50%).

M-R3-013-HOR	Exo-API.exe	R3-V1_02a	Printer status DWORD in packet TS_EXO_API_PCKT_PRINTER_STATUS extended with D_EXO_API_PRINTER_STATUS_PSDW_EEPROM_MISSING
M-R3-014-HOR	Exo-ConfigurationTool.exe Exo-Tb.dll	R3-V1_02b	Configuration data extended with paper presentation offset.
M-R3-015-HOR	Exo-SpeedTestTool.exe	R3-V1_02b	Speed test tool extended with density setting.
M-R3-015-HOR	Exo-ConfigurationTool.exe Exo-Tb.dll	R3-V1_02b	Configuration data extended with mark cut correction.
M-R3-016-HOR	Exo-ConfigurationTool.exe Exo-Tb.dll	R3-V1_02b	Configuration data extended with print start correction.
M-R3-017-HOR	Exo-ConfigurationTool.exe Exo-Tb.dll	R3-V1_02b	Configuration data extended with "print whole objects only" flag.
M-R3-018-HOR	Exo-Tb.dll	R3-V1_02c	The flag "UseDefaultSettings" in the driver dat-file is lowered only after successful storage of the settings in the registry.
M-R3-019-HOR	Exo-ManufacturingTool.exe	R3-V1_02c	Extended with new 12V thermal print heads for X56 and X80.
M-R3-020-HOR	Exo-DiagnosticTool.exe	R3-V1_02c	Display of A/C converter measurements as hex string.
M-R3-021-HOR	Exo-ManufacturingTool.exe Exo-Tb.dll	R3-V1_02c	Cutter type "NONE" added.
M-R3-022-HOR	Exo-ConfigurationTool.exe	R3-V1_02c	Park position "USER" added.
M-R3-023-HOR	Exo-FontTool.exe	R3-V1_02c	Modified for processing font files with both 256 and 256+96 characters. Font input files which can be processed have width 32 characters and height 8 or 11 characters. Note that until eXtendo firmware R2-V1.02o all fonts have 256 characters and that, from this firmware version, fonts have 256+96 characters.
M-R3-024-HOR	Exo-DiagnosticTool.exe Exo-EnduranceTestTool.exe	R3-V1_02c	Added new states for cutter test and paper eject.
M-R3-025-HOR	Exo-EnduranceTestTool.exe	R3-V1_02c	Extended with cutter test feature.
M-R3-026-HOR	Exo-Tb.dll Exo-ManufacturingTool.exe	R3-V1_02c	Extension of manufactory data with controller revision.
M-R3-027-HOR	Exo-PrintTerminal.exe	R3-V1_02c	Soft reset changed to hard reset.
M-R3-028-HOR	Exo-API.h	R3-V1.02	Printer status DWORD in packet TS_EXO_API_PCKT_PRINTER_STATUS extended with D_EXO_API_PRINTER_STATUS_PSDW_PARCUT flags.
M-R3-028-HOR	Exo-ExhibitionTool.exe	R3-V1.02	All exhibition tools are removed from the driver package.
M-R3-029-HOR	Exo-UniDrv.dll	R3-V1.02	Division-by-zero bug resolved regarding printing empty documents whereas flag "remove trailing blanks" is enabled.

Package overview

```

|   D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf
|   Extendo-WindowsXpDriver-S684015-R2-V1_01c-BETA-2010JAN28.zip
|
+---Driver
|   |   Hengstler-Extendo-X56.inf
|   |   Hengstler-Extendo-X80.inf
|   |
|   \---i386
|       Exo_Api.dll
|       Exo_PrintMon.dll

```

```
|      Exo_PrintMonPlugin.dll
|      Exo_Tb.dll
|      Exo_Tb2.dll
|      Exo_UniDrv.dll
|      Exo_UniDrv.ini
|      Exo_UserInterface.dll
|      Exo_X56.dat
|      Exo_X56.dll
|      Exo_X56.gpd
|      Exo_X56.prn
|      Exo_X80.dat
|      Exo_X80.dll
|      Exo_X80.gpd
|      Exo_X80.prn
|      MFC71.dll
|      msvc71.dll
|      STDNAMES.GPD
|
+---Fonts
|      Exo-Font-Std-01.08x16.ExoCs
|      Exo-Font-Std-01.12x24.ExoCs
|      Exo-Font-Std-01.16x32.ExoCs
|      Exo-Font-Std-01.20x40.ExoCs
|      Exo-Font-Std-02-20x40.ExoCs
|      Exo-Font-Std-02.08x16.ExoCs
|      Exo-Font-Std-02.12x24.ExoCs
|      Exo-Font-Std-02.16x32.ExoCs
|      Exo-WideFont-Korean.20X20.ExoWcs
|      Exo-WideFont-Mall.24X24.ExoWcs
|
+---Documents
|      D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf
|      D-684-131_Extendo-WindowsXpDriver-Manual.pdf
|      S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf
|
+---Other
|      NET_START_SPOOLER.lnk
|      NET_STOP_SPOOLER.lnk
|
+---Samples
|      Exo-GdiDemo-X56-056x125.doc
|      Exo-GdiDemo-X56-Test.doc
|      Exo-GdiDemo-X80-080x125.doc
|      Exo-GdiDemo-X80-Test.doc
|
+---Sdk
|      Exo_Api.h
|      Exo_Api.lib
|      Exo_PrintMonPlugin.h
|
+---Sources
|      Exo-PrintMonPluginTest.zip
|      Exo_PrintMonPlugin.zip
|
\---Tools
|      Exo-CommandTool.exe
|      Exo-ConfigurationTool.exe
|      Exo-DiagnosticTool.exe
|      Exo-FontTool.exe
|      Exo-FwPatchTool.exe
|      Exo-ImageTool.exe
|      Exo-PrintMonInfo.exe
|      Exo-PrintMonPluginTest.exe
|      Exo-PrintTerminal.exe
|      Exo-Uninstaller.exe
|      Exo-UploadTool.exe
|      Exo-WideFontTool.exe
|      Exo_Api.dll
|      Exo_Tb.dll
|      Exo_Tb2.dll
|      MFC71.dll
|      msvc71.dll
```

List of files/components				
Date	Size	File	Version	Description
N/A	N/A	Extendo-WindowsXpDriver-S684015-R2-V1_02c-BETA-2010JAN28.zip	R3-V1.02	Complete driver package as zip file
N/A	N/A	D-684-118-Extendo-WindowsXpDriver-ReleaseNote.pdf	R3-V1.02	Release note of the eXtendo driver package
N/A	N/A	D-684-131_Extendo-WindowsXpDriver-Manual.pdf	N/A	Manual of the eXtendo driver package
N/A	N/A	S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf	N/A	Release note regarding usage of the Windows XP driver with Windows Vista.
30.04.2010	6.106	Hengstler-Extendo-X56.inf	R3-V1.02	Driver component => information file required for installation of the X56 driver
30.04.2010	6.135	Hengstler-Extendo-X80.inf	R3-V1.02	Driver component => information file required for installation of the X80 driver
30.04.2010	12.288	Exo_Api.dll	R3-V1.02	Driver component => application programming interface
30.04.2010	86.016	Exo_PrintMon.dll	R3-V1.02	Driver component => print job monitor
29.04.2010	10.240	Exo_PrintMonPlugin.dll	R3-V1.02	Driver component => print job monitor plugin
30.04.2010	41.984	Exo_Tb.dll	R3-V1.02	Driver component => tool box
30.04.2010	163.840	Exo_Tb2.dll	R3-V1.02	Driver component => tool box 2
30.04.2010	31.232	Exo_UniDrv.dll	R3-V1.02	Driver component => uni-driver
21.12.2007	85	Exo_UniDrv.ini	N/A	Driver component => uni-driver
30.04.2010	684.032	Exo_UserInterface.dll	R3-V1.02	Driver component => user interface / printer properties
14.08.2008	759	Exo_X56.dat	N/A	Driver component => settings file for the X56 driver
30.04.2010	5.120	Exo_X56.dll	R3-V1.02	Driver component => resource file for the X56 driver
29.04.2010	13.700	Exo_X56.gpd	R3-V1.02	Driver component => general printer definition file for the X56 driver
12.04.2010	24.060	Exo_X56.prn	N/A	Driver component => test print file for the X56 driver
14.08.2008	759	Exo_X80.dat	N/A	Driver component => settings file for the X80 driver
30.04.2010	5.120	Exo_X80.dll	R3-V1.02	Driver component => resource file for the X80 driver
30.04.2010	13.717	Exo_X80.gpd	R3-V1.02	Driver component => general printer definition file for the X80 driver
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30.07.2007	249.654	Exo-Font-Std-01.12x24.ExoCs	N/A	Character set: standard font #1, 12x24
30.07.2007	430.902	Exo-Font-Std-01.16x32.ExoCs	N/A	Character set: standard font #1, 16x32

31.07.2007	661.302	Exo-Font-Std-01.20x40.ExoCs	N/A	Character set: standard font #1, 20x40
31.07.2007	661.302	Exo-Font-Std-02-20x40.ExoCs	N/A	Character set: standard font #2, 08x16
22.08.2005	117.558	Exo-Font-Std-02.08x16.ExoCs	N/A	Character set: standard font #2, 12x24
22.08.2005	249.654	Exo-Font-Std-02.12x24.ExoCs	N/A	Character set: standard font #2, 16x32
30.07.2007	430.902	Exo-Font-Std-02.16x32.ExoCs	N/A	Character set: standard font #2, 20x40
09.01.2006	3.811.318	Exo-WideFont-Korean.20X20.ExoWcs	N/A	Character set: Korean KS5601 wide font, 20x20
10.11.2005	4.551.078	Exo-WideFont-Mall.24X24.ExoWcs	N/A	Character set: sample wide font, 24x24
13.10.2005	1.456	NET_START_SPOOLER.lnk	N/A	Command for starting the spooler
13.10.2005	1.658	NET_STOP_SPOOLER.lnk	N/A	Command for stopping the spooler
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21.12.2007	161.280	Exo-GdiDemo-X56-Test.doc	N/A	Sample document for GDI printing
29.08.2007	137.216	Exo-GdiDemo-X80-080x125.doc	N/A	Sample document for GDI printing
21.12.2007	161.792	Exo-GdiDemo-X80-Test.doc	N/A	Sample document for GDI printing
30.04.2010	21.060	Exo_Api.h	R3-V1.02	Header file describing the application programming interface (API)
30.04.2010	4.392	Exo_Api.lib	R3-V1.02	API library, included in applications
30.04.2010	18.482	Exo_PrintMonPlugin.h	R3-V1.02	Header file describing the print monitor plugin interface
30.04.2010	42.974	Exo_PrintMonPlugin.zip	R3-V1.02	Zip file containing the Visual C++ sources of the print monitor plugin.
30.04.2010	34.075	Exo_PrintMonPluginTest.zip	R3-V1.02	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
29.04.2010	36.864	Exo-CommandTool.exe	R3-V1.02	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket)
29.04.2010	65.536	Exo-ConfigurationTool.exe	R3-V1.02	Configuration tool which is used for configuring the X56 and X80 type printers.
29.04.2010	73.728	Exo-DiagnosticTool.exe	R3-V1.02	Diagnostic tool which is used for displaying printer status and other information.
29.04.2010	53.248	Exo-FontTool.exe	R3-V1.02	Font tool which is used for generating a font upload file from windows bitmaps.
29.04.2010	33.792	Exo-FwPatchTool.exe	R3-V1.02	Firmware patch tool which is used for enable/disable specific firmware patches.
29.04.2010	53.248	Exo-ImageTool.exe	R3-V1.02	Image tool which is used of creating an image upload file from windows bitmaps.
29.04.2010	65.536	Exo-PrintTerminal.exe	R3-V1.02	Terminal tool which is used for evaluating emulation commands.
29.04.2010	217.088	Exo-Uninstaller.exe	R3-V1.02	Un-installation tool which is used to remove all eXtendo driver components for a

				windows XP installation.
30.04.2010	36.352	Exo-UploadTool.exe	R3-V1.02	Upload tool which is used for upload of firmware, fonts, widefonts and images.
30.04.2010	49.152	Exo-WideFontTool.exe	R3-V1.02	Wide font tool which is used for generating a wide font upload file from windows bitmaps.
29.04.2010	28.672	Exo_PrintMonInfo.exe	R3-V1.02	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
29.04.2010	28.160	Exo_PrintMonPluginTest.exe	R3-V1.02	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
19.03.2003	1.060.864	MFC71.dll	N/A	Windows XP library, used in various tools and/or applications
21.02.2003	348.160	msvcr71.dll	N/A	Windows XP library, used in various tools and/or applications

Installation

To prevent a eXtendo file version mismatch, it is required that the Exo-Uninstaller tool is used before installation of a different eXtendo printer driver version.

