



Agilent Instrument Control Framework for Agilent LC/CE and GC instruments in Non-Agilent Chromatography Data Systems A.02.03

Release Notes

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NOTE

Agilent Instrument Control Framework offers a fixed set of supported modules with the required configuration, control and method parameters.

- Depending on the hosting CDS and its configuration some of the functionality may not be available.
- ICF provides techniques and/or functionality which may require specific features (e.g. FLD Spectra require 3D Data Evaluation) for data evaluation and reporting.

Please contact your Data System provider or check the Data System Provider release notes, if there are known limitations or restrictions.

NOTE

Following rules apply to run Agilent LC/CE and GC instruments in a non-Agilent Chromatography Data System (CDS).

- The 3rd-party CDS software vendor is responsible for compatibility testing with the respective CDS revision.
 - The 3rd-party CDS software vendor defines the minimum firmware revision required for CDS compatibility.
 - The 3rd-party CDS release notes issued by the respective CDS vendor may use different terminology for the firmware requirements such as "tested firmware", "supported firmware", "firmware requirements", "minimum tested firmware", etc.
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NOTE

Additional Agilent LC Firmware Set Interoperability and Support Statement:

- An Agilent LC instrument running a current firmware set is fully supported as long as it meets or exceeds the minimum firmware requirements specified by the 3rd-party CDS software vendor and meets Agilent's firmware set/firmware interoperability requirements.
 - Agilent releases LC firmware updates as so-called "firmware sets".
 - All Agilent LC instrument firmware sets have been designed and tested to be truly and strictly backward compatible to the installed software base (CDS).
 - The module firmware contained in each set is fully compatible and interoperable with all other module firmware of the same set.
 - Agilent recommends using always the latest module firmware revision of a firmware set in order to avoid interoperability issues.
 - Generally, Agilent recommends keeping the LC instrument firmware always current.
 - Do not mix firmware revisions between different sets. Agilent does not guarantee mixed firmware revisions from older or newer sets.
 - If you have to document the firmware revision (for validation reasons) please use the term "Revision XXX or later" or "Firmware from Set XXX or later". This might help on discussions in case of required updates due to malfunctions that have been corrected in later releases.
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NOTE**Agilent GC Firmware Interoperability and Support Statement:**

- Agilent releases GC firmware updates independently of software releases.
 - All Agilent GC instrument firmware revisions have been designed and tested to be backward compatible to the installed software base (CDS).
 - Agilent recommends always using the latest module firmware revision in order to avoid interoperability issues.
 - Generally, Agilent recommends keeping the GC instrument firmware current.
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Instrument Control Framework (ICF) Revision A.02.03

What's New in Agilent Instrument Control Framework A.02.03

Agilent LC/CE Package A.02.03

- Added support for G7167A/B Agilent 1290 Infinity Multisampler

Supported Drivers

Agilent Instrument Control Framework A.02.03 [99]

- Agilent LC/CE Driver Package A.02.03 [60]
- Agilent GC Driver Package A.02.02 [59]

Supported Operating Systems

		Windows 7 SP1 32 / 64 Bit	Windows 8.1 32 / 64 Bit	Windows Server 2008 R2	Windows Server 2012 R2
Agilent Instrument Control Framework	A.02.03	X	X	X	X
Agilent LC/CE Driver Package	A.02.03	X	X	X	X
Agilent GC Driver Package	A.02.02	X	X	X	X

Minimum Required .NET Framework

	Revision	Minimum .NET framework
Agilent Instrument Control Framework	A.02.03	Microsoft .NET 3.5
Agilent LC/CE Driver Package	A.02.03	Microsoft .NET 3.5
Agilent GC Driver Package	A.02.02	Microsoft .NET 3.5

Supported Agilent LC/CE Hardware for A.02.03

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.32
	G1321C	A.06.54
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.32
	G1361A	A.06.50
Prep Pump Cluster Solution	Pump Cluster (up to 4x G1361A)	
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.32
	G1311C	A.06.32
	G4204A	A.06.50
	G5611A	A.06.32

	Module type	Minimum required firmware version*
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.32
	G1376A	A.06.10
	G2226A	A.06.10
	G4220A	B.06.23
	G4220B	B.06.43
	G4302A	A.06.32
Refractive index detector	G1362A	A.06.10
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G1389A	A.06.10
	G4303A	A.06.54
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.32
	G1377A	A.06.12
	G4226A	A.06.31
	G5667A	A.06.32
	G2258A	A.06.50
	G2260A	A.06.50
Multi Sampler	G7167A	D.06.60
	G7167B	D.06.60
Thermostat	G1330A	n/a
	G1330B	n/a

	Module type	Minimum required firmware version*
Valves	G1156A	A.06.02
	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1162A	A.06.02
	G1163A	A.06.02
	G1170A	B.06.40 Master Module C.06.40 Sub Module
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.32
	G1314E	B.06.32
	G1314F	B.06.32
Fraction collector	G1364A	A.06.53
	G1364B	A.06.53
	G1364C	A.06.53
	G1364D	A.06.53
	G5664A	A.06.53
Fraction Collector Cluster Solution	up to 4x G1364A-C, G5664A where one module acts as recovery fraction collector	
Column compartment cluster	G1316C	A.06.17

