Agilent M9099
Waveform Creator 2.0



Startup Guide

Agilent Technologies

Errata

Agilent References in this manual

NOTICE: This document contains references to Agilent Technologies. Agilent's former Test and Measurement business has become Keysight Technologies. For more information, go to:

www.keysight.com

About this manual

We've added this manual to the Keysight website in an effort to help you support your product. This manual provides the best information we could find. It may be incomplete or contain dated information.

Support for your product

You can find information about technical and professional services, product support, and equipment repair and service on the web:

www.keysight.com

Select your country from the drop-down menu at the top. Under *Electronic Test and Measurement*, click on *Services*. The web page that appears next has contact information specific to your country.

For more detailed product information, go to: www.keysight.com/find/ *<product model>*
i.e., for the M9514A, use: www.keysight.com/find/M9514A

Hypertext links to documents on agilent.com are no longer active. Use this substitution to access PDF files:

Broken links have the form: http://cp.literature.agilent.com/litweb/pdf/*<literature_part_number>*
Substitute links with this form: http://literature.cdn.keysight.com/litweb/pdf/*<literature_part_number>*
Where *<literature_part_number>* has the form: M9300-90001.pdf

For service notes, use: www.keysight.com/find/servicenotes

KEYSIGHT TECHNOLOGIES

Notices

© Agilent Technologies, Inc. 2013-2014

No part of this manual may be reproduced in any form or by any means (including electronic storage and retrieval or translation into a foreign language) without prior agreement and written consent from Agilent Technologies, Inc. as governed by United States and international copyright laws.

Manual Part Number

M9099-90002

Edition

June 2014

Printed in USA

Warranty

The material contained in this document is provided "as is," and is subject to being changed, without notice, in future editions. Further, to the maximum extent permitted by applicable law, Agilent disclaims all warranties, either express or implied, with regard to this manual and any information contained herein, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Agilent shall not be liable for errors or for incidental or consequential damages in connection with the furnishing, use, or performance of this document or of any information contained herein. Should Agilent and the user have a separate written agreement with warranty terms covering the material in this document that conflict with these terms, the warranty terms in the separate agreement shall control.

Technology Licenses

The hardware and/or software described in this document are furnished under a license and may be used or copied only in accordance with the terms of such license.

Restricted Rights Legend

If software is for use in the performance of a U.S. Government prime contract or subcontract, Software is delivered and licensed as "Commercial computer software" as defined in DFAR 252.227-7014 (June 1995), or as a "commercial item" as defined in FAR 2.101(a) or as "Restricted computer software" as defined in FAR 52.227-19 (June 1987) or any equivalent agency regulation or contract clause. Use, duplication or disclosure of Software is subject to Agilent Technologies' standard commercial license terms, and non-DOD Departments and Agencies of the U.S. Government will receive no greater than Restricted Rights as defined in FAR 52.227-19(c)(1-2) (June 1987). U.S. Government users will receive no greater than Limited Rights as defined in FAR 52.227-14 (June 1987) or DFAR 252.227-7015 (b)(2) (November 1995), as applicable in any technical data.

Safety Notices

CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

Agilent Technologies

Table of Contents

Chapter 1 – Introduction 5
1.1 Related Documentation 6

Chapter 2 – System Requirements 8
2.1 Summary of Software Compatibility with Waveform Creator 8

Chapter 3 – Installing Waveform Creator 10
3.1 Pre-requisites 10
3.2 Obtain Waveform Creator Executable 10
3.3 Install Waveform Creator Core 10
3.4 Install Plug-ins 11
3.5 Silent Installation of Waveform Creator 12

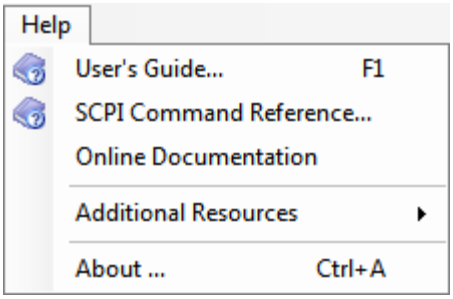
Chapter 4 – Setting Up Licenses 13
4.1 Agilent Software Licensing 13
4.2 Waveform Creator Licenses 13

Chapter 5 – Quick Start 15
5.1 Configure the System 15
5.2 Create a Simple Waveform 15
5.3 Download the Waveform 16
5.3.1 M9381A VSG 16
5.3.2 Connect M9099 Waveform Creator to the M9381A VSG 16
5.3.3 Generate Output 16
5.3.4 Data File Write 17

Preface

The scope of the Startup Guide is to introduce you to Waveform Creator software and describe the process of Installing and Licensing the product. It also encloses details on how to quickly get started with the software.

