

## Thermo Scientific Atlas™ 8.2

### CDS Instrument Control Firmware

The Thermo Scientific Atlas 8.2 Instrument Control Firmware document contains a list of GC and LC instruments with modules and the current validated firmware versions for Atlas 8.2. The Atlas DS2K instrument control components are developed to run on the 247 Instrument Controller Network Appliance and the DataServer. The firmware versions contained within may differ from those in the Instrument Control documents, which were validated for the release of Atlas 8.2.

Best endeavor will be made to test Atlas 8.2 against the latest firmware version of an instrument. The instrument control extension releases are posted for download on the support website at <https://support.thermoinformatics.com/>. Support of earlier firmware versions or Atlas releases will be reviewed on a by case basis for risk assessment, no guarantee is given for correct operation.

Product Manager	Barry Coope
Date	19 November 2008
Author	Barry Coope

#### Table of Contents

1	Thermo Scientific (Electron / Finnigan)	2
2	Agilent	4
3	Hewlett Packard	8
4	PerkinElmer	8
5	Shimadzu	9
6	Waters	9
7	Digi Communication Board	9

## 1. Thermo Scientific (Electron / Finnigan)

Model	Comment	Validated	Firmware	Connection
Spectra System	SN4000 Interface Controller	✓	9.05	RS232
	UV1000 Detector		3.09	N/A
	UV2000 Detector	✓	3.13	N/A
	UV3000 Detector	✓	3.21	N/A
	UV6000 Detector	✓	Main Board RAM 1.8 Main Board ROM (Mon960) 0.2 PIC processor 7.0	N/A
	FL2000/3000	✓	3.11	N/A
	P1000 Pump	✓	4.01.10	N/A
	P1500 Pump	✓	4.02.15	N/A
	P2000 Pump	✓	4.03.20	N/A
	P4000 Pump	✓	4.04.40	N/A
	AS1000 Fixed Loop Injection	✓	3.44.10	N/A
	AS3000 with Sample Prep Option	✓	3.44.30	N/A
	AS with Plate Handling	✓	2.13/2.14 AS ROM 1.08	LAN
	Surveyor	PDA Photodiode Array Detector	✓	Converter Board ROM 1.08 Converter Board RAM Main PDA Board 1.8 Main PDA Board ROM (Mon960) 0.2 Main PDA PIC processor 7.00
UV-VIS Dual Wavelength Detector		✓	Converter Board ROM 1.08 Converter Board RAM 1.10 Main Detector Board 3.12	LAN
Quaternary Pump		✓	Converter Board ROM 1.08 Converter Board RAM 1.14 Main Pump Board 1.10	LAN
AS with Plate Handling		✓	2.13/2.14 AS ROM 1.08	LAN
Autosampler Lite			2.14	LAN
Surveyor Plus		PDA Plus	✓	2.02
	UV-VIS	✓	Converter Board ROM 1.08 Converter Board RAM 1.10 Main Detector Board 3.12	LAN
	Pump Plus	✓	Converter Board ROM 1.08 Converter Board RAM 2.00 Main Pump Board 3.02	LAN
	Autosampler Plus with Plate Handling	✓	2.15 AS ROM 1.08	LAN
	Autosampler Plus Lite	✓	2.15	LAN
Accela™	The Pump module is connected by USB. The connection may be accessed by the Pumplist application, downloadable from the Atlas support site <a href="http://support.thermoinformatics.com/prodinfo/info/product-atlas.asp">http://support.thermoinformatics.com/prodinfo/info/product-atlas.asp</a> 2 instrument per 247 / DataServer are supported			
	PDA	✓	2.02	LAN
	Pump	✓	12.47c	USB
	Autosampler	✓	2.15	LAN

