Data Acquisition Toolbox™ Release Notes
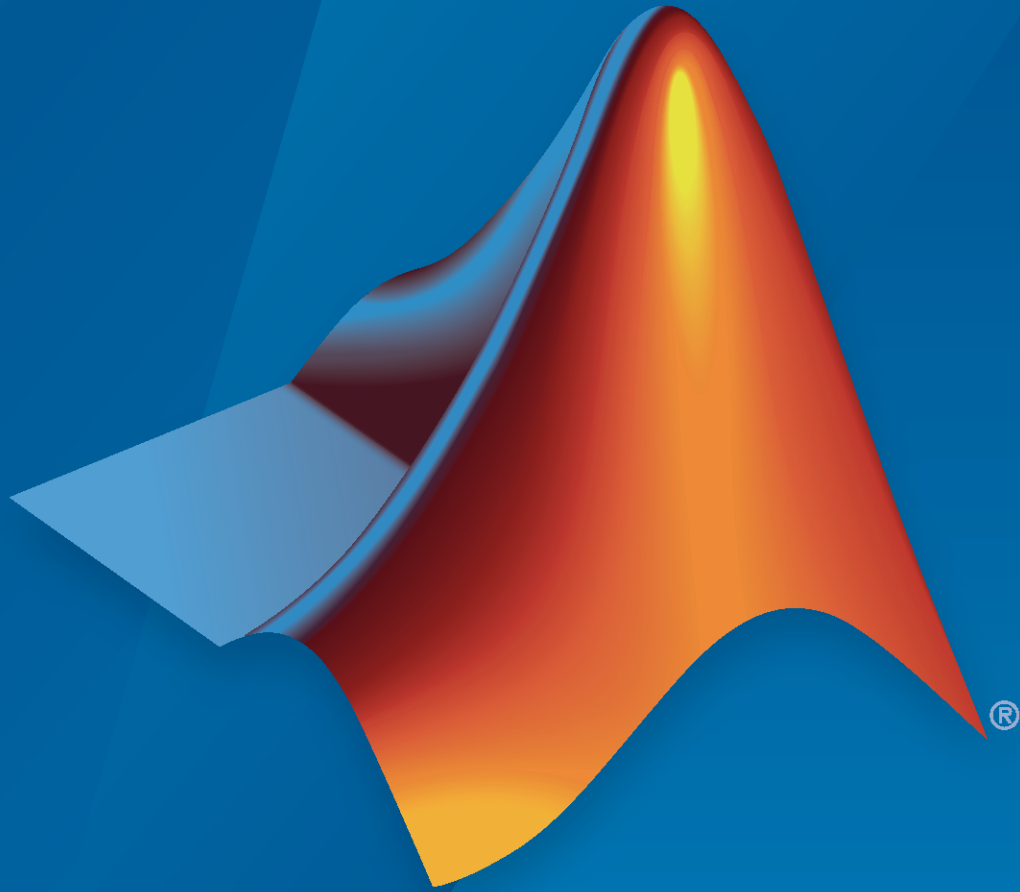
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The MathWorks, Inc.
1 Apple Hill Drive
Natick, MA 01760-2098

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Version: 4.3

New Features

Bug Fixes

NI Support: FieldDAQ Devices

Data Acquisition Toolbox now supports NI® FieldDAQ® devices. For example, the following code shows how to read 500 samples from a FieldDAQ FD-11601 at a rate of 1,000 samples per second.

```
devs = daqlist

devs =

  10×5 table

     VendorID         DeviceID                    Description                      Model              DeviceInfo
    _____    _____    _____    _____    _____

     "ni"          "Dev1"              "National Instruments(TM) USB-6211"  "USB-6211"            [1×1 daq.DeviceInfo]
     "ni"          "FieldDAQ1-Bank1"   "National Instruments(TM) FD-11601"  "FD-11601"            [1×1 daq.DeviceInfo]
     "ni"          "FieldDAQ1-Bank2"   "National Instruments(TM) FD-11601"  "FD-11601"            [1×1 daq.DeviceInfo]

devinfo = devs{2,"DeviceInfo"}

devinfo =

ni: National Instruments(TM) FD-11601 (Device ID: 'FieldDAQ1-Bank1')
   Analog input supports:
       -10 to +10 Volts range
       Rates from 500.0 to 102400.0 scans/sec
       4 channels ('ai0','ai1','ai2','ai3')
       'Voltage' measurement type

This bank is part of the 'FD-11601' device with the name 'FieldDAQ1'.

ch1 = addinput(d,"FieldDAQ1-Bank1","ai0","Voltage")

ch1 =

    Index    Type         Device          Channel    Measurement Type            Range
    _____    ____    _____    _____    _____    _____    _

      1      "ai"    "FieldDAQ1-Bank1"      "ai0"     "Voltage (Diff)"    "-10 to +10 Volts"     "

data = read(d,500);
data(1:4,:)

ans =

  4×1 timetable

     Time        FieldDAQ1-Bank1_ai0
    _____    _____

    0 sec              -0.31424
    0.001 sec           0.040702
    0.002 sec          -0.19196
    0.003 sec           0.19644
```

For a more detailed example, see "Acquire Data Using NI FieldDAQ Device".