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB.

The eXtendo printer driver information files are "Hengstler-Extendo-X56.inf" for the X56 type printer and "Hengstler-Extendo-X80.inf". for the X80 type printer.

The eXtendo printer driver manual contains more detailed information on eXtendo printer driver installation.

Un-Installation

The Exo-Uninstaller tool is to be used for the Uninstallation of installed eXtendo printer drivers and driver files.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

Currently no restrictions are known.

Documentation

At this time there is no eXtendo printer driver manual available.

The eXtendo emulation command set manual is available as Hengstler document D-684-112 [1].

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows XP driver within windows Vista.

5 EXTENDO XP/7/8 DRIVER S684015-R4-V2.00-2013JUL18

Description

The eXtendo printer driver S684015-R4-V2.00-2013JUL18 is developed for Windows-XP (32-Bit), Windows-7 (32-Bit and 64-Bit) and Windows-8 (32-Bit and 64-Bit) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have firmware S684014-R1-V1.00 to S684014-R4-V2.00 installed.

Package overview

```
|      S-684-015-Extendo-WindowsXp78Driver-R4-V2_00-FINAL-2013JUL18.zip
|
+---Driver
|   |   Hengstler-Extendo-X56.inf
|   |   Hengstler-Extendo-X56.cat
|   |   Hengstler-Extendo-X56_x64.inf
|   |   Hengstler-Extendo-X56_x64.cat
|   |   Hengstler-Extendo-X80.inf
|   |   Hengstler-Extendo-X80.inf.cat
|   |   Hengstler-Extendo-X80_x64.inf
|   |   Hengstler-Extendo-X80_x64.cat
|   |   Exo-Setup.exe
|   |   Exo-Setup.x32.exe
|   |   Exo-Setup.x64.exe
|   |   difxapi.dll
|   |   difxapi.x64
|   |
|   \---Data
|       Exo_Api.dll
|       Exo_Api_x64.dll
|       Exo_PrintMon.dll
|       Exo_PrintMon_x64.dll
|       Exo_PrintMonPlugin.dll
|       Exo_PrintMonPlugin_x64.dll
|       Exo_Tb_x64.dll
|       Exo_Tb.dll
|       Exo_UniDrv.dll
|       Exo_UniDrv_x64.dll
|       Exo_UniDrv.ini
|       Exo_UniDrv_x64.ini
|       Exo_UserInterface.dll
|       Exo_UserInterface_x64.dll
|       Exo_Vs.dll
|       Exo_Vs_x64.dll
|       Exo_X56.dat
|       Exo_X56.dll
|       Exo_X56_x64.dll
|       Exo_X56.gpd
|       Exo_X56_x64.gpd
|       Exo_X56.prn
|       Exo_X80.dat
|       Exo_X80.dll
|       Exo_X80_x64.dll
|       Exo_X80.gpd
|       Exo_X80_x64.gpd
|       Exo_X80.prn
|       STDNAMES.GPD
|
+---Documents
|   D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf
|   S-684-015-Extendo-WindowsDriver-ApplicationNote-0001.pdf
|   S-684-015-Extendo-WindowsDriver-ApplicationNote-0002.pdf
|   S-684-015-Extendo-WindowsDriver-ApplicationNote-0003.pdf
|   S-684-015-Extendo-WindowsDriver-ApplicationNote-0004.pdf
|
+---Fonts
|   Exo-CodePages.zip
|   Exo-StandardFont.zip
|   Exo-WideFont.zip
```

```

|
+---Other
|     NET_START_SPOOLER.lnk
|     NET_STOP_SPOOLER.lnk
|
+---Samples
|     Exo-GdiDemo-X56-056x125.doc
|     Exo-GdiDemo-X56-Test.doc
|     Exo-GdiDemo-X80-080x125.doc
|     Exo-GdiDemo-X80-Test.doc
|
+---Api
|     Exo_Api.h
|     Exo_Api.lib
|     Exo_PrintMonPlugin.h
|     Exo_ApiWrapper_NET.dll
|
+---Sources
|     Exo-PrintMonPluginTest.zip
|     Exo_PrintMonPlugin.zip
|
\---Tools
     Exo-CommandTool.exe
     Exo-ConfigurationTool.exe
     Exo-DiagnosticTool.exe
     Exo-FontTool.exe
     Exo-FwP@tchTool.exe
     Exo-ImageTool.exe
     Exo-PrintMonInfo.exe
     Exo-PrintMonPluginTest.exe
     Exo-PrintTerminal.exe
     Exo-Uninstaller.exe
     Exo-UploadTool.exe
     Exo-WideFontTool.exe
     Exo_Api.dll
     Exo_Tb.dll
     Exo_Tb2.dll
     Mfc100.dll
     Msvcr100.dll

```

List of Files	
File	Description
S-684-015-Extendo-WindowsXp78Driver-R4-V2_00-FINAL-2013JUL18.zip	Complete Windows driver package as zip file
D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf	Release note of the eXtendo Windows driver package (this document).
S-684-015-Extendo-WindowsDriver-ApplicationNote-0001.pdf	Application note regarding usage of the Windows driver with a Windows Vista environment.
S-684-015-Extendo-WindowsDriver-ApplicationNote-0002.pdf	Application note regarding usage of the Windows driver within .NET applications.
S-684-015-Extendo-WindowsDriver-ApplicationNote-0003.pdf	Application note describing how to remove an "unspecified device" in Windows 7 (8).
S-684-015-Extendo-WindowsDriver-ApplicationNote-0004.pdf	Application note describing how to recover from a printer driver components mismatch in Windows 7 (8).
Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.cat Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X56.x64.cat	Driver component => information and catalog file required for installation of the X56 driver (32/64 BIT)

Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.cat Hengstler-Extendo-X80.x64.inf Hengstler-Extendo-X80.x64.cat	Driver component => information and catalog file required for installation of the X80 driver (32/64 BIT)
Exo-Setup.exe Exo-Setup.x32 Exo-Setup.x64	Setup tool(s) (batch and GUI) for Windows XP (32 BIT), Windows 7 (32/64 BIT) and Windows 8 (32/64 BIT).
difxapi.dll difxapi.x64	Driver component => driver information framework files which are required during installation.
Exo_Api.dll Exo_Api_x64.dll	Driver component => application programming interface (32/64 BIT)
Exo_PrintMon.dll Exo_PrintMon_x64.dll	Driver component => print job monitor (32/64 BIT)
Exo_PrintMonPlugin.dll Exo_PrintMonPlugin_x64.dll	Driver component => print job monitor plugin (32/64 BIT)
Exo_Tb.dll Exo_Tb_x64.dll	Driver component => tool box (32/64 BIT)
Exo_Tb2.dll	Driver component => tool box 2
Exo_UniDrv.dll Exo_UniDrv_x64.dll	Driver component => uni-driver (32/64 BIT)
Exo_UniDrv.ini Exo_UniDrv_x64.ini	Driver component => uni-driver (32/64 BIT)
Exo_UserInterface.dll Exo_UserInterface_x64.dll	Driver component => user interface / printer properties (32/64 BIT)
Exo_X56.dat	Driver component => settings file for the X56 driver
Exo_X56.dll Exo_X56_x64.dll	Driver component => resource file for the X56 driver (32/64 BIT)
Exo_X56.gpd Exo_X56_x64.gpd	Driver component => general printer definition file for the X56 driver (32/64 BIT)
Exo_X56.prn	Driver component => test print file for the X56 driver
Exo_X80.dat	Driver component => settings file for the X80 driver
Exo_X80.dll Exo_X80_x64.dll	Driver component => resource file for the X80 driver (32/64 BIT)
Exo_X80.gpd Exo_X80_x64.gpd	Driver component => general printer definition file for the X80 driver (32/64 BIT)
Exo_X80.prn	Driver component => test print file for the X80 driver
STDNAMES.GPD	General printer definitions file from Windows XP, used when installing in windows Vista.
Exo-CodePages.zip	Zip file containing various code page images that can be uploaded onto the printer
Exo-StandardFont.zip	Zip file containing the standard font images that are included in the firmware
Exo-WideFont.zip	Zip file containing wide font images that can be uploaded onto the printer
NET_START_SPOOLER.lnk	Command for starting the spooler
NET_STOP_SPOOLER.lnk	Command for stopping the spooler
Exo-GdiDemo-X56-056x125.doc	Sample document for GDI printing
Exo-GdiDemo-X56-Test.doc	Sample document for GDI printing
Exo-GdiDemo-X80-080x125.doc	Sample document for GDI printing
Exo-GdiDemo-X80-Test.doc	Sample document for GDI printing
Exo_Api.h	Header file describing the application programming interface (API)
Exo_Api.lib Exo_Api_x64.lib	API library, included in applications (32/64 BIT)
Exo_Exo_ApiWrapper_NET.dll	.NET library, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types.
Exo_PrintMonPlugin.h	Header file describing the print monitor plugin interface
Exo_PrintMonPlugin.zip	Zip file containing the Visual C++ sources of the print monitor plugin.

Exo_PrintMonPluginTest.zip	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
Exo-CommandTool.exe	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket)
Exo-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers.
Exo-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information.
Exo-FontTool.exe	Font tool which is used for generating a font upload file from windows bitmaps.
Exo-FwP@tchTool.exe	Firmware patch tool which is used for enable/disable specific firmware patches.
Exo-ImageTool.exe	Image tool which is used of creating an image upload file from windows bitmaps.
Exo-PrintTerminal.exe	Terminal tool which is used for evaluating emulation commands.
Exo-Uninstaller.exe	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
Exo-UploadTool.exe	Upload tool which is used for upload of firmware, fonts, widefonts and images.
Exo-WideFontTool.exe	Wide font tool which is used for generating a wide font upload file from windows bitmaps.
Exo_PrintMonInfo.exe	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
Exo_PrintMonPluginTest.exe	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
Mfc100.dll	Windows XP library, used in various tools and/or applications
Msvcr100.dll	Windows XP library, used in various tools and/or applications

Installation on Windows XP

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below).

The printer driver for X56/X80-type printers can be pre-installed within the driver framework with use of the "setup.exe" tool.

Installation of an X56/X80-RS232-type printer must be done manually by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of an X56/X80-USB-type printer is automatically performed by connecting the printer through USB.

The driver information files for X56-type printers are "Hengstler-Extendo-X56.inf" and "Hengstler-Extendo-X56.x64.inf".