	Module type	Minimum required firmware version*
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40
Evaporative Light Scattering Detector (ELSD)	G4218A	1.3, 1.4
Universal Interface Box (UIB)	G1390B	B.06.53 Master Module C.06.53 SubModule
Flexible Cube	G4227A	B.06.52 Master Module C.06.52 Submodule
Super Fluid Chromatograph	G4301A	A.03.07
High Dynamic Range Dad Cluster	2 x G4212A/B	B.06.57
1120 Compact LC	G4286A	B.06.50
	G4287A	B.06.50
	G4288A	B.06.50
	G4289A	B.06.50
	G4290A	B.06.50
1220 LC system	G4286B	B.06.50
	G4287B	B.06.50
	G4288B	B.06.50
	G4289B	B.06.50
	G4290B	B.06.50
	G4291B	B.06.50
	G4292B	B.06.50
	G4293B	B.06.50
G4294B	B.06.50	

	Module type	Minimum required firmware version*
1220 LC system VL	G4288C	B.06.50
	G4289C	B.06.50
	G4290C	B.06.50
	G4293C	B.06.50
7100 Capillary Electrophoresis	G7150A	B.06.25
	G7151A	B.06.25

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Supported Agilent GC Hardware for A.02.03

GC Hardware Compatibility

NOTE

In general the communication is handled via LAN.
All available GC valves are supported.

	Module type	Minimum required firmware version*	Inlets	Detectors
7890B	G3440B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3442B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3443B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
7890A	G3440A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3442A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3443A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
7820	G4350A	A.01.12	S/S, P/P	TCD, FID, NPD, μ ECD
6890A	G1530A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
6890Plus	G1530A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
6890N	G1530N	N.03.07	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540N	N.03.07	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB

	Module type	Minimum required firmware version*	Inlets	Detectors
6850	G2630A (Serial# >= US10243001)	A.06.02	S/S, P/P, COC, PTV	TCD, FID, FPD, μ ECD, AIB
6850	G2630A (Serial# <= US00003200)	A.03.07	S/S, P/P, COC, PTV	TCD, FID, FPD, μ ECD, AIB

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

GC Sampler Autosampler and Tray Compatibility

NOTE

The communication for GC samplers and trays are in general handled through the GC.

	Hardware	Module type	Minimum required firmware version*
7890 Series	7693A	G3430A GC ALS Controller	A.02.13
		G4513A Injector	A.10.08
		G4514A Tray	A.10.16
		G4515A BCR/Mixer	A.10.04
		G4521A LVI Syringe Carriage	n/a
		G4522A Cooling Accessory	n/a
		G4520A Tray with BCR/Mixer	A.10.16/A.10.04, see above
	7683A	G2613A Injector	A.10.01
		G2614A Tray	A.02.02
		G2615A BCR/Mixer	n/a
7683B	G2913A Injector	A.11.03	
	G2614A Tray	A.02.02	
	G2615A BCR/Mixer	n/a	
7820 Series	7693	G3430A GC ALS Controller	A.02.13
		G4513A Injector	A.10.08
	7650	G3430A GC ALS Controller	A.02.13
		G4567A Injector	A.10.06
6890	7693	G4516A ALS Controller	A.01.07
		G4513A Injector	A.10.08
		G4514A Tray	A.10.16
		G4515A BCR/Mixer	A.10.04
		G4517A 6890 Plus ALS Card Upgrade	A.01.06
		G4521A LVI Syringe Carriage	n/a
		G4522A Cooling Accessory	n/a
		G4520A Tray with BCR/Mixer	A.10.16/A.10.04, see above

	Hardware	Module type	Minimum required firmware version*
6890 (cont.)	7683B	G2912A ALS Controller	A.02.02
		G4516A ALS Controller	A.01.07
		G2913A Injector	A.11.03
		G2614A Tray	A.02.02
		G2916A Tray	A.02.02
		G2615A BCR/Mixer	n/a
	7683A	G2612A ALS Controller	A.02.02
		G4516A ALS Controller	A.01.06
		G2613A Injector	A.10.07
		G2614AT ray	A.02.02
		G2615A BCR/Mixer	n/a
	7673C	G1512A ALS Controller	A.01.12
		G1513A Injector	A.09.15
		18596C Tray	n/a
		G1926A BCR/Mixer	n/a
	7673B	18593B Injector	B.08.00
		18596BTray	n/a
		G2615ABCR/Mixer	n/a
6850	7683B	G2613A Injector	A.11.03
	7693	G4513A Injector	A.10.08
	6850	G2880A Injector	

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

7697A Headspace Compatibility

NOTE

In general the communication is handled via LAN.