For a complete list of supported FieldDAQ devices, see Supported Hardware.

New Examples

This release includes the following new examples:

- "Acquire Data Using NI FieldDAQ Device"
- "Create an Echometer Using Audio Measurements"

R2020b

Version: 4.2

New Features

Bug Fixes

Measurement Computing Support: Analog Output Generator and Analog Input Recorder

The **Analog Output Generator** and **Analog Input Recorder** apps now support Measurement Computing™ devices.

R2020a

Version: 4.1

New Features

Bug Fixes

Compatibility Considerations

New Command-Line Interface: The DataAcquisition object

A new command-line device interface is available through the `DataAcquisition` object. You create this interface object with the `daq` function.

Some of the advantages and capabilities of the new interface are:

- A single `addinput` function to add any kind of input channel, and a single `addoutput` function to add any kind of output channel
- Same set of functions for single scan and clocked operations, whether in foreground or background
- Simpler periodic waveform generation, including the ability to repeat signal generation from the defined data set without re-queuing
- Foreground operation: A single `write` function to load data and generate an output signal, and a single `read` function to acquire data
- Background operation: Callback functions and properties instead of listeners
- Read data after operations stop, simplifying acquisition of data in the background without callbacks or listeners

For more information and examples of common workflows, see Transition Your Code from Session to DataAcquisition Interface.

Compatibility Considerations

The session interface will be removed. Transition your code to the new command-line interface as soon as possible. The following table indicates the differences between these interfaces for a common task.

Session Interface	DataAcquisition Interface

`% Discover vendors and devices`
`v = daq.getVendors`
`dev = daq.getDevices`
	`% Simplified function names`
	`v = daqvendorlist`
	`dev = daqlist`

`% Create an interface and add a channel`
`s = daq.createSession('ni');`
`addAnalogOutputChannel(s,'Dev1','ao0','Voltage');`
	`% One function for any kind of output channel`
	`d = daq("ni")`
	`addoutput(d,"Dev1","ao0","Voltage");`

`% Queue data and generate a signal`
`queueOutputData(s,outputSignalData)`
`startForeground(s)`
	`% One function queues and generates`
	`write(d,outputSignalData)`

`% Generate continuous output in the background`
`s.IsContinuous = true;`
`queueOutputData(s,outputSignalData)`
`lh1 = addlistener(s, 'DataRequired', ...`
`      @(src,event)queueOutputData(src, outputSignalData));`
`startBackground(s)`
`pause(5) % Adjust duration of signal generation`
`stop(s)`
	`% No need for listeners or continual data queuing`
	`preload(d,outputSignalData);`
	`start(d,"RepeatOutput")`
	`pause(5) % Adjust duration of signal generation`
	`stop(d)`

Open Signal Analyzer from Analog Input Recorder

You can now open the Signal Analyzer app of Signal Processing Toolbox™ directly from the Analog Input Recorder. After you have recorded your data in the Analog Input Recorder, simply click Signal Analyzer on the toolstrip to perform analysis on the recorded data.

R2019b

Version: 4.0.1

Bug Fixes

R2019a

Version: 4.0

New Features

Bug Fixes

Compatibility Considerations

Analog Output Generator App: Generate analog output signals

The **Analog Output Generator** app provides a graphical interface for configuring data acquisition devices, defining their signals, and generating analog output. In this release the app supports National Instruments® and Windows® DirectSound devices.

