

Agilent HPLC System Firmware Bulletin

Local Controller
G4208A Instant Pilot
G1323B Control Module



Agilent Technologies

Notices

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About this Document

This document provides the firmware changes of the Local Control Modules

- Instant Pilot G4208A and
- G1323B Control Module

used with Agilent HPLC systems

- 1100
- 1200
- 1260 Infinity
- 1290 Infinity
- 1200 Infinity II

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Visit the Agilent web

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- HPLC module firmware
- download tools and
- instructions

Document History

The table below lists all changes that have been made to this document.

Table 1 Document History

Date	Description	Author
16-Jul-2015	New firmware revision for G4208A <ul style="list-style-type: none">• "Revision B.02.19" , 12	W. Albrecht
08-Jul-2015	New firmware revision for G4208A <ul style="list-style-type: none">• "Revision B.02.18" , 12• "Revision B.02.17" , 13	W. Albrecht
22-Oct-2013	Updated missing information (crosslink to B.02.15) for G4208A <ul style="list-style-type: none">• "Revision A.05.15" , 33	W. Albrecht
15-May-2013	New firmware revision for G4208A <ul style="list-style-type: none">• "Revision B.02.16" , 14	W. Albrecht
18-Apr-2013	New firmware revisions for G4208A to correct resident mode (blinking LED) mode <ul style="list-style-type: none">• "Revision B.02.15" , 15• "Revision A.05.15" , 33	W. Albrecht
13-Feb-2013	Corrected typo in footer information and some cross-references	W. Albrecht
12-Feb-2013	Initial Release of this document. Content has been taken from individual HPLC set documents	W. Albrecht

OO/PV - Validation Information

If a firmware upgrade has been performed, normally no revalidation of the module/system is required. This is stated in the module specific change information for each revision, see example below.

Table 2 Module XXX A.06.50

Date Introduced	
General	
Bugfix	•
New Features	•
OO/PV Recommendation	No repeat OO/PV tests are recommended after update



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1 G4208A Change Information

This chapter provides the details of the various firmware revisions for the Agilent G4208A Instant Pilot since its introduction in 2006.

Firmware Revision Overview

The G4208A Instant Pilot replaced the 1200 Control Module G1323B in 2006. Newer hardware (display, processor, memory) increased the number of supported LC modules (1100/1200/1260/1290/200 Infinity/1200 Infinity II, 1220).

NOTE Do not downgrade firmware of the Instant Pilot to earlier revisions. Use always the latest revision. The latest version is always backward compatible to the initial B.01.02.

There are two platforms that are supported by the Instant Pilot:

- Firmware B.xx.xx supports the A.06.xx/B.01xx/B.06.xx LC modules
- Firmware A.05.1x supports the A.05.xx LC modules

The resident firmware depends on the main firmware (must be from the same revision).

Table 3 Firmware Revision Overview

Product	Filename (.DLB)	Date	Comments
G4208A	4208A_B219_001, Res_4208A_B219_001	07/16/2014	Latest version, should be used per default. Version for use with A.06.xx/B.0x.xx firmware, based on B.02.18.
G4208A	4208A_B218_001, Res_4208A_B218_001	07/08/2014	Version for use with A.06.xx/B.0x.xx firmware, based on B.02.17.
G4208A	4208A_B217_003, Res_4208A_B216_001	06/25/2014	Version for use with A.06.xx/B.0x.xx firmware, based on B.02.16.
G4208A	4208A_B216_001, Res_4208A_B216_001	05/2013	Version for use with A.06.xx/B.0x.xx firmware, based on B.02.15.
G4208A	4208A_B215_001, Res_4208A_B215_001	03/2013	Version for use with A.06.xx/B.0x.xx firmware, based on B.02.14. Solves a problem with MY94674204 and above with B.02.14 that may fall into resident mode (dark screen and blinking LED). See “Special Instructions” on page 15.

1 G4208A Change Information

Firmware Revision Overview

Table 3 Firmware Revision Overview

Product	Filename (.DLB)	Date	Comments
G4208A	4208A_A515_001, resident not required	03/2013	Latest version, should be used per default. Version for use with A.05.1x firmware, based on A.05.14. Solves a problem with MY94674204 and above with A.05.14 that may fall into resident mode (dark screen and blinking LED). See “Special Instructions” on page 33 .
G4208A	4208A_B214_001, Res_4208A_B214_001	06/2012	Has a problem with MY94674204 and above, falls into resident mode (dark screen and blinking LED)
G4208A	4208A_B213_001, Res_4208A_B213_001	08/2011	Solves problems with MY.... serial number Instant Pilots with the new graphical chip (SM502) from crashing and going to resident.
G4208A	4208A_B212_001, Res_4208A_B212_001	04/2011	
G4208A	4208A_A514_001, resident not required	10/2010	Version for use with A.05.1x firmware, based on B.02.07. Support of Instant Pilots manufactured in Malaysia (MY....)
G4208A	4208A_B211_002, Res_4208A_B211_002	08/2010	
G4208A	4208A_B209_003, Res_4208A_B209_003	10/2009	1260/1290 Infinity Release. See Note 1
G4208A	4208A_B208_002, Res_4208A_B208_002	07/2009	1290 Infinity Release. See Note 1
G4208A	4208A_B207_001, Res_4208A_B207_001	08/2008	See Note 1
G4208A	4208A_A513_003, resident not required	08/2007	Version for use with A.05.1x firmware, based on B.02.06
G4208A	4208A_B206_007, Res_4208A_B206_007	08/2007	
G4208A	4208A_A512_002, resident not required	06/2007	Version for use with A.05.1x firmware, based on B.02.05
G4208A	4208A_B205_002, Res_4208A_B205_002	06/2007	
G4208A	4208A_A511_005, resident not required	11/2006	for use with A.05.1x firmware, based on B.02.01
G4208A	4208A_B201_003, Res_4208A_B201_003	11/2006	
G4208A	4208A_B104_002, Res_4208A_B104_002	06/2006	
G4208A	4208A_B103_001, Res_4208A_B103_001	05/2006	
G4208A	4208A_B102_004, Res_4208A_B102_004	03/2006	initial for A.06.xx/B.xx firmware

Notes

- 1 Instant Pilots with firmware B.02.09, B.02.08 and B.02.07 and new main board cannot be downgraded to B.02.06 and below (also not to A.05.13). This shows up on Instant Pilots manufactured in Malaysia - with MY-serial numbers and B.02.09 installed).

Changes

Revision B.02.19

Table 4 [Revision B.02.19](#) Change Information

Revision	4208A_B219_001 , Res_4208A_B219_001
Date Introduced	July 2015
Bugfix	<ul style="list-style-type: none">• TT Entry #023369: When using the Instant Pilot with the G7167 MLS (no connection to ChemStation or Lab Advisor) the needle moves into wrong sample location when a plate configuration for a drawer position is set using Instant Pilot and Instant Pilot controls the sequence. Example: Selected D1F-A1 but needle moves to D1F-F1. No problem occurs when the plate configuration is set using the CDS or when the run is started using the CDS (in this case the CDS will set right configuration before the run is started)
New Features	None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.18

Table 5 [Revision B.02.18](#) Change Information

Revision	4208A_B218_001 , Res_4208A_B218_001
Date Introduced	July 2015
Bugfix	<ul style="list-style-type: none">• TT Entry #023333: G7167A/B Wrong remote services are setup for G13XX Pumps
New Features	None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.17

Table 6 Revision B.02.17 Change Information

Revision	4208A_B217_003, Res_4208A_B216_001
Date Introduced	June 2015
Bugfix	<ul style="list-style-type: none"> • TT Entry #016462: Missing Lamp/Cell Test info in RFID tag • TT Entry #017065: Flexible Cube - Flow in dashboard and actuals not displayed correctly • TT Entry #019037: WL Shift in Intensity Test G4212A/B <ul style="list-style-type: none"> • B.02.16 and below shows a WL shift of about 45 nm to the left. The displayed values do not match with the curve. • TT Entry #021140: Wait for Single / Multiple Start Request does not work <ul style="list-style-type: none"> • A change in B.02.08 caused this problem. • TT Entry #021932: G7117B Intensity Test wave length range must be 501-640nm • TT Entry #022201: G1316C + VWD G7114B: not ready condition: right temp cluster missing • TT Entry #022209: G1311B - Pressure test does not work in PSI
New Features	<ul style="list-style-type: none"> • Visualize HDR cluster • G1312B - implement new pressure test limits • Support of the 1200 Infinity II modules (introduction November 2014/July 2015). <ul style="list-style-type: none"> • G7104A Flexible (Quaternary) Pump • G7120A High Speed (Binary) Pump • G7167A/B Multisampler • G7116B Multicolumn Thermostat • G7114B Variable Wavelength Detector • G7117B Diode Array Detector • G7117A Diode Array Detector FS • G7129A/B Vial Sampler • G7130A Integrated Column Compartment
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