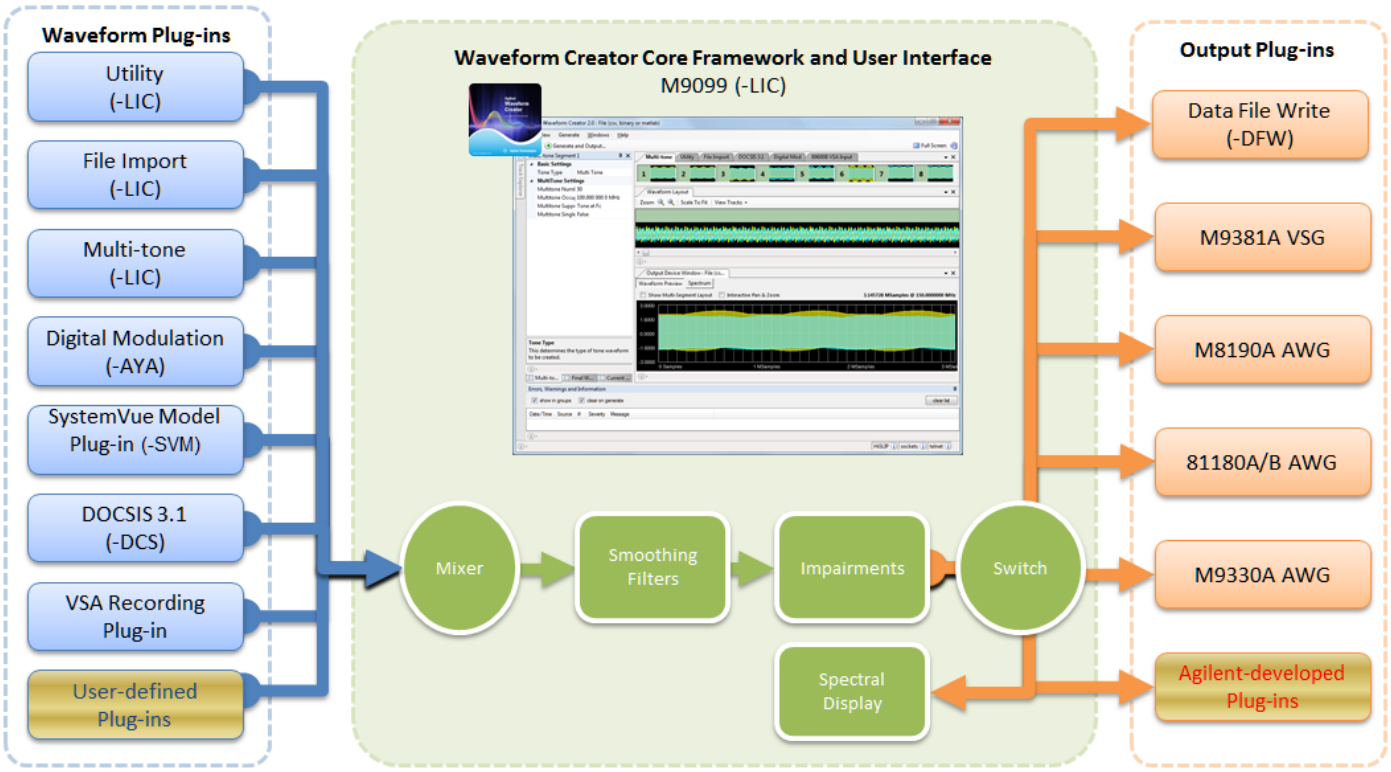
To access M9099 Waveform Creator help, launch the Product and click **Help** > **User's Guide**.