Plug in your device, open the app, and begin previewing and generating signals. The app can generate DC outputs, test sine waves with a fixed frequency depending on the device, or waveforms defined by MATLAB® variables. Use the app to set timing, repetition, and other waveform parameters. For more information, see Generate Signals with the Analog Output Generator.
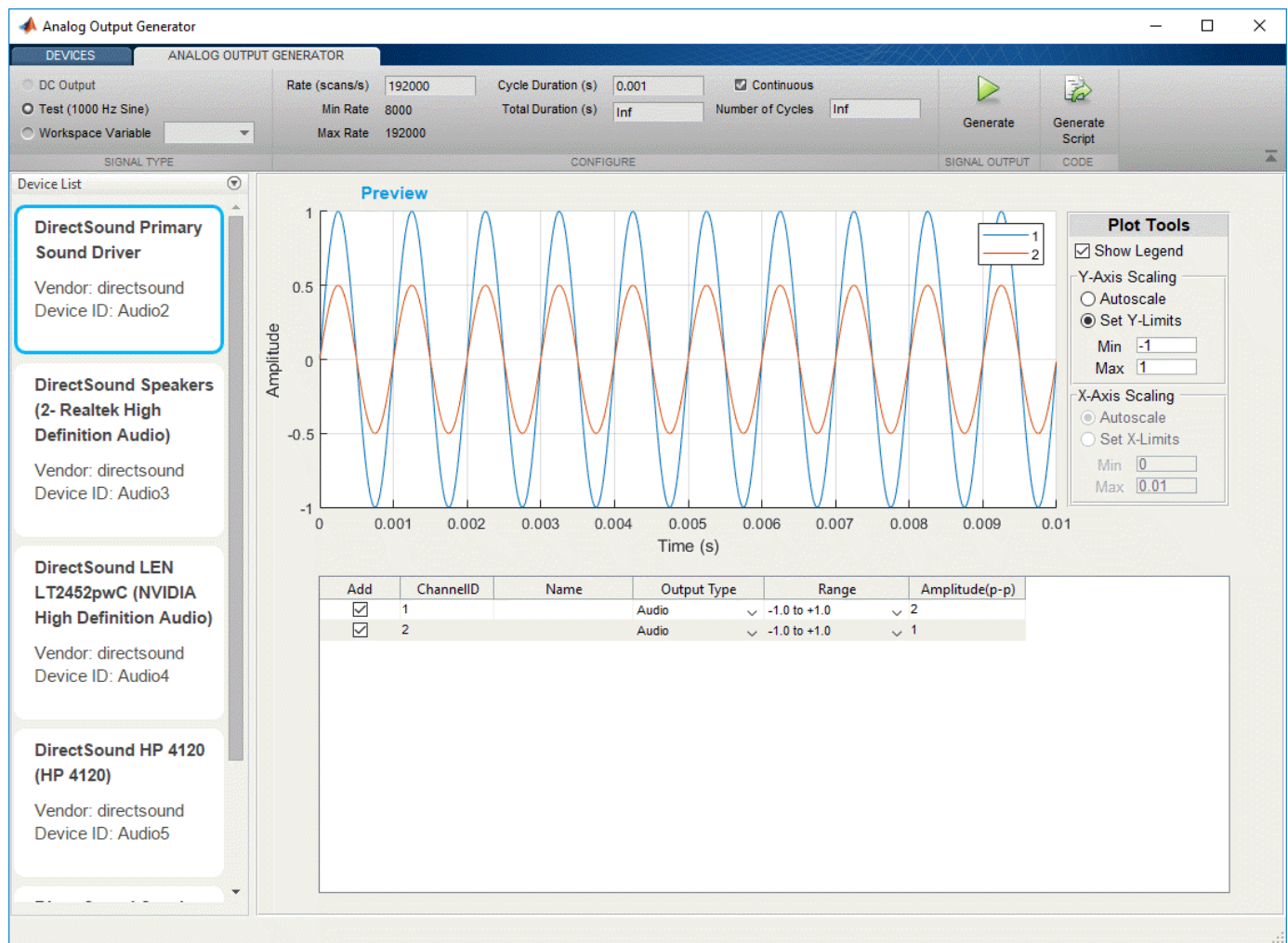
National Instruments Support: Removed support for certain NI-DAQmx devices

Because the minimum required NI-DAQmx driver version no longer supports the following National Instruments devices, they are no longer supported by Data Acquisition Toolbox:

* ENET-9163 (Carrier)

- NI 9233
- NI cDAQ-9172
- USB-9233
- WLS-9163 (Carrier)

For a full list of hardware supported by Data Acquisition Toolbox, see `Hardware Support`.

Compatibility Considerations

Applications that use these particular devices will no longer work.

New Examples

This release includes the following new examples showing how to use App Designer to create apps for data acquisition.

- Analog Trigger App
- Analog Trigger App by Using Stateflow Charts
- Live Data Acquisition App

R2018b

Version: 3.14

New Features

Bug Fixes

National Instruments Support: Connect to additional National Instruments devices

This release of Data Acquisition Toolbox provides new support for the following National Instruments devices.

```
9210
9215
9224
9251
```

For a full list of hardware supported by Data Acquisition Toolbox, see `Hardware Support`.

Measurement Computing Support: Connect to additional Measurement Computing devices

This release of Data Acquisition Toolbox provides new support for the following Measurement Computing devices.

```
USB-204
USB-1808X
```

Note: Analog output streaming is not supported on the USB-1808X.

For a full list of hardware supported by Data Acquisition Toolbox, see `Hardware Support`.

Digilent Analog Discovery 2 Support: Acquire data and generate signals with Digilent Analog Discovery 2 hardware

Data Acquisition Toolbox Support Package for Digilent® Analog Discovery™ Hardware now supports Digilent Analog Discovery 2 devices.

For a list of supported Digilent Analog Discovery devices, see Digilent Analog Discovery Support from MATLAB.

For information on installing support packages for particular vendors, see Data Acquisition Toolbox Supported Hardware.

Improved Single Scan Performance for National Instruments Devices

This release provides significantly reduced latency in `inputSingleScan` and `outputSingleScan` for National Instruments devices.

R2018a

Version: 3.13

New Features

Bug Fixes

Compatibility Considerations

Data Acquisition SDK: Add digital I/O support to custom adaptors that interface to third-party vendors and devices

This release provides support for digital input and output channels in custom adaptors built with the Data Acquisition Toolbox SDK. You can create adaptors that include single scan and streaming digital input/output.