Model	Comment	Validated	Firmware	Connection
Trace GC	Oven	✓	4.08	RS232
	UFM Oven			
	Inlets:			
	<ul style="list-style-type: none"> <li>• Split/Splitless</li> <li>• Packed</li> <li>• Purge Packed</li> <li>• On-Column (with/without Large Volume)</li> <li>• Hot-on-Column</li> <li>• PTV</li> </ul>			
Trace GC	Detectors:			
	<ul style="list-style-type: none"> <li>• FID</li> <li>• NPD</li> <li>• TCD</li> <li>• ECD</li> <li>• PID</li> <li>• FPD</li> <li>• FPD – Dual</li> <li>• PDD</li> </ul>			
	External Detectors: (DGFC and non DGFC)			
	<ul style="list-style-type: none"> <li>• X-FID</li> <li>• X-NPD</li> <li>• X-TCD</li> <li>• X-ECD</li> <li>• X-PID</li> <li>• X-FPD</li> <li>• X-PDD</li> <li>• X-Hall</li> <li>• X-Other</li> </ul>			
Trace GC	Options:			
	<ul style="list-style-type: none"> <li>• Cryogenics</li> <li>• Ultra Fast Module</li> <li>• Auxiliary Temperature zones 1 &amp; 2</li> <li>• Valves</li> </ul>			
	AS2000	✓	3.31	Through GC and RS232
	Standard ASU (includes Double Pro & Gemini)			
Trace GC	HS2000	✓	3.4	Through GC and RS232
	Headspace ASU (Multiple Headspace extraction Not Supported)			
Trace GC	AI/AS3000	✓	1.25	Through GC and RS232
	AI/AS3000			
Focus GC	Oven	✓	2.04	RS232
	Inlets:			
	<ul style="list-style-type: none"> <li>• Split/Splitless (DGFC)</li> </ul>			
	Detectors:			
	<ul style="list-style-type: none"> <li>• FID (non DGFC)</li> </ul>			
	External Detectors:			
	<ul style="list-style-type: none"> <li>• X-FID</li> <li>• X-NPD</li> <li>• X-TCD</li> <li>• X-ECD</li> <li>• X-PID</li> <li>• X-FPD</li> <li>• X-PDD</li> </ul>			
	Options:			
	<ul style="list-style-type: none"> <li>• Valves</li> </ul>			
	AS2000 Standard ASU	✓	3.31	Through GC and RS232
HS2000 Headspace ASU	✓	3.4	Through GC and RS232	
AI/AS3000	✓	1.25	Through GC and RS232	