Chapter 1 – Introduction

M9099 Waveform Creator provides a modular and flexible waveform creation environment supporting analog and digital modulation formats for the Agilent M9381A Vector Signal Generator, M8190A, M933xA, and 81180-series instruments for R&D, design validation, and test engineers who need to create and manage custom waveforms for wireless and high speed wireline product design & testing.

Waveform Creator provides a simple, easy, & modular SW framework for creating, combining & managing custom, arbitrary waveforms, with support for corrected waveform download to Agilent AWGs and Signal Generators. It accelerates design validation and testing of chips, modules, and systems by streamlining development and management of custom stimulus waveforms.



Waveform Creator provides various benefits out of the box:

- Optional generation of DOCSIS 3.1 downstream and upstream signals.
- Flexible waveform creation and generation capability for Agilent M9381 PXI VSG.
- Waveform creation and generation capability for 81180 series arbitrary waveform generators.
- Waveform generation and download capability for wideband arbitrary waveform generators, such as M933x series and M8190A.
- Standard waveform plug-ins for of general-purpose waveform creation.
- Optional waveform creation plug-in for basic digital modulation.
- Optional waveform creation plug-in for SystemVue simulation models.

- Output generation plug-in for writing unencrypted waveform files (CSV, MAT, BIN, M8190A DUC IQBIN, and M9381A native files).
- Import waveform data from CSV, LabVIEW CSV, HDF, BIN, or M8190A DUC IQBINFile type.
- User extendable functionality such as creating your own waveform input plug-ins.
- SCPI remote control for test automation.

1.1 Related Documentation

To access documentation related to M9099 Waveform Creator, click the links below to open the related document.

Document	Description	Help Link/Location	Format
Startup Guide	This guide includes quick install and license setup instructions with instructions to quickly get started with Waveform Creator	http://cp.literature.agilent.com/litweb/pdf/M9099-90002.pdf	PDF
M9099 Waveform Creator Help	This help includes Waveform Creator Core GUI and supported Plug-ins' documentation	**32-bit** - *C:\Program Files (x86)\Agilent\M9099 Waveform Creator\Documentation\wc.chm*	(Microsoft Help Format) CHM
SCPI Reference Manual	This manual includes descriptions and details of SCPI commands supported in Waveform Creator	**32-bit** - *C:\Program Files (x86)\Agilent\M9099 Waveform Creator\Documentation\SCPI Command Reference.html*	HTML
Agilent License Manager Help	This help file provides information on Agilent Licensing	**32-bit** - *C:\Program Files\Agilent\Agilent License Manager\AgilentLicenseManager.chm* **64-bit** -*C:\Program Files(x86)\Agilent\Agilent License Manager\AgilentLicenseM*	(Microsoft Help Format) CHM

Document	Description	Help Link/Location	Format
		anager.chm Alternatively, you can find help under: **Start** > **All Programs** > **Agilent License Manager** > <product_name>	
Agilent I/O Libraries Help	This help file provides information on Agilent I/O libraries	**32-bit** - *C:\Program Files\Agilent\I/O Libraries Suite\VisaCom.chm* **64-bit** - *C:\Program Files(x86)\Agilent\I/O Libraries Suite\VisaCom.chm*	(Microsoft Help Format) CHM
SystemVue Help	This is online version of SystemVue software help	http://www.agilent.com/find/eesof-systemvue-documentation	Web

For more details, visit:

- Product Documentation on the web: http://www.agilent.com/find/modular-m9099-docs.
- KC for Waveform Creator: http://www.agilent.com/find/modular-wfc-knowledge.
- KC for Modular Solutions: http://www.agilent.com/find/modular-knowledgecenter.