For more information on the demo adaptor and creating a custom adaptor, see Build Custom Adaptors.

Digital I/O Channels

The following updates to the SDK allow you to define digital I/O channels:

• The demo adaptor source code includes the following new functions:

```
DemoAdaptor::initAdaptorImpl
DemoDriver::getDigitalChannelTypesImpl
DemoDriver::getChannelDirectionImpl
DemoDriver::setChannelDirectionImpl
```

There are corresponding `VendorAdaptor` and `VendorDriver` versions in the templates for the vendor driver. For more information, see Adaptor API Reference.

• The `custom_demo` source files include the following new macro:

```
GETADAPTOR
```

The `GETADAPTOR` macro should be used instead of calls to the function `AdaptorFactory::getAdaptor()`.

Digital I/O Streaming

The following SDK updates accommodate digital streaming:

• The following two new C++ file templates are provided in *matlabroot*/toolbox/daq/daqsdk/src/daqadaptor/DemoAdaptor and *matlabroot*/toolbox/daq/daqsdk/src/daqadaptor/VendorAdaptor:

```
daqstream_digital.cpp
daqstream_digital.hpp
```

See Demo Adaptor Description.

• To be consistent with the `daqstream_digital` code, the `daqstream_analog` source files include the following new function:

```
makeStream
```

For more information, see Streaming Input and Output and Streaming API Reference.

Compatibility Considerations

Adaptor MEX-files that were built in versions R2017a and R2017b should work in this release. Adaptor MEX-files built in this R2018a release should work in R2017a and R2017b, but only for support of analog input and output.

Source code that was used to create adaptors in earlier releases needs to be modified as follows before you can build an adaptor in R2018a:

- Your adaptor code must include definitions for the new functions described above. You can copy and paste these into your source file, defining them as you did for other unused functions. It is recommended that you compare the source file templates from the new and old releases to identify the additional functions.
- Custom function calls to `AdaptorFactory::getAdaptor()` should be replaced by calls to the `GETADAPTOR` macro.

R2017b

Version: 3.12

New Features

Bug Fixes

Analog Input Recorder App: Acquire and visualize analog input signals

The **Analog Input Recorder** app provides a graphical interface for configuring data acquisition devices, previewing their signals, and recording analog input signals. In this release the app supports National Instruments, Analog Devices®, and DirectSound devices.

Plug in your device, open the app, and you are ready to start viewing and recording data. For more information, see Acquire Data with the Analog Input Recorder.
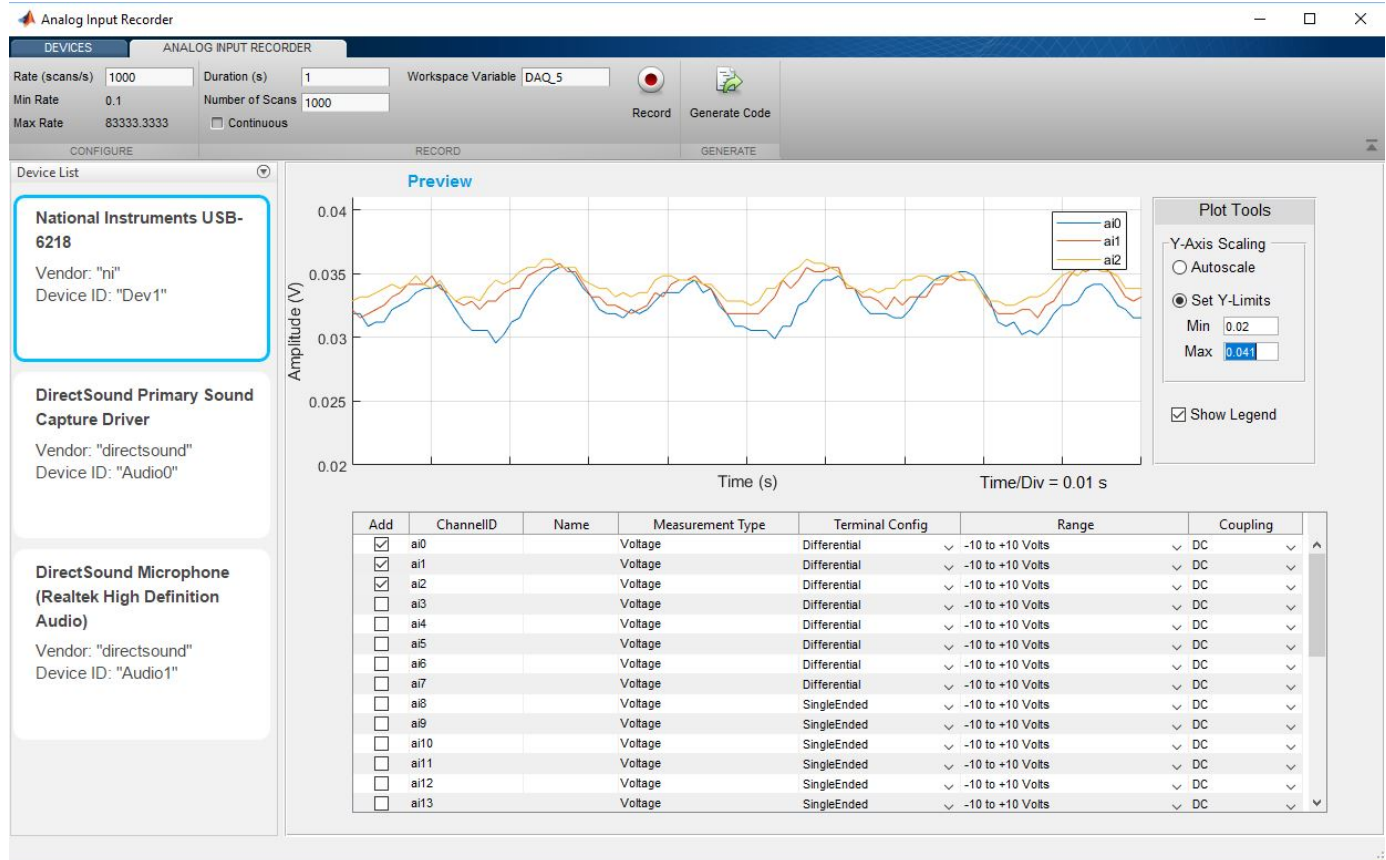
Hardware Support: Connect to additional National Instruments devices