	Module type	Minimum required firmware version*
7697A	G4556A	A.01.06
7697A	G4557A	A.01.06
G1888A	Headspace	A.01.10

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Instrument Control Framework (ICF) Revision A.02.02

What's New in Agilent Instrument Control Framework A.02.02

Agilent GC Package A.02.02

- Added Support for 7890A Agilent GC
- Added Support for 7890B Agilent GC
- Added Support for 6890A Agilent GC
- Added Support for 6890Plus Agilent GC
- Added Support for 6890N Agilent GC
- Added Support for 6850 Agilent GC
- Added Support for 7693/7683A/7683B GC Auto Sampler
- Added Support for 7697A Headspace Sampler
- Added support for various GC Automatic Samplers and Trays (see [“Supported Agilent GC Hardware for A.02.02”](#) on page 19)
- Added Support for G1888A Agilent Headspace Sampler

Fixed Bugs

- 226147: ICF does not provide the Injector Name fields
- 226148: ICF does not provide the Firmware Version fields
- 225152: CE Method not working for CEC Mode and/or MS Installed soft configuration option

Supported Drivers

Agilent Instrument Control Framework A.02.02 [89]

- Agilent LC/CE Driver Package A.02.02 [57]
- Agilent GC Driver Package A.02.02 [77]

Supported Operating Systems

		Windows XP SP3 32 Bit	Windows Vista 32 Bit	Windows 7 32 Bit	Windows 7 64 Bit	Windows Server 2003 R2	Windows Server 2008 R2
Agilent Instrument Control Framework	A.02.02	Best effort	X	X	X	X	X
Agilent LC/CE Driver Package	A.02.02	Best effort	X	X	X	-	X
Agilent GC Driver Package	A.02.02	Best effort	-	X	X	-	X

Minimum Required .NET Frameworks

	Revision	Minimum .NET framework
Agilent Instrument Control Framework	A.02.02	Microsoft .NET 3.5
Agilent LC/CE Driver Package	A.02.02	Microsoft .NET 3.5
Agilent GC Driver Package	A.02.02	Microsoft .NET 3.5

Supported Agilent LC/CE Hardware for A.02.02

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
	G1321C	A.06.53
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.30
	G1361A	A.06.50
Prep Pump Cluster Solution	Pump Cluster (up to 4x G1361A)	

	Module type	Minimum required firmware version*
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G4204A	A.06.50
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G1376A	A.06.10
	G2226A	A.06.10
	G4220A	B.06.23
	G4220B	B.06.43
G4302A	A.06.30	
Refractive index detector	G1362A	A.06.10
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G1389A	A.06.10
	G4303A	A.06.54
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G1377A	A.06.12
	G4226A	A.06.30
	G5667A	A.06.31
	G2258A	A.06.50
	G2260A	A.06.50
Thermostat	G1330A	n/a
	G1330B	n/a

	Module type	Minimum required firmware version*
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1162A	A.06.02
	G1163A	A.06.02
	G1170A	C.06.40
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30
Fraction collector	G1364A	A.06.53
	G1364B	A.06.53
	G1364C	A.06.53
	G1364D	A.06.53
	G5664A	A.06.53
Fraction Collector Cluster Solution	up to 4x G1364A-C, G5664A where one module acts as recovery fraction collector	
Column compartment cluster	G1316C	A.06.17
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40

	Module type	Minimum required firmware version*
Evaporative light scattering detector	G4218A	1.3, 1.4
UIB	G1390B	B.06.53
Flexible cube	G4227A	B.06.52
Super Fluid Chromatograph	G4301A	A.03.07
High Dynamic Range Dad Cluster	2 x G4212A/B	B.06.57
1120 Compact LC	G4286A	B.06.50
	G4287A	B.06.50
	G4288A	B.06.50
	G4289A	B.06.50
	G4290A	B.06.50
1220 LC system	G4286B	B.06.50
	G4287B	B.06.50
	G4288B	B.06.50
	G4289B	B.06.50
	G4290B	B.06.50
	G4291B	B.06.50
	G4292B	B.06.50
	G4293B	B.06.50
G4294B	B.06.50	
1220 LC system VL	G4288C	B.06.50
	G4289C	B.06.50
	G4290C	B.06.50
	G4293C	B.06.50
7100 Capillary Electrophoresis	G7150A	B.06.24
	G7151A	B.06.24

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Supported Agilent GC Hardware for A.02.02

GC Hardware Compatibility

NOTE

In general the communication is handled via LAN.

All available GC valves are supported.

	Module type	Minimum required firmware version*	Inlets	Detectors
7890B	G3440B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3442B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3443B	B.02.02	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
7890A	G3440A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3442A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
	G3443A	A.01.15	S/S, P/P, COC, PTV, PCM, VI, MMI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB, HT-PTV
7820	G4350A	A.01.12	S/S, P/P	TCD, FID, NPD, μ ECD
6890A	G1530A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
6890Plus	G1530A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540A	A.03.05	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
6890N	G1530N	N.03.07	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB
	G1540N	N.03.07	S/S, P/P, COC, PTV, PCM, VI	TCD, FID, NPD, FPD ECD, μ ECD, DualWFPD, AIB

Instrument Control Framework (ICF) Revision A.02.02

Supported Agilent GC Hardware for A.02.02

	Module type	Minimum required firmware version*	Inlets	Detectors
6850	G2630A (Serial# >= US10243001)	A.06.02	S/S, P/P, COC, PTV	TCD, FID, FPD, μ ECD, AIB
6850	G2630A (Serial# <= US00003200)	A.03.07	S/S, P/P, COC, PTV	TCD, FID, FPD, μ ECD, AIB

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

GC Sampler Autosampler and Tray Compatibility

NOTE

The communication for GC samplers and trays are in general handled through the GC.

