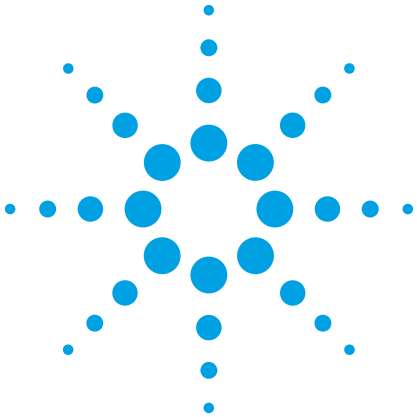

Test Automation Kit Example Programs

The Test Automation Kit contains over 200 example programs written in several popular languages. In this file you will see a listing of these programs along with a short description of what they do. Some programs are written for specific instruments while others can be used with any instrument. Select the tab for your programming language and view its list of examples.

Agilent Technologies

Title	Language	Description
1dto2d	Agilent VEE	Constructs a 2D array from a larger 1D input array with fixed sizes
2dto1d	Agilent VEE	Flattens multiple-dimensioned arrays into a 1D array
34401mathoperation	Agilent VEE	Takes 5 voltage readings via driver, then calculates dB values
34401stripchart	Agilent VEE	Sample program connecting using vxiplug&play driver
access97dataclient	Agilent VEE	Example usnig Access and Agilent VEE
access97enumerate	Agilent VEE	Open testData.mdb Access Database and display tables
advanceddialog	Agilent VEE	Creates dialog box and validates input in Agilent VEE
analogfilter	Agilent VEE	displays the transfer function of a filter, uses array math
ascii	Agilent VEE	Converts a keyboard character to ASCII code, code to character
barcht1	Agilent VEE	Displays an array as bar chart
barcht2	Agilent VEE	Plot Limit as Pass/Fail Barchart in Agilent VEE
barcht3	Agilent VEE	Displays 2 arrays simultaneously as stacked bar chart
barcht4	Agilent VEE	Displays 2 arrays of data simultaneously
basicgraphmanipulation	Agilent VEE	Shows basic graph & plots
callvee	Agilent VEE	Synthesizes pulse and display by calling two Agilent VEE Ufs
commondialog	Agilent VEE	Uses common Windows dialog boxes in a program
complex	Agilent VEE	Complex Polar Numbers
convert	Agilent VEE	converts to/from decimal, hex, octal, binary data types
countercaldata	Agilent VEE	Calibrates counter (sends & receives data)
counterhistogram	Agilent VEE	Creates histogram within min/max frequencies, # bins
curvefit	Agilent VEE	uses various regression methods for curve fit
datacomp	Agilent VEE	compresses data; checks for changes, recording only change with time stamp
dialog	Agilent VEE	Uses dialog object for requesting user input
digfilt	Agilent VEE	Un/builds time-domain waveforms, contructs 3rd order dig filter, auto conversion from time to freq
dirlist	Agilent VEE	Uses Agilent VEE function to select which shell commands to use based on the OS its operating on
dynamicfinddmm	Agilent VEE	finds all DMMs on your system
dynamicfindinstruments	Agilent VEE	finds all GPIB, VXI instruments except USB converter (488.2 & *IDN)
dynamicfindinterfaces	Agilent VEE	finds type, logical unit number of all instrument interfaces
dynamicfindremoteinstruements	Agilent VEE	Finds all instruments available on specified remote host, which must have Agilent VEE installed
example1	Agilent VEE	Sends Commands to Scope
example2	Agilent VEE	Uses passthrough functions to control scope
example3	Agilent VEE	Demonstrates subsystem functions for scope
example4	Agilent VEE	Shows basic waveform functions on arb
example8	Agilent VEE	sets arbitrary waveform
excel97graph	Agilent VEE	ActiveX Automation example in Microsoft Excel
excel97weather	Agilent VEE	Uses Automation to store data in Microsoft Excel and generate a report
feedback	Agilent VEE	implements feedback for a one-pole IIR digital filter
findmaximums	Agilent VEE	Locates and highlights peaks in ML graph based on Agilent VEE data
gpibtest	Agilent VEE	performs simulated gpib transactions on a 34401
integrate	Agilent VEE	integrates a function with limits and displays
interpolation	Agilent VEE	Shows ML data interpolation function of Agilent VEE data
keypad	Agilent VEE	Uses phone keypad as input for numbers
lissajou	Agilent VEE	generates a lissajous pattern from 2 waveform inputs; plots
listview	Agilent VEE	uses the Windows ListView control
logo3dplot	Agilent VEE	Plots 3D shaded surface plot
magdist	Agilent VEE	generates a histogram of data point distribution
magphase	Agilent VEE	displays magnitude & phase vs. freq from a time-domain waveform
maparray	Agilent VEE	Unpacks a spectrum or waveform input into a corresponding array of numbers
mfgtest	Agilent VEE	Virtual test system for Manufacturing
mixer	Agilent VEE	virtual sources simulator
mltitracegraph	Agilent VEE	Plots multiple graph traces
mschart	Agilent VEE	uses Microsoft's MSChart control to display waveform
multigraphfigure	Agilent VEE	Multiple subplots in one dialog