R2017b supports the National Instruments NI cDAQ-9179 CompactDAQ chassis.

For a full list of supported hardware for the Data Acquisition Toolbox, see `Hardware Support`.

Hardware Support: Connect to additional Measurement Computing DAQ devices

Data Acquisition Toolbox provides new or enhanced support for the following Measurement Computing data acquisition devices in this release.

New Support	Enhanced Support
PCI-DAC6703 USB-1208HS-4AO USB-1604HS-2AO USB-1616FS USB-2404-10 USB-3101FS	USB-1208FS-Plus USB-1408FS-Plus Analog output streaming operations now supported for these devices.

For a full list of supported hardware for the Data Acquisition Toolbox, see `Hardware Support`.

R2017a

Version: 3.11

New Features

Bug Fixes

Data Acquisition SDK: Create custom adaptors to extend toolbox capabilities to third-party vendors and devices

You can now create your own adaptors to access third-party devices in Data Acquisition Toolbox. For more information on the SDK, see Build Custom Adaptors.

Measurement Computing Support: Acquire data from Measurement Computing data acquisition hardware

Data Acquisition Toolbox now supports Measurement Computing devices for analog input and analog output voltage operations. Among the devices now supported are the following:

```
USB-1208LS              USB-2020
USB-1208FS-Plus *       USB-205
USB 1408FS-Plus *       USB-234
USB-1608FS              USB-2537
USB-1608FS-PLUS         USB-2637
USB-1608GX-2A0          PCI-DAS6035
USB-1616HS-4            PCI-DAS6071
                        PCI-DAS6052
```

* Analog output (AO) streaming not supported.

For a complete and up-to-date list of supported MCC devices, see Measurement Computing DAQ Support from Data Acquisition Toolbox.

For information on installing support packages for particular vendors, see Data Acquisition Toolbox Supported Hardware.

R2016b

Version: 3.10

New Features

Bug Fixes

Compatibility Considerations

Simulink Blocks: Acquire and generate data in Simulink models using National Instruments, Analog Devices, and Digilent hardware

The following blocks are new in the Data Acquisition Toolbox block library for support of 64-bit MATLAB:

- Analog Input
- Analog Output
- Analog Input (Single Sample)
- Analog Output (Single Sample)
- Digital Input (Single Sample)
- Digital Output (Single Sample)

Compatibility Considerations

In releases prior to R2016a, some of the blocks in the Data Acquisition Toolbox had the same names as these new blocks. If you open a model containing these old blocks, the model will either fail to find some blocks, or report errors for others. You must remove these old blocks from your model and replace them with new blocks from the current library.

Hardware Support: Connect to additional National Instruments DAQ devices

In R2016b, the following additional National Instruments DAQ devices are supported.

CompactDAQ Controllers	C Series Devices	X Series Devices	Dynamic Signal Acquisition Devices	SC Express Devices
cDAQ-9132/34 cDAQ-9133/35	NI 9230 (BNC) NI 9232 (BNC) NI 9251 NI 9436	PXIe-6378 PXIe-6345 PXIe-6355 PXIe-6365 PXIe-6375	PXIe-4464	PXIe-4339

For a full list of supported hardware for the Data Acquisition Toolbox, see `Hardware Support`.