	Hardware	Module type	Minimum required firmware version*
7890 Series	7693A	G3430A GC ALS Controller	A.02.13
		G4513A Injector	A.10.08
		G4514A Tray	A.10.16
		G4515A BCR/Mixer	A.10.04
		G4521A LVI Syringe Carriage	n/a
		G4522A Cooling Accessory	n/a
		G4520A Tray with BCR/Mixer	A.10.16/A.10.04, see above
	7683A	G2613A Injector	A.10.01
		G2614A Tray	A.02.02
		G2615A BCR/Mixer	n/a
7683B	G2913A Injector	A.11.03	
	G2614A Tray	A.02.02	
	G2615A BCR/Mixer	n/a	
7820 Series	7693	G3430A GC ALS Controller	A.02.13
		G4513A Injector	A.10.08
	7650	G3430A GC ALS Controller	A.02.13
		G4567A Injector	A.10.06
6890	7693	G4516A ALS Controller	A.01.07
		G4513A Injector	A.10.08
		G4514A Tray	A.10.16
		G4515A BCR/Mixer	A.10.04
		G4517A 6890 Plus ALS Card Upgrade	A.01.06
		G4521A LVI Syringe Carriage	n/a
		G4522A Cooling Accessory	n/a
		G4520A Tray with BCR/Mixer	A.10.16/A.10.04, see above

	Hardware	Module type	Minimum required firmware version*
6890 (cont.)	7683B	G2912A ALS Controller	A.02.02
		G4516A ALS Controller	A.01.07
		G2913A Injector	A.11.03
		G2614A Tray	A.02.02
		G2916A Tray	A.02.02
		G2615A BCR/Mixer	n/a
	7683A	G2612A ALS Controller	A.02.02
		G4516A ALS Controller	A.01.06
		G2613A Injector	A.10.07
		G2614AT ray	A.02.02
		G2615A BCR/Mixer	n/a
	7673C	G1512A ALS Controller	A.01.12
		G1513A Injector	A.09.15
		18596C Tray	n/a
		G1926A BCR/Mixer	n/a
	7673B	18593B Injector	B.08.00
		18596BTray	n/a
		G2615ABCR/Mixer	n/a
6850	7683B	G2613A Injector	A.11.03
	7693	G4513A Injector	A.10.08
	6850	G2880A Injector	

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

7697A Headspace Compatibility

NOTE

In general the communication is handled via LAN.

	Module type	Minimum required firmware version*
7697A	G4556A	A.01.06
7697A	G4557A	A.01.06
G1888A	Headspace	A.01.10

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Instrument Control Framework (ICF) Revision A.02.01

What's New in Agilent Instrument Control Framework A.02.01

Agilent LC/CE Driver Package A.02.01

- Added support for G4301A Agilent Super Fluid Chromatograph
- Added support for G1321C Agilent Fluorescence Detector
- Added support for G1361A Preparative Pump
- Added support for G2260A Preparative Autosampler
- Added support for G2258A Dual Loop Autosampler
- Added Support for the Preparative Pump Cluster (up to 4x G1361A)
- Added Support for the Fraction Collector Cluster (up to 4x G1364A-C, G5664A)
- Added Support for 7100 Capillary Electrophoresis
- Added Feature Support for G2197AA ISET III
- Added Feature Support G2197AA ISET Support added for G4204A Quaternary Pump
- Added Feature Support G2199AA High Dynamic Range (HDR) - DAD Cluster

Agilent GC Driver Package A.02.01

- Enable support for GC Control

Fixed Bugs

- 209122: Wrong link in IQT reports
- 209290: Improve IQT handling
- 209439: MethodDownload for UIB2 fails for german local settings
- 162784: changed configurations should be distributed only on module level
- 215351: Exception when openen SingleStatusUI
- 218242: Custom plates not working using german local settings
- 219539: Location validation fails for custom plates
- 205810: Want: Add UV lamp age to be visible and printable in ICF environment
- 213817: Want: calculation of "to be used mobile phase"
- 203215: Sampler hangs in injecting after stop of run
- 203667: DAD G1315C - Dashboard actuals of Wavelength not displayed correctly

Supported Drivers

Agilent Instrument Control Framework A.02.01

- Agilent LC/CE Driver Package A.02.01
- Agilent GC Driver Package A.02.01

Supported Operating Systems

		Windows XP SP3 32 Bit	Windows Vista 32 Bit	Windows 7 32 Bit	Windows 7 64 Bit	Window Server 2003 R2	Windows Server 2008 R2
Agilent Instrument Control Framework	A.02.01	X	X	X	X	X	X
Agilent LC/CE Driver Package	A.02.01	X	X	X	X	X	X
Agilent GC Driver Package	A.02.01	X	-	X	X	X	X

Minimum Required .NET Frameworks

	Revision	Minimum .NET framework
Agilent Instrument Control Framework	A.02.01	Microsoft .NET 3.5
Agilent LC/CE Driver Package	A.02.01	Microsoft .NET 3.5
Agilent GC Driver Package	A.02.01	Microsoft .NET 3.5

Supported Agilent LC/CE Hardware for A.02.01

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
	G1321C	A.06.53
Prep Pump Cluster Solution	Pump Cluster (up to 4x G1361A)	
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G4204A	A.06.50
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G1376A	A.06.10
	G2226A	A.06.10
	G4220A	B.06.23
	G4220B	B.06.43
	G4302A	A.06.30