Title	Language	Description
multiplx	Agilent VEE	Uses multiplex object
outlook97	Agilent VEE	Sends e-mail by via automation of Outlook
pathsep	Agilent VEE	Normalizes directory path separator for DOS and UNIX
pid	Agilent VEE	PID controller for closed-loop control
piechart	Agilent VEE	Creates a piechart from an array of data
plot2darray	Agilent VEE	Plots 2D array data from Agilent VEE
prerundevicecheck	Agilent VEE	Checks for instrument config at pre-run phase of Agilent VEE program
progressbar	Agilent VEE	uses Microsoft's progress bar
psk	Agilent VEE	encodes and decodes messages
readmakervalues	Agilent VEE	sets markers on an XY display, reads values
richtextbox	Agilent VEE	gets RTF text into text control, save into Agilent VEE program
rmfile	Agilent VEE	Removes a file from within a Agilent VEE program
sample	Agilent VEE	Demonstrates basic operations using the IntuiInk Scope Control
setmap	Agilent VEE	retrieves meaningful info from a spectrum datatype
signalprocessing	Agilent VEE	Uses Butterworth filter of Agilent VEE data
smtpmail	Agilent VEE	Implements a send-only functionality of SMTP mail
spreadsheetapp	Agilent VEE	Synthesizes pulse and displays with test limits
surf3dplot	Agilent VEE	Creates and rotates a MATLAB 3D shaded surface plot
systemverifier	Agilent VEE	Validates Test Express Instruments in Agilent VEE
telecomm	Agilent VEE	simulates DS1 pulse test, automates match to known pulse
tofrom1	Agilent VEE	Saves incremental data after each execution to file
tofrom2	Agilent VEE	Writes to file while second thread reads, processes it at own speed
tofrom3	Agilent VEE	Takes user input plus conditional cases to determine output
tofrom4	Agilent VEE	Combines data type conversion of wavefrom with transactions
word97	Agilent VEE	Uses Word via automation to insert test data and a bitmap from Agilent VEE UF into Word document
word97datasheet	Agilent VEE	Automates search and replace in Word
word97mailmerge	Agilent VEE	Agilent VEE performs mail merge in document using Access database
xfftfunc	Agilent VEE	performs FFT on waveform
xy_cntrl	Agilent VEE	Adjusts traces and scales on XY trace display