1 G4208A Change Information Changes

Revision B.02.16

Table 7 Revision B.02.16 Change Information

Revision	4208A_B216_001 , Res_4208A_B216_001
Date Introduced	May 2013
Bugfix	<ul style="list-style-type: none">• TT Entry #015645: Problems with Pressure Test with SL-Systems• TT Entry #017073: Cell Test limits should be same as on Lab Advisor B.02.03 (G1315/65), add also BioCell to list• TT Entry #017075: G1315/65 Intensity Test Limit wrong in range 501 to 950 nm
Special Instructions	
New Features	<ul style="list-style-type: none">• Supports the G1321C FLD (introduction June 2013)
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.15

Table 8 Revision B.02.15 Change Information

Revision	4208A_B215_001, Res_4208A_B215_001
Date Introduced	April 2013
Bugfix	<ul style="list-style-type: none">• TT 018151: Instant Pilot with RAM rev G fall into resident mode with MY94674204 and above and firmware B.02.14
Special Instructions	<p>Update Procedure (use the Firmware Update Tool 2.10 or later or the Lab Advisor) The IP must be in either RESIDENT (blinking green LED) or MAIN mode (normal display). If the IP is in resident mode start with the main firmware update first, then the resident If the IP is in main mode start in the usual way, resident first and then the main (as the update tool does). Possible situations:</p> <ul style="list-style-type: none">• The firmware update tool shows a time out while transferring to main system (IP may have re-booted already).• The firmware update tool shows the update of the main still not finished (IP may have re-booted already). <p>In both situations, close the firmware update tool and unplug / re-connect the IP to the module. If the IP is still in resident mode, redo the update process.</p> <p>Check the firmware information for correct version (B.02.15 or A.05.15). If not correct redo the firmware upgrade process.</p>
New Features	<ul style="list-style-type: none">• None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.14

Table 9 Revision B.02.14 Change Information

Revision	4208A_B214_001, Res_4208A_B214_001
Date Introduced	May 2012
Firmware Revision	B.02.14
Bugfix	<ul style="list-style-type: none">• TT 014897: Date in Logbook report did not change in sequences
New Features	<ul style="list-style-type: none">• Support of Universal Interface Box 2.• Support of 1290 Quaternary Pump G4204A.• Support of new supported solvents list for G4220x pumps.• Extend pressure limit range to 0...1200 bar for G4220B pump.• Purge screen changed for G1361A Prep Pump with firmware A.06.50 and above.• ISET indication (icon) added.• Possibility to show the sample name from another controller.• Supported Seat Capillary Volumes for G4226A with 80, 400, 1400 and 5000 ul.• Limits of G4212X Cartridge Cells are the same as in Lab Advisor now.• Watchdog handling / Post Mortem Dump in Resident (for diagnostic of intermittent problems, to USB stick)
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.13

Table 10 Revision B.02.13 Change Information

Revision	4208A_B213_001, Res_4208A_B213_001
Date Introduced	September 2011
Firmware Revision	B.02.13
Bugfix	<ul style="list-style-type: none"> Solves problems with MY.... serial number Instant Pilots with the new graphical chip (SM502) from crashing and going to resident.
New Features	<ul style="list-style-type: none"> None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.12

Table 11 Revision B.02.12 Change Information

Revision	4208A_B212_001, Res_4208A_B212_001
Date Introduced	April 2011
Firmware Revision	B.02.12
Bugfix	<ul style="list-style-type: none"> • Teamtrack 012436: Wrong injection volume in Status UI during analysis (when running with RC.Net) • Teamtrack 012437: FLD timetable offered wrong parameter AT:PKWD instead of AT:PDPW. Now AT:PDPW is used for G1321A/B • Teamtrack 012485: FLD G1321B: Load method - required instrument option not installed. Now the correct G1321B method is loaded. • Teamtrack 012488: Wrong limits in intensity test for G1314D/E/F VWD. Now the same as in LabAdvisor. • Teamtrack 012524: Rename "Is Sealed" to "Is Wellplate" • Teamtrack 012762: G1314D/E VWD shows up as 1100 module (started as 1200 modules) • Teamtrack 012869: Intensity Test for G4212B DAD has wrong limits. Now the same as in LabAdvisor.
New Features	<p>G4227A - Flexcube Interface Changes</p> <ul style="list-style-type: none"> • Valve position parameters The position parameters are defined to the same scheme as already used in old valves. <p>POS Set the absolute position, if used in timetable allows also relative switching. APOS Absolut / relative position at begin of analysis RPOS Absolut / relative position at begin of run HPOS Absolut / relative position at end of analysis RHPO Absolut / relative position at end of run</p> <ul style="list-style-type: none"> • Pressure Cluster Handling Valves can get clustered with pumps to pressure clusters. This allows setting a pressure limit at the clustered pumps which prevents parts from being damaged. E.g. a valve can reduce the applied pressure during it switches between positions. • Position Cluster Multiple valves can get clustered to a position clusters. All valves in a position cluster will switch synchronized to the same position index. • Resource Locking Information Resource lock info is provided from configuration dialog

Table 11 Revision B.02.12 Change Information

New Features	<p>G1170A - Universal Valve Drive Add support for new nucleus slave device G1170A. The valve handling is the same as in FlexCube described above.</p> <p>G1316C - Interface Changes</p> <ul style="list-style-type: none"> • The pressure cluster handling is extended to the functionality described or FlexCube. The position clustering is introduced new and will only work with G1316C and G1170A devices. Flexcube is not supported! <p>Support Biolnert Products</p> <ul style="list-style-type: none"> • G5611A Quaternary Pump • G5664A Analytical Fraction Collector • G5667A High-Performance Autosampler
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.11

Table 12 Revision B.02.11 Change Information

Revision	4208A_B211_002, Res_4208A_B211_002
Date Introduced	July 2010
Firmware Revision	B.02.11
Bugfix	<ul style="list-style-type: none"> • Teamtrack 1261: APG remote problem with Manual Injector. • Teamtrack 1262: Timetable entries for FLD missing / not possible. • Teamtrack 1278: Flush Out Pump in Configuration: can't set "None selected" (since B.02.09) • Teamtrack 1279: 1290 Pump Pressure Test is used for all Binary Pumps (since B.02.08).
New Features	<ul style="list-style-type: none"> • Added 1260 Infinity modules G1310B Isocratic Pump, G1311B Quaternary Pump, G1311C Quaternary Pump VL, G1312C Binary Pump VL, G1367E High Performance Autosampler, G4212B Diode Array Detector, G1314F Variable Wavelength Detector, G1321B Fluorescence Detector. • Added 1290 Infinity modules G1314E Variable Wavelength Detector, G1316C Thermostatted Column Compartment, G4227A Flexible Cube, G4220B Binary Pump VL. • Harmonize user interface texts for all detector peakwidth parameters. • The firmware update functionality was extended to meet the specific requirements when updating a new CAN slaves. • The user can view the tag content of the installed valves in the Valve Info dialog which is available from FlexCube Maintenance screen. • Increased Pressure for G1310B and G1311B. Upper pressure limit in method and timetable needs to be 600 bar. The diagnostic tests must be updated to the new upper pressure. • Module Naming based on serial number (1100 < 55000, 1200 > 55000, 1260 new format). • Teamtrack 1257: Show the source of the used IP address in configuration screen of Nucleus based modules. • High Pressure Limit Cluster. The LC-system can automatically detect certain devices with pressure ratings – typically, QuickChange Valve heads. These pressure ratings can be used to limit the maximum pressure of available pumps in a LC-system. • G1316C - 600 bar Valve Pod Support. The IP retrieves the number of switch positions from valve pod that is mounted in G1316C. The range of the valve position related method and timetable parameters are adopted accordingly. The Column Compartment must be power cycled when valve pod is changed in order to get the ranges updated. • UV Detector Lamp Ignition. The configuration parameter "UV-Lamp Tag" of the UV detectors allow to configure how the lamp will get switched on. The set of methods from which the user can choose depends on the detector type.