Advanced tab completion for functions

To get a list of options that you can use at a certain location in a function call, press **Tab** after entering the function name on the command line. The list of valid options appears and you can scroll to choose an argument. For example, when you create a session with `daq.createSession`, you can get a list of supported vendors. Type the following:

```
s = daq.createSession(
```

When you press **Tab** after the left parentheses, the list of vendors appears:.

```
adi
digilent
directsound
ni
```
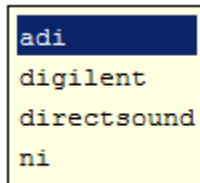
```
>> s = daq.createSession('
```

Double-click the name of the vender you want to insert, then complete the line.

```
s = daq.createSession('directsound')
```

To continue with a session channel on a device, use tab completion with the addAudioOutputChannel function to get a list of devices. Type the following:

```
ch = addAudioOutputChannel(s,
```

Then press **Tab**:

```
Audio2
Audio3
Audio4
```
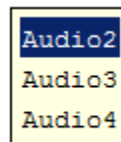
```
>> ch = addAudioOutputChannel(s,'Audio
```

Double-click your choice again. Continue until the line is complete:

```
>> ch = addAudioOutputChannel(s,'Audio3','2')
```

You can use this technique to construct any toolbox function call where the input at the specific location is limited to a choice of defined character vectors.

R2016a

Version: 3.9

New Features

Bug Fixes

Compatibility Considerations

Hardware Support: Measure and source voltage and current from Analog Devices ADALM1000 hardware

Data Acquisition Toolbox provides a support package for the Analog Devices ADALM1000 source-measurement unit (SMU). To install the support package from MATLAB, in the Home tab click **Add-Ons > Get Hardware Support Packages**. For more information on support package availability and installation, see Supported Hardware.

Legacy interface removed

The Data Acquisition Toolbox legacy interface has been removed. Only the session-based interface is supported on 64-bit Windows architectures.

Compatibility Considerations

Interface Code

Legacy interface code now generates an error. For this release, you must update legacy code to use the session-based interface. The following table shows a small sample of legacy vs. session interface code.

Legacy code	Session code

`ai = analoginput('nidaq','Dev1');`
`addchannel(ai,0);`
`start(ai);`
`data = getdata(ai);`
	`s = daq.createSession('ni');`
	`addAnalogInputChannel(s,'Dev1',1,'voltage')'`
	
	`data = startForeground(s);`

For more information about updating your code to the session interface, see Transition Your Code to Session-Based Interface.

Simulink Blocks

With the removal of the legacy interface, there are no Simulink® blocks provided by Data Acquisition Toolbox in this release.

32-bit drivers no longer supported

In R2016a, 32-bit MATLAB is no longer supported, therefore 32-bit device drivers are no longer supported in this release.

Compatibility Considerations

With the removal of 32-bit driver support, the only vendors supported by Data Acquisition Toolbox are Digilent, National Instruments, DirectSound, and Analog Devices, as shown in the output of the `daq.getVendors` function:

```
daq.getVendors
```

```
Number of vendors: 4
Analog Devices
index     ID          Operational         Comment
----- ----------- ----------- -----------------------
```

```
1    ni           true        National Instruments
2    digilent     true        Digilent Inc.
3    adi          true        Analog Devices Inc.
4    directsound  true        DirectSound
```

Functionality being removed or changed

Functionality	Result	Use Instead	Compatibility Considerations
addchannel	Error	daq.createSession, addAnalogInputChannel, addAnalogOutputChannel	Analog input and analog output objects removed. Use the session interface instead.
addline	Error	daq.createSession, addDigitalChannel	Digital IO object removed. Use the session interface instead.
addmuxchannel	Error	Not applicable	Analog input object removed.
analoginput, analogoutput	Error	daq.createSession, addAnalogInputChannel, addAnalogOutputChannel	Analog input and analog output objects removed. Their properties and methods are no longer available. Use the session interface instead, as described in Transition Your Code to Session-Based Interface.
daqcallback	Error	addlistener	Background operations use listeners to monitor events.
daqfind	Error	daq.getVendors	Use the session interface instead.
daqhwinfo	Error	daq.getDevices	Use the session interface instead.
daqmem	Error	memory	Use MATLAB memory monitoring.
daqregister	Error	Not applicable	No longer required.

Functionality	Result	Use Instead	Compatibility Considerations
`digitalio`	Error	`daq.createSession`, `addDigitalChannel`	Digital IO object removed. Its properties and methods are no longer available. Use session interface instead, as described in Transition Your Code to Session-Based Interface.
`flushdata`	Error	Not applicable	No longer required.
`getdata`	Error	`startForeground`, `startBackground`, `DataAvailable`	Use the session interface instead.
`getsample`, `getvalue`	Error	`inputSingleScan`	Use the session interface instead.
`ischannel`, `isdioline`, `islogging`, `isrunning`, `issending`, `isvalid`	Error	Not applicable	Legacy objects not supported.
`load`	Error	Not applicable	Legacy objects not supported.
`makenames`	Error	Not applicable	No replacement
`muxchanidx`	Error	Not applicable	No replacement
`obj2mfile`	Error	Not applicable	No replacement
`peekdata`	Error	Not applicable	No replacement
`propinfo`	Error	Not applicable	No replacement
`putdata`	Error	`startForeground`, `startBackground`, `DataRequired`	Use the session interface instead.
`putsample`, `putvalue`	Error	`outputSingleScan`	Use the session interface instead.
`save`	Error	Not applicable	Legacy objects not supported.
`setverify`	Error	Not applicable	No replacement
`showdaqevents`	Error	Not applicable	No replacement
`softscope`	Error	Not applicable	Softscope removed.
`start`	Error	`startForeground`, `startBackground`	Use the session interface instead.
`trigger`	Error	`addTriggerConnection`	Use the session interface instead.