	Module type	Minimum required firmware version*
Refractive index detector	G1362A	A.06.10
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G1389A	A.06.10
	G4303A	A.06.54
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G1377A	A.06.12
	G4226A	A.06.30
	G5667A	A.06.31
	G2258A	A.06.50
	G2260A	A.06.50
Thermostat	G1330A	n/a
	G1330B	n/a
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1162A	A.06.02
	G1163A	A.06.02
	G1170A	C.06.40
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30

	Module type	Minimum required firmware version*
Fraction collector	G1364A	A.06.53
	G1364B	A.06.53
	G1364C	A.06.53
	G1364D	A.06.53
	G5664A	A.06.53
Fraction Collector Cluster Solution	up to 4x G1364A-C, G5664A where one module acts as recovery fraction collector	
Column compartment cluster	G1316C	A.06.17
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40
Evaporative light scattering detector	G4218A	1.3, 1.4
UIB	G1390B	B.06.53
Flexible cube	G4227A	B.06.52
Super Fluid Chromatograph	G4301A	A.03.07
High Dynamic Range Dad Cluster	2 x G4212A/B	B.06.57
1120 Compact LC	G4286A	B.06.50
	G4287A	B.06.50
	G4288A	B.06.50
	G4289A	B.06.50
	G4290A	B.06.50

	Module type	Minimum required firmware version*
1220 LC system	G4286B	B.06.50
	G4287B	B.06.50
	G4288B	B.06.50
	G4289B	B.06.50
	G4290B	B.06.50
	G4291B	B.06.50
	G4292B	B.06.50
	G4293B	B.06.50
	G4294B	B.06.50
1220 LC system VL	G4288C	B.06.50
	G4289C	B.06.50
	G4290C	B.06.50
	G4293C	B.06.50
7100 Capillary Electrophoresis	G7150A	B.06.24
	G7151A	B.06.24

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Instrument Control Framework Versions A.01.0x

What's New in Agilent Instrument Control Framework A.01.05 [037]

Agilent LC Driver Package A.01.05 [035]:

- Added support for Flexible Cube as standalone module
- Added support for UIB2
- Added support for 1290 quat. Pump
- Added support for 1220 Infinity System G4294B
- Prepared for version interoperability

Fixed Bugs

- 178507: Some regional settings as Turkish break the generic resource resolution
- 181833: AD-Hoc runs: Delay first run end check
- 181918: Ad-hoc runs: changed signal settings from the instrument are not applied to the process cache
- 182663: Interversion compatibility
- 183913: wrong BW limits for G1315A/B and G1365A/B
- 183927: Uploaded method inconsistent
- 186889: Memory leak in Status dashboard
- 186940: Two defects in G4204A config UI
- 191556: Configuration settings in ICF not saved.
- 189595: Wrong priority in instrument run state accumulation
- 193570: ICF Wellplate list does not contain the predefined wellplates
- 195248: Pretreatment failed to download during run
- 166237: Vwd Scan not available on status UI
- 148117: Accidental setting of the error method
- 164039: Less clicks to access module parameters - PUMPS
- 175274: ControlUIs can be closed using the OK button although there are errors
- 177741: Increase temp range for ZEN oven to 80 or 90 degree Celsius
- 177786: Method editing via Dashboard: Default method shown / download of default method possible before the actual method is shown within the UI
- 181692: Injector Program: editor for "Eject" activates wrong elements for Vial+, Sample+ and Waste
- 181834: Soft config brings module online
- 182227: Purge valve switching is not working for RID detector
- 183351: Resources dispose handling is not able to handle multiple Dispose calls
- 183397: FLD - Incorrect Step value
- 185794: Pump/Valve Cluster; Flow not shown in Dashboard graphics

- 186144: SoftConfigDlg of Pump Valve Cluster works not proper
- 186357: Switch valve in context menu of G1316C switches always to next position
- 186371: Unhandled exception when using audit trail
- 186584: Switching off the sampler thermostats from Dashboard context menu is not possible
- 187452: [function] the color of bottle does not turn red when its solvent runs out
- 191472: Method cannot be saved with certain peakwidth settings for G1314C

Agilent LC Driver Package A.01.05 SP1 [037]:

Fixed Bugs

- 201071: Radio Buttons in Method section of HF ALS (2260A) don't work
- 204532: some local culture setting result in download method failure
- 204907: shift in retention times for G1315A/B or G1365A/B
- 205311: the “edit Wellplate type” could not work in OPLB ChemStation Japanese (Custom well plates could not be created, on Japanese systems)
- 205972: Wrong datarate for Vwd Aux signals for 'Board Temperature' and 'Optical Unit Temperature'

What's New in Agilent Instrument Control Framework A.01.04 [028]

Agilent LC Driver Package A.01.04 [029]:

- Added support Micro/Nano devices
- Added ISET support

Fixed Bugs

- 164280: Module runstate "Run" has lower priority compared to runstate "Inject"
- 171413: Memory/resource leak in single device UI
- 176659: Manual configuration changes in Combined Config are not reflected in the sub module configurations
- 173825: Feature based IQT doesn't work
- 176659: Manual configuration changes in Combined Config are not reflected in the sub module configurations
- 114754: G1316C: Runtime not actualized during heating up in run
- 114857: Runtime of dashboard not updated if pump not ready during run
- 117882: Inconsistent thermostat behavior of TCC-temp and ALS-temp settings
- 137445: Installing a lamp with tag invalidates "always use lamp" setting in DAD's control
- 147704: ELSD G4218A ignores change of Stoptime during run
- 160532: Wrong system pressure shown for G1311B in dashboard
- 162054: Wrong pressure limits at G1311B
- 162324: Missing means to switch off vent and/or LED after ELSD's method execution
- 164492: Left side of the BinPump Method pane cannot be resized.
- 164708: AFRACO: returns wrong ConfigOptions
- 177970: Initial upload of method and pretreatment delivers wrong location
- 171599: Enhance thermostat handling in ALS

What's New in Agilent Instrument Control Framework A.01.03 [026]

Agilent LC Driver Package A.01.03 [023/027/029]:

- Added support for Agilent G1364A-C and G5664A Fraction Collectors
- Added support for G1170A Universal Valve Drive

Fixed Bugs

- 147555: IIC*.Format returns wrong output
- 147556: IIC*.Format output is not conform to reporting.xsd schema
- 155269: Sporadic crashes while trying to open MethodUI from LC Dashboard
- 145469: Wrong X scale factor returned for spectra monitor signals
- 143205: FLD Dashboard: Take 3D Scan available even if switched off in application customization
- 139678: Run execution after LAN disconnect not ending properly
- 139679: Data acquisition of FLD Scan not ending properly
- 138406: Change spectra acquisition mode: All: doesn't work, if Spectra acquisition is None in the method
- 135188: Resource description missing for Time Property within Valve Function of HiP Sampler Pretreatment
- 147186: G1367A Help typo
- 147190: Help topics in Binary Pump / Pump Valve Cluster Method UI not working
- 157960: DAD driver problem with time stamp
- 130962: Pretreatment is not reloaded after Tray change
- 143425: Wrong Default injection location for HiP Sampler with 100 Vials tray
- 143994: TCC G1316A / G1316B only allow 600 bar in manual configuration
- 144112: ALS illumination
- 144143: Wrong calculation of maximum injection volume in case of multi-draw
- 147703: ELSD G4218A cannot handle change of Sample Time during run
- 114767: Wavelength not in signal description for online plot
- Minor UI and localization fixes
- 195545: wrong limit for intensity scan range 221nm to 350nm (*fixed in Build 029)
- 183351: Resources dispose handling is not able to handle multiple Dispose calls (*fixed in Build 029)

What's New in Agilent Instrument Control Framework A.01.02 [024]

Agilent LC Driver Package A.01.02 [017]:

- Added support for 1260 LC modules
- Added support for 1220 LC systems and 1220 LC systems VL
- Added support for G4218A ELSD detector
- Added support for G4212B DAD detector

Fixed Bugs

- Terminate during run handled correctly
- Fixed possible attenuation times in DAD and VWD method
- Minor UI fixes
- Minor localization fixes

What's New in Agilent Instrument Control Framework A.01.01 SP1 [020]

Agilent LC Driver Package A.01.01 SP1 [011]:

- Added support for G4227A 1290 Infinity Flexible Cube as add-on to G4226A High Performance Autosampler
- Improved Status UI for LC drivers with separate On/Off buttons

Fixed Bugs

- Installation issue on Windows XP with .NET framework 3.0 SP1 installed
- Help issue, if ICF isn't installed in the application's directory
- Localization issue, if ICF isn't installed in the application's directory
- Error: No COSY-List, if sampler is switched off and on while using a pretreatment program
- Spectra data, if wavelength parameter are floating point values
- Locked Status UI after a run has been aborted
- Programmatic definition respectively redefinition of well plates on HiP Sampler while online
- Minor UI fixes

What's New in Agilent Instrument Control Framework A.01.01 [016]

Agilent LC Driver Package A.01.01 [006]:

- Initial release

Supported Operating Systems

		Windows XP SP3 32 Bit	Windows Vista 32 Bit	Windows Vista 64 Bit	Windows 7 32 Bit	Windows 7 64 Bit	Window Server 2003 R2	Windows Server 2008 R2
Agilent Instrument Control Framework	A.01.05 [037]	X	X	X	X	X	X	X
	A.01.04 [028]	X	X	X	X	X	X	X
	A.01.03 [026]	X	X	X	X	X	X	-
	A.01.02 [024]	X	X	X	X	X	X	-
	A.01.01 SP1 [020]	X	X	X	X	X	-	-
	A.01.01 [016]	X	X	-	X	X	-	-
Agilent LC Driver Package	A.01.05 [035]	X	X	-	X	X	X	X
	A.01.04 [029]	X	X	-	X	X	X	-
	A.01.03 [023/027/ 029]	X	X	-	X	X	-	-
	A.01.02 [017]	X	X	-	X	X	-	-
	A.01.01 SP1 [011]	X	X	-	-	-	-	-
	A.01.01 [006]	X	X	-	-	-	-	-