Table 12 Revision B.02.11 Change Information

	<ul style="list-style-type: none">• Troubleshooting of IP: If the IP falls in resident mode (green LED is flashing) and a USB Flash Disk is inserted at that time, a dump file is generated into folder PMD. This can be used to analyze the cause of the failure. Send this file to product support in Waldbronn.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.09

Table 13 Revision B.02.09 Change Information

Main firmware revision	4208A_B209_003, Res_4208A_B209_003
Date Introduced	September 2009
Bugfix	<ul style="list-style-type: none"> • PVCS #1200: Missing "Save" dialog during modifying method, when using delete line/all in time table. • PVCS #1221: (G4220A) Changes in "Solvent Channel X" or "Injector Program" marks the method as changed '*' but on 'Exit' no "Save changes ?" dialog was shown. • PVCS #1222: (G1316C) Actual valve position on status screen The actual position was not shown, only a '-' was visible. Also after the valve switched the actual position stays at '-'. • PVCS #1229: Aborted wavelength calibration written into DAD logbook without mention of the abort. • PVCS #1231: (NUCLEUS) New events for LongNotReady and 1290 Pump NotReady. There are 3 new events send from firmware to indicate changes in long not ready bits. They are shown as unknown in the earlier revisions. The 1290 Pump has implemented additional not ready conditions (TUNING, DEFILL, REMOVE_AIR). • PVCS #1237 (in B.02.08 only): The illumination of G4226A (1290 Infinity ALS) is missing. Neither the light at a new G4226A is switched on nor the user interface for illumination is available. • PVCS #1238 (in B.02.08 only): An Instant Pilot (G4208A) connected to a 1290 Infinity LC System and running firmware revision B.02.08 freezes after power-cycling the LC System. • And minor changes in screens and help text.
New Features	<ul style="list-style-type: none"> • (G4220A) Added a line in status tile "Dynamic Pressure Limit" that indicates the currently used pressure limit.
Known Problems	<p>Compatibility Issues: Instant Pilots with firmware B.02.09, B.02.08 and B.02.07 and new main board cannot be downgraded to B.02.06 and below (also not to A.05.13). This shows up on Instant Pilots manufactured in Malaysia - with MY... serial numbers and B.02.09 installed).</p>
Pre-requisites	Requires A.06.02/B.01.02 or above on all 1100/1200/1290 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.08

Table 14 Revision B.02.08 Change Information

Main firmware revision	4208A_B208_002, Res_4208A_B208_002
Date Introduced	July, 2009
Bugfix	<ul style="list-style-type: none"> • PVCS #1161: Maintenance: valve synchronize -> actual showed always "0" in any selected position. • PVCS #1162: DAD/MWD Intensity Test - Limit 501-950 nm Lowest intensity in range 501nm - 950nm: greater 2000 counts. Same limits for G1315A/B/C/D and G1365A/B/C/D • PVCS #1163: "GHOM" parameter missing in Configuration of ALS. Added function Autosampler go back to home position after every injection. E.g. when using a robotic arm to load vials and the ALS transport arm gets hit if it doesn't move back to home between injections. • PVCS #1164: Injector Program - added extended "draw from vial +" command • PVCS #1165: Missing temperature plot for ALS-Thermostat • PVCS #1166: DAD/MWD Bandwith limits wrong. The limits for the bandwidth of sample WL is 1-400 nm in steps of 1 nm, for reference WL is 1 to 340 nm in steps of 1 nm. The entry is checked against the limit e.g. a sample WL of 350 nm would not allow 400 nm (350 +/-200). Same implementation now as in ChemStation. • PVCS #1167: Limits of Holmium test changed to +/- 1 nm (G1314A/B/C/D/E VWD) • PVCS #1167: Fraction Collection / Manual trigger. Instant Pilot and ChemStation showed different fraction times due to update problem. • PVCS #1196 EMF limit for TCC not updated. This EMF for the Peltier power has been removed to overcome conflict with ChemStation B.04.02 (1290 Infinity)
New Features	<ul style="list-style-type: none"> • Support for 1290 Infinity LC Modules <ul style="list-style-type: none"> • G4212A Infinity DAD • G4220A Infinity Binary Pump • G4226A Infinity ALS • G1316C Infinity TCC
Known Problems	<p>Compatibility Issues: Instant Pilots with firmware B.02.09, B.02.08 and B.02.07 and new main board cannot be downgraded to B.02.06 and below (also not to A.05.13). This shows up on Instant Pilots manufactured in Malaysia - with MY... serial numbers and B.02.09 installed).</p>
Pre-requisites	Requires A.06.02/B.01.02 or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.07

Table 15 Revision B.02.07 Change Information

Main firmware revision	4208A_B207_001, Res_4208A_B207_001
Date Introduced	July, 2008
Bugfix	<ul style="list-style-type: none"> • PVCS #1118: Extended FLD wave length range EX 200 - 1200 nm, EM 200 - 1200 nm • PVCS #1120: Added FLD - PMT Gain Test (was missing) • PVCS #1121: Added PMT - Gain Settings PMT gain settings in the method shows the value as 2^X. This is different to the ChemStation where we have just the value X. • PVCS #1119: Fixed ALS needle change procedure During the Change Needle procedure (Maintenance ALS) you are moving the needle down via button "needle down". When the needle reaches the needle seat the message "Needle already in lowest position" shows up and the buttons "Needle up", "Needle down" and "Continue" disappear. So, no chance to move the needle up again. "Abort" is the only way to leave this function. Change needle maintenance changed to a two-step procedure. Step 1 moves gripper and needle to change position, step 2 moves gripper and needle back to home position after needle changed. • PVCS #1122: Printing of DAD calibration result When printing the Calibration report with G1315C DAD-SL Internal Print Error #5 showed up. • PVCS #1139: Extend pressure range in column tag edit dialog to 0...2000 bar (was limited to 400 bar)
New Features	<ul style="list-style-type: none"> • Support for G1314D VWD and G1314E VWD SL+ • Support for G1367D High Performance Autosampler SL+ • Start/stop sequence at/from a selected sequence line • Support of new flash ROM type on Instant Pilot main board
Known Problems	<p>Compatibility Issues: Instant Pilots with firmware B.02.09, B.02.08 and B.02.07 and new main board cannot be downgraded to B.02.06 and below (also not to A.05.13). This shows up on Instant Pilots manufactured in Malaysia - with MY... serial numbers and B.02.09 installed).</p>
Pre-requisites	Requires A.06.02/B.01.02 or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.06

Table 16 Revision B.02.06 Change Information

Main firmware revision	4208A_B206_007, Res_4208A_B206_007
Date Introduced	August, 2007
Bugfix	<ul style="list-style-type: none"> • New RAM layout • Add a warning dialog analysis is started with Hobbit and a collector is in the system. "Instant pilot is not able to fully control analysis of fractionation instruments [Continue] / [Abort]" • Problem with hanging EMPV Clean when pump is in test mode • SCR#0920: Status screen - the edit position in status setup screen is stored even if the screen is left • SCR#1005: EMF limits for TCC (Maintenance) for Peltier Power Left and Right is now available • SCR#1074: Leak test with isocratic pump did not abort automatically on error • SCR#1075: Keyword Error "AREV?;ABLD?!" with A.06.01 in Details screen • SCR#1078: Help text changed: for micro mode pressure test • SCR#1079: Help text changed: EMPV cleaning instead of Leak Test • SCR#1080: Help text changed: Leak Test for capillary/nano pump with EMPV • SCR#1084: RID-Not Ready Conditions optimized • SCR#1085: Hang-up during LAN modification (Configure) • SCR#1090: Problem with multi fraction collector instruments to allow operation with up to three collectors and one recovery collector (was already solved in A.05.12) • SCR#1091: AFC: Status view should show RINSE and WASTE status • SCR#1093: Print of Sequence table (table is empty) does not work • SCR#1095: Status - Thermostat - displayed value changed back • SCR#1097: TCC Col ID: no entries possible in column tag • SCR#1098: Injector program problem – WPS Mix Parameter • SCR#1099: Dual loop: change loop does not work • SCR#1100: Injector program editing hangs after the attempt to edit a not editable line e.g. "Draw default amount"
New Features	None
Known Problems	None
Pre-requisites	Requires A.06.02/B.01.02 or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.05