Functionality	Result	Use Instead	Compatibility Considerations
Analog Input block	Unresolved link in model	Not applicable	Block library removed.
Analog Output block	Unresolved link in model	Not applicable	Block library removed.
Analog Input (Single Sample) block	Unresolved link in model	Not applicable	Block library removed.
Analog Output (Single Sample) block	Unresolved link in model	Not applicable	Block library removed.
Digital Input block	Unresolved link in model	Not applicable	Block library removed.
Digital Output block	Unresolved link in model	Not applicable	Block library removed.
32-bit driver support	Error	64-bit driver	Use 64-bit drivers.

R2015b

Version: 3.8

New Features

Bug Fixes

Compatibility Considerations

Support for additional National Instruments DAQ devices

In R2015b, the following additional National Instruments DAQ devices are supported.

- NI 9242 and 9244 C Series devices
- NI 9212, 9218, 9238, and 9437 C Series devices
- NI 6345, 6355, 6365, and 6375 X Series devices
- NI PXIe-4463 Dynamic Signal Acquisition device
- NI 9209, 9216/26, 9246/47, 9230, and 9344 C Series devices

For a full list of supported hardware for the Data Acquisition Toolbox, see `Hardware Support`.

Removal of 32-bit MATLAB and the legacy interface

Starting in R2016a, 32-bit MATLAB will no longer be supported. For Data Acquisition Toolbox, that means starting in R2016a, the legacy interface will no longer be supported.

In R2015b, you will receive a warning that the legacy interface will be unavailable in the following release. In R2016a, you will receive errors if you try to use it.

Note that the session-based interface is supported on 64-bit Windows. It is recommended that you transition to that interface.

Compatibility Considerations

Since 32-bit MATLAB will no longer be supported starting in R2016a, the legacy interface will no longer be available at that point. In this release, you will receive the following warning when you use the legacy interface.

```
Warning: Legacy interface will no longer be available starting
in MATLAB R2016a. Consider transitioning your code to session-based
interface. If you are unable to find information on transitioning your
code because you are using hardware not supported in the session-based
interface, contact MathWorks technical support.
```

For more information about switching to the session interface, see Transition Your Code to Session-Based Interface.

R2015a

Version: 3.7

New Features

Bug Fixes

Support added for new National Instruments devices

Additional data acquisition hardware support was added for NI 9242 C Series, NI 9244 C Series, NI USB-6001, NI USB-6002, NI USB-6003, NI 9222 (BNC) C Series and NI 9223 (BNC) C Series devices.

R2014b

Version: 3.6

New Features

Bug Fixes

Enhanced analog output stability for National Instruments devices

Analog output using National Instruments devices with Data Acquisition Toolbox is now more stable.

Support for additional Measurement Computing devices

Additional data acquisition hardware support was added for USB-201, USB-204 and USB-2600 series. You can use these Measurement Computing devices in the legacy interface.

Support Added for Waveform Function Generation

You can now use Digilent Analog Discovery devices with the session-based interface to generate waveform functions. For more information see `addFunctionGeneratorChannel`.

R2014a

Version: 3.5

New Features

Bug Fixes

Multichannel Windows sound card support using the session-based interface

You can now use the 64–bit multichannel Windows sound cards with the Data Acquisition Toolbox session-based interface.

Windows DirectSound sound card support via Support Package Installer

You can now install Windows DirectSound sound card drivers via the Support Package Installer. You can use Windows DirectSound sound cards with the session-based interface.

Support for National Instruments NI-DAQmx devices via Support Package Installer

You can now install National Instruments NI-DAQmx device drivers via the Support Package Installer. You can use National Instruments NI-DAQmx devices with the session-based interface.

R2013b

Version: 3.4

New Features

Bug Fixes

Support for Measurement Computing USB 1208FS-PLUS, USB 1408FS-PLUS, and USB 1608 FS-PLUS devices using legacy interface

You can now use the legacy interface with Measurement Computing USB 1208FS-PLUS, USB 1408FS-PLUS, and USB 1608 FS-PLUS.

Support for National Instruments CompactDAQ chassis cDAQ-9184 using session-based interface

You can now use the session-based interface with National Instruments CompactDAQ chassis NI cDAQ-9184.

R2013a

Version: 3.3

New Features

Bug Fixes

Support for clocked digital I/O on National Instruments devices using session-based interface

You can now use the session-based interface with National Instruments digital devices to acquire and generate clocked digital data.

Support Package for Digilent Analog Discovery design kit used in circuits courses

You can now install Digilent Analog Discovery hardware via the Support Package Installer. You can use Digilent's analog input capability with the session-based interface.

Support for array binary-to-decimal conversion

You can now convert arrays of binary values to hexadecimal or decimal values, and vice versa using the conversion functions.