The driver information files for X80-type printers are "Hengstler-Extendo-X80.inf" and "Hengstler-Extendo-X80.x64.inf".

The printer driver manual contains more detailed information on printer driver installation on Windows Xp.

Installation on Windows 7

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below) (see "Un-Installing on Windows 7" below).

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[DEVICES&PRINTERS]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB, whereas the eXtendo printer will appear in the printers&faxes dialog. The actions required for successfully installing the driver may depend on the system setting. The eXtendo driver will automatically be installed when the eXtendo driver has already been loaded in the driver store. If not, then press the right mouse button on the eXtendo printer in the "printers&faxes dialog, select "properties", go to the "Hardware" register, select "properties", go to the "Driver" register and update (attach) the eXtendo driver from there.

Un-Installation on Windows XP

Removal of installed eXtendo drivers and eXtendo OEM driver files within Windows XP can be done with the Exo-Uninstaller tool, which is included in the driver package.

Un-Installation on Windows 7

Removal of installed eXtendo drivers within Windows 7 can be done with by deleting the eXtendo printer within the printers and faxes dialog. Extendo OEM driver files can be removed from Windows 7 by using the Windows 7 Tool "pnputil.exe" ("pnputil -e" lists all OEM drivers, "pnputil -d oem0.inf" deletes the particular OEM driver.

A setup tool for un-installing is currently in development and is expected to be available in the next to come driver version.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

Currently no restrictions are known.

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows driver within windows Vista.

List of modifications

Mod-Id	Component	Version	Description
M-R4-001-HOR	Exo-ComponentsTool.exe	R4-V2_00a	Extendo components tool extended with Chinese and Korean font.
M-R4-002-HOR	Exo-ConfigurationTool.exe	R4-V2_00a	Maximum setting for paper end detect distance limited to 650.

M-R4-003-HOR	Exo-FwPatchTool.exe	R4-V2_00a	Firmware patch 0x00000004 added which initializes the width of the narrow and wide barcode stripes equal to that of firmware version R2-V1.01 (equivalent with command "GS 'e'+[02]+[06]"). Note that these defaults have been changed in version R3-V1.02c (see M-R3-009-HOR).
M-R4-004-HOR	Exo_Api.dll Exo_CommandTool.exe Exo_PrintMon.dll Exo_Tb.dll Exo	R4-V2_00a	Modules adapted to VS2010 and, if required, 64 bit (x64). Redesign of various tools.
M-R4-005-HOR	Exo_Api.dll Exo_DiagnosticTool.dll	R4-V2_00a	Diagnostic tool extended with life cycle data display (available from firmware R4-V1.03b-Beta)
M-R4-006-HOR	Exo_PrintMon.dll Exo_PrintMon_x64.dll	R4-V2_00b	Clearing of data reception buffer at start of GDI printing improved.
M-R4-007-HOR	Exo_PrintMon.dll Exo_PrintMon_x64.dll	R4-V2_00b	Application programming interface data reception timeout enlarged.
M-R4-008-HOR	Exo_UserInterface.dll Exo_UserInterface_x64.dll	R4-V2_00b	Error in driver information display for 64 bit installation corrected.
M-R4-009-HOR	Exo_PrintMon.dll Exo_PrintMon_x64.dll	R4-V2_00c	Error in loading 64 bit print monitor plugin resolved.
M-R4-010-HOR	Exo-DiagnosticTool.exe	R4-V2_00c	Various failures in print test tab corrected.
M-R4-011-HOR	Exo-FwPatchTool.exe	R4-V2_00c	Extended with firmware patch 0x00000008. This patch is available from eXtendo firmware V1.03g-BETA and extends the paper jam detect distance by 3,5 cm.
M-R4-012-HOR	Exo_PrintMonPlugin.dll Exo_PrintMonPlugin_x64.dll	R4-V2_00c	Compiler switch "UNICODE" added. Was removed in M-R4-004-HOR when adapted to VS2010.
M-R4-013-HOR	Exo-API.dll Exo-DiagnosticTool.dll Exo-PrintMonitor.dll	R4-V2_00c	Printer status extended with presenter available and presenter active flag. This new flag is available from firmware version V2.00a.
M-R4-014-HOR	Exo-API.dll Exo-DiagnosticTool.dll Exo-PrintMonitor.dll	R4-V2_00c	Presenter status packet adapted to that of firmware version V2.00a.
M-R4-015-HOR	Exo-OptionsTool.dll Exo-Tb.dll Exo-ComponentsTool.dll	R4-V2_00c	Extended with paper roll holders P7 and P8.
M-R4-016-HOR	Exo-ServiceTool	R4-V2.00c	New command line tool for upload of firmware and storage/recovery of printer/driver settings
M-R4-017-HOR	Exo-ConfigurationTool.dll Exo-Tb.dll	R4-V2.00c	New firmware configuration setting "Mark Threshold Correction" added, which is available for Extendo firmware R4-R1.03j and up. The "Mark Threshold Correction" value selected reduces the mark detection scope between "white" and "black" (approx. 1.0 volt) with 10% (approx. 0.1 volt). The setting may help detecting low quality or reflective black marks.
M-R4-018-PS	Exo_ApiWrapper_NET.dll	R4-V2.00c	New .NET library added, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types. See application note #0002 for additional information.
M-R4-019-PS	S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf	R4-V2.00c	New application note added describing how-to use Exo_ApiWrapper_NET.dll within .NET applications.
M-R4-019-TKA	Exo_VendorSetup.dll	R4-V2.00c	Extended with automatic paper path selection at the end of the printer driver setup phase.

M-R4-020-HOR	Exo-CodePages.zip	N/A	First character in each code page cleared.
M-R4-021-TKA	Exo-Setup.exe	N/A	New setup tool added for driver setup within windows 7.
M-R4-022-HOR	Exo-ServiceTool.exe	R4-V2.00c	New argument /cmd="<Command-Sequence>" added.
M-R4-023-HOR	Exo-ConfigTool.exe Exo-Tb.dll	R4-V2.00d	Configuration data structure extended with new option "assign model specific USB device identifier".
M-R4-024-HOR	Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.x64.inf	R4-V2.00d	New unique model specifications "Hengstler X-56" and "Hengstler X-80" added.
M-R4-025-HOR	Exo-API.dll Exo-Uninstaller.exe Exo-Setup.exe	N/A	New printer models "Hengstler X-56" and "Hengstler X-80" added.
M-R4-026-HOR	Exo-CodePages.zip	N/A	Characters in the codepages update.
M-R4-027-HOR	Exo-Setup.exe	R4-V2.00d	Setup tool reviewed and extended with a command line interface.
M-R4-028-HOR	Exo-ConfigTool.exe Exo-Tb.dll	R4-V2.00d	Configuration data structure extended with option "disable retract at print start". If enabled, this option will cause the printer to immediately start printing and not to retract top of paper to print head.
M-R4-029-HOR	Exo-Tb.dll Exo-ConfigTool.exe	R4-V2.00e	Option "unjam paper on init" replaced by "enable automatic recovery on init".
M-R4-030-HOR	Exo-Tb.dll	R4-V2.00e	Presenter controls at end of print adapted to firmware V2.00a.
M-R4-031-HOR	Exo-Userinterface.dll Exo-PrintMon.dll	R4-V2.00e	Failure in data logging feature corrected.
M-R4-032-HOR	Exo-API.dll Exo-Tb.dll	R4-V2.00e	Configuration data structure moved from Exo-Tb.h to Exo-API.h
M-R4-033-HOR	Exo-API.dll Exo-Tb.dll	R4-V2.00e	Configuration data option "Automatic Recovery on init" (0x00000400 / D_EXO_CD_OPTION_ENABLE_AUTOMATIC_RECOVERY_ON_INIT / D_EXO_CD_OPTION_UNJAM_PAPER_ON_INIT) is no longer available since firmware R4-V2.00e. The printer will automatically recover on init if possible.
M-R4-034-HOR	Exo-DiagnosticTool.dll Exo-Tb.dll	R4-V2.00e	Presenter information adapted to firmware R4-V2.00a.
M-R4-035-HOR	Exo-UserInterface.dll	R4-V2.00e	Presenter bundle capacity setup removed.
M-R4-036-HOR	Exo-ConfigurationTool.exe Exo-API.dll	R4-V2.00e	Option "pre-pull form before print" added to configuration data, which is available since firmware R4-V2.00a.
M-R4-037-HOR	Exo-ConfigurationTool.exe Exo-API.dll	R4-V2.00e	Speed settings for paper load, paper advance and paper reverse added to configuration data, which are available since firmware R4-V2.00a.
M-R4-038-HOR	Exo-OptionsTool.exe Exo-ComponentsTool.exe	R4-V2.00e	Option X80 "Omit Paper Guides" added
M-R4-039-HOR	Exo-API.dll Exo-ConfigTool.exe		Option "use improved burn time determination" added to configuration data, which is available since firmware R4-V2.00a.
M-R4-040-HOR	Exo-Setup.exe	R4-V2.00e	Extended for usage under Windows XP. Minor corrections.
M-R4-041-HOR	Exo-PrintMon.dll Exo-Tb.dll	R4-V2.00e	Improvement of data inquiry (e.g. from diagnostic tools and others) (effective with slow printer<->host connections).
M-R4-042-HOR	Exo-DiagnosticTool.exe Exo-API.dll	R4-V2.00e	Sensor readings data package (GS 'a' +[n]) extended with presenter sensor #1 and #2 information.

M-R4-043-HOR	Exo-EnduranceTestTool.exe	R4-V2.00e	Tool extended with presenter test settings that are available since extendo firmware V2.00a. The cutter test is removed due to incompatibility with extendo firmware V2.00a.
M-R4-044-HOR	Exo-Vs.exe	R4-V2.00e	After installation vendor setup selects a paper size of 300 cm.
M-R4-045-HOR	Exo-PrintMonitor.dll	R4-V2.00f	Failure in data logging file naming resolved.
M-R4-046-HOR	Exo-PrintMonitor.dll	R4-V2.00f	Decrement of the duration of a data read from a port at which no received data is available.
M-R4-047-HOR	Exo-PrintTerminal.exe	R4-V2.00f	Input buffer for reception of data from the printer decreased to 32 bytes.
M-R4-048-HOR	Exo-API.dll	R4-V2.00f	Review of the presenter status structure.
M-R4-049-HOR	Exo-Tb.dll Exo-UserInterface.dll	R4-V2.00f	Cutter control can now be specified individually for end of page and end of document.
M-R4-050-HOR	Exo-ConfigTools.dll	R4-V2.00f	Distances are now input in mm instead of 1/10 mm.
M-R4-051-HOR	Exo-ConfigTools.dll Exo-API.dll	R4-V2.00g	Configuration data extended with a paper load setting that disables reverse motion when paper load fails. Currently loaded paper is rejected when the paper exit sensor remains unoccupied during paper load. This reverse motion without paper could damage the platen, especially when paper is frequently loaded, such as in ticket in/out applications. By enabling the "disable paper reject on paper load fail" option, the printer will stop the paper load process immediately and will not reject the inserted paper.
M-R4-052-HOR	Exo-ConfigTools.dll Exo-API.dll	R4-V2.00g	Configuration data extended with a presenter setting that disables the auto reject function of the driver. If enabled, then this "disable auto presenter reject feature" causes the presenter to wait for the host command before rejecting the ticket.
M-R4-053-HOR	Whole driver package	R4-V2.00g	Globalsign signature "HENGSTLER" added to driver and components.
M-R4-054-HOR	Exo-API.dll Exo-Toolbox.dll Exo-PrintMon.dll	R4-V2.00g	An application or tool can now communicate with the printer via the drivers API without having administrator rights.
M-R4-055-HOR	Whole driver package	R4-V2.00g	Package adapted to Windows 8.
M-R4-056-HOR	Exo-ConfigTool.exe	R4-V2.00h	Failure in processing decimals input resolved.
M-R4-057-HOR	Exo-ConfigTool.exe Exo-API.dll	R4-V2.00h	Option "mark look ahead (on mark detection fail)" added to configuration data. When enabled, this flag causes the firmware to scan the next form in case a paper mark has not been detected in the current form.
M-R4-058-HOR	Exo-CATool.exe	R4-V2.00h	Driver package extended with a company confidential CA-Tool. This tool sets the CA-Code in an Extendo BETA firmware (firmware version R4-V2.00h or higher).
M-R4-059-HOR	N/A	R4-V2.00	Windows Driver Application Note 003 added to the driver packet.
M-R4-060-HOR	N/A	R4-V2.00	Windows Driver Application Note 004 added to the driver packet.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows XP driver within windows Vista.