Table 17 Revision B.02.05 Change Information

Main firmware revision	4208A_B205_002, Res_4208A_B205_002
Date Introduced	June 2007
Bugfix	<ul style="list-style-type: none"> • PVCS# 0947: Button to delete a timetable completely missing • PVCS# 1003: no "pump off" information in status dialog (prep pump) • PVCS# 1021: Units for pump EMF limits missing • PVCS# 1022: Invalid sampler configuration using WPS and Wizard • PVCS# 1024: Max pressure in the Bin Pump SL timetable could not be set to 600 bar. • PVCS# 1025: No pictures after printing to "out of disc space" USB-Flash Drive. • PVCS# 1041: 1367C Injector seat volume 2.3 µl not displayed • PVCS# 1047: Internal error (event code 300) when entering the LAN Settings • PVCS# 1065: Cannot activate a blank run for vial ranges dialog in the Start screen
New Features	<ul style="list-style-type: none"> • reworked System ON/OFF screen. Simplified to a pure system on/off dialog. • reworked Status View. The status has two new tile types: <ul style="list-style-type: none"> - small editable method parameter tiles and large 'G1323' module summary tiles based on G1323 analysis screen layout. - The status view setup shows these new tile types as '... - editable' and 'Analysis' - ALS and WPS now shows the actual vial number and injection volume not only during injection, but preserves it and shows it continuously during analysis. - New 'Wavelength' status tiles show the actual used wavelength for DAD, MWD or VWD. It could defer from the method wavelength shown in the existing 'Signal' tiles, when a timetable is used to change the set wavelength over runtime. - Entering the setup select dialog now focuses the currently selected tile's entry in the list or – if it is an empty tile – the last selected entry. - Properties added (history and lock/unlock status views) • Automated Fraction Collectors <ul style="list-style-type: none"> - The IP will support some but not all functions of the fraction collectors (G1364A, G1364B, G1364C, and G1364D). - The IP will be used together with purification software and the most important function will be the manual trigger function. - Beside this the IP will support the events and error messages and basic maintenance functionalities. - Clusters of up to 3 collectors plus one recovery collector (SEE KNOWN PROBLEMS). - Manual Trigger View via Control / System - Manual Trigger (SEE KNOWN PROBLEMS) - Zero Fill Volumes Request - Initialize Micro Fraction Collector - EMF Counter, Needle Counter will be supported. - Generic configuration parameters (module name, LAN, RS232) are supported.

Table 17 Revision B.02.05 Change Information**New Features**

- Switch temperature On/Off set temperature.
 - Not supported Automated Fraction Collectors functions are:
 - Fraction Parameters
 - Location Setup (Reserved Loc., Recovery Loc., Fraction...)
 - Trigger Modes
 - Configuration
 - Delay Setup / Calibration
 - Tray Setup / Well Plate Setup
 - Cluster Setup
 - Tests
 - Control Functions
 - Status Information
 - Method
 - Import from G1323B
 - Editing.
 - Sequence: Overview of Tray
 - The current sequence's status is shown graphically
 - View and Print Sample Ranges
 - WPS: Custom Well Plate Dialog to view plate definitions and setup custom plate definitions
 - RID: Two control functions for the RID are added to control the recycle and the purge valve and the parameters in configuration are removed.
 - Method/Sequence/Status Setup File Protection
 - If a file is protected, the user can not edit the currently loaded content or its filter settings.
 - System Info (Details): Board ID of Instant Pilot is shown.
 - Fast Scrolling in Lists: All lists are now speeding up scrolling after a few lines if the up or down button remains pressed.
 - FLD: Calibration Printing
 - The FLD deviations and the calibration history can be printed from Maintenance/ FLD Calibration Dialog.
 - UIB: Visible as supported module. It does not have any settings or features.
 - Leak Test (Binary STD (G1312A only), Isocratic, Quaternary, Micro, Nano, Prep)
 - Added leak test procedures to the diagnosis screen. Preparation is described in help. Preparation steps (like purging the pump) are NOT included in the automatic actions list itself.
- NOTE: The G1312B SL pump uses a different Leak Test

1 G4208A Change Information

Changes

Table 17 Revision B.02.05 Change Information

New Features	<ul style="list-style-type: none">• VWD: Intensity Test with Raw Sample / Reference Signal Counts<ul style="list-style-type: none">- Added two lines to the VWD intensity test results that show the raw sample and reference signal counts right before the intensity test was started. There is no passed/failed information available for these values. It uses the currently selected wavelength.• FLD: Excitation / Emission Spectrum (under Control/More)• USB Flash Drive: Handling of Unsupported Formats<ul style="list-style-type: none">- If an unsupported format on a newly inserted USB flash drive is found, the Instant Pilot brings up a warning and asks the user to format the drive in a proper way.
Known Problems	<ul style="list-style-type: none">• After release of the firmware it has been encountered that when using the Manual Trigger Dialog, switching from one AFC to the next, the Instant Pilot hangs up (crashes). So, only one AFC is supported with B.02.05. SCR#1090.• During executing the Leak Test for the Isocratic Pump, an "Wait Timeout" error message may occur. After pressing "Ackn." the test runs not to completion and has to be aborted. This is due to that a leakage (the pressure cannot be build up). SCR#1072.• Agilent LC Diagnostic provides the EMF limits Right and Left Heater Energy for G1316A/B TCC. The IP shows therefore an unknown limit event (2853), which is not editable via the IP. SCR#1005. <p>These malfunctions will be fixed with the next release B.02.06, expected in July/August 2007.</p>
Pre-requisites	Requires A.06.0x / B.01.0x or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.01

Table 18 Revision B.02.01 Change Information

Main firmware revision	4208A_B201_003, Res_4208A_B201_003
Date Introduced	November 2006
Bugfix	<ul style="list-style-type: none">• PVCS# 857: Option not installed error with BinPump SL• PVCS# 884: «Error Keyword» appears systematically on the control module• PVCS# 970: Lamp Counter Reset failure (G1315C/G1365C/G1315D/G1365D)
New Features	<ul style="list-style-type: none">• Print to USB Flash Drive There is no direct print via printer connected to the 1100/1200 modules possible. This gives more flexibility on usable printers and allows the formatted printing.• Added Sample Range in Start Analysis screen• User defined Injector Program (Method)• DAD/MWD/VWD Spectrum (Control)• DAD/MWD Wavelength Calibration Test (Maintenance)• Autosampler Transport Alignment (Maintenance)• FLD Intensity Test (Diagnosis)• Instrument Name added (Startup Wizard, Config/System)• Support of new modules G1329B ALS/G1315D DAD/G1365D MWD• Service Dialog (hidden feature - for Service Engineers)
Known Problems	None
Pre-requisites	Requires A.06.0x /B.01.0x or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

1 G4208A Change Information Changes

Revision B.01.04

Table 19 Revision B.01.04 Change Information

Main firmware revision	4208A_B104_002 , Res_4208A_B104_002
Date Introduced	June, 2006
Bugfix	<ul style="list-style-type: none">• SCR#872 "Instant Pilot and finding the Nano Pump Solvent Calibrations" Cap-/Nano-Pump calibration curve is selectable within the method and can be edited and saved. Same handling is possible for Da Vinci methods imported.• SCR#873 "Board identify query returns empty string" (for production only)• SCR#785 "No Fast Composition Change when Overlap enabled" Fast Composition Change is not executed when overlap is enabled for the WPS. No error message is displayed.
New Features	None
Known Problems	see information with revision B.01.02 of " Revision B.01.02 " on page 32.
Pre-requisites	Requires A.06.0x /B.01.0x or above on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.01.03

Table 20 Revision B.01.03 Change Information

Main firmware revision	4208A_B103_001, Res_4208A_B103_001
Date Introduced	May, 2006
Bugfix	<ul style="list-style-type: none">• SCR#865: "G1314A/B/C VWD Lamp Intensity Test does not work" The G1314A/B/C VWD Lamp Intensity Test on the Instant Pilot had a false Passed/Failed check for one limit/boundary, so good lamps did fail the test. Now the limits are corrected and the test will determine the lamp's performance.• SCR#849: "Backward Compatibility set to ON: Instant Pilot restarted in Resident" In some cases the forced restart after a change to the "Configure/Controller/3rd Party Software" parameter or a firmware update did end in a black screen, which required an additional power cycle of the Instant Pilot. The Instant Pilot now does normal restarts and comes up with the "Welcome Screen" again.• SCR#869: "Recognition problems of some Kingston and Hama USB sticks" The Instant Pilot now accepts<ul style="list-style-type: none">• Hama 57059 v2 FlashPen Mini USB 2.0 512MB and• Kingston DTI/128 Data Traveler 128MB USB sticks
New Features	None
Known Problems	see information with revision B.01.02 of " Revision B.01.02 " on page 32.
Pre-requisites	Requires A.06.02 on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.01.02

Table 21 Revision B.01.02 Change Information

Main firmware revision	4208A_B102_004, Res_4208A_B102_004 (initial firmware)
Date Introduced	March, 2006
Bugfix	None
New Features	None
Known Problems	<ul style="list-style-type: none"> • See “Thermostatted Column Compartment TCC / TCC SL (G1316A/G1316B)” in changes A.06.02. • SCR#686: Status view: 4 bottles empty is not displayed complete . <ul style="list-style-type: none"> • Press Control button and select System: Get Ready screen to see all not ready conditions. • SCR#785: Fast Composition Change is not executed when overlap is enabled for the WPS. No error message is displayed. • SCR#842: G4208A was connected to an 1100 LC consisting of isocratic pump. When putting the upper pressure limit as 'OFF' in the method view, the pump goes into an error state (pressure above upper limit). • SCR# 848: G4208A hangs (screen corrupted, no reaction on further input), do the following actions: <ul style="list-style-type: none"> • Configure > Module (with LAN card installed) • Select "LAN Settings" • Press Help button "i" • Exit Help screen • Press Enter button • Select YES • SCR# 856: When selecting "Injection Mode/Injector Program" on a sampler with no injector program a correct error "Missing Injector Program" occurs. When now pressing "Cancel", every parameter I try to change in the sampler brings a "Missing Injector Program" on "Done". This could only be undone by changing to "Needle Wash" and then back to "Standard" or by using "Control/System:Set Defaults". All SCR's will be fixed with next releases.
Pre-requisites	Requires A.06.02 on all 1100/1200 modules
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision A.05.15

This version supports the A.05.1x LC firmware platform and is based on “Revision B.02.15”.