Minimum Required .NET Frameworks

	Revision	Minimum .NET framework
Agilent Instrument Control Framework	A.01.05 [037]	Microsoft .NET 3.5
	A.01.04 [028]	Microsoft .NET 3.5
	A.01.03 [026]	Microsoft .NET 3.5
	A.01.02 [024]	Microsoft .NET 3.0 SP1
	A.01.01 SP1 [020]	Microsoft .NET 3.0 SP1
	A.01.01 [016]	Microsoft .NET 3.0 SP1
Agilent LC Driver Package	A.01.05 [035]	Microsoft .NET 3.5
	A.01.04 [029]	Microsoft .NET 3.5
	A.01.03 [023/027/029]	Microsoft .NET 3.5
	A.01.02 [017]	Microsoft .NET 3.0 SP1
	A.01.01 [006]	Microsoft .NET 3.0 SP1

Supported LC Drivers

		Agilent Instrument Control Framework					
		A.01.01 [016]	A.01.01 SP1 [020]	A.01.02 [024]	A.01.03 [026]	A.01.04 [028]	A.01.05 [037]
Agilent LC Driver Package	A.01.05 SP1 [037]	-	-	-	-	-	X
	A.01.05 [035]	-	-	-	-	-	X
	A.01.04 [029]	-	-	-	-	X	-
	A.01.03 [023/027/029]	-	-	-	X	-	-
	A.01.02 [017]	-	-	X	-	-	-
	A.01.01 SP1 [011]	-	X	-	-	-	-
	A.01.01 [006]	X	-	-	-	-	-

Supported Agilent Hardware

Agilent LC Driver Package A.01.05 [035] / A.01.05 SP1 [037]

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.30
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G4204A	A.06.50
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G1376A	A.06.10
	G2226A	A.06.10
	G4220A	B.06.23
	G4220B	B.06.43
G4302A	A.06.30	

	Module type	Minimum required firmware version*
Refractive index detector	G1362A	A.06.10
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G1389A	A.06.10
	G4303A	A.06.30
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G1377A	A.06.12
	G4226A	A.06.30
	G5667A	A.06.31
Thermostat	G1330A	n/a
	G1330B	n/a
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1162A	A.06.02
	G1163A	A.06.02
	G1170A	C.06.40
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30

Instrument Control Framework Versions A.01.0x
Supported Agilent Hardware

	Module type	Minimum required firmware version*
Fraction collector	G1364A	A.06.34
	G1364B	A.06.34
	G1364C	A.06.34
	G1364D	A.06.34
	G5664A	A.06.34
Column compartment cluster	G1316C	A.06.17
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40
Evaporative light scattering detector	G4218A	1.3, 1.4
UIB	G1390B	B.06.50
Flexible cube	G4227A	B.06.50
1120 Compact LC	G4286A	B.06.50
	G4287A	B.06.50
	G4288A	B.06.50
	G4289A	B.06.50
	G4290A	B.06.50

	Module type	Minimum required firmware version*
1220 LC system	G4286B	B.06.50
	G4287B	B.06.50
	G4288B	B.06.50
	G4289B	B.06.50
	G4290B	B.06.50
	G4291B	B.06.50
	G4292B	B.06.50
	G4293B	B.06.50
	G4294B	B.06.50
1220 LC system VL	G4288C	B.06.50
	G4289C	B.06.50
	G4290C	B.06.50
	G4293C	B.06.50

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Agilent LC Driver Package A.01.04 [029]

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.30
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G1376A	A.06.10
	G2226A	A.06.10
	G4220A	B.06.23
	G4220B	B.06.43
	G4302A	A.06.30
Refractive index detector	G1362A	A.06.10

	Module type	Minimum required firmware version*
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G1389A	A.06.10
	G4303A	A.06.30
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G1377A	A.06.12
	G4226A	A.06.30
	G5667A	A.06.31
Thermostat	G1330A	n/a
	G1330B	n/a
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1162A	A.06.02
	G1163A	A.06.02
	G1170A	C.06.40
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30

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	Module type	Minimum required firmware version*
Fraction collector	G1364A	A.06.34
	G1364B	A.06.34
	G1364C	A.06.34
	G1364D	A.06.34
	G5664A	A.06.34
Column compartment cluster	G1316C	A.06.17
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40
	Evaporative light scattering detector	G4218A
1120 Compact LC	G4286A	B.06.21
	G4287A	B.06.21
	G4288A	B.06.21
	G4289A	B.06.21
	G4290A	B.06.21

	Module type	Minimum required firmware version*
1220 LC system	G4286B	B.06.21
	G4287B	B.06.21
	G4288B	B.06.21
	G4289B	B.06.21
	G4290B	B.06.21
	G4291B	B.06.21
	G4292B	B.06.21
	G4293B	B.06.21
1220 LC system VL	G4288C	B.06.21
	G4289C	B.06.21
	G4290C	B.06.21
	G4293C	B.06.21

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Agilent LC Driver Package A.01.03 [023/027/029]

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.30
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G4220A	B.06.23
	G4220B	B.06.23
	G4302A	A.06.30
Refractive index detector	G1362A	A.06.10

	Module type	Minimum required firmware version*
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G4303A	A.06.30
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G4226A	A.06.30
	G5667A	A.06.31
Thermostat	G1330A	n/a
	G1330B	n/a
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
	G1170A	C.06.40
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30
Fraction collector	G1364A	A.06.34
	G1364B	A.06.34
	G1364C	A.06.34
	G5664A	A.06.34
Column compartment cluster	G1316C	A.06.17