Title	Language	Description
33120_arb_am	Microsoft ® Visual Basic 6	Demonstrates AM Modulation and storing instrument state
33120_arb_applyburst	Microsoft Visual Basic 6	Demonstrates the Apply command and how to create a burst as an output.
33120_arb_dampedsine	Microsoft Visual Basic 6	Downloads an array of integers representing a damped sine
33120_arb_fm	Microsoft Visual Basic 6	Demonstrates FM modulation and how to store and recall an instrument setup
33120_arb_pulse	Microsoft Visual Basic 6	Outputs a pulse with adjustable rise and fall times
33220_ivi_amlowlevel	Microsoft Visual Basic 6	Demonstrates AM Modulation and storing instrument state using IVICOM
33220_ivi_asciiarb	Microsoft Visual Basic 6	Downloads a square pulse using ASCII data
33220_ivi_binaryarb	Microsoft Visual Basic 6	Downloads a damped sine using binary data
33220_ivi_haversine	Microsoft Visual Basic 6	Creates a haversine with the 33220 IVI-COM driver
33220_ivi_linearsweep	Microsoft Visual Basic 6	Sets up a linear sweep using a sinusoid waveform.
33220_ivi_pulse	Microsoft Visual Basic 6	Sets up a pulse waveform and adjusts the edge time
33220_ivi_pulsewidthmod	Microsoft Visual Basic 6	Outputs a PWM waveform.
33220_ivi_simplesine	Microsoft Visual Basic 6	Selects output sinusoid, frequency, amplitude, and offset
33220_ivi_squareburst	Microsoft Visual Basic 6	Triggered burst of three cycles of a square wave
33250a_general	Microsoft Visual Basic 6	Demonstrates the use of: Modulation, Pulse, Sweeping, Burst, and Status checking.
33250_ivi_amlowlevel	Microsoft Visual Basic 6	Outputs an AM waveform for the function generator
33250_ivi_asciiarb	Microsoft Visual Basic 6	Downloads a square pulse using ASCII data
33250_ivi_binaryarb	Microsoft Visual Basic 6	Downloads a damped sine using binary data
33250_ivi_haversine	Microsoft Visual Basic 6	Creates a haversine with the 33250 IVI-COM driver
33250_ivi_linearsweep	Microsoft Visual Basic 6	Sets up a linear sweep using a sinusoid waveform.
33250_ivi_pulse	Microsoft Visual Basic 6	Sets up a pulse waveform and adjusts the edge time
33250_ivi_simplesine	Microsoft Visual Basic 6	Selects output sinusoid, frequency, amplitude, and offset
33250_ivi_squareburst	Microsoft Visual Basic 6	Triggered burst of three cycles of a square wave
34401a_dmmezsample	Microsoft Visual Basic 6	Uses VISA-COM to identify instrument and make voltage measurements
34401a_dmmgpib_meas_config	Microsoft Visual Basic 6	Uses VISA-COM to initiate MEASure? and CONFigure Commands for the 34401A
34401a_dmmrs232_meas_config	Microsoft Visual Basic 6	Uses VISA-COM to initiate MEASure? and CONFigure Commands for the 34401A over RS232
34401a_dmmstat_reg_srq	Microsoft Visual Basic 6	The following example shows how you can use the multimeter's status registers to determine when a command sequence is completed
34401_dmmlearnstring	Microsoft Visual Basic 6	Demonstrates Learn Strings to save and restore state on the 34401
34401_ivi_ezsample	Microsoft Visual Basic 6	Demonstrated how to use the 34401A IVI-COM Driver
34401_ivi_gpib_meas_config	Microsoft Visual Basic 6	Takes single and multiple AC measurements with 34401A IVI-COM Driver
34401_ivi_learn_string	Microsoft Visual Basic 6	Demonstrates Learn Strings to save and restore state on the 34401 using the IVI-COM Driver
34401_ivi_rs232_meas_conf	Microsoft Visual Basic 6	This example program demonstrates how to use RS232 with the 34401A IVI COM driver
34401_ivi_stat_reg_srq	Microsoft Visual Basic 6	Uses IVI-COM to use the multimeter's status registers to determine when a command sequence is completed
34970a_matrixswitch	Microsoft Visual Basic 6	This program demonstrates how to open and close a relay for the Matrix card.
34970a_monitor_channels	Microsoft Visual Basic 6	This program calls the instrument and gets the reading for the specified channel with VISA COM
34970a_scan_monitor	Microsoft Visual Basic 6	This program demonstrates how to monitor channels set up on the 34970A by calling the channel list, allowing the user to select one of the channels, and then getting a reading (Monitor) from that channel.
34970_ivi_dac_out	Microsoft Visual Basic 6	Sets Voltage on 34970A using IVI-COM Driver
3499_ez_relay	Microsoft Visual Basic 6	This program demonstrates how to open and close the relay switch in the 3499 Switch Unit
3499_matrix	Microsoft Visual Basic 6	Opens and Closes a Matrix Switch using VISA-COM
3499_muxswitch	Microsoft Visual Basic 6	Opens and Closes a MUX using VISA-COM
53131_32_81_ezsample	Microsoft Visual Basic 6	Demonstrates how to use the SCPI MEASure function to perform counter measurements
53131_32_81_fast_xfer	Microsoft Visual Basic 6	Demonstrates how to read data at the fastest rate using VISA-COM
53131_32_81_limit_test_srq	Microsoft Visual Basic 6	Monitors a channel to ensure it remains in limit
53131_32_81_meas_freq	Microsoft Visual Basic 6	Uses a counter to make 10 frequency measurements on channel 1 using a 0.1 second gate time
54600scope_measure	Microsoft Visual Basic 6	This program displays a reading from the HP54600 series scope using the specified address, scope channel, and function values.