Model	Comment	Validated	Firmware	Connection
	ASU 7683B	✓	Controller:G1530N.05.05	N/A
	<ul style="list-style-type: none"> <li>• 100 Vial Tray</li> <li>• Standard Turret</li> <li>• 8 Vial Turret to be tested, not supported.</li> </ul>	✓ ✓ ✓	Tower:G2913A.11.02 Tray:G2614A.02.01	
	Dual Injector control	✓		
	Dual Digital Signal acquisition	✓		
	HP JetDirect Print Server Card J4100A, J4106A (See Knowledgebase article 2293 for configuration on the eService portal <a href="http://eservice.thermo.com/">http://eservice.thermo.com/</a> )	✓		LAN
	Agilent G1369A LAN communication card (supported on Agilent LCs only)			
6850A Series I	Oven	✓	A.03.01	RS232
	Inlet:			
	<ul style="list-style-type: none"> <li>• Split/Splitless (EPC)</li> </ul>	✓		
	Detector:			
	<ul style="list-style-type: none"> <li>• FID (EPC)</li> </ul>	✓		
	Options:			
	<ul style="list-style-type: none"> <li>• Run Time Events (up to 4)</li> </ul>	✓		
	ASU G2880A	✓		N/A
	22/27 carousel	✓		
	HP JetDirect Print Server Card J4100A	✓		LAN
	Agilent G1369A LAN communication card (supported on Agilent LCs)			
6850A Series II	Oven	✓	A.05.04	RS232
	Inlet:			
	<ul style="list-style-type: none"> <li>• Split/Splitless (EPC)</li> <li>• Purge Packed</li> <li>• AC PCM</li> </ul>	✓ ✓ ✓	Require Atlas 8.1.2 (April 2006) patch for AC PCM temperature control and air cooling.	
	Detector:			
	<ul style="list-style-type: none"> <li>• FID (EPC)</li> <li>• TCD (EPC)</li> <li>• PFD (EPC)</li> <li>• µECD (EPC)</li> </ul>	✓ ✓ ✓ ✓		
	Options:			
	<ul style="list-style-type: none"> <li>• Run Time Events (up to 25)</li> <li>• Cryogenics</li> <li>Valves (up to 4)</li> </ul>	✓ ✓ ✓		
	ASU G2880A	✓		N/A
	22/27 carousel	✓		
1100	Agilent 1100 LAN v2 control released 3rd Nov 2005		Includes DAD 1315B spectral & multi channel acquisition.	
	Agilent 1100 LAN v3 control released 1st August 2006		Includes Well-Plate, Micro Well-Plate, MWD, DAD G1315A, 2 pumps/stack & 3 detectors/stack support.	
	Control Module G1323B		B.03.02 last supported	GPIO
	ASU & Thermostat G1313A(G1330B), G1329A	✓	A.05.01 last supported	GPIO
	Pump G1310A G1311A G1312A	✓	A.05.01 last supported	GPIO
	Column Heater G1316A	✓	A.05.01 last supported	GPIO
	VWD detector G1314A	✓	A.05.01 last supported	GPIO
	RID detector G1362A	✓	A.05.01 last supported	GPIO
	DAD detector G1315B Single digital channel acq	✓	A.05.01 last supported	GPIO
	FL detector G1321A Single digital channel acq	✓	A.04.11	GPIO
LAN cards	Agilent G1369A LAN communication card	✓	A.05.11	LAN
	HP JetDirect Print Server Card J4100, J4106AA (See Knowledgebase article 2293 for configuration on the eService portal <a href="http://eservice.thermo.com/">http://eservice.thermo.com/</a> )	✓	A.05.11	LAN
	Control Module G1323B		B.03.22	LAN
	ASU & Thermostat G1313A (G1330B), G1329A	✓	A.05.11	LAN
	Well-Plate & Thermostat G1367A(G1330B), G1368A	✓	A.05.11	LAN
	Micro Well-Plate & Thermostat G1377A(G1330B), G1378A	✓	A.05.11	LAN
	Pump G1310A G1311A G1312A	✓	A.05.11	LAN
	Column Heater G1316A	✓	A.05.11	LAN
	VWD detector G1314A	✓	A.05.11	LAN
	RID detector G1362A	✓	A.05.11	LAN