6 EXTENDO XP/7/8 DRIVER S684015-R5-V2.01-2015MAY07

Description

The eXtendo printer driver S684015-R5-V2.01-2015MAY07 is developed for Windows-XP (32-Bit), Windows-7 (32-Bit and 64-Bit) and Windows-8 (32-Bit and 64-Bit) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have firmware S684014-R1-V1.00 to S684014-R5-V2.01 installed.

Package overview

```
|      S-684-015-Extendo-WindowsXp78Driver-R5-V2_01-FINAL-2015MAY07.zip
|
+---Driver
|   |   Hengstler-Extendo-X56.inf
|   |   Hengstler-Extendo-X56.cat
|   |   Hengstler-Extendo-X56_x64.inf
|   |   Hengstler-Extendo-X56_x64.cat
|   |   Hengstler-Extendo-X80.inf
|   |   Hengstler-Extendo-X80.inf.cat
|   |   Hengstler-Extendo-X80_x64.inf
|   |   Hengstler-Extendo-X80_x64.cat
|   |   Exo-Setup.exe
|   |   Exo-Setup.x32.exe
|   |   Exo-Setup.x64.exe
|   |   difxapi.dll
|   |   difxapi.x64
|   |
|   \---Data
|       Exo_Api.dll
|       Exo_Api_x64.dll
|       Exo_PrintMon.dll
|       Exo_PrintMon_x64.dll
|       Exo_PrintMonPlugin.dll
|       Exo_PrintMonPlugin_x64.dll
|       Exo_Tb_x64.dll
|       Exo_Tb.dll
|       Exo_UniDrv.dll
|       Exo_UniDrv_x64.dll
|       Exo_UniDrv.ini
|       Exo_UniDrv_x64.ini
|       Exo_UserInterface.dll
|       Exo_UserInterface_x64.dll
|       Exo_Vs.dll
|       Exo_Vs_x64.dll
|       Exo_X56.dat
|       Exo_X56.dll
|       Exo_X56_x64.dll
|       Exo_X56.gpd
|       Exo_X56_x64.gpd
|       Exo_X56.prn
|       Exo_X80.dat
|       Exo_X80.dll
|       Exo_X80_x64.dll
|       Exo_X80.gpd
|       Exo_X80_x64.gpd
|       Exo_X80.prn
|       STDNAMES.GPD
|
+---Documents
|   D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf
|
+---Fonts
|   Exo-CodePages.zip
|   Exo-StandardFont.zip
|   Exo-WideFont.zip
|
+---Other
```

```

|      NET_START_SPOOLER.lnk
|      NET_STOP_SPOOLER.lnk
|
+---Samples
|      Exo-GdiDemo-X56-056x125.doc
|      Exo-GdiDemo-X56-Test.doc
|      Exo-GdiDemo-X80-080x125.doc
|      Exo-GdiDemo-X80-Test.doc
|
+---Api
|      Exo_Api.h
|      Exo_Api.lib
|      Exo_PrintMonPlugin.h
|      Exo_ApiWrapper_NET.dll
|
+---Sources
|      Exo-PrintMonPluginTest.zip
|      Exo_PrintMonPlugin.zip
|
\---Tools
      Exo-CommandTool.exe
      Exo-ConfigurationTool.exe
      Exo-DiagnosticTool.exe
      Exo-FontTool.exe
      Exo-FwP@tchTool.exe
      Exo-ImageTool.exe
      Exo-PrintMonInfo.exe
      Exo-PrintMonPluginTest.exe
      Exo-PrintTerminal.exe
      Exo-Uninstaller.exe
      Exo-UploadTool.exe
      Exo-WideFontTool.exe
      Exo_Api.dll
      Exo_Tb.dll
      Exo_Tb2.dll
      Mfc100.dll
      Msvcrt100.dll

```

List of Files	
File	Description
S-684-015-Extendo-WindowsXp78Driver-R5-V2_01-FINAL-2015MAY07.zip	Complete Windows driver package as zip file
D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf	Release note of the eXtendo Windows driver package (this document).
Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.cat Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X56.x64.cat	Driver component => information and catalog file required for installation of the X56 driver (32/64 BIT)
Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.cat Hengstler-Extendo-X80.x64.inf Hengstler-Extendo-X80.x64.cat	Driver component => information and catalog file required for installation of the X80 driver (32/64 BIT)
Exo-Setup.exe Exo-Setup.x32 Exo-Setup.x64	Setup tool(s) (batch and GUI) for Windows XP (32 BIT), Windows 7 (32/64 BIT) and Windows 8 (32/64 BIT).
difxapi.dll difxapi.x64	Driver component => driver information framework files which are required during installation.
Exo_Api.dll Exo_Api_x64.dll	Driver component => application programming interface (32/64 BIT)
Exo_PrintMon.dll Exo_PrintMon_x64.dll	Driver component => print job monitor (32/64 BIT)
Exo_PrintMonPlugin.dll Exo_PrintMonPlugin_x64.dll	Driver component => print job monitor plugin (32/64 BIT)
Exo_Tb.dll Exo_Tb_x64.dll	Driver component => tool box (32/64 BIT)
Exo_Tb2.dll	Driver component => tool box 2
Exo_UniDrv.dll	Driver component => uni-driver (32/64 BIT)

Exo_UniDrv_x64.dll	
Exo_UniDrv.ini Exo_UniDrv_x64.ini	Driver component => uni-driver (32/64 BIT)
Exo_UserInterface.dll Exo_UserInterface_x64.dll	Driver component => user interface / printer properties (32/64 BIT)
Exo_X56.dat	Driver component => settings file for the X56 driver
Exo_X56.dll Exo_X56_x64.dll	Driver component => resource file for the X56 driver (32/64 BIT)
Exo_X56.gpd Exo_X56_x64.gpd	Driver component => general printer definition file for the X56 driver (32/64 BIT)
Exo_X56.prn	Driver component => test print file for the X56 driver
Exo_X80.dat	Driver component => settings file for the X80 driver
Exo_X80.dll Exo_X80_x64.dll	Driver component => resource file for the X80 driver (32/64 BIT)
Exo_X80.gpd Exo_X80_x64.gpd	Driver component => general printer definition file for the X80 driver (32/64 BIT)
Exo_X80.prn	Driver component => test print file for the X80 driver
STDNAMES.GPD	General printer definitions file from Windows XP, used when installing in windows Vista.
Exo-CodePages.zip	Zip file containing various code page images that can be uploaded onto the printer
Exo-StandardFont.zip	Zip file containing the standard font images that are included in the firmware
Exo-WideFont.zip	Zip file containing wide font images that can be uploaded onto the printer
NET_START_SPOOLER.lnk	Command for starting the spooler
NET_STOP_SPOOLER.lnk	Command for stopping the spooler
Exo-GdiDemo-X56-056x125.doc	Sample document for GDI printing
Exo-GdiDemo-X56-Test.doc	Sample document for GDI printing
Exo-GdiDemo-X80-080x125.doc	Sample document for GDI printing
Exo-GdiDemo-X80-Test.doc	Sample document for GDI printing
Exo_Api.h	Header file describing the application programming interface (API)
Exo_Api.lib Exo_Api_x64.lib	API library, included in applications (32/64 BIT)
Exo_Exo_ApiWrapper_NET.dll	.NET library, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types.
Exo_PrintMonPlugin.h	Header file describing the print monitor plugin interface
Exo_PrintMonPlugin.zip	Zip file containing the Visual C++ sources of the print monitor plugin.
Exo_PrintMonPluginTest.zip	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
Exo-CommandTool.exe	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket)
Exo-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers.
Exo-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information.
Exo-FontTool.exe	Font tool which is used for generating a font upload file from windows bitmaps.
Exo-FwP@tchTool.exe	Firmware patch tool which is used for enable/disable specific firmware patches.
Exo-ImageTool.exe	Image tool which is used of creating an image upload file from windows bitmaps.
Exo-PrintTerminal.exe	Terminal tool which is used for evaluating emulation commands.
Exo-Uninstaller.exe	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
Exo-UploadTool.exe	Upload tool which is used for upload of firmware, fonts,

	widefonts and images.
Exo-WideFontTool.exe	Wide font tool which is used for generating a wide font upload file from windows bitmaps.
Exo_PrintMonInfo.exe	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
Exo_PrintMonPluginTest.exe	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
Mfc100.dll	Windows XP library, used in various tools and/or applications
Msvcr100.dll	Windows XP library, used in various tools and/or applications

Installation on Windows XP

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below).

The printer driver for X56/X80-type printers can be pre-installed within the driver framework with use of the "setup.exe" tool.

Installation of an X56/X80-RS232-type printer must be done manually by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of an X56/X80-USB-type printer is automatically performed by connecting the printer through USB.

The driver information files for X56-type printers are "Hengstler-Extendo-X56.inf" and "Hengstler-Extendo-X56.x64.inf".

The driver information files for X80-type printers are "Hengstler-Extendo-X80.inf" and "Hengstler-Extendo-X80.x64.inf".

The printer driver manual contains more detailed information on printer driver installation on Windows Xp.

Installation on Windows 7

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below) (see "Un-Installing on Windows 7" below).

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[DEVICES&PRINTERS]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB, whereas the eXtendo printer will appear in the printers&faxes dialog. The actions required for successfully installing the driver may depend on the system setting. The eXtendo driver will automatically be installed when the eXtendo driver has already been loaded in the driver store. If not, then press the right mouse button on the eXtendo printer in the "printers&faxes dialog, select "properties", go to the "Hardware" register, select "properties", go to the "Driver" register and update (attach) the eXtendo driver from there.

Un-Installation on Windows XP

Removal of installed eXtendo drivers and eXtendo OEM driver files within Windows XP can be done with the Exo-Uninstaller tool, which is included in the driver package.

Un-Installation on Windows 7

Removal of installed eXtendo drivers within Windows 7 can be done with by deleting the eXtendo printer within the printers and faxes dialog. Extendo OEM driver files can be removed from Windows 7 by using the Windows 7 Tool "pnputil.exe" ("pnputil -e" lists all OEM drivers, "pnputil -d oem0.inf" deletes the particular OEM driver.

A setup tool for un-installing is currently in development and is expected to be available in the next to come driver version.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

Currently no restrictions are known.

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows driver within windows Vista.