Title	Language	Description
54600scope_screenimage5460x	Microsoft Visual Basic 6	Displays 546xx Scope Screen Image (that support the PRINT Command)
54600scope_screenimage5462x	Microsoft Visual Basic 6	This example program demonstrates how to read a bitmap from the 54620 series of scopes
54600scope_waveformas	Microsoft Visual Basic 6	Uses MSChart to display a 54600 scope waveform data
isdk_bitmap	Microsoft Visual Basic 6	This code gets the bitmap from the Agilent 54620-series scopes
isdk_vbpcltopbox	Microsoft Visual Basic 6	Converts PCL file to raster image in PictureBox as .bmp for 546xx scopes

Title	Language	Description
34401_EZsample	Microsoft Visual Basic .NET	Demonstrated how to use the 34401A IVI-COM Driver in Microsoft Visual Basic .NET
Access	Visual Basic .NET - Agilent Toolkit	Simple Database operations using the Agilent Toolkit in Visual Basic .NET
ClassLibrary	Microsoft Visual Basic .NET - Agilent Toolkit	Example of Toolkit DirectIO Class in Visual Basic .NET
ComplexNumbers	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrates Complex Numbers using the Agilent Toolkit in Visual Basic .NET
CreateVeeWrapper	Visual Basic .NET - Agilent Toolkit	Creates a .DLL wrapper around Agilent VEE user functions using the Agilent Toolkit
DirectIOConsoleApplication	Microsoft Visual Basic .NET - Agilent Toolkit	Example of Agilent Toolkit DirectIO in Visual Basic .NET Console Application
DirectIOWindowsApplication	Microsoft Visual Basic .NET - Agilent Toolkit	Example of Agilent Toolkit DirectIO in Visual Basic .NET Windows Application
e36xx_EZsample	Microsoft Visual Basic .NET	Sends commands to e36xx power supplies using IVI-COM Driver
Excel	Visual Basic .NET - Agilent Toolkit	Call Microsoft Excel using the Agilent Toolkit in Visual Basic .NET
FFTinDB	Visual Basic .NET - Agilent Toolkit	Plots an FFT in dB using Agilent Toolkit in Visual Basic .NET
HistogramOfTimingDelays	Visual Basic .NET - Agilent Toolkit	Create a histogram using the Agilent Toolkit in Visual Basic .NET
PullData	Visual Basic .NET	Demonstrates how to pull data from Crystal Reports in Visual Basic .NEt
PushData	Visual Basic .NET	Demonstrates using Crystal Reports to ""push"" data into a report in Visual Basic .NET
ServiceRequestConsoleApplication	Visual Basic .NET - Agilent Toolkit	Demonstrates a Service Request using the Agilent Toolkit DirectIO in Visual Basic .NET
ServiceRequestWindowsApplication	Visual Basic .NET	Demonstrates using a Service Request with a 34401 Voltmeter using the Agilent Toolkit DirectIO
StoringTestDataToFile	Visual Basic .NET	Example Techniques of Storing Test Data to File Using Visual Basic .NET
StripChart	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrates the strip chart from the Agilent Toolkit in Visual Basic .NET
SystemVerifier	Microsoft Visual Basic .NET	Validates Test Express Instruments in Microsoft Visual Basic .NET
Timing	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrates use of Agilent Toolkit Timer Routines and Engineering Formatting in Visual Basic .NET
ToolkitSampler	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrates Agilent Toolkit capabilities with a Scope in Visual Basic .NET
UseVeeWrapper	Visual Basic .NET - Agilent Toolkit	Demonstrates how to call wrapped VEE function in Visual Basic .NET using the Agilent Toolkit
VxiPnp34401	Visual Basic .NET - Agilent Toolkit	Calls VXIplug&play Driver using the Agilent Toolkit .NET Wrapper in Visual Basic .NET
Word	Visual Basic .NET	Calls Microsoft Word from Visual Basic .NET
XYGraph	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrate the use of the T&M Toolkit's XYGraph in Visual Basic .NET
YGraphWithMarkers	Microsoft Visual Basic .NET - Agilent Toolkit	Demonstrates Agilent Toolkit's YGraph using Markers and Trace in Visual Basic .NET