Model	Comment	Validated	Firmware	Connection
	MWD detector G1365A/B	✓	A.05.11	LAN
	DAD detector G1315A/B Single digital channel acq	✓	A.05.11	LAN
	FL detector G1321A Single digital channel acq	✓	A.05.11	LAN
	Degasser G1322A		No Control	N/A
1200	Using A.05.11 firmware with v3 of AG1100 LAN control	✓	A.05.11	LAN
In 1100 Emulation	Downgrade firmware on 1200 and 1200 SL modules using Agilent's emulation firmware tool; <a href="http://www.chem.agilent.com/scripts/cag_firmware.asp?nmod=L&amp;CGUID=DA07CC90-D1E2-4E1A-B5CB-65737F92CB1F">http://www.chem.agilent.com/scripts/cag_firmware.asp?nmod=L&amp;CGUID=DA07CC90-D1E2-4E1A-B5CB-65737F92CB1F</a> Select the A.05.11 emulation mode file (1100_Emulation_ModeVA511_A512). Modules must be renamed using the downgrade firmware tool, e.g. the G1312B SL Pump will be changed to G1312A.			
*Agilent DAD G1315C SL and MWD G1365C SL cannot be downgraded to run in emulation mode.				
<b>Agilent 1100 LAN v4 control released 2nd November 2007</b>			Includes Agilent 1200 control including SL (Starlight) modules listed below and External Control Board for relay control.	
1100 / 1200	Download firmware for the Agilent 1100/1200 from <a href="http://www.chem.agilent.com/scripts/cag_firmware.asp?nmod=L&amp;CGUID=585A2344-F453-46E0-9055-307F0F818C32">http://www.chem.agilent.com/scripts/cag_firmware.asp?nmod=L&amp;CGUID=585A2344-F453-46E0-9055-307F0F818C32</a> Select 'Agilent 1100/1200 Systems' A.06.02/06/B.01.06/B.02.05' firmware, which module firmware versions correspond to the compiled list. Special note should be made between Agilent 1100 and 1200 hybrid stacks running 5.11 and 6.02 firmware. Check the compatibility matrix associated with the firmware download on the Agilent site.  *Agilent DAD G1315C SL and MWD G1365C SL cannot be downgraded below firmware 6.01.  *Agilent G1354A is a bundled package consisting of the Quaternary Pump (G1311A), solvent cabinet, 4 solvent bottles, vacuum degasser and CAN cable.			
	HPLC Control Module G1323B	✓	B.04.02	LAN
	Instant Pilot G4208A	✓	B.02.01	
	Autosampler G1313A	✓	A.06.04	
	Autosampler plus Thermostat G1313A, G1330B	✓	A.06.04	
	Thermostatted Autosampler G1329A	✓	A.06.04	
	Thermostatted Autosampler SL G1329B	✓	A.06.04	
	Well-plate ASU G1367A	✓	A.06.03	
	Well-plate ASU Thermostat G1367A, G1330B	✓	A.06.03	
	Thermostatted Well-plate ASU G1368A	✓	A.06.04	
	Micro Well-plate ASU G1377A	✓	A.06.03	
	Micro Well-plate ASU Thermostat G1377A, G1330B	✓	A.06.03	
	Thermostatted Micro Well-plate ASU G1378A	✓	A.06.04	
	Well-plate ASU G1367B	✓	A.06.04	
	Well-plate ASU SL G1367C	✓	A.06.03	
	Binary Pump G1312A	✓	A.06.04	
	Binary Pump SL G1312B	✓	A.06.06	
	Isocratic Pump G1310A	✓	A.06.04	
	Quaternary Pump G1311A	✓	A.06.04	
	Degasser G1322A	✓	A.06.02	
	Column Heater G1316A	✓	A.06.04	
	Column Heater TCC-SL G1316B	✓	A.06.04	
	Variable Wavelength Detector G1314A	✓	A.06.04	
	Variable Wavelength Detector G1314B	✓	A.06.04	
	Variable Wavelength Detector SL G1314C	✓	A.06.04	
	Refractive Index Detector G1362A	✓	A.06.02	
	Diode Array Detector G1315A/B	✓	A.06.04	
	Diode Array Detector SL G1315C/D	✓	B.01.06	
	Multiple Wavelength Detector G1365A/B	✓	A.06.04	
	Multiple Wavelength Detector G1365C/D	✓	B.01.06	
	Fluorescence Detector (Single channel) G1321A	✓	A.06.02	
	System Resident Firmware	✓	A.06.02	
	External Contacts Board G1351	✓	A.06.02	