List of modifications

Mod-Id	Component	Version	Description
M-R5-001-HOR	Exo-ConfigurationTool.exe Exo-API.dll	R5-V2_01a	Configuration settings extended with option "DISABLE SCAN OUTSIDE MARK AREA". If enabled, paper mark detection is limited to the defined paper mark area +- 10 mm.
M-R5-002-HOR	Exo-PrintMon.dll	R5-V2_01a	GDI printing does no longer keep the printer open when the port is occupied.
M-R5-003-HOR	Exo-API.dll Exo_ApiWrapper_NET.dll	R5-V2_01a	API extended with function Exo_Api_Pio_PrinterPrintImage. This function loads a black and white image from a file, converts it to emulation commands and sends these commands to the printer. Note that no color to monochrome rendering is done.
M-R5-004-HOR	Exo-API.dll	R5-V2_01a	Function Exo_Api_Pio_PrinterPrintImage renders the image using rendering settings specified in the printer properties dialog.
M-R5-005-HOR	Exo-ServiceTool.exe	R5-V2_01a	Service tool extended with image print feature (Exo-ServiceTool - image=<filename>).
M-R5-006-HOR	Exo-PrintTerminal.exe	R5-V2_01a	Print terminal is now capable of receiving and displaying larger data packets.
M-R5-007-HOR	Exo-ManufacturingTool.exe	R5-V2_01a	Manufacturing tool update.
M-R5-008-HOR	Exo-API.dll	R5-V2_01b	Configuration data extended with sensor current adjustment setting. This setting allows a 4 bit current automatic adjustment of the paper entry sensor and a 2 bit adjustment of the paper exit (chute) sensor. The adjustment is done during paper load.

M-R5-009-HOR	Exo-FwPatchTool.exe	R5-V2_01b	Extended with firmware patch #5 (0x00000010). This patch is available from eXtendo firmware V2.01b-BETA and causes the printer to remain in printing mode after a power down or reset. The patch has no effect on printers that have a presenter attached.
M-R5-010-HOR	Exo-Tb.dll Exo-ManufacturingTool.exe	R5-V2_01b	Manufacturing data entry printer revision removed (obsolete).
M-R5-011-HOR	Exo-Tb.dll Exo-ManufacturingTool.exe	R5-V2_01b	Manufacturing data entry controller revision removed (obsolete).
M-R5-012-HOR	Exo-Tb.dll Exo-ManufacturingTool.exe	R5-V2_01b	Manufacturing data extended with sensor settings regarding sensor mounting and sensor current adjustment (available from firmware V2.01g).
M-R5-013-HOR	Exo-API.dll Exo-ConfigurationTool.exe	R5-V2_01b	Settings for dynamic sensor current adjustment feature added to configuration data.
M-R5-014-HOR	Exo-PrintTerminal.exe	R5-V2_01b	Image printing feature added which uses the driver API function Exo_Api_Pio_PrinterPrintImage(..) to print the contents of an image file (jpg,bmp,tiff,gif,png).
M-R5-015-HOR	Exo-API.dll Exo-ConfigurationTool.exe Exo-DiagnosticTool.exe	R5-V2_01b	By default, the automatic sensor adjustment is done during the initial paper load only. This is done to assure best possible backward compatibility for application in which a sensor calibration feature is undesired.
M-R5-016-HOR	Exo-API.dll Exo-ConfigurationTool.exe	R5-V2_01b	Configuration data structure extended with a pre-mark validation distance, which defines the minimum length of the "white" area that precedes the paper mark. Note that this setting is available from firmware R5-V2.01i.
M-R5-017-HOR	Exo-API.dll Exo-ConfigurationTool.exe	R5-V2_01b	Configuration data structure extended with a post-mark validation distance, which defines the minimum length of the "white" area that succeeds the paper mark. Note that this setting is available from firmware R5-V2.01i.
M-R5-018-HOR	Exo-API.dll Exo-ConfigurationTool.exe	R5-V2_01b	Configuration data extended with a minimum and maximum dynamic paper entry sensor current adjustment settings. This setting assures that, when, for the paper entry sensor, dynamic current adjustment is enabled, the selected current does not get beyond the defined minimum / above the defined maximum. A value of 0 for the minimum or maximum dynamic paper enter sensor current adjustment selects default values With firmware V2.01i following defaults are used. For reflex sensors, the default minimum / maximum current is 11.8 mA / 26.6 mA. For through light sensors, the default minimum / maximum current is 9.6 mA / 26.6 mA.

7 EXTENDO XP/7/8/10 DRIVER S684015-R6-V2.02-2016MAY25

Description

The eXtendo printer driver S684015-R6-V2.02-2016MAY25 is developed for Windows-XP (32-Bit), Windows-7 (32-Bit and 64-Bit), Windows-8 (32-Bit and 64-Bit) and Windows-10 (32-Bit and 64-Bit) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have either Extendo firmware S684014 or Extendo-XF firmware S684035 installed.

Package overview

```
| S-684-015-Extendo-WindowsXp7810Driver-R6-V2_02-FINAL-2016MAY25.zip
|
+---Driver
| | Hengstler-Extendo-X56.inf
| | Hengstler-Extendo-X56.cat
| | Hengstler-Extendo-X56_x64.inf
| | Hengstler-Extendo-X56_x64.cat
| | Hengstler-Extendo-X80.inf
| | Hengstler-Extendo-X80.inf.cat
| | Hengstler-Extendo-X80_x64.inf
| | Hengstler-Extendo-X80_x64.cat
| | Exo-Setup.exe
| | Exo-Setup.x32.exe
| | Exo-Setup.x64.exe
| | difxapi.dll
| | difxapi.x64
| |
| \---Data
| | Exo_Api.dll
| | Exo_Api_x64.dll
| | Exo_PrintMon.dll
| | Exo_PrintMon_x64.dll
| | Exo_PrintMonPlugin.dll
| | Exo_PrintMonPlugin_x64.dll
| | Exo_Tb_x64.dll
| | Exo_Tb.dll
| | Exo_UniDrv.dll
| | Exo_UniDrv_x64.dll
| | Exo_UniDrv.ini
| | Exo_UniDrv_x64.ini
| | Exo_UserInterface.dll
| | Exo_UserInterface_x64.dll
| | Exo_Vs.dll
| | Exo_Vs_x64.dll
| | Exo_X56.dat
| | Exo_X56.dll
| | Exo_X56_x64.dll
| | Exo_X56.gpd
| | Exo_X56_x64.gpd
| | Exo_X56.prn
| | Exo_X80.dat
| | Exo_X80.dll
| | Exo_X80_x64.dll
| | Exo_X80.gpd
| | Exo_X80_x64.gpd
| | Exo_X80.prn
| | STDNAMES.GPD
|
+---Documents
| D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf
|
+---Fonts
| Exo-CodePages.zip
| Exo-StandardFont.zip
| Exo-WideFont.zip
```



```

+---Other
|   NET_START_SPOOLER.lnk
|   NET_STOP_SPOOLER.lnk
|
+---Samples
|   Exo-GdiDemo-X56-056x125.doc
|   Exo-GdiDemo-X56-Test.doc
|   Exo-GdiDemo-X80-080x125.doc
|   Exo-GdiDemo-X80-Test.doc
|
+---Api
|   Exo_Api.h
|   Exo_Api.lib
|   Exo_PrintMonPlugin.h
|   Exo_ApiWrapper_NET.dll
|
+---Sources
|   Exo-PrintMonPluginTest.zip
|   Exo_PrintMonPlugin.zip
|
\---Tools
    Exf-ConfigurationTool.exe
    Exf-DiagnosticTool.exe
    Exo-CommandTool.exe
    Exo-ConfigurationTool.exe
    Exo-DiagnosticTool.exe
    Exo-FontTool.exe
    Exo-FwP@tchTool.exe
    Exo-ImageTool.exe
    Exo-PrintMonInfo.exe
    Exo-PrintMonPluginTest.exe
    Exo-PrintTerminal.exe
    Exo-Uninstaller.exe
    Exo-UploadTool.exe
    Exo-WideFontTool.exe
    Exo_Api.dll
    Exo_Tb.dll
    Exo_Tb2.dll
    Mfc140.dll

```

List of Files	
File	Description
S-684-015-Extendo-WindowsXp7810Driver-R6-V2_02-FINAL-2016MAY25.zip	Complete Windows driver package as zip file
D-684-118-Extendo-WindowsDriver-ReleaseNote.pdf	Release note of the eXtendo Windows driver package (this document)
Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.cat Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X56.x64.cat	Driver component => information and catalog file required for installation of the X56 driver (32/64 BIT)
Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.cat Hengstler-Extendo-X80.x64.inf Hengstler-Extendo-X80.x64.cat	Driver component => information and catalog file required for installation of the X80 driver (32/64 BIT)
Exo-Setup.exe Exo-Setup.x32 Exo-Setup.x64	Setup tool(s) (batch and GUI) for Windows XP (32 BIT), Windows 7 (32/64 BIT), Windows 8 (32/64 BIT) and Windows 10 (32/64 BIT).
difxapi.dll difxapi.x64	Driver component => driver information framework files which are required during installation.
Exo_Api.dll Exo_Api_x64.dll	Driver component => application programming interface (32/64 BIT)
Exo_PrintMon.dll Exo_PrintMon_x64.dll	Driver component => print job monitor (32/64 BIT)
Exo_PrintMonPlugin.dll Exo_PrintMonPlugin_x64.dll	Driver component => print job monitor plugin (32/64 BIT)
Exo_Tb.dll Exo_Tb_x64.dll	Driver component => tool box (32/64 BIT)

Exo_Tb2.dll	Driver component => tool box 2
Exo_UniDrv.dll Exo_UniDrv_x64.dll	Driver component => uni-driver (32/64 BIT)
Exo_UniDrv.ini Exo_UniDrv_x64.ini	Driver component => uni-driver (32/64 BIT)
Exo_UserInterface.dll Exo_UserInterface_x64.dll	Driver component => user interface / printer properties (32/64 BIT)
Exo_X56.dat	Driver component => settings file for the X56 driver
Exo_X56.dll Exo_X56_x64.dll	Driver component => resource file for the X56 driver (32/64 BIT)
Exo_X56.gpd Exo_X56_x64.gpd	Driver component => general printer definition file for the X56 driver (32/64 BIT)
Exo_X56.prn	Driver component => test print file for the X56 driver
Exo_X80.dat	Driver component => settings file for the X80 driver
Exo_X80.dll Exo_X80_x64.dll	Driver component => resource file for the X80 driver (32/64 BIT)
Exo_X80.gpd Exo_X80_x64.gpd	Driver component => general printer definition file for the X80 driver (32/64 BIT)
Exo_X80.prn	Driver component => test print file for the X80 driver
STDNAMES.GPD	General printer definitions file from Windows XP, used when installing in windows Vista.
Exo-CodePages.zip	Zip file containing various code page images that can be uploaded onto the printer. Useable with Extendo firmware only!
Exo-StandardFont.zip	Zip file containing the standard font images that are included in the firmware. Useable with Extendo firmware only!
Exo-WideFont.zip	Zip file containing wide font images that can be uploaded onto the printer. Useable with Extendo firmware only!
NET_START_SPOOLER.lnk	Command for starting the spooler
NET_STOP_SPOOLER.lnk	Command for stopping the spooler
Exo-GdiDemo-X56-056x125.doc	Sample document for GDI printing
Exo-GdiDemo-X56-Test.doc	Sample document for GDI printing
Exo-GdiDemo-X80-080x125.doc	Sample document for GDI printing
Exo-GdiDemo-X80-Test.doc	Sample document for GDI printing
Exo_Api.h	Header file describing the application programming interface (API)
Exo_Api.lib Exo_Api_x64.lib	API library, included in applications (32/64 BIT)
Exo_Exo_ApiWrapper_NET.dll	.NET library, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types.
Exo_PrintMonPlugin.h	Header file describing the print monitor plugin interface
Exo_PrintMonPlugin.zip	Zip file containing the Visual C++ sources of the print monitor plugin.
Exo_PrintMonPluginTest.zip	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
Exo-CommandTool.exe	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket). Operates with Extendo and Extendo-XF firmware!
Exo-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo Firmware only!
Exo-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo firmware only!
Exo-FontTool.exe	Font tool which is used for generating a font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo-FwP@tchTool.exe	Firmware patch tool which is used for enable/disable specific firmware patches. Operates with Extendo firmware only!
Exo-ImageTool.exe	Image tool which is used of creating an image upload file from windows bitmaps. Operates with Extendo and Extendo-XF firmware!