Table 22 Revision A.05.15 Change Information

Revision	4208A_A515_001, resident not required
Date Introduced	April 2013
Firmware Revision	A.05.15
Bugfix	<ul style="list-style-type: none"> • TT 018151: Instant Pilot with RAM rev G fall into resident mode with MY94674204 and above and firmware A.05.14 • TT 015191: Instant Pilots with MY serial number crashed and fall into resident mode.
Special Instructions	<p>Update Procedure (use the Firmware Update Tool 2.10 or later or the Lab Advisor)</p> <p>The IP must be in either RESIDENT (blinking green LED) or MAIN mode (normal display). If the IP is in resident mode start with the main firmware update first, then the resident. If the IP is in main mode start in the usual way, resident first and then the main (as the update tool does).</p> <p>Possible situations:</p> <ul style="list-style-type: none"> • The firmware update tool shows a time out while transferring to main system (IP may have re-booted already). • The firmware update tool shows the update of the main still not finished (IP may have re-booted already). <p>In both situations, close the firmware update tool and unplug / re-connect the IP to the module.</p> <p>If the IP is still in resident mode, redo the update process.</p> <p>Check the firmware information for correct version (B.02.15 or A.05.15). If not correct redo the firmware upgrade process.</p>
New Features	<ul style="list-style-type: none"> • None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision A.05.14

This version supports the A.05.1x LC firmware platform and is based on “Revision B.02.07”.

Table 23 Revision A.05.14 Change Information

Main firmware revision	4208A_A514_001, resident not required
Date Introduced	September 2010
Bugfix	<ul style="list-style-type: none"> • support of Instant Pilots with serial number MY... and DE ... • PVCS #1118: Extended FLD wave length range EX 200 - 1200 nm, EM 200 - 1200 nm • PVCS #1120: Added FLD - PMT Gain Test - was missing • PVCS #1121 Added PMT - Gain Settings The PMT gain settings in the method shows the value as 2^X. This is different to the ChemStation where we have just the value X. • PVCS #1119: Fixed ALS needle change procedure During the Change Needle procedure (Maintenance ALS) you are moving the needle down via button "needle down". When the needle reaches the needle seat the message "Needle already in lowest position" shows up and the buttons "Needle up", "Needle down" and "Continue" disappear. So, no chance to move the needle up again. "Abort" is the only way to leave this function. Change needle maintenance changed to a two-step procedure. Step 1 moves gripper and needle to change position, step 2 moves gripper and needle back to home position after needle changed. • PVCS #1122 Printing of DAD calibration result When printing the Calibration report with G1315C DAD-SL Internal Print Error #5 showed up. • PVCS #1139 Extend pressure range in column tag edit dialog to 0...2000 bar. Wwas limited to 400 bar. • And minor changes in screens and help text.
New Features	<ul style="list-style-type: none"> • Based on revision B.02.07 • Support for G1314D VWD and G1314E VWD SL+ • Support for G1367D High Performance Autosampler SL+ • Start/stop sequence at/from a selected sequence line. • Support of new flash ROM type on IP main board
Known Problems	None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision A.05.13

This version supports the A.05.1x LC firmware platform and is based on “Revision B.02.06”.

Table 24 Revision A.05.13 Change Information

Main firmware revision	4208A_A513_003, resident not required
Date Introduced	August 2007
Bugfix	<ul style="list-style-type: none"> • New RAM layout • Add a warning dialog analysis is started with Hobbit and a collector is in the system. "Instant pilot is not able to fully control analysis of fractionation instruments [Continue] / [Abort]" • Problem with hanging EMPV Clean when pump is in test mode • SCR#0920: Status screen - the edit position in status setup screen is stored even if the screen is left • SCR#1005: EMF limits for TCC (Maintenance) for Peltier Power Left and Right is now available • SCR#1074: Leak test with isocratic pump did not abort automatically on error • SCR#1075: Keyword Error "AREV?;ABLD?!" with A.06.01 in Details screen • SCR#1078: Help text changed: for micro mode pressure test • SCR#1079: Help text changed: EMPV cleaning instead of Leak Test • SCR#1080: Help text changed: Leak Test for capillary/nano pump with EMPV • SCR#1084: RID-Not Ready Conditions optimized • SCR#1085: Hang-up during LAN modification (Configure) • SCR#1090: Problem with multi fraction collector instruments to allow operation with up to three collectors and one recovery collector (was already solved in A.05.12) • SCR#1091: AFC: Status view should show RINSE and WASTE status • SCR#1093: Print of Sequence table (table is empty) does not work • SCR#1095: Status - Thermostat - displayed value changed back • SCR#1097: TCC Col ID: no entries possible in column tag • SCR#1098: Injector program problem – WPS Mix Parameter • SCR#1099: Dual loop: change loop does not work • SCR#1100: Injector program editing hangs after the attempt to edit a not editable line e.g. "Draw default amount"
New Features	None
Known Problems	None

1 G4208A Change Information

Changes

Table 24 Revision A.05.13 Change Information

Special:	<ul style="list-style-type: none">• How to downgrade the Instant Pilot from B.01.xx/B.02.xx to A.05.13 and vice versa is described in the FWUPDATE.PDF provided with the LAN/RS-232 FWUpgrade Tool 2.4 or above. It provides additional descriptions not covered in the User Guide of the Instant Pilot (G4208-90003, 05/07).
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision A.05.12

This version supports the A.05.1x LC firmware platform and is based on “Revision B.02.05”.

Table 25 Revision A.05.12 Change Information

Main firmware revision	4208A_A512_002, resident not required
Date Introduced	June 2007
Bugfix	<ul style="list-style-type: none"> • PVCS# 0947: Button to delete a timetable completely missing • PVCS# 1003: no "pump off" information in status dialog (prep pump) • PVCS# 1021: Units for pump EMF limits missing • PVCS# 1022: Invalid sampler configuration using WPS and Wizard • PVCS# 1024: Max pressure in the Bin Pump SL timetable could not be set to 600 bar. • PVCS# 1025: No pictures after printing to "out of disc space" USB-Flash Drive. • PVCS# 1041: 1367C Injector seat volume 2.3 µl not displayed • PVCS# 1047: Internal error (event code 300) when entering the LAN Settings • PVCS# 1065: Cannot activate a blank run for vial ranges dialog in the Start screen
New Features	<ul style="list-style-type: none"> • reworked System ON/OFF screen. Simplified to a pure system on/off dialog. • reworked Status View. The status has two new tile types: <ul style="list-style-type: none"> - small editable method parameter tiles and large 'G1323' module summary tiles based on G1323 analysis screen layout. - The status view setup shows these new tile types as '... - editable' and 'Analysis' - ALS and WPS now shows the actual vial number and injection volume not only during injection, but preserves it and shows it continuously during analysis. - New 'Wavelength' status tiles show the actual used wavelength for DAD, MWD or VWD. It could defer from the method wavelength shown in the existing 'Signal' tiles, when a timetable is used to change the set wavelength over runtime. - Entering the setup select dialog now focuses the currently selected tile's entry in the list or – if it is an empty tile – the last selected entry. - Properties added (history and lock/unlock status views) • Sequence: Overview of Tray <ul style="list-style-type: none"> - The current sequence's status is shown graphically - View and Print Sample Ranges • WPS: Custom Well Plate Dialog to view plate definitions and setup custom plate definitions • RID: Two control functions for the RID are added to control the recycle and the purge valve and the parameters in configuration are removed. • Method/Sequence/Status Setup File Protection <ul style="list-style-type: none"> - If a file is protected, the user can not edit the currently loaded content or its filter settings.