Model	Comment	Validated	Firmware	Connection
1100 / 1200	Agilent 1100 LAN v4.1 control released 1st May 2008		Maintenance release of v4 control, using same firmware release. Updates to VWD SL, Binary Pump Gradient, Holmium Test and External Contacts Board.	
1100 / 1200	Agilent 1100 LAN v4.2 control released 17th Oct 2008		Maintenance release of v4.1 control addressing dual instrument spectral acquisition and real-time parameter plotting. Agilent 1100 validated	
	Download Agilent 1100/1200 firmware from <a href="http://www.chem.agilent.com/en-US/Support/Downloads/firmware/Pages/LC.aspx">http://www.chem.agilent.com/en-US/Support/Downloads/firmware/Pages/LC.aspx</a> Agilent 1100 & 1200 validated on firmware 'Agilent 1100/1200 Systems A.06.02/06/B.01.06/B.02.05 firmware' and 'Agilent 1100/1200 Firmware A.06.1x/B.06.1x (current)'		For 6.0x firmware refer to v4 release compatibility	
	HPLC Control Module G1323B	✓	B.04.02	
	Instant Pilot G4208A	✓	B.04.02	
	Autosampler G1313A	✓	A.06.10 [004]	
	Autosampler plus Thermostat G1313A, G1330B	✓	A.06.10 [004]	
	Thermostatted Autosampler G1329A	✓	A.06.10 [006]	
	Thermostatted Autosampler SL G1329B	✓	A.06.10 [006]	
	Well-plate ASU G1367A	✓	A.06.12 [003]	
	Well-plate ASU Thermostat G1367A, G1330B	✓	A.06.12 [003]	
	Thermostatted Well-plate ASU G1368A	✓	A.06.12 [003]	
	Micro Well-plate ASU G1377A	✓	A.06.12 [003]	
	Micro Well-plate ASU Thermostat G1377A, G1330B	✓	A.06.12 [003]	
	Thermostatted Micro Well-plate ASU G1378A	✓	A.06.12 [003]	
	Well-plate ASU G1367B	✓	A.06.12 [003]	
	Well-plate ASU SL G1367C	✓	A.06.10 [005]	
	Binary Pump G1312A	✓	A.06.10 [005]	
	Binary Pump SL G1312B	✓	A.06.10 [005]	
	Isocratic Pump G1310A	✓		
	Quaternary Pump G1311A	✓	A.06.10 [005]	
	Degasser G1322A	✓	No Firmware	
	Column Heater G1316A	✓	A.06.10 [004]	
	Column Heater TCC-SL G1316B	✓	A.06.10 [004]	
	Variable Wavelength Detector G1314A	✓	A.06.10 [004]	
	Variable Wavelength Detector G1314B	✓	A.06.10 [004]	
	Variable Wavelength Detector SL G1314C	✓	A.06.10 [004]	
	Refractive Index Detector G1362A	✓	A.06.10 [004]	
	Diode Array Detector G1315A/B	✓	A.06.10 [004]	
	Diode Array Detector SL G1315C/D	✓	B.06.13 [002]	
	Multiple Wavelength Detector G1365A/B	✓	A.06.10 [004]	
	Multiple Wavelength Detector G1365C/D	✓	B.06.13 [002]	
	Fluorescence Detector (Single channel) G1321A	✓	A.06.10 [004]	
	System Resident Firmware	✓	A.06.10 [004]	
	External Contacts Board G1351	✓	No Firmware	

## 4. Hewlett Packard

Model	Comment	Validated	Firmware	Connection
6890 Plus	Oven	✓	A.03.08	RS232
	Inlets:			
	• Split/Splitless (EPC)	✓		
	• Purge Packed (EPC)	✓		
	• Cool-on-Column (EPC)	✓		
	• PCS/SL PTV	✓		
	• Agilent PTV	✓		
	• CIS4 PTV	✓		
	• AC PCM	✓		
	Detectors:			
	• FID (EPC & Non EPC)	✓		
	• NPD (EPC & Non EPC)	✓		
	• TCD (EPC & Non EPC)	✓		
	• $\mu$ ECD (EPC)	✓		
	Options:			
	• Cryogenics	✓		
	• Valves (up to 8)	✓		
	• Run Time Events (up to 25)	✓		
	• Auxiliaries 1-5	✓		
	ASU 7683 internal Standard Carousel	✓	Tray:G2612A.01.02	N/A
	8 Vial Carousel	✓	Tower:G2613A.10.01	
	100 Vial Tray	✓		
	G1512A external autosampler box			N/A
	Dual Injector control	✓		
	Dual Digital Signal acquisition	✓		
5890 Series I & II	Oven	✓	HP5890A.02.01(RS232 Only)	RS232 & HBIP boards
	Inlets:			
	• Split/Splitless	✓		
	• Purge Packed	✓		
	• Cool on Column	✓		
	• PTV	✓		
	Detectors:			
	• FID	✓		
	• NPD	✓		
	• TCD	✓		
	• ECD	✓		
	• FPD	✓		
	Options:			
	• Valves (up to 4)	✓		
	ASU 7673		3.0	RS232 & HBIP boards
	Standard Carousel	✓		
	8 Vial Carousel	✓		
	100 Vial Tray	✓		
	ASU G1512A			RS232 boards
	Standard Carousel	✓		
	8 Vial Carousel	✓		
	100 Vial Tray	✓		
	Dual Injector control	✓	Requires Atlas 8.1.1	
	Dual digital Signal acquisition	✓	or 8.1.2 patch	