Exo-PrintTerminal.exe	Terminal tool which is used for evaluating emulation commands. Operates with Extendo and Extendo-XF firmware!
Exo-Uninstaller.exe	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
Exo-UploadTool.exe	Upload tool which is used for upload of firmware, fonts, widefonts and images. Operates with Extendo and Extendo-XF firmware!
Exo-WideFontTool.exe	Wide font tool which is used for generating a wide font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo_PrintMonInfo.exe	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
Exo_PrintMonPluginTest.exe	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
Mfc140.dll	Windows libraries, used in various tools and/or applications
Exf-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo-XF firmware only!
Exf-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo-XF firmware only!

Installation on Windows XP

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below).

The printer driver for X56/X80-type printers can be pre-installed within the driver framework with use of the "setup.exe" tool.

Installation of an X56/X80-RS232-type printer must be done manually by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of an X56/X80-USB-type printer is automatically performed by connecting the printer through USB.

The driver information files for X56-type printers are "Hengstler-Extendo-X56.inf" and "Hengstler-Extendo-X56.x64.inf".

The driver information files for X80-type printers are "Hengstler-Extendo-X80.inf" and "Hengstler-Extendo-X80.x64.inf".

The printer driver manual contains more detailed information on printer driver installation on Windows Xp.

Installation on Windows 7

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below) (see "Un-Installing on Windows 7" below).

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[DEVICES&PRINTERS]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB, whereas the eXtendo printer will appear in the printers&faxes dialog. The actions required for successfully installing the driver may depend on the system setting. The eXtendo driver will automatically be installed when the eXtendo driver has already been loaded in the driver store. If not, then press the right mouse button on the eXtendo printer in the "printers&faxes dialog, select "properties", go to the "Hardware" register, select "properties", go to the "Driver" register and update (attach) the eXtendo driver from there.

Un-Installation on Windows XP

Removal of installed eXtendo drivers and eXtendo OEM driver files within Windows XP can be done with the Exo-Uninstaller tool, which is included in the driver package.

Un-Installation on Windows 7

Removal of installed eXtendo drivers within Windows 7 can be done with by deleting the eXtendo printer within the printers and faxes dialog. Extendo OEM driver files can be removed from Windows 7 by using the Windows 7 Tool "pnputil.exe" ("pnputil -e" lists all OEM drivers, "pnputil -d oem0.inf" deletes the particular OEM driver.

A setup tool for un-installing is currently in development and is expected to be available in the next to come driver version.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

This driver version is intended for usage with printers that have either Extendo or Extendo-XF firmware. Usage of some of the tools which the driver contains is restricted to the type of firmware which the printer contains. Following table shows which tools are available for the specific firmware type:

Component	Extendo	Extendo XF
Exf-ConfigurationTool	NO	YES
Exf-DiagnosticTool	NO	YES
Exo-CommandTool	YES	YES
Exo-ConfigurationTool	YES	NO
Exo-DiagnosticTool	YES	NO
Exo-FontTool	YES	NO
Exo-FwPatchTool	YES	NO
Exo-ImageTool	YES	YES
Exo-PrintTerminal	YES	YES
Exo-ServiceTool	YES	NO
Exo-Setup	YES	YES
Exo-UploadTool	YES	YES
Exo-WideFontTool	YES	NO

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows driver within windows Vista.

List of modifications			
Mod-Id	Component	Version	Description
M-R6-001-HOR	Exo-ImageTool.exe	R6-V2_02a	Image tool extended with creation of a flexible upload file for extendo-XF printer.
M-R6-002-HOR	Exf-SysFontConverter.exe Exo-Tb.dll	R6-V2_02a	Driver package extended with a new system font conversion tool for eXtendo-XF printers.
M-R6-003-HOR	Exf-DiagnosticTool.exe Exo-Tb.dll	R6-V2_02a	Driver package extended with a new diagnostic tool for eXtendo-XF printers.
M-R6-004-HOR	Exf-ConfigurationTool.exe Exo-Tb.dll	R6-V2_02a	Driver package extended with a new configuration tool for eXtendo-XF printers.
M-R6-005-HOR	Exo-UploadTool.exe	R6-V2_02a	The upload tool has been extended with functionality to upload firmware and fonts for eXtendo-XF
M-R6-006-HOR	Exo-UploadTool.exe	R6-V2_02b	Wrongly implemented usage restriction corrected (V2.02a).
M-R6-007-HOR	Complete package	R6-V2_02b	Driver package migrated to VS2015 and adapted to Windows 10.

8 EXTENDO XP/7/8/10 DRIVER S684015-R7-V2.03-2017APR20

Description

The eXtendo printer driver S684015-R7-V2.03-2017APR20 is developed for Windows-XP (32-Bit), Windows-7 (32-Bit and 64-Bit), Windows-8 (32-Bit and 64-Bit) and Windows-10 (32-Bit and 64-Bit) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have either Extendo firmware S684014 or Extendo-XF firmware S684035 installed.

Package overview

```
| S-684-015-Extendo-Windows7810Driver-R7-V2.03-FINAL-2017APR20.zip
| S-684-015-Extendo-WindowsXpDriver-R7-V2.03-FINAL-2017APR20.zip
|
+---Driver
| | Hengstler-Extendo-X56.inf
| | Hengstler-Extendo-X56.cat
| | Hengstler-Extendo-X56_x64.inf
| | Hengstler-Extendo-X56_x64.cat
| | Hengstler-Extendo-X80.inf
| | Hengstler-Extendo-X80.inf.cat
| | Hengstler-Extendo-X80_x64.inf
| | Hengstler-Extendo-X80_x64.cat
| | Exo-Setup.exe
| | Exo-Setup.x32.exe
| | Exo-Setup.x64.exe
| | difxapi.dll
| | difxapi.x64
| |
| \---Data
| | Exo_Api.dll
| | Exo_Api_x64.dll
| | Exo_PrintMon.dll
| | Exo_PrintMon_x64.dll
| | Exo_PrintMonPlugin.dll
| | Exo_PrintMonPlugin_x64.dll
| | Exo_Tb_x64.dll
| | Exo_Tb.dll
| | Exo_UniDrv.dll
| | Exo_UniDrv_x64.dll
| | Exo_UniDrv.ini
| | Exo_UniDrv_x64.ini
| | Exo_UserInterface.dll
| | Exo_UserInterface_x64.dll
| | Exo_Vs.dll
| | Exo_Vs_x64.dll
| | Exo_X56.dat
| | Exo_X56.dll
| | Exo_X56_x64.dll
| | Exo_X56.gpd
| | Exo_X56_x64.gpd
| | Exo_X56.prn
| | Exo_X80.dat
| | Exo_X80.dll
| | Exo_X80_x64.dll
| | Exo_X80.gpd
| | Exo_X80_x64.gpd
| | Exo_X80.prn
| | STDNAMES.GPD
|
+---Documents
| | S-684-015-Extendo-WindowsDriver-ReleaseNote.pdf
|
+---Fonts
| | Exo-CodePages.zip
| | Exo-StandardFont.zip
| | Exo-WideFont.zip
```

```

|
+---Other
|     NET_START_SPOOLER.lnk
|     NET_STOP_SPOOLER.lnk
|
+---Samples
|     Exo-GdiDemo-X56-056x125.doc
|     Exo-GdiDemo-X56-Test.doc
|     Exo-GdiDemo-X80-080x125.doc
|     Exo-GdiDemo-X80-Test.doc
|
+---Api
|     Exo_Api.h
|     Exo_Api.lib
|     Exo_PrintMonPlugin.h
|     Exo_ApiWrapper_NET.dll
|
+---Sources
|     Exo-PrintMonPluginTest.zip
|     Exo_PrintMonPlugin.zip
|
\---Tools
     Exf-ConfigurationTool.exe
     Exf-DiagnosticTool.exe
     Exo-CommandTool.exe
     Exo-ConfigurationTool.exe
     Exo-DiagnosticTool.exe
     Exo-FontTool.exe
     Exo-FwP@tchTool.exe
     Exo-ImageTool.exe
     Exo-PrintMonInfo.exe
     Exo-PrintMonPluginTest.exe
     Exo-PrintTerminal.exe
     Exo-Uninstaller.exe
     Exo-UploadTool.exe
     Exo-WideFontTool.exe
     Exo_Api.dll
     Exo_Tb.dll
     Exo_Tb2.dll
     Mfc140.dll

```

List of Files	
File	Description
S-684-015-Extendo-Windows7810Driver-R7-V2_03-2017APR20.zip	Complete Windows 7/8/10 driver package as zip file
S-684-015-Extendo-WindowsXpDriver-R7-V2_03-2017APR20.zip	Complete Windows XP driver package as zip file
S-684-015-Extendo-WindowsDriver-ReleaseNote.pdf	Release note of the eXtendo Windows driver package (this document)
Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.cat Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X56.x64.cat	Driver component => information and catalog file required for installation of the X56 driver (32/64 BIT)
Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.cat Hengstler-Extendo-X80.x64.inf Hengstler-Extendo-X80.x64.cat	Driver component => information and catalog file required for installation of the X80 driver (32/64 BIT)
Exo-Setup.exe Exo-Setup.x32 Exo-Setup.x64	Setup tool(s) (batch and GUI) for Windows XP (32 BIT), Windows 7 (32/64 BIT), Windows 8 (32/64 BIT) and Windows 10 (32/64 BIT).
difxapi.dll difxapi.x64	Driver component => driver information framework files which are required during installation.
Exo_Api.dll Exo_Api_x64.dll	Driver component => application programming interface (32/64 BIT)
Exo_PrintMon.dll Exo_PrintMon_x64.dll	Driver component => print job monitor (32/64 BIT)
Exo_PrintMonPlugin.dll	Driver component => print job monitor plugin (32/64 BIT)