Chapter 2 – System Requirements

Following are Agilent recommended configurations:

CPU	2 GHz or faster 32-bit (x86) or 64-bit (x64) processor
RAM	2 GB recommended (32-bit) / 4 GB recommended (64-bit)
Video RAM	512 MB recommended
Hard Disk	1 GB available
Additional Drives	DVD to load software; license transfer requires network access, USB Flash drive, USB hard drive, or USB DVD drive
Operating System	Microsoft Windows® 7 Professional, Enterprise, or Ultimate (64-bit/32-bit)

2.1 Summary of Software Compatibility with Waveform Creator

Microsoft .NET Framework	Ensure that you have Microsoft .NET Framework version 4 or higher installed on your system. The Microsoft .NET Framework 4 can be found at http://www.microsoft.com/en-in/download/details.aspx?id=17851.
Agilent IO Libraries Suite	Ensure that you have Agilent IO Libraries Suite 16.3 or higher installed on your system. The Agilent IO Libraries Suite can be found on the CD that is part of shipment content or at http://www.agilent.com/find/iosuite.
VSA for pre-corrections filter calibration	If you wish to use the optional pre-corrections filter calibration capability, you also need Agilent 89601B VSA version 15 or higher installed on your system.
M9381A VSG/CW Source Instrument Drivers	Install M9381A VSG Drivers from http://www.agilent.com/find/M9381A Please install M9381A driver version 1.2 or higher.
M8190A AWG Driver	If you wish to use the M8190A streaming capability, you also need Agilent M8190A Driver. Install the M8190A driver from http://www.home.agilent.com/agilent/software.jspx?ckey=sw385 Please install version 3.0 or higher.
NI-IVI Compliance Package	The M933xA series AWG require that the NI IVI Compliance Package 4.1 or greater be installed. To get the latest release of the NI IVI Compliance Package, go to http://www.ni.com/drivers/
M933xA AWG Source Instrument Drivers	Install M933xA Drivers from http://www.home.agilent.com/agilent/software.jspx?c

	key=2033326. Please install M933xA driver version 2.01 or higher.
SystemVue Software	To use SystemVue Model Plug-in, please install SystemVue software 2013.08 or SP1 release.

Chapter 3 – Installing Waveform Creator

Follow the given steps to get the executable and install Agilent M9099 Waveform Creator software (core and plug-ins) on your system.

3.1 Pre-requisites

A host PC with Agilent IO Libraries Suite software correctly installed:
For more details, refer to Summary of Software/Hardware Compatibility with Waveform Creator section under System Requirements.

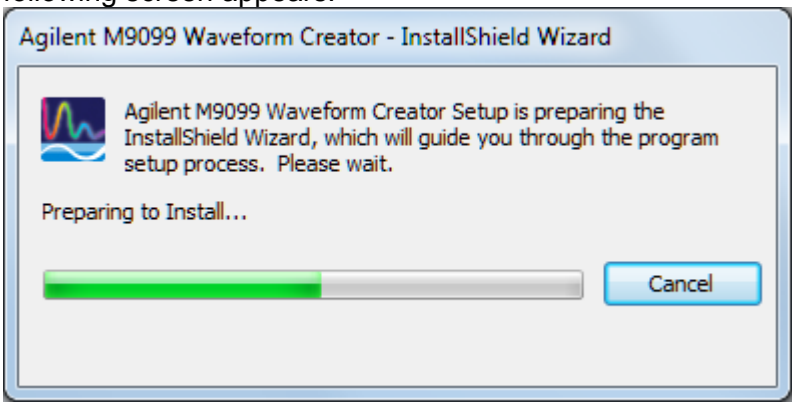
3.2 Obtain Waveform Creator Executable

Obtain the Waveform Creator executable from the following sources:

- A.com
- CD-ROM (Product ordered with -MED option)

3.3 Install Waveform Creator Core

1. Double-click the executable (*Agilent M9099 Setup.exe*) to run the Waveform Creator setup. The following screen appears:



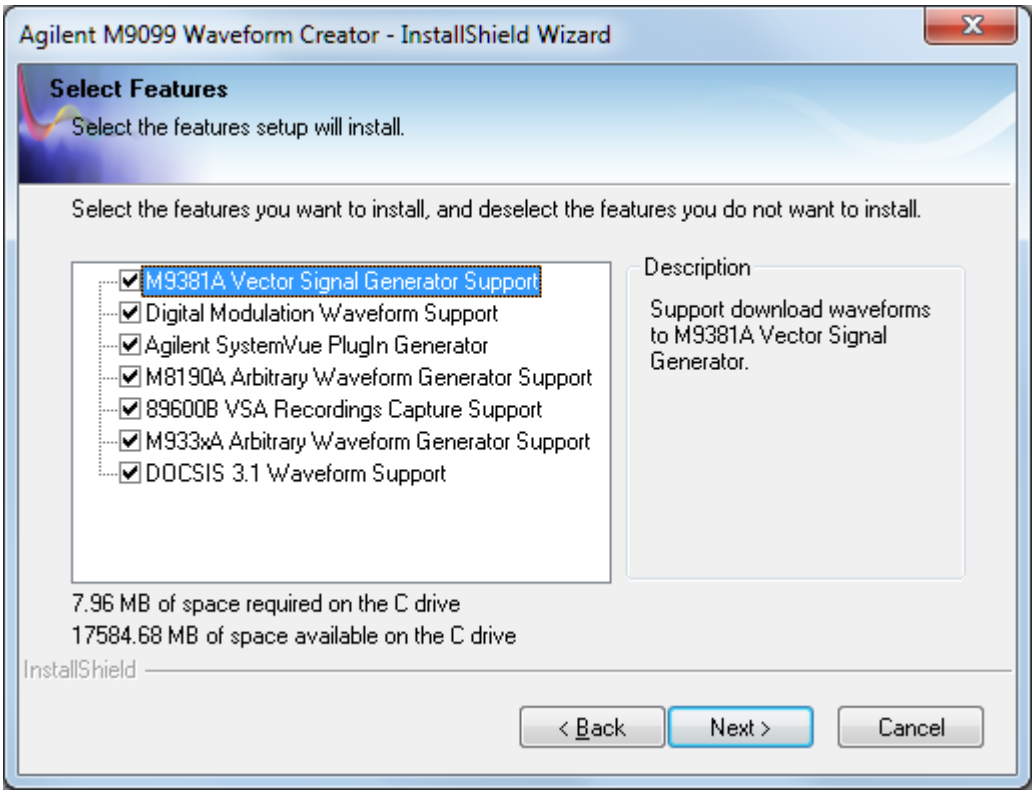
2. Follow the guided tour to complete the installation.

3.4 Install Plug-ins

1. The InstallShield Wizard installs the Agilent M9099 Waveform Creator plug-in on your computer.



2. Click **Next** to continue.



3. Select the features you want to install and click **Next** to install in the default folder.
4. Follow the guided tour to complete the installation

Note
If you do not have the Agilent M938x Instrument Driver Version 1.1.199.3 or later or M933x Arbitrary Waveform Generator Instrument Drivers installed on your system, download the same from http://www.agilent.com/find/adnivicomdrivers.

Install the M8190A driver from http://www.home.agilent.com/agilent/software.jspx?ckey=sw385.

3.5 Silent Installation of Waveform Creator

To install Waveform Creator silently, perform the following steps:

1. Copy the following files to a non read-only directory.
   - Agilent M9099 Setup.exe
   - runinstall.bat
   - install.iss
2. Update the runinstall.bat file to reflect the correct directory in which the M9099 setup file is located.
3. Run the command prompt as an administrator.
4. Change directory to the directory in which the M9099 Setup file is located.
5. Run the runinstall.bat file.

```
C:\_Work\Installers>runinstall.bat

C:\_Work\Installers>"C:\_Work\Installers\Agilent M9099 Setup_2.0_Sprint14.exe" /
s /f1".\install.iss"

C:\_Work\Installers>echo Waveform Creator installed
Waveform Creator installed

C:\_Work\Installers>dir "C:\Program Files (x86)\Agilent"
 Volume in drive C has no label.
 Volume Serial Number is 2000-029C

 Directory of C:\Program Files (x86)\Agilent

05/15/2014  10:00 AM    <DIR>          .
05/15/2014  10:00 AM    <DIR>          ..
05/07/2014  12:05 PM    <DIR>          ACCL
05/07/2014  12:05 PM    <DIR>          Agilent License Manager
01/10/2014  04:01 PM    <DIR>          CDF
05/28/2013  08:58 AM    <DIR>          Command Expert
01/21/2014  12:13 PM    <DIR>          HPP
05/14/2014  01:55 PM    <DIR>          IO Libraries Suite
05/07/2014  12:06 PM    <DIR>          M9000
05/19/2014  03:55 PM    <DIR>          M9099 Waveform Creator
07/11/2013  11:00 AM    <DIR>          M9099A Waveform Creator
05/07/2014  12:06 PM    <DIR>          M90XA
05/15/2014  10:00 AM    <DIR>          M933x
02/21/2014  11:45 AM    <DIR>          M938x
12/12/2013  01:57 PM    <DIR>          M9391
05/14/2014  01:29 PM    <DIR>          TranslatorFramework
               0 File(s)              0 bytes
              16 Dir(s)   8,577,519,616 bytes free

C:\_Work\Installers>
```