Title	Language	Description
34401_EZsample	Microsoft C#	Demonstrated how to use the 34401A IVI-COM Driver
ClassLibrary	Microsoft C# - Agilent Toolkit	Example of Toolkit DirectIO Class in C#
ComplexNumbers	Microsoft C# - Agilent Toolkit	Demonstrates Complex Numbers using the Agilent Toolkit in C#
dac_out	Microsoft C#	Sets Voltage on 34970A using IVI-COM Driver
DirectIOConsoleApplication	Microsoft C# - Agilent Toolkit	Example of Agilent Toolkit DirectIO in C# Console Application
DirectIOWindowsApplication	Microsoft C# - Agilent Toolkit	Example of Agilent Toolkit DirectIO in C# Windows Application
e36xx_EZsample	Microsoft C#	Sends commands to e36xx power supplies using IVI-COM Driver
GraphingComplexData	Microsoft C# - Agilent Toolkit	Shows use of Complex Numbers in Agilent Toolkit with C#
LabVIEW	Microsoft C#	Demonstrated calling LabVIEW COM Objects in C#
StripChart	Microsoft C# - Agilent Toolkit	Demonstrates the strip chart from the Agilent Toolkit in C#
Timing	Microsoft C# - Agilent Toolkit	Demonstrates use of Agilent Toolkit Timer Routines and Engineering Formatting in C#
ToolkitSampler	Microsoft C# - Agilent Toolkit	Demonstrates Agilent Toolkit capabilities with a Scope in C#
WaveformGraph	Microsoft C# - Agilent Toolkit	Demonstrates the Agilent Toolkit WaveformGraph in C#
XYGraph	Microsoft C# - Agilent Toolki	Demonstrate the use of the T&M Toolkit's XYGraph in C#
YGraph	Microsoft C# - Agilent Toolkit	Demonstrate the T&M Toolkit's YGraph in C#
YGraphWithMarkers	Microsoft C# - Agilent Toolkit	Demonstrates Agilent Toolkit's YGraph using Markers and Trace in C#

Title	Language	Description
33250_example3	NI LabVIEW	Initiatlizes, set waveform shape, amplitude, freq, voltage offset,
33250_example7	NI LabVIEW	sets arbitrary waveform
example1	NI LabVIEW	Initializes, closes, resets, revises query, runs self test, sends error msg, queries error, checks for errors, sends commands
example2	NI LabVIEW	Uses command passthrough functions, which allow all of instruments functionality to be executed
example3	NI LabVIEW	Uses subsystem functions of acquire, blankView, & channelSettings
Find Voltmeter	NI LabVIEW	Finds a Voltmeter and takes a measurement using 3 different driver technologies
Generate Waveforms	NI LabVIEW	Sets Arbitrary Waveform
Log Data	NI LabVIEW	Log battery Voltage to file.
Test Sequencing	NI LabVIEW	Selects and Runs a sequence of tests

Title	Language	Description
34401a stripchart	Microsoft Excel	Graphs 34401A data in a strip chart.
34401_bursts	Microsoft Excel	Takes 10 readings from a 34401 on a user form
34401_monitor	Microsoft Excel	Records DC voltage from 34401A
asciiarb	Microsoft Excel	Send pulse with variable rise and fall times to 33220A
binaryarb	Microsoft Excel	Sends pulse to 33220A using binary data
counter_bursts	Microsoft Excel	Retrieves data at the fastest possible rate from 53131A
counter_monitor	Microsoft Excel	Monitors 53131A frequency every 5 seconds
daq_34970a	Microsoft Excel	This worksheet contains the 3494A Instrument Control for communicating with the instrument.
datacapture54620	Microsoft Excel	Captures data from Scope
e3631a_test	Microsoft Excel	Characterizes a power MOSFET using a E3631A
excel_form	Microsoft Excel	Getting std command & IO form using 3494 control
excel_sheet	Microsoft Excel	Get instrument ID and set IO using 3494 control
ezmeasurement	Microsoft Excel	Uses MEASure, CONFig, and FETCh on 53131A
fet_2_pwrsupplies	Microsoft Excel	Characterizing a power MOSFET using two power supplies.
get image_measure	Microsoft Excel	Read frequency on Channel 1 of 54600 Scope
graphexample	Microsoft Excel	Macros for simple chart & strip chart creation in Microsoft Excel
idn	Microsoft Excel	Identifies IEEE 488.2 Instruments. Read DC Voltage on 34401A.
idn_frm	Microsoft Excel	Getting std IDN & IO form using 3494 control
macro stripchart	Microsoft Excel	Displays graph of frequency reading from 566xx scope
ontime with control	Microsoft Excel	Monitor frequency with 546xx Scopes
ontime with macro	Microsoft Excel	Monitor frequency on channel 1 using 54600 Scope Toolbar
pulse_instrcontrol	Microsoft Excel	Download square wave pulse to 33250A
pulse_scpi	Microsoft Excel	Downloads and output a square wave pulse to Arbs
samplewf	Microsoft Excel	Sample Waveform Data
user form	Microsoft Excel	Demonstrates using the Intuilink 54600 Scope Control
using sheets	Microsoft Excel	Demonstrates how to use the 54600 Intuilink Scope Control