R2012b

Version: 3.2

New Features

Bug Fixes

Support for Digital I/O on National Instruments devices using session-based interface

You can now use the session-based interface with National Instruments digital devices to acquire and generate non-clocked digital data.

AutoSyncDSA Property for automatically synchronizing National Instruments DSA devices using RTSI or PXI bus in session-based interface

You can use the AutoSyncDSA property to synchronize PXI or PCI devices on the same chassis in a session.

Support for additional National Instruments devices using session-based interface

You can use National Instruments digital devices with the session-based interface. See the Supported Hardware page for a list of supported National Instruments digital devices.

Additionally you can use NI 9232 and NI PXIe-4357 SC Express RTD device with the session-based interface.

R2012a

Version: 3.1

New Features

Bug Fixes

Session Synchronization Capability

You can now synchronize operations in the session-based interface using hardware triggers and scan clocks.

Support Added for Microphone Channels

You can now perform microphone measurements on National Instruments devices using the session-based interface.

Support Added for IEPE Channels

You can now perform generic IEPE measurements on National Instruments devices using the session-based interface.

Support Added for New National Instruments CompactDAQ Chassis

Additional data acquisition support was added for the Ethernet chassis NI cDAQ-9188 and these 1-Slot CompactDAQ chassis:

NI cDAQ-9171
NI cDAQ-9181
NI cDAQ-9191

Support Added for New National Instruments Devices

Additional data acquisition hardware support was added for these National Instruments devices:

NI USB-6341	NI PCIe-6509
NI USB-6343	NI PXI-4472
NI USB-6351	NI PXI-6602
NI USB-6353	NI PXI-6608
NI USB-6356	NI PXI-6624
NI USB-6361	NI PXI-6723
NI USB-6363	NI PXI-6733
NI USB-6366	NI PXIe-4492
NI PCI-6601	NI PXIe-4497
NI PCI-6602	NI PXIe-4499
NI PCI-6713	NI WLS-9163

Support Added for New Measurement Computing Devices

Additional data acquisition hardware support was added for USB-1608G, USB-1608GX and USB-1608GX-2AO. You can use these Measurement Computing devices in the legacy interface.

R2011b

Version: 3.0

New Features

Bug Fixes

Expanded Support for National Instruments Devices in the Session-Based Interface

You can now use most supported National Instruments devices in the session-based interface. See the Supported Hardware page for a list of supported National Instruments devices.

Support Added for Bridge Measurements

You can now perform bridge measurements on National Instruments using the session-based interface.

Support Added for RTD Channels

You can now perform RTD measurements on National Instruments using the session-based interface.

Support Added for New Thermocouple Device

You can now use the National Instruments `NI USB-TC01` Thermocouple measurement device with Data Acquisition Toolbox, using the session-based interface.

Support Removed for Two National Instruments USB Devices

Support for NI USB-9263 and NI USB-9264 devices removed from the legacy interface of Data Acquisition Toolbox. Use these devices with the session-based interface.

R2011a

Version: 2.18

New Features

Bug Fixes

Support Added for Counters and Timers

You can now use counter and timer subsystems on National Instruments CompactDAQ devices in Data Acquisition Toolbox.

Support Added for IEPE Accelerometer Measurements

You can now directly access IEPE accelerometer measurements on a National Instruments CompactDAQ device.

Support Added for NI-DAQmx Devices

Additional data acquisition hardware support was added for NI-DAQmx Version 9.2.1 devices as follows:

NI PCIe-6509	NI USB-6351
NI PXIe-4492	NI USB-6353
NI PXIe-4497	NI USB-6356
NI PXIe-4499	NI USB-6361
NI USB-6341	NI USB-6363
NI USB-6343	NI USB-6366

Note You must use NI-DAQmx driver Version 9.1 or greater with Data Acquisition Toolbox.

New Hardware Support for National Instruments Chassis-Based Devices

Additional data acquisition hardware support was added for NI 9222, and NI 9223 devices.

64-Bit Windows Support

You can now use the session-based interface of Data Acquisition Toolbox with a Windows 64-bit system. The legacy interface does not support use of the 64-bit system.

NI-DAQmx Driver Requirement

You must use Version 9.1 of the NI-DAQmx driver with Data Acquisition Toolbox.

R2010b

Version: 2.17

New Features

Bug Fixes

Support Added for National Instruments CompactDAQ Devices

You can use the session-based interface of the Data Acquisition Toolbox to communicate with National Instruments CompactDAQ devices. Currently the toolbox only supports devices with analog input and output channels. For a complete list of supported CompactDAQ devices, visit the Data Acquisition Toolbox Supported Hardware page at the MathWorks website.

Current and Thermocouple Measurements for CompactDAQ Devices

You can use CompactDAQ devices that support current and thermocouple measurement types with the session-based interface of the Data Acquisition Toolbox.

New Hardware Support

Data Acquisition Toolbox now supports the analog and digital I/O subsystems in the National Instruments Educational Laboratory Virtual Instrumentation Suite (ELVIS) II+ devices.