Exo_PrintMonPlugin_x64.dll	
Exo_Tb.dll Exo_Tb_x64.dll	Driver component => tool box (32/64 BIT)
Exo_Tb2.dll	Driver component => tool box 2
Exo_UniDrv.dll Exo_UniDrv_x64.dll	Driver component => uni-driver (32/64 BIT)
Exo_UniDrv.ini Exo_UniDrv_x64.ini	Driver component => uni-driver (32/64 BIT)
Exo_UserInterface.dll Exo_UserInterface_x64.dll	Driver component => user interface / printer properties (32/64 BIT)
Exo_X56.dat	Driver component => settings file for the X56 driver
Exo_X56.dll Exo_X56_x64.dll	Driver component => resource file for the X56 driver (32/64 BIT)
Exo_X56.gpd Exo_X56_x64.gpd	Driver component => general printer definition file for the X56 driver (32/64 BIT)
Exo_X56.prn	Driver component => test print file for the X56 driver
Exo_X80.dat	Driver component => settings file for the X80 driver
Exo_X80.dll Exo_X80_x64.dll	Driver component => resource file for the X80 driver (32/64 BIT)
Exo_X80.gpd Exo_X80_x64.gpd	Driver component => general printer definition file for the X80 driver (32/64 BIT)
Exo_X80.prn	Driver component => test print file for the X80 driver
STDNAMES.GPD	General printer definitions file from Windows XP, used when installing in windows Vista.
Exo-CodePages.zip	Zip file containing various code page images that can be uploaded onto the printer. Useable with Extendo firmware only!
Exo-StandardFont.zip	Zip file containing the standard font images that are included in the firmware. Useable with Extendo firmware only!
Exo-WideFont.zip	Zip file containing wide font images that can be uploaded onto the printer. Useable with Extendo firmware only!
NET_START_SPOOLER.lnk	Command for starting the spooler
NET_STOP_SPOOLER.lnk	Command for stopping the spooler
Exo-GdiDemo-X56-056x125.doc	Sample document for GDI printing
Exo-GdiDemo-X56-Test.doc	Sample document for GDI printing
Exo-GdiDemo-X80-080x125.doc	Sample document for GDI printing
Exo-GdiDemo-X80-Test.doc	Sample document for GDI printing
Exo_Api.h	Header file describing the application programming interface (API)
Exo_Api.lib Exo_Api_x64.lib	API library, included in applications (32/64 BIT)
Exo_Exo_ApiWrapper_NET.dll	.NET library, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types.
Exo_PrintMonPlugin.h	Header file describing the print monitor plugin interface
Exo_PrintMonPlugin.zip	Zip file containing the Visual C++ sources of the print monitor plugin.
Exo_PrintMonPluginTest.zip	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
Exo-CommandTool.exe	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket). Operates with Extendo and Extendo-XF firmware!
Exo-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo Firmware only!
Exo-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo firmware only!
Exo-FontTool.exe	Font tool which is used for generating a font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo-FwP@tchTool.exe	Firmware patch tool which is used for enable/disable specific firmware patches. Operates with Extendo firmware only!

Exo-ImageTool.exe	Image tool which is used of creating an image upload file from windows bitmaps. Operates with Extendo and Extendo-XF firmware!
Exo-PrintTerminal.exe	Terminal tool which is used for evaluating emulation commands. Operates with Extendo and Extendo-XF firmware!
Exo-Uninstaller.exe	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
Exo-UploadTool.exe	Upload tool which is used for upload of firmware, fonts, widefonts and images. Operates with Extendo and Extendo-XF firmware!
Exo-WideFontTool.exe	Wide font tool which is used for generating a wide font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo_PrintMonInfo.exe	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
Exo_PrintMonPluginTest.exe	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
Mfc140.dll	Windows libraries, used in various tools and/or applications
Exf-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo-XF firmware only!
Exf-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo-XF firmware only!

Installation on Windows XP

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below).

The printer driver for X56/X80-type printers can be pre-installed within the driver framework with use of the "setup.exe" tool.

Installation of an X56/X80-RS232-type printer must be done manually by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of an X56/X80-USB-type printer is automatically performed by connecting the printer through USB.

The driver information files for X56-type printers are "Hengstler-Extendo-X56.inf" and "Hengstler-Extendo-X56.x64.inf".

The driver information files for X80-type printers are "Hengstler-Extendo-X80.inf" and "Hengstler-Extendo-X80.x64.inf".

The printer driver manual contains more detailed information on printer driver installation on Windows Xp.

Installation on Windows 7

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below) (see "Un-Installing on Windows 7" below).

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[DEVICES&PRINTERS]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB, whereas the eXtendo printer will appear in the printers&faxes dialog. The actions required for successfully installing the driver may depend on the system setting. The eXtendo driver will automatically be installed when the eXtendo driver has already been loaded in the driver store. If not, then press the right mouse button on the eXtendo printer in the "printers&faxes dialog, select "properties", go to the "Hardware" register, select "properties", go to the "Driver" register and update (attach) the eXtendo driver from there.

Un-Installation on Windows XP

Removal of installed eXtendo drivers and eXtendo OEM driver files within Windows XP can be done with the Exo-Uninstaller tool, which is included in the driver package.

Un-Installation on Windows 7

Removal of installed eXtendo drivers within Windows 7 can be done with by deleting the eXtendo printer within the printers and faxes dialog. Extendo OEM driver files can be removed from Windows 7 by using the Windows 7 Tool "pnputil.exe" ("pnputil -e" lists all OEM drivers, "pnputil -d oem0.inf" deletes the particular OEM driver.

A setup tool for un-installing is currently in development and is expected to be available in the next to come driver version.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

This driver version is intended for usage with printers that have either Extendo or Extendo-XF firmware. Usage of some of the tools which the driver contains is restricted to the type of firmware which the printer contains. Following table shows which tools are available for the specific firmware type:

Component	Extendo	Extendo XF
Exf-ConfigurationTool	NO	YES
Exf-DiagnosticTool	NO	YES
Exo-CommandTool	YES	YES
Exo-ConfigurationTool	YES	NO
Exo-DiagnosticTool	YES	NO
Exo-FontTool	YES	NO
Exo-FwPatchTool	YES	NO
Exo-ImageTool	YES	YES
Exo-PrintTerminal	YES	YES
Exo-ServiceTool	YES	NO
Exo-Setup	YES	YES
Exo-UploadTool	YES	YES
Exo-WideFontTool	YES	NO

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows driver within windows Vista.

List of modifications			
Mod-Id	Component	Version	Description
M-R7-001-HOR	Exo-ComponentsTool.exe Exo-OptionsTool.exe Exo-Tb.dll	R7-V2_03a	Tools extended with Extendo-XF Printer Type and GB18030 Font.
M-R7-002-HOR	Exo-ManufacturingTool.exe Exo-Tb.dll	R7-V2_03a	Manufacturing data extended with operating mode feature "ISO 86 INVALIDATOR".
M-R7-XXX-HOR	Driver package release note	R7-V2_03	Document "D-684-118-Extendo-WindowsDriver-ReleaseNote" changed to "S-684-015-Extendo-WindowsDriver-ReleaseNote"
M-R7-XXX-HOR	Complete driver package	R7-V2_03	Driver package split-up into a Windows 7/8/10 and a Windows Xp version.
M-R7-003-HOR	Complete driver package	R7-V2_03	Print monitor plugin "Exo-PrintMonPlugin.dll" is no longer installed by default. If needed, then copy this file by hand into the windows system32 directory. Note that this windows directory also contains "Exo-PrintMon.dll".

9 EXTENDO XP/7/8/10 DRIVER S684015-R8-V2.04-2018JUL02

Description

The eXtendo printer driver S684015-R8-V2.04-2018JUL02 is developed for Windows-XP (32-Bit), Windows-7 (32-Bit and 64-Bit), Windows-8 (32-Bit and 64-Bit) and Windows-10 (32-Bit and 64-Bit) and is operational with all currently available eXtendo type printers (X56/X80. USB/RS232) that have either Extendo firmware S684014 or Extendo-XF firmware S684035 installed.

Package overview

```
| S-684-015-Extendo-Windows7810Driver-R8-V2.04-FINAL-2018JUL02.zip
| S-684-015-Extendo-WindowsXpDriver-R8-V2.04-FINAL-2018JUL02.zip
|
+---Driver
| | Hengstler-Extendo-X56.inf
| | Hengstler-Extendo-X56.cat
| | Hengstler-Extendo-X56_x64.inf
| | Hengstler-Extendo-X56_x64.cat
| | Hengstler-Extendo-X80.inf
| | Hengstler-Extendo-X80.inf.cat
| | Hengstler-Extendo-X80_x64.inf
| | Hengstler-Extendo-X80_x64.cat
| | Exo-Setup.exe
| | Exo-Setup.x32.exe
| | Exo-Setup.x64.exe
| | difxapi.dll
| | difxapi.x64
| |
| \---Data
| | Exo_Api.dll
| | Exo_Api_x64.dll
| | Exo_PrintMon.dll
| | Exo_PrintMon_x64.dll
| | Exo_PrintMonPlugin.dll
| | Exo_PrintMonPlugin_x64.dll
| | Exo_Tb_x64.dll
| | Exo_Tb.dll
| | Exo_UniDrv.dll
| | Exo_UniDrv_x64.dll
| | Exo_UniDrv.ini
| | Exo_UniDrv_x64.ini
| | Exo_UserInterface.dll
| | Exo_UserInterface_x64.dll
| | Exo_Vs.dll
| | Exo_Vs_x64.dll
| | Exo_X56.dat
| | Exo_X56.dll
| | Exo_X56_x64.dll
| | Exo_X56.gpd
| | Exo_X56_x64.gpd
| | Exo_X56.prn
| | Exo_X80.dat
| | Exo_X80.dll
| | Exo_X80_x64.dll
| | Exo_X80.gpd
| | Exo_X80_x64.gpd
| | Exo_X80.prn
| | STDNAMES.GPD
|
+---Documents
| | S-684-015-Extendo-WindowsDriver-ReleaseNote.pdf
|
+---Fonts
| | Exo-CodePages.zip
| | Exo-StandardFont.zip
| | Exo-WideFont.zip
```

```

|
+---Other
|     NET_START_SPOOLER.lnk
|     NET_STOP_SPOOLER.lnk
|
+---Samples
|     Exo-GdiDemo-X56-056x125.doc
|     Exo-GdiDemo-X56-Test.doc
|     Exo-GdiDemo-X80-080x125.doc
|     Exo-GdiDemo-X80-Test.doc
|
+---Api
|     Exo_Api.h
|     Exo_Api.lib
|     Exo_PrintMonPlugin.h
|     Exo_ApiWrapper_NET.dll
|
+---Sources
|     Exo-PrintMonPluginTest.zip
|     Exo_PrintMonPlugin.zip
|
\---Tools
     Exf-ConfigurationTool.exe
     Exf-DiagnosticTool.exe
     Exo-CommandTool.exe
     Exo-ConfigurationTool.exe
     Exo-DiagnosticTool.exe
     Exo-FontTool.exe
     Exo-FwP@tchTool.exe
     Exo-ImageTool.exe
     Exo-PrintMonInfo.exe
     Exo-PrintMonPluginTest.exe
     Exo-PrintTerminal.exe
     Exo-Uninstaller.exe
     Exo-UploadTool.exe
     Exo-WideFontTool.exe
     Exo_Api.dll
     Exo_Tb.dll
     Exo_Tb2.dll
     Mfc140.dll

```

List of Files	
File	Description
S-684-015-Extendo-Windows7810Driver-R8-V2.04-FINAL-2018JUL02.zip	Complete Windows 7/8/10 driver package as zip file
S-684-015-Extendo-WindowsXpDriver-R8-V2.04-FINAL-2018JUL02.zip	Complete Windows XP driver package as zip file
S-684-015-Extendo-WindowsDriver-ReleaseNote.pdf	Release note of the eXtendo Windows driver package (this document)
Hengstler-Extendo-X56.inf Hengstler-Extendo-X56.cat Hengstler-Extendo-X56.x64.inf Hengstler-Extendo-X56.x64.cat	Driver component => information and catalog file required for installation of the X56 driver (32/64 BIT)
Hengstler-Extendo-X80.inf Hengstler-Extendo-X80.cat Hengstler-Extendo-X80.x64.inf Hengstler-Extendo-X80.x64.cat	Driver component => information and catalog file required for installation of the X80 driver (32/64 BIT)
Exo-Setup.exe Exo-Setup.x32 Exo-Setup.x64	Setup tool(s) (batch and GUI) for Windows XP (32 BIT), Windows 7 (32/64 BIT), Windows 8 (32/64 BIT) and Windows 10 (32/64 BIT).
difxapi.dll difxapi.x64	Driver component => driver information framework files which are required during installation.
Exo_Api.dll Exo_Api_x64.dll	Driver component => application programming interface (32/64 BIT)
Exo_PrintMon.dll Exo_PrintMon_x64.dll	Driver component => print job monitor (32/64 BIT)
Exo_PrintMonPlugin.dll	Driver component => print job monitor plugin (32/64 BIT)