Table 25 Revision A.05.12 Change Information

New Features

- System Info (Details): Board ID of Instant Pilot is shown.
 - Fast Scrolling in Lists: All lists are now speeding up scrolling after a few lines if the up or down button remains pressed.
 - FLD: Calibration Printing
 - The FLD deviations and the calibration history can be printed from Maintenance/ FLD Calibration Dialog.
 - UIB: Visible as supported module. It does not have any settings or features.
 - Leak Test (Binary STD (G1312A only), Isocratic, Quaternary, Micro, Nano, Prep)
 - Added leak test procedures to the diagnosis screen. Preparation is described in help. Preparation steps (like purging the pump) are NOT included in the automatic actions list itself.
 - NOTE: The G1312B SL pump uses a different Leak Test
 - Automated Fraction Collectors
 - The IP will support some but not all functions of the fraction collectors (G1364A, G1364B, G1364C, and G1364D).
 - The IP will be used together with purification software and the most important function will be the manual trigger function.
 - Beside this the IP will support the events and error messages and basic maintenance functionalities.
 - Clusters of up to 3 collectors plus one recovery collector (SEE KNOWN PROBLEMS).
 - Manual Trigger View via Control / System - Manual Trigger (SEE KNOWN PROBLEMS)
 - Zero Fill Volumes Request
 - Initialize Micro Fraction Collector
 - EMF Counter, Needle Counter will be supported.
 - Generic configuration parameters (module name, LAN, RS232) are supported.
 - Switch temperature On/Off set temperature.
 - Not supported Automated Fraction Collectors functions are:
 - Fraction Parameters
 - Location Setup (Reserved Loc., Recovery Loc., Fraction...)
 - Trigger Modes
 - Configuration
 - Delay Setup / Calibration
 - Tray Setup / Well Plate Setup
 - Cluster Setup
 - Tests
 - Control Functions
 - Status Information
 - Method
 - Import from G1323B
 - Editing.
-

Table 25 Revision A.05.12 Change Information

Known Problems	<ul style="list-style-type: none"> • During executing the Leak Test for the Isocratic Pump, an "Wait Timeout" error message may occur. After pressing "Ackn." the test runs not to completion and has to be aborted. This is due to that a leakage (the pressure cannot be build up). SCR#1072. • Agilent LC Diagnostic provides the EMF limits Right and Left Heater Energy for G1316A/B TCC. The IP shows therefore an unknown limit event (2853), which is not editable via the IP. SCR#1005.
Special:	<ul style="list-style-type: none"> • How to downgrade the Instant Pilot from B.01.xx/B.02.xx to A.05.11 and vice versa is described in the FWUPDATE.PDF provided with the LAN/RS-232 FWUpgrade Tool 2.4. It provides additional descriptions not covered in the User Guide of the Instant Pilot (G4208-90003, 05/07).
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision A.05.11

This version supports the A.05.1x LC firmware platform and is based on “Revision B.02.01”.

Table 26 Revision A.05.11 Change Information

Main firmware revision	4208A_A511_005, resident not required, initial revision
Date Introduced	November 2006
Bugfix	Initial
New Features	<ul style="list-style-type: none">• Revision A.05.11 for the Instant Pilot G4208A supports the Agilent 1100/1200 modules with firmware A.05.09/10 and A.05.11/12 installed.• Revision A.05.11 is not compatible with A.06.xx and B.01.xx!• It has the same functionality as the current firmware revision B.02.01 [0003] for modules with A.06.xx/B.01.xx
Known Problems	<ul style="list-style-type: none">• PVCS# 1018: Error message in system info screen . From welcome screen, when selecting the "Details", for a short time an error message appears: "Error: Unknown tag status". Ignore message.• PVCS# 1020: Hobbit remains in "scanning system" with 5.11 Firmware due to a too large system.• PVCS# 1021: Units for pump EMF limits missing
Special:	<ul style="list-style-type: none">• How to downgrade the Instant Pilot from B.01.xx/B.02.xx to A.05.11 and vice versa is described in the FWUPDATE.PDF provided with the LAN/RS-232 FWUpgrade Tool 2.4[002]. It provides additional descriptions not covered in the User Guide of the Instant Pilot (G4208-90002, 10/06).
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update



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G1323B Change Information

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This chapter provides the details of the various firmware revisions for the Agilent G1323B Control Module since its introduction in 1999.



Firmware Revision Overview

The G1323B Control Module replaced the 1100 Control Module G1323A in 1999. Larger memory size (2 MB) increased the number of supported LC modules (1100/1200).

NOTE

Do not downgrade firmware of the G1323B Control Module to earlier revisions. Use always the latest revision. The latest version is always backward compatible to the initial version.

There are two platforms that are supported by the G1323B Control Module:

- Firmware B.04.02 supports the A.06.xx/B.01xx/B.06.xx LC modules
- Firmware B.03.22 supports the A.05.xx LC modules and below

Table 27 Firmware Revision Overview

Product#	Filename (.BIN)	Date	Comments
G1323B	LCB402EN	06/2012	Latest version, should be used per default for all systems with firmware A.06.xx/B.01.xx/B.06.xx
G1323B	LCB401EN	01/2004	
G1323B	LCB322EN	01/2004	Latest version, should be used per default for all systems with firmware A.05.xx and below
G1323B	LCB321EN	01/2004	
G1323B	LCB311EN	09/2002	
G1323B	LCB302EN	07/2002	
G1323B	LCB301EN	12/2001	
G1323B	LCB202EN (Update)	03/2001	This is an update of the B.02.02
G1323B	LCB202EN	01/2001	
G1323B	LCB201EN	07/2000	
G1323B	LCB104EN	05/2000	
G1323B	LCB103EN	03/1999	

Table 27 Firmware Revision Overview

Product#	Filename (.BIN)	Date	Comments
G1323B	LCB102EN	03/1999	
G1323B	LCB101EN	03/1999	Initial version. Based on revision A.02.02 (G1323A) This version does not work on G1323A control modules due to limited memory size!

Changes

Revision B.04.02

Table 28 [Revision B.04.02](#) Change Information

Revision	LCB402EN
Date Introduced	September 2005
Firmware Revision	B.04.02
Enhancements	•
Bugfixes	<ul style="list-style-type: none">• Fixed “connect” problem for G1323Bs with serial number CN22504008 and above when upgrading to B.04.01.
Known Problems	<ul style="list-style-type: none">• See “Revision B.04.01” on page 45.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.04.01

Table 29 Revision B.04.01 Change Information

Revision	LCB401EN
Date Introduced	July 2005
Firmware Revision	B.04.01
Enhancements	<ul style="list-style-type: none">• Support for G1315C, G1365C detectors• Support for new CAN protokoll - old can protokoll is still working• Support for Injector Purge Kit including G1156A valve• Enable overlap injection for Dual Loop Sampler G2258A
Bugfixes	<ul style="list-style-type: none">• Pooling with AFraCo did not work if no sampler is within system.• DaVinci shows misleading error messages when setting up bottle fillings for a G1361 ISO HF pump (PVCS 1776).• Problem with large calibration intervals - "every x samples" - when using G1313A/G1329A/G1389A/G2260A with a 100 vial tray. The sequence goes into an infinite loop when: [sample range last position] + [calibration interval] > 99 (PVCS 1778).• G1389A injector program wash in vial display problem (PVCS 1779).• Error when executing EMPV cleaning on a G2226A Nano Pump (PVCS 1780).
Known Problems	<ul style="list-style-type: none">• May not connect to 1100 system after upgrade to this version (serial numbers CN22504008 and above), requires B.04.02.• Not compatible with G4240 Chip Cube.• No more analysis can be started after using "Wait for repeated start request" AND aborting the analysis while waiting for the start request coming over the remote line. Everything works fine when an analysis is aborted after start request was received (PVCS 1812).
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

1 G1323B Change Information Changes

Revision B.03.22

Table 30 Revision B.03.22 Change Information

Revision	LCB322EN
Date Introduced	January 2004
Firmware Revision	B.03.22
Enhancements	<ul style="list-style-type: none">• None
Bugfixes	<ul style="list-style-type: none">• FOR DUAL LOOP AUTOSAMPLER G2258A REQUIRED G1323B firmware B.03.21 was the first release with control capabilities for the Dual Loop Autosampler G2258A. This revision contains a critical bug <1773>. When the parameter "Draw Plug" is activated, the sampler does not draw a plug but toggles the position of the 10-port injection valve instead. This has been corrected.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.03.21