Chapter 4 – Setting Up Licenses

This section describes Agilent software licensing and the licenses required to run the Agilent Waveform Creator software.

4.1 Agilent Software Licensing

The Waveform Creator software supports Node-Locked licensing type.

For more details on different license types and setup, launch **Agilent License Manager** from **Start** > **All Programs** > **Agilent License Manager** or by clicking from system tray.

When you purchase Waveform Creator, you are provided with a License Redemption Entitlement Certificate that documents the options to which you are entitled. You can redeem the certificate at http://www.agilent.com/find/softwaremanager using the purchase order number, entitlement certificate number, and other details to run the software.

The Agilent Software Licensing system issues a license file for each purchased option, by e-mail, to an address you specify. Each license file is a plain text file attachment with a file name in the form *XXXXXX_YYYYYY.lic*.

When you receive the e-mail, you should save the attached .lic file(s) to the Agilent license directory, which is, by default, located at
C:\Program Files\Agilent\licensing.

Note
You can check the status of your software licenses by running the optional Agilent License Manager or by selecting **Help** > **About...** from the Waveform Creator menu and then selecting the Licenses tab in the About dialog.

If a license is not available or not valid, the corresponding features will not be enabled by the Agilent Waveform Creator.

4.2 Waveform Creator Licenses

Agilent Waveform Creator Software Options

Product-Option	*Feature	Version*	Description
M9099T			Waveform Creator (Transportable Perpetual License)
M9099T-LIC	M9099_CS_CoreSoftware	2.000	Core product w/ Utility & Multi-tone plug-in licenses (Required)
M9099T-AYA	M9099_Wp_DigMod	2.000	Digital Modulation Library plug-in license
M9099T-DCS	M9099_Dc_Docsis	2.000	Docsis 3.1 Plug-in license

Product-Option	*Feature	Version*	Description
M9099T-DFW	M9099_Dp_DataFileWrite	2.000	Unencrypted Data File Write plug-in License
M9099T-SVM	M9099_Wp_SystemVue	2.000	SystemVue Model plug-in license (requires SystemVue software)

Waveform Creator Trial licenses

Product-Option	Feature	Version	Description
M9099T-LIC-TRL	M9099_CS_CoreSoftware	2.000	Waveform Creator core software (Trial)
M9099T-AYA-TRL	M9099_Wp_DigMod	2.000	Digital Modulation Plug-in (Trial)
M9099T-DCS-TRL	M9099_Dc_Docsis	2.000	Waveform Creator Docsis 3.1 Plug-in (Trial)
M9099T-DFW-TRL	M9099_Dp_DataFileWrite	2.000	Waveform Creator Data File Write (Trial)
M9099T-SVM-TRL	M9099_Wp_SystemVue	2.000	SystemVue Model Plug-in (Trial)

Waveform Creator Support licenses

Product-Option	Feature	Version	Description
M9099T-LIC-12M		2.000	Waveform Creator, Core Software, Premium Support Plan (1-year)
M9099T-AYA-12M		2.000	Waveform Creator Digital Modulation, Premium Support Plan (1-year)
M9099T-DCS-12M		2.000	Waveform Creator Docsis 3.1 Plug-in, Premium Support Plan (1-year renewal)
M9099T-DFW-12M		2.000	Waveform Creator Data File Write, Premium Support Plan (1-year)
M9099T-SVM-12M		2.000	Waveform Creator SystemVue Model, Premium Support Plan (1-year)

Chapter 5 – Quick Start

This section introduces a typical Waveform Creator workflow. You will create a test modulation in M9099 Waveform Creator, download it to the M9381A Vector Signal Generator (VSG), and verify the resulting RF signal using the N9020A MXA Signal Analyzer.