Exo_PrintMonPlugin_x64.dll	
Exo_Tb.dll Exo_Tb_x64.dll	Driver component => tool box (32/64 BIT)
Exo_Tb2.dll	Driver component => tool box 2
Exo_UniDrv.dll Exo_UniDrv_x64.dll	Driver component => uni-driver (32/64 BIT)
Exo_UniDrv.ini Exo_UniDrv_x64.ini	Driver component => uni-driver (32/64 BIT)
Exo_UserInterface.dll Exo_UserInterface_x64.dll	Driver component => user interface / printer properties (32/64 BIT)
Exo_X56.dat	Driver component => settings file for the X56 driver
Exo_X56.dll Exo_X56_x64.dll	Driver component => resource file for the X56 driver (32/64 BIT)
Exo_X56.gpd Exo_X56_x64.gpd	Driver component => general printer definition file for the X56 driver (32/64 BIT)
Exo_X56.prn	Driver component => test print file for the X56 driver
Exo_X80.dat	Driver component => settings file for the X80 driver
Exo_X80.dll Exo_X80_x64.dll	Driver component => resource file for the X80 driver (32/64 BIT)
Exo_X80.gpd Exo_X80_x64.gpd	Driver component => general printer definition file for the X80 driver (32/64 BIT)
Exo_X80.prn	Driver component => test print file for the X80 driver
STDNAMES.GPD	General printer definitions file from Windows XP, used when installing in windows Vista.
Exo-CodePages.zip	Zip file containing various code page images that can be uploaded onto the printer. Useable with Extendo firmware only!
Exo-StandardFont.zip	Zip file containing the standard font images that are included in the firmware. Useable with Extendo firmware only!
Exo-WideFont.zip	Zip file containing wide font images that can be uploaded onto the printer. Useable with Extendo firmware only!
NET_START_SPOOLER.lnk	Command for starting the spooler
NET_STOP_SPOOLER.lnk	Command for stopping the spooler
Exo-GdiDemo-X56-056x125.doc	Sample document for GDI printing
Exo-GdiDemo-X56-Test.doc	Sample document for GDI printing
Exo-GdiDemo-X80-080x125.doc	Sample document for GDI printing
Exo-GdiDemo-X80-Test.doc	Sample document for GDI printing
Exo_Api.h	Header file describing the application programming interface (API)
Exo_Api.lib Exo_Api_x64.lib	API library, included in applications (32/64 BIT)
Exo_Exo_ApiWrapper_NET.dll	.NET library, which wraps the C++ Printer API to .NET. The provided functions use common .NET variable types.
Exo_PrintMonPlugin.h	Header file describing the print monitor plugin interface
Exo_PrintMonPlugin.zip	Zip file containing the Visual C++ sources of the print monitor plugin.
Exo_PrintMonPluginTest.zip	Zip file containing the Visual C++ sources of the print monitor plugin test tool.
Exo-CommandTool.exe	Command tool which is used for evaluating a set of emulation commands (e.g. a sample ticket). Operates with Extendo and Extendo-XF firmware!
Exo-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo Firmware only!
Exo-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo firmware only!
Exo-FontTool.exe	Font tool which is used for generating a font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo-FwP@tchTool.exe	Firmware patch tool which is used for enable/disable specific firmware patches. Operates with Extendo firmware only!

Exo-ImageTool.exe	Image tool which is used of creating an image upload file from windows bitmaps. Operates with Extendo and Extendo-XF firmware!
Exo-PrintTerminal.exe	Terminal tool which is used for evaluating emulation commands. Operates with Extendo and Extendo-XF firmware!
Exo-Uninstaller.exe	Un-installation tool which is used to remove all eXtendo driver components for a windows XP installation.
Exo-UploadTool.exe	Upload tool which is used for upload of firmware, fonts, widefonts and images. Operates with Extendo and Extendo-XF firmware!
Exo-WideFontTool.exe	Wide font tool which is used for generating a wide font upload file from windows bitmaps. Operates with Extendo firmware only!
Exo_PrintMonInfo.exe	Print monitor info tool which is used for monitoring the services that are done by the eXtendo print monitor.
Exo_PrintMonPluginTest.exe	Print monitor plugin test tool which is used for display of information that is collected by the print monitor plugin
Mfc140.dll	Windows libraries, used in various tools and/or applications
Exf-ConfigurationTool.exe	Configuration tool which is used for configuring the X56 and X80 type printers. Operates with Extendo-XF firmware only!
Exf-DiagnosticTool.exe	Diagnostic tool which is used for displaying printer status and other information. Operates with Extendo-XF firmware only!

Installation on Windows XP

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below).

The printer driver for X56/X80-type printers can be pre-installed within the driver framework with use of the "setup.exe" tool.

Installation of an X56/X80-RS232-type printer must be done manually by selecting [START MENU]->[PRINTERS&FAXES]->[ADD NEW PRINTER].

Installation of an X56/X80-USB-type printer is automatically performed by connecting the printer through USB.

The driver information files for X56-type printers are "Hengstler-Extendo-X56.inf" and "Hengstler-Extendo-X56.x64.inf".

The driver information files for X80-type printers are "Hengstler-Extendo-X80.inf" and "Hengstler-Extendo-X80.x64.inf".

The printer driver manual contains more detailed information on printer driver installation on Windows Xp.

Installation on Windows 7

To prevent an eXtendo driver component version mismatch, it is required that all previously installed eXtendo drivers are removed from the system (see "Un-Installing on Windows XP" below) (see "Un-Installing on Windows 7" below).

Installation of the eXtendo printer driver for usage with X56/X80-RS232-type printers is started by selecting [START MENU]->[DEVICES&PRINTERS]->[ADD NEW PRINTER].

Installation of the eXtendo printer driver for usage with X56/X80-USB-type printers is started by connecting the printer through USB, whereas the eXtendo printer will appear in the printers&faxes dialog. The actions required for successfully installing the driver may depend on the system setting. The eXtendo driver will automatically be installed when the eXtendo driver has already been loaded in the driver store. If not, then press the right mouse button on the eXtendo printer in the "printers&faxes dialog, select "properties", go to the "Hardware" register, select "properties", go to the "Driver" register and update (attach) the eXtendo driver from there.

Un-Installation on Windows XP

Removal of installed eXtendo drivers and eXtendo OEM driver files within Windows XP can be done with the Exo-Uninstaller tool, which is included in the driver package.

Un-Installation on Windows 7

Removal of installed eXtendo drivers within Windows 7 can be done with by deleting the eXtendo printer within the printers and faxes dialog. Extendo OEM driver files can be removed from Windows 7 by using the Windows 7 Tool "pnputil.exe" ("pnputil -e" lists all OEM drivers, "pnputil -d oem0.inf" deletes the particular OEM driver.

A setup tool for un-installing is currently in development and is expected to be available in the next to come driver version.

List of anomalies and bugs

Currently no anomalies or bugs are known.

List of incompatibilities to previous versions

Currently no incompatibilities are known.

List of restrictions

This driver version is intended for usage with printers that have either Extendo or Extendo-XF firmware. Usage of some of the tools which the driver contains is restricted to the type of firmware which the printer contains. Following table shows which tools are available for the specific firmware type:

Component	Extendo	Extendo XF
Exf-ConfigurationTool	NO	YES
Exf-DiagnosticTool	NO	YES
Exo-CommandTool	YES	YES
Exo-ConfigurationTool	YES	NO
Exo-DiagnosticTool	YES	NO
Exo-FontTool	YES	NO
Exo-FwPatchTool	YES	NO
Exo-ImageTool	YES	YES
Exo-PrintTerminal	YES	YES
Exo-ServiceTool	YES	NO
Exo-Setup	YES	YES
Exo-UploadTool	YES	YES
Exo-WideFontTool	YES	NO

Notes

It is advised that the hardware flow control is enabled in both eXtendo printer driver and eXtendo printer when uploading firmware onto a serial board. The hardware flow control can be enabled in the printer properties dialog.

Firmware patch #00000001 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on early prototype X56 and X80 printers which have controller board A or B.

Firmware patch #00000002 must be enabled with use of the Exo-FwPatchTool when eXtendo firmware has been installed on pre-production X56 and X80 printers which have the head up switch inverted.

Application note "S-684-015-Extendo-WindowsXpDriver-ApplicationNote-0001.pdf" informs on how this windows driver within windows Vista.

List of modifications			
Mod-Id	Component	Version	Description
M-R8-001-HOR	Exo-FixTool.exe	R8-V2_04a	The fix tool is now also available for usage within Windows XP.
M-R8-002-HOR	Exf-SysFontConverter.exe	R8-V2_04a	Tool extended with codepage 1256 (Arabic).
M-R8-003-HOR	Exo-EnduranceTestTool.exe Exo-Tb.dll	R8-V2_04a	Complete redesign of the endurance test tool with integrated relays control.
M-R8-004-HOR	Exo-PrintMonitor.dll Exo-PrintMonitorPlugin.dll	R8-V2_04a	Print monitor plugin interface extended with TF_Exo_Pmp_StartMonitor2(...) which allows plugins to specify the service interval in milliseconds with no minimum service interval.
M-R8-005-HOR	Exo-Tb.dll Exo-ManufacturingTool.exe	R8-V2_04a	System configuration extended with USB 2.0.
M-R8-006-HOR	Exo-FwPatch.exe		For backward compatibility reasons, firmware patch 0x00000020 "USE V2-00 REFERENCE POSITIONS" has been implemented, which disables the reference position adjustment done since eXtendo firmware V3.00.
M-R8-007-HOR	Exo-ConfigTool.exe	R8-V2_04a	Button "Select Default Preferences" added.
M-R8-008-HOR	Exo-API.dll, Exo-DiagnosticTool.exe	R8-V2_04a	Partial cut monitoring flags PARTIAL CUT HOLDING PRINT (e.g. partial cut value 0x00100000) and PARTIAL CUT PRINT TAKEN (e.g. partial cut value 0x00200000) are no longer raised when PARTIAL CUT HOLDING PRINT is set (e.g. partial cut value 0x00300000).
M-R8-009-HOR	Exo-API.dll, Exo-ConfigurationTool.exe	R8-V2_04a	Configuration data has been extended with a print length correction settings (available since firmware V2.01x).
M-R8-010-HOR	Exo-DiagnosticTool.exe	R8-V2_04a	Tool extended with button "Create XML Report".
M-R8-011-HOR	Exo-CodeSigner.exe	R8-V2_04a	Integration of the USB token signing certificate.
M-R8-012-HOR	Exo-CodeSigner.exe	R8-V2_04a	Added a driver development clean up tool.
M-R8-013-HOR	Exo-Setup.exe Exo-Setup.x32.exe Exo-Setup-x64.exe	R8-V2_04a	Renewal of console based and dialog based setup (execute "Exo-Setup -h" from a command shell with administrator for help).
M-R8-014-HOR	Exo-DiagnosticTool.exe	R8-V2_04	Release of driver version R8-V2_04 (8.2.4.0).