## 5. PerkinElmer

Model	Comment	Validated	Firmware	Connection
Series 200	Autosampler (N293-0100)	✓	1.08	RS232 Cables must be purchased from PerkinElmer
	Peltier Tray Control Assembly (N293-0036)	✓	N/A	N/A
	Binary Pump (N291-0101)	✓	2.43	RS232 Cables must be purchased from PerkinElmer
	Isocratic Pump (N291-0100)	✓		
	Quaternary Pump (N291-0102)	✓		
	UV/VIS Detector (N292-0011)	✓	1.01	RS232 Cables must be purchased from PerkinElmer

## 6. Shimadzu

Model	Comment	Validated	Firmware	Connection
	Shimadzu VP Series v2 control released 3rd Nov 2005		Includes large volume injection support over 500 µl	
SLC-10Avp	Controller SLC-10Avp	✓	5.42	
	Pump LC-8A, LC-6AD/7A, LC-10AD, LC-10AS, LC-10AT, LC-10Ai, LC-10ADvp, LC-10ATvp	✓	5.27	
	Detector SPD-10A, SPD-10Ai, SPD-10AV, SPD-10Avi, SPD-10Avp, SPD-10AVvp	✓	5.24	
	ASU SIL-10ADvp, SIL-10AF, SIL-HTA, SIL-HTC	✓	5.32	
	Column Oven CTO-10AC, CTO-10Avp, CTO-10ACvp and CTO-10ASvp.	✓		

## 7. Waters

Model	Comment	Validated	Firmware	Connection
Alliance 2690	In-Line Degasser Column Heater Sample Heater/Cooler AutoSampler	✓ ✓ ✓ ✓	1.2	
2695/2695XE	In-Line Degasser Column Heater Sample Heater/Cooler AutoSampler CapLC 2487 / 486 Dual Wavelength Absorbance Detector (A2D collection)	✓ ✓ ✓ ✓ ✓	2.02	

## 8. Digi Communication Board

Model	Comment	Validated	Firmware	Connection
Neo	8 serial port board for serial communication expansion.	✓	NA	PCMCIA
Universal PCI 8 port		✓ ✓		
Connector Xp & Neo 8 Port DTE Cable DB-9M	8 serial port cable to be used in association with the Neo Universal PCI 8 port board Part Number 77000858. Only available for the DataServer	✓	NA	PCMCIA / RS232

In addition to these offices, Thermo Fisher Scientific maintains a network of representative organizations throughout the world.

### Australia/Asia Pacific

+61 8 8208 8200

### China

+86 21 6865 4588

### France

+33 160924800

### Germany/Eastern Europe

+49 6103 408 0

### India

+91 22 67 42 94 34

### Latin America and the Caribbean

+1 713 272 4592

### Netherlands/Benelux

+31 76 579 5555

### Spain/Portugal

+34 914 845 965

### United Kingdom

+44 1619423000

### USA/North America

+1 215 964 6020

[www.thermo.com/informatics](http://www.thermo.com/informatics)