This should be sufficient to get you familiar with the basic workflow.

- Configure the System
- Create a Simple Waveform
- Download the Waveform

5.1 Configure the System

Refer to System Requirements

5.2 Create a Simple Waveform

Waveforms are created by dragging and dropping waveform segments from the active Segment Library window into the Waveform Layout window. Once the desired sequence of waveform segments is achieved, the composite waveform, including any added noise or other impairments, can be reviewed in the Output Device window.

Follow these steps to create a simple waveform and analyze it using 89601B:

1. Run the M9099 Waveform Creator software.
2. Start 89601B application.
3. Preset 89601B.
4. Preset M9099 by choosing File > Preset Setup.
5. Select the Multi-tone Segment Library tab.
6. Drag and drop Segment 1 from the Segment Library window into the Waveform Layout window by selecting the colored box numbered 1.
   The Multi-tone Segment 1 panel appears on the left.
7. Change the segment 1 settings to the following (leave all others at their default values):
   a. Tone Type: Single Tone
   b. Tone Frequency: 0.00 MHz
   c. Tone Modulation Type: 16 QAM
   d. Tone Modulation Symbol Rate: 20.00 MHz
   e. Tone Filter Type: Root Raised-Cosine
   f. Tone Filter BT/Shape: 0.300
   g. Tone Minimum Length: 65536
8. Choose Generate > Output Device > File (csv, binary or matlab).
9. In the Current Output Device Settings window, make the following settings:

a. Waveform File Name: Browse to a directory and specify the file name as “Single_Tone_16QAM”
b. Load File in 89600: True

10. Click Generate and Output.
11. In the Output Device Window, click Spectrum. Click the Run button. The current waveform spectrum runs, centered at zero Hz.
12. Open the 89601B application and same waveform runs. You can fully demodulate and analyze the M9099 signal with the VSA.

Note
Waveforms can also be imported in the form of CSV, LabVIEW CSV, HDF, BIN, and M8190A DUC IQBIN file format using File Import plug-in. To import:

1. In the File Import Segment, under **Segment Settings**, set the **File Type** to "XXX File", where XXX=CSV, LabVIEW CSV, HDF, BIN, or M8190A DUC IQBIN.
2. Specify the **Waveform File Name** under **Segment Settings** to import the desired file.

5.3 Download the Waveform

Generated waveforms using Waveform Creator can be downloaded either to an output device like M9381A, M8190A, M933xA, 81180-series instrument, or File (csv, matlab or binary format).

5.3.1 M9381A VSG

To download waveform on an M9381A VSG:

1. Connect the M9099 Waveform Creator to the M9381A Vector Signal Generator
2. Run M9099 software
3. Generate Output

5.3.2 Connect M9099 Waveform Creator to the M9381A VSG

The Agilent M9381A VSG hardware comprises four interconnected PXIe modules, typically hosted in an Agilent M9018A PXIe chassis. These modules must be controlled over the PXIe bus by the M9381A instrument driver in order to deliver the product functionality. The driver may be hosted by an embedded controller PC in the same PXIe chassis, or by an external laptop or desktop PC whose PCIe backplane has been extended (by adapters and cable) onto the backplane of the PXIe chassis. The possible configurations are fully described in the *Agilent M9381A Configuration Guide (5991-0897EN)*.

Once the M9381A hardware is configured and the M938x VSG/CW Source Instrument Driver is installed, other applications (such as M9099) may communicate with the M9381A by means of IVI-COM driver calls to the VISA PXI address assigned to the M9381A in the Agilent IO Libraries Suite.

5.3.3 Generate Output

To generate output:

1. Select **Generate** > **Output Device** > **Agilent M9381A VSG** to select the output device.
2. Select the Current Output Device Settings window and change the device settings to the following (leave all other parameters at their default values):
    a. Instrument Address: <VISA string from Agilent IO Libraries>
    b. Frequency: 1.5 GHz
    c. Amplitude: 0 dBm
    d. RF On: True
3. Click the Generate and Output button in the tool bar to send the created waveform to M9381A VSG.