Table 31 Revision B.03.21 Change Information

Revision	LCB321EN
Date Introduced	January 2004
Firmware Revision	B.03.21
Enhancements	<ul style="list-style-type: none"> • Support for Dual Loop Autosampler (DLA) • Support for new generation AFraCo Types B,C,D • Support for new tray types: low height 2 wellplate, 20 funnel, 40 funnel • Micro system shows hints to configure startup in bypass and to use Fast Composition Change • Seal wash function for G1310A, G1311A, G1312A • New method parameters for wellplate samplers. They are only editable in method screen. • Minimized Carry Over - automatic carryover reduction (not for G2258A) • Lowest Carry Over - provides settings for the injector programm with the same name • Seal wash parameter On Time for G1361A is now specified in minutes instead percent. • Sampler method parameter "Valve to Bypass After Inj." in method screen renamed to "Delay Volume Reduction" to be inline with ChemStation and own settings screen.
Bugfixes	<ul style="list-style-type: none"> • On well plate samplers, when using a single location range with "shortest path" scheme over plates with uneven number of columns or rows (like Eppendorf 0.5 ml), the second plate was not correctly processed (also visible in Samples View preview). <1740> • Slave errors are now reset in System On. <1690> • Waittime is now rounded to at least 1sec. <1694> • For unknown inj.program commands "UNKNOWN" is shown in inj.programm view. <1703> • Fixed bug in instruction to set slave serial numbers. <1704> • Fixed bug which hides external contacts in method view. <1719> • "Grating assembly reset" is now added to maintenance log. <1722>
Known Problems	<ul style="list-style-type: none"> • Do not use with DUAL LOOP AUTOSAMPLER G2258A, use B.03.22 instead
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.03.11

Table 32 Revision B.03.11 Change Information

Revision	LCB311EN
Date Introduced	September 2002
Firmware Revision	B.03.11
Enhancements	<ul style="list-style-type: none"> • Edit method parameters inline in Method view • It is now possible to EDIT METHOD PARAMETERS INLINE in the Method-View. This means, if you enter the Method-View from the Analysis-View by pressing (F3), you can NOW edit all method parameters in each line. These parameters were previously only displayed for reviewing in this view. • Cerity support (disable controls and dialogs when function is locked by Cerity/ other controller). • Automation interface (G2254A) and Wellplate Handler calibration and test support. • Support for 2-Pos/10-Port valve Column Compartment (G1316A) option. • Support for 1100 series Valves • 1) Simple Switching (no automation) • 2) Synchronization • 3) EMF • 4) FW update (important, since the current FW upgrade utility cannot update the firmware of CAN slaves. • Added Nano Pump (G2226A) micro mode pressure test • Selection if End Actions should be processed when analysis is aborted by user. • Added function to stop sequence after completion of actual running analysis (additional choice in stop dialog).
Bugfixes	<ul style="list-style-type: none"> • Manual trigger button update (PVCS #1560). • Update of trigger parameters in fraction view (PVCS #1565). • Recycle Valve State of RI Detector in logbook is now in line with analysis screen • After selecting "Stop multiple injections" or "Stop current vial range" on the analysis stop dialog the sequence did not continue with next location or range. Only Rev. B.03.01 or above. • Fixed row-by-row, shortest way (meander) processing order of WellPlate Sampler when used in a sequence including calibration samples (PVCS #1685) • Edit of active or previous sequence lines is prevented (PVCS #1302). • Interlock Cap/Nano Pump's Fast Composition Change against Well Plate Sampler's Overlap, that only one could be enabled (PVCS #1354). • When a new method is loaded without an injector program, a previously existing injection program is deleted (PVCS #1360).
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.03.02

Table 33 [Revision B.03.11](#) Change Information

Revision	LCB302EN
Date Introduced	July 2002
Firmware Revision	B.03.02
Enhancements	<ul style="list-style-type: none"> Control added for new products Nano Pump (G2226A) support - NOT including Flow Sensor Accuracy Calibration
Bugfixes	<ul style="list-style-type: none"> Problem with multiple external start requests for a single run (PVCS #1573) If two 'remote start' requests are submitted, the control module aborts the current sequence. Now, a start request during a run is. It's just generating a logbook entry "Ext. start request while in run".
Known Problems	<ul style="list-style-type: none"> See "Revision B.03.01" on page 50.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.03.01

Table 34 Revision B.03.01 Change Information

Revision	LCB301EN
Date Introduced	December 2001
Firmware Revision	B.03.01
Enhancements	<ul style="list-style-type: none">• Control added for new products• Automated Fraction Collector (G1364A) Single only• High Flow ALS (G2260A)• Extension Boxes (Multiple Purpose Switching Valve G1160A)• Universal Interface Box G1390A)• Peristaltic Pump control in Well Plate Sampler (G1367A AND G1377A) allows "Prime the Flush Pump".• Added hidden dialog for 2-point calibration on G1316A TCC.
Bugfixes	<ul style="list-style-type: none">• Intermittent lockup of control module on Agilent 1100 system.• Fixed sporadic lockups after setting up new timetable entries.• G1313A flow/eject speed ranges and 900 ul syringe option corrected.
Known Problems	<ul style="list-style-type: none">• Manual trigger for fraction collection does only support one Agilent 1100 Series Fraction Collector (G1364A). If more than one Fraction Collector is present, the manual trigger function of the control module is not accessible. The Control Module will display the message "Error: Multiple AF Collectors".• Display update using manual trigger not updated• The manual trigger (0/1) button-icon isn't updated when the ChemStation/Purify run ends before the trigger was set to off (0). After next use of the trigger button, the button reading is OK. The function itself is working without problems.• Control Module revision B.03.01 connected to an instrument with Extension Boxes (Valves, UIBs) will need a running G1364A fraction collector for undisturbed operation. If it's not recognizing a G1364A in the system, the Control Module will wait up to 2 minutes during startup ("start communication").• If a Fraction Collector is powered on during that period of time, the wait time is aborted as the module is announcing its presence. If no Fraction Collector is found after 2 minutes the Control Module will connect to the system, but it's recommended to first power down the whole system before the Fraction Collector is integrated again in the system.• Note that the described behavior is only visible with Control Module revision B.03.01 connected to an instrument that includes Extension Boxes.

Table 34 Revision B.03.01 Change Information

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- Before updating Extension Boxes (Valves, UIBs) firmware with the Control Module revision B.03.01, make sure only one Agilent G1364A Fraction Collector is powered on. Otherwise the control module may not find the correct bootloader after the module transfers from resident to normal mode.
 - "Serial Number Invalid" message during new software update of G1323B Control Modules with a serial number starting with CN... and preinstalled software revision B.02.02. To avoid a "Serial Number Invalid" message during update of Control Modules that have serial number starting with CN... and software revision B.02.02 installed, you must copy the latest UPDATE.EXE (revision 3.19 or above, dated 03/16/01 or later) onto the same flash card with the B.03.01 firmware. All updates from this card will then be processed the normal way without showing the described error message.
 - If the error already occurred, press <Enter> and type the serial number printed on the rear side of the control module into the shown mask. Then press <Enter> and <1><Enter> to acknowledge the serial number. The message should not occur again, after an update to revision B.03.01 or above.
NOTE: The described problem does not occur during remote updates via PC.
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0Q/PV Recommendation No repeat 0Q/PV tests are recommended after update

Revision B.02.02 (Update)

Table 35 Revision B.02.02 (Update) Change Information

Revision	LCB202EN (Update)
Date Introduced	March 2001
Firmware Revision	B.02.02 (Update)
Enhancements	<ul style="list-style-type: none">The G1323B Agilent 1100 Series Control Module and the G1819A Agilent 8453E Spectrophotometer Control Module manufacturing will be transferred to China in April. To support the transition, we have changed the default country code prefixing the serial number from DE... to CN... in the current revisions. <p>This topic is mainly affecting manufacturing, but you have to be aware that we had to change the update program (UPDATE.EXE) bundled with the binaries and had to patch the following binaries:</p> <p>LCB202EN.BIN - Latest LC control module revision UVA153ML.BIN - Multilanguage UV/VIS control module UVA203CH.BIN - Chinese UV/VIS control module</p> <p>This is a silent role out (no changes in revisions) and we checked the new binaries against the current shipping binaries to make sure only the serial number prefixes have changed.</p> <p>In addition to the binary patches the update (UPDATE.EXE) program bundled with the binaries has changed to revision 3.19 to support the CN... serial number prefixes.</p> <p>The older update programs (revision 3.18 or below) will report CN... prefixed serial numbers as invalid and will not offer it as an alternative when setting/programming a new serial number.</p>
Bugfixes:	<ul style="list-style-type: none">None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.02