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	Module type	Minimum required firmware version*
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
	G1170A	C.06.40
Evaporative light scattering detector	G4218A	1.3, 1.4
1120 Compact LC	G4286A	B.06.21
	G4287A	B.06.21
	G4288A	B.06.21
	G4289A	B.06.21
	G4290A	B.06.21
1220 LC system	G4286B	B.06.21
	G4287B	B.06.21
	G4288B	B.06.21
	G4289B	B.06.21
	G4290B	B.06.21
	G4291B	B.06.21
	G4292B	B.06.21
	G4293B	B.06.21
1220 LC system VL	G4288C	B.06.21
	G4289C	B.06.21
	G4290C	B.06.21
	G4293C	B.06.21

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Agilent LC Driver Package A.01.02 [017]

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.30
	G1315D	B.06.30
	G4212A	B.06.30
	G4212B	B.06.30
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.30
	G1365D	B.06.30
Fluorescence detector	G1321A	A.06.10
	G1321B	A.06.30
Isocratic pump	G1310A	A.06.10
	G1310B	A.06.30
Quaternary pump	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G5611A	A.06.30
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G1312C	A.06.30
	G4220A	B.06.23
	G4220B	B.06.23
	G4302A	A.06.30
Refractive index detector	G1362A	A.06.10

	Module type	Minimum required firmware version*
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
	G4303A	A.06.30
High performance autosampler	G1367A	A.06.31
	G1367B	A.06.31
	G1367C	A.06.31
	G1367D	A.06.31
	G1367E	A.06.31
	G4226A	A.06.30
	G5667A	A.06.30
Thermostat	G1330A	n/a
	G1330B	n/a
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.30
	G1314E	B.06.30
	G1314F	B.06.30
Column compartment cluster	G1316C	A.06.17

	Module type	Minimum required firmware version*
Pump valve cluster	G1311A	A.06.10
	G1311B	A.06.30
	G1311C	A.06.30
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G5611A	A.06.30
	G1160A	A.06.02
Evaporative light scattering detector	G4218A	1.3, 1.4
1120 Compact LC	G4286A	B.06.21
	G4287A	B.06.21
	G4288A	B.06.21
	G4289A	B.06.21
	G4290A	B.06.21
1220 LC system	G4286B	B.06.21
	G4287B	B.06.21
	G4288B	B.06.21
	G4289B	B.06.21
	G4290B	B.06.21
	G4291B	B.06.21
	G4292B	B.06.21
	G4293B	B.06.21
1220 LC system VL	G4288C	B.06.21
	G4289C	B.06.21
	G4290C	B.06.21
	G4293C	B.06.21

* The version listed in this table is the minimum supported version. Any version higher than that is supported as well.

Agilent LC Driver Package A.01.01 SP1 [011]

	Module type	Minimum required firmware version*
Column compartment	G1316A	A.06.10
	G1316B	A.06.10
	G1316C	A.06.14
Diode array detector	G1315A	A.06.10
	G1315B	A.06.10
	G1315C	B.06.13
	G1315D	B.06.13
	G4212A	B.06.23
Multiple wavelength detector	G1365A	A.06.10
	G1365B	A.06.10
	G1365C	B.06.13
	G1365D	B.06.13
Fluorescence detector	G1321A	A.06.10
Isocratic pump	G1310A	A.06.10
Quaternary pump	G1311A	A.06.10
Binary pump	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
Refractive index detector	G1362A	A.06.10
Sampler	G1313A	A.06.10
	G1329A	A.06.10
	G1329B	A.06.10
High performance autosampler	G1367A	A.06.12
	G1367B	A.06.12
	G1367C	A.06.12
	G1367D	A.06.12
	G4226A	A.06.30
Thermostat	G1330A	n/a
	G1330B	n/a

	Module type	Minimum required firmware version*
Valves	G1157A	A.06.02
	G1158A	A.06.02
	G1158B	A.06.02
	G1159A	A.06.02
	G1160A	A.06.02
Variable wavelength detector	G1314A	A.06.10
	G1314B	A.06.10
	G1314C	A.06.10
	G1314D	B.06.20
	G1314E	B.06.20
Column compartment cluster	G1316C	A.06.17
Pump valve cluster	G1311A	A.06.10
	G1312A	A.06.10
	G1312B	A.06.10
	G4220A	B.06.23
	G4220B	B.06.23
	G1160A	A.06.02
1120 Compact LC	G4286A	B.06.21
	G4287A	B.06.21
	G4288A	B.06.21
	G4289A	B.06.21
	G4290A	B.06.21

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Glossary

Term/Acronym	Definition
support services	Customer Support Services, ex IQ, OQ/PV, educational, I&F, maintenance contracts
S/S	Split/Splitless
P/P	Purged/Packed
COC	Cool On-Column
PTV	Programmable Temperature Vaporizer
PCM	Pneumatic Control Module
VI	Volatile Interface
MMI	Multi-Mode Inlet
TCD	Thermal Conductivity Detector
FID	Flame Ionization Detector
NPD	Nitrogen Phosphorus Detector
FPD	Flame Photometric Detector
ECD	Electron Capturing Detector
μECD	Micro Electron Capturing Detector
AIB	Analog Input Board
DualWFPD	Dual Wavelength Flame Photometric Detector

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Supported Agilent Hardware



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