If you have no M9381A hardware installed (and therefore have no address to enter), you can still explore the software functionality by changing the M9381A output device setting **Output To** to **Output to Simulated HW**. In this mode, Settings changes and waveform downloads will appear to work, but the changes and data are simply discarded by the M9381A driver. Also, you can output the waveform data to a CSV file which can be loaded into M9381A SFP.

For more details on M9381A Output plug-in settings, refer to the User's Guide.

5.3.4 Data File Write

Waveform Creator allows you to save the output waveform to a file in either of the following formats:

- CSV (comma separated)
- N5110A waveform (*.bin)
- MATLAB® Level 5 MAT-File
- M8190A DUC IQBIN File

To download waveform to a file:

1. Select **Generate** > **Output Device** > *File (csv, binary or matlab).
2. Set the parameter values.
3. Click the Generate and Output button in the tool bar to save the output to a file on the host computer.

For file data, the maximum sample rate is not limited by hardware, so for internal coding purposes a nominal limit of 5 GHz is set. Within this limit, the auto sample rate algorithm chooses the most appropriate sample rate for the generated waveform. If a higher sample rate is needed, then this nominal limit can be over-ruled by using the manual sample rate setting.

The output files are unencrypted and can be formatted in various ways to facilitate their import into other Agilent and non-Agilent tools.
For more details on File settings, refer to Data File Write Plug-in topic in the Waveform Creator User's Guide.

Note
Output to all supported Agilent VSG is standard as part of Waveform Creator functionality but file output is separately licensed as Waveform Creator option DFW.



The Modular Tangram

The four-sided geometric symbol that appears in Agilent modular product literature is called a tangram. The goal of this seven-piece puzzle is to create shapes—from simple e to complex. As with a tangram, the possibilities may seem infinite as you begin to create a new test system. With a set of clearly defined elements—hardware, software—Agilent can help you create the system you need, from simple to complex.



DISCOVER the Alternatives ...
... Agilent **MODULAR** Products

Agilent Advantage Services is committed to your success tthroughout your equipment's lifetime.
www.agilent.com/find/advantageservices

Agilent Email Updates keep you informed on the latest product, support and application information.
www.agilent.com/find/emailupdates

Agilent Channel Partners provide sales and solutions support. For details, see
www.agilent.com/find/channelpartners

ISO 9001:2008 certified. For details, see
www.agilent.com/quality

www.pxisa.org

PICMG and the PICMG logo, CompactPCI and the CompactPCI logo, AdvancedTCA and the AdvancedTCA logo are US registered trademarks of the PCI Industrial Computers Manufacturers Group. "PCIe" and "PCI EXPRESS" are registered trademarks and/or service marks of PC-SIG. Microsoft, Windows, Visual Studio, Visual C++, Visual C#, and Visual Basic are either registered trademark or trademarks of Microsoft Corporation.

Product descriptions in this document are subject to change without notice.
© Agilent Technologies, Inc. 2013 -2014

www.agilent.com
www.agilent.com/find/modular
www.agilent.com/find/M9099

For more information on Agilent Technologies' products, applications or services, please contact your local Agilent office. (For additional listings, go to **www.agilent.com/find/assist**.)

Americas

Canada	(877) 894 4414
Brazil	(11) 4197 3500
Mexico	01800 5064 800
United States	(800) 829 4444

Asia Pacific

Australia	1 800 629 485
China	800 810 0189
Hong Kong	800 938 693
India	1 800 112 929
Japan	0120 (421) 345
Korea	080 769 0800
Malaysia	1 800 888 848
Singapore	1 800 375 8100
Taiwan	0800 047 866
Thailand	1 800 226 008

Europe & Middle East

Austria	43 (0) 1 360 277 1571
Belgium	32 (0) 2 404 93 40
Denmark	45 70 13 15 15
Finland	358 (0) 10 855 2100
France	0825 010 700 (0.125 €/minute)
Germany	49 (0) 7031 464 6333
Ireland	1890 924 204
Israel	972 3 9288 504 / 544
Italy	39 02 92 60 8484
Netherlands	31 (0) 20 547 2111
Spain	34 (91) 631 3300
Sweden	0200 88 22 55
Switzerland	0800 80 53 53
United Kingdom	44 (0) 118 92762