Table 36 Revision B.02.02 Change Information

Revision	LCB202EN
Date Introduced	January 2001
Firmware Revision	B.02.02
Enhancements	<ul style="list-style-type: none"> • This release adds control for new 1100 modules: Preparative Pump (G1361A) and Preparative Pump Gradient Extension, Micro Well Plate Autosampler (G1377A). • Fast reconditioning for Capillary Pump (G1376A) in combination with a Micro Well Plate Autosampler (G1377A). • This release adds control for new 1100 modules: Preparative Pump (G1361A) and Preparative Pump Gradient Extension, Micro Well Plate Autosampler (G1377A). • Fast reconditioning for Capillary Pump (G1376A) in combination with a Micro Well Plate Autosampler (G1377A) • Capillary Pump (G1376A) support for manual purge valve in leak/pressure tests • Support for new Autosampler injector program commands supported with the latest sampler firmware (>= A.04.10): Position Increment/Reset, Syringe Home • Bottom sensing setting for Well Plate Autosamplers • Changed Align Transport procedure for standard autosampler (G1313A/G1329A/ G1389A) • Added 'Service' dialog to the MIO extension card configuration screen.
Bugfixes:	<ul style="list-style-type: none"> • Well Plate Autosampler driver bug in vessel calculation for sequence lines with alternating calibration sample positions • In Well Plate Autosampler injector program dialogs changed displayed 'Wait Equilibration' unit from minutes 'min' to correct unit seconds 's'.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.02.01

Table 37 Revision B.02.01 Change Information

Revision	LCB201EN
Date Introduced	July 2000
Firmware Revision	B.02.01
Enhancements	<ul style="list-style-type: none"> Control for new 1100 modules: Capillary LC pump (G1376A), Well Plate Autosampler (G1367A) and Micro Autosampler (G1389A). Multiple modules of the same type can be operated now. Speed optimized on plot drawing routines
Bugfixes:	<ul style="list-style-type: none"> FLD Acquisition Type for Spectra In Settings/FL Detector/More/Scan the order of the "Store Spectra" selection list for excitation or emission spectra should be "off - apex - all in peak - all - all w/o signals", and not "off - all in peak - apex - all - all w/o signals". Because of the switch of "apex" and "all in peak" this may lead to a false data acquisition setting in the instrument. DAD timetable peak detector peakwidth The "Peakwidth" (Peak Detector Peakwidth) setting in a DAD timetable has a wrong selection list. It should have the following entries: <ul style="list-style-type: none"> - same value as the method's peakwidth - 2-times the method's peakwidth - 4-times the method's peakwidth - 8-times the method's peakwidth instead of: <ul style="list-style-type: none"> - <0.01 min (<0.1 s) - >0.01 min (0.2 s) - >0.03 min (0.5 s) - >0.05 min (1 s) - >0.1 min (2 s) - >0.2 min (4 s) - >0.4 min (8 s) - >0.85 min (16 s) The last four entries of the last list result in a "8-times" the method's peakwidth setting.
OO/PV Recommendation	No repeat OO/PV tests are recommended after update

Revision B.01.04

Table 38 Revision B.02.01 Change Information

Revision	LCB104EN
Date Introduced	May 2000
Firmware Revision	B.01.04
Enhancements	<ul style="list-style-type: none"> • This release adds control for new 1100 DAD/MWD version G1315B/G1365B that will be available in July. • Method handling adjusted to handle different module versions as different configurations (warning "Method from different configuration" when methods from A is loaded into B version and vice versa). • Date code information in diagnosis buffer is now shown as real date and no longer as seconds starting from 1.1.1970.
Bugfixes:	<ul style="list-style-type: none"> • None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

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Revision B.01.03

Table 39 Revision B.01.03 Change Information

Revision	LCB103EN
Date Introduced	March 1999
Firmware Revision	B.01.03
Enhancements	This release changes logo and name appearances in correspondence to Agilent.
Bugfixes:	<ul style="list-style-type: none">• There are no fixes or changes in functionality included.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.01.02

Table 40 Revision B.01.02 Change Information

Revision	LCB102EN
Date Introduced	March 1999
Firmware Revision	B.01.02
Enhancements	<ul style="list-style-type: none"> • Sequence with nonexistent method (NEW) A message box now warns the user when starting a sequence that contains a nonexistent method. If the user continues, the sequence uses the actual method for all nonexistent methods, which are parts of the sequence. • Additional checks when validating injector program (NEW) The control module now checks for valid draw/eject/mix volumes with the current method settings and metering device capabilities during the 'Autosampler/Settings/Inj. Program/Validate' process. The vial positions are checked against the installed trays. • Messages/Events The 'Method loaded/saved/deleted' entries in the logbook are now referred as controller messages. The error message box text now includes the name of the module where the error occurred. • Running sequences with ALS optimization modes activated The ALS optimization modes 'Prefetch Sample Vial' and 'Overlap Injection Cycle' now work also over sequence lines and switches between sequence and calibration vial ranges. The only exception is overlap over a method change.
Bugfixes:	<ul style="list-style-type: none"> • 'Instrument out of memory' when saving methods The error now displays again in the logbook. The remaining parts of the incomplete - not correctly saved - method are now automatically removed, when the save failed because of an instrument error. • FLD lamp lifetime % display in EMF screen The displayed percentage value was by a factor of 10 too high. Now it shows the correct value. • Calibration 'after' sequence lines Calibration lines set to 'calibrate after' are now correctly executed. • Samples View Sequence Simulation Selecting or changing the sequence lines to view in the samples dialog may have resulted in a never ending rotating busy cursor. This was due to an error in the sequence simulation procedure, which calculates the used vials for display in the dialog's tray representation. • Double Error Messages An error message generated by the instrument may have showed up twice and other messages at the same time may have not been popped up as an error box.
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

Revision B.01.01

Table 41 Revision B.01.01 Change Information

Revision	LCB101EN
Date Introduced	March 1999
Firmware Revision	<p>B.01.01, Initial Firmware</p> <ul style="list-style-type: none"> Based on revision A.02.02 (G1323A) This version does not work on G1323A control modules due to limited memory size!
Enhancements	<ul style="list-style-type: none"> Control of the G1362A Refractive Index Detector Control of the G1365A Multiple Wavelength Detector Remote Update - NO PC CARD REQUIRED <p>Possibility to update the control module via the firmware upgrade utility delivered with ChemStation (support included with the following versions: 3.x for the firmware upgrade utility and LCB101EN.BIN for the control module firmware). The update time is about 33 minutes.</p>
Changes (vs A.02.02):	<ul style="list-style-type: none"> Startup Added "synchronizing with modules" as last initialization step, to wait if one module's parameterset copy in the controller modules is not yet initialized (e.g. visible when switching on the DAD with control module plugged in). Removed message "Information held in the modules may not be format compatible", if the module holds no information for the control module (e.g. updated/new module). System On/Off Reworked systems on/off screen to see all module states and to allow each module to be switched on individually. Last revision the on/off screens did not support more than one detector/pump. The Screen dynamically attaches to the number/type of modules present. If no module with on/off capability is present (e.g. standalone Autosampler) the system on/off key is not visible. 'System On' now only switches on lamps that are necessarily required by the actual method to reach the ready condition of the system. Pumps Online Plot Added ripple signal to all pumps by default. In the previous version ripple was only visible in single module systems. Status Line Time in status line now shows the remaining time before a time out (if set) will occur. Visible between two analyses while the system is idle. If an Auto-On action is set, the scheduled time is displayed in the System view's status line. If a sequence or vial range was aborted, the vial and injection number of the interrupted analysis keeps visible in analysis view's status line, until the next analysis is started.

Table 41 Revision B.01.01 Change Information

	<ul style="list-style-type: none"> • Sequence The control module now waits between two runs for the system to get ready (visible as "Rdy. Wait" in the status line). This may lead to a timeout error, if the system won't get ready in the timeout period specified in 'End Actions' dialog. If timeout is active (between two runs) the timeout countdown is displayed in the status line. Sequence logbook now holds all entries of a full control module sequence. • VWD/FLD: Analog Signal Plot The analog signal plot may not have shown the selected signal source after restarting the control module or switching the signal source. • Binary Pump: Flow - Range Check In the analysis view corrected the validation of the flow value. • Printouts Changed print routines to be compatible with the new generation DeskJet/LaserJet printers.
Bugfix	<ul style="list-style-type: none"> • None
OQ/PV Recommendation	No repeat OQ/PV tests are recommended after update

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Changes

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In This Book

This bulletin contains information about the firmware revision for the Agilent 1200 Infinity System.

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