Keysight 34450A Digital Multimeter, 5.5 Digit, OLED Display

01.03-01.02 Version Information

Release Date: (Table Text)	October 17, 2019
Requirements Category (e.g., operating system):	Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista, Microsoft Windows XP, Microsoft Windows 10
Requirements Category (e.g., instrument software version):	None
Requirements Category (other):	None
File Name:	34450AFirmwareUpdatePackage_V01.03-01.02.exe
License:	None

Main Changes

1. Solved defect 576603 – Trim Value overwritten by Flatness CAL constant.

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01.03-01.01 Version Information

Release Date: (Table Text)	March 18, 2019
Requirements Category (e.g., operating system):	Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista, Microsoft Windows XP, Microsoft Windows 10
Requirements Category (e.g., instrument software version):	None
Requirements Category (other):	None
File Name:	34450AFirmwareUpdatePackage_V01.03-01.01.exe
License:	None

Main Changes

1. To accommodate the new flash memory.

01.02-01.00 Version Information

Release Date: (Table Text)	March 14, 2017
Requirements Category (e.g., operating system):	Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista, Microsoft Windows XP
Requirements Category (e.g., instrument software version):	None
Requirements Category (other):	None
File Name:	34450AFirmwareUpdatePackage_V01.02-01.01.exe
License:	None

Main Changes

IO

1. Splash screen – Agilent logo replace by Keysight logo (Keysight rebranding activity).
2. Added New SCPI (Keysight rebranding activity).

    I. SYSTem:PERSona:MANufacturer <string>

    II. SYSTem:PERSona:MANufacturer:DEFault

    III. SYSTem:PERSona:MODel <string>

    IV. SYSTem:PERSona:MODel:DEFault
3. USB Vendor ID change from 0x0957 (Agilent) to 0x2A8D (Keysight). (Keysight rebranding activity).
4. Solve the USB wrong ID character issue (TFS Defect ID 428815).
5. Solve the issue of Hold measurement where reading return by read? command is not match with meter reading (TFS Defect ID 437070).
6. Change syst:pers:man? query response to always return "Keysight Technologies" or "Agilent Technologies".
7. Added 10ms settling time for LFREQ change (SYST:LFR <50|60>) to avoid 1st reading wrong for medium mode, after LFREQ change.

MB

1. Added 10ms settling time for LFREQ change (SYST:LFR <50|60>) to avoid 1st reading wrong for medium mode, after LFREQ change.

00.61–00.71 Version Information

Release Date: (Table Text)	August 12, 2015
Requirements Category (e.g., operating system):	Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista, Microsoft Windows XP
Requirements Category (e.g., instrument software version):	None
Requirements Category (other):	None
File Name:	34450AFirmwareUpdatePackage-V00-61-00-71.exe
License:	None

Main Changes

IO

1. Fix the bug where value 1.3100 is shown on the front panel when OPEN condition are occurred during diode test in emulator mode.
2. Include diode test into the math limit function for both Agilent and Emulator mode.
3. Increase the trigger out pulse width from 3us to 10us, so that it is able to trigger another Frodo2 unit.
4. Correction on the AC trim command for diagnosis use.

MB

1. Solved defect 423869 - FResistance:OComp: Wrong resistance measurement reading. Resistance value and range in slow mode is different from medium and fast mode (input with DC offset).

00.60-00.66 Version Information

Release Date: (Table Text)	May 30, 2013
Requirements Category (e.g., operating system):	Microsoft Windows 8, Microsoft Windows 7, Microsoft Windows Vista, Microsoft Windows XP
Requirements Category (e.g., instrument software version):	None
Requirements Category (other):	None
File Name:	34450AFirmwareUpdatePackage-V00-60-00-66.exe
License:	None

Main Changes

IO

1. Added checking for receiving length zero in UART communication between IO and MB.
2. Set hdfa and clear hdfe setting for GPIB interface. Release holdoff (rhdf) on every byte received.
3. Not setting rhdf after sending feoi for GPIB interface.

MB

1. Handling on communication between CB and MB, when CTI happen at terminal byte (0x25).

00.59-00.65 Version Information

Main Changes

IO

1. Add in error handling in IO-MB communication when UART CTI error occur.

MB

1. For data logging auto range jumping (limit to number of range+1 times).
2. Ocomp on limit to 12Kohm to return OL to CB.
3. CAP OL AR EXT (remove abort)
4. INIT FETCH? vee test timeout when CTI occur, add CTI handling for error return to CB.

00.58-00.64 Version Information

Main Changes

IO

1. Move the "REMOTE" label to lower location on the display.
2. Include "TRIG" label for math functions.
3. Update the data log minimum sample interval.

MB

1. Data logging timer (sample timer and Trigger Delay timer), SAD00455526, SAD00455427, SAD00455411, SAD00455554
2. Hold data not update. SAD00455473
3. Cap no abort for start measurement, for auto range read OL issue.

00.57-88.63 Beta Version Information

Main Changes

IO

1. Solve SAD00455476, SAD00455408 and SAD00455478.

MB

1. Data logging timer (sample timer and Trigger Delay timer).
2. Hold data not update. SAD00455473.
3. Cap no abort for start measurement, for auto range read OL issue.

00.56-00.63 Version Information

Main Changes

IO

1. Removed 115200 baud rate setting of RS232 interface.
2. Added ¡°Processing¡¡± message when enter Math dB function from front panel.

MB

1. Solved Ocomp Slow mode error.
2. Solved average reading become OL when resolution change.

34450AFirmwareUpdatePackage_V00.56-00.63

1. Added firmware 34450A_IO_V0056.bin and 34450A_MB_V0063.bin.
2. Added IO bootloader 34450A_IOBoot_BL004.bin.

00.55-00.62 Version Information

Main Changes

1. Solve SAD00453852 DCV ACV settling time after reset.

00.55-00.61 Version Information

Main Changes

IO

1. Solve bug where USB is not disabled when doing power-on recall in emulator mode.
2. Update minimum data log sample timer for OCOMP and TEMP.
3. Added scpi to write eeprom.
4. Solve SAD00455180.

MB

1. Solved FREQ read 0hz for >200Vac 100khz if keep on reconfigure, happen in dual function mode (ACV, FREQ) or (ACI, FREQ).
2. Solved Emulator save and recall location 1, range cannot recall, this is due to State 0 being overwrite when parameters change and Power-on-last is set to off.
3. Solved ocomp res 2w offset issue, new algorithm and longer settling time.
4. Solved 1st trigger display fetch get empty for ext trigger after trigger source change (emulator)
5. Add EEPROM read and write diag command.
6. Add Flash 16 sections empty check, if empty then check if Flash address and readingcount is init state, else reset and write to update eeprom backup (for firmware update treatment).

IO Bootloader (BL0.04)

1. Added command to reset instrument.
2. Added code to terminate bulk out message.

00.54-00.60 Version Information

Main Changes

IO

1. Solve issue SAD00454920.
2. All IO connectivity will be disabled during data logging and will be restored back when the logging is complete or abort.
3. Update the data log minimum sample time for all function in manual range except FREQ and CAP.

MB

1. Ext trig CAP OL in AR <10mF in regression.
2. DIAG:FLASH:ERASE? force to write to eeprom for new flash address.
3. Math fetch 0 for bus in stale case.
4. Firmware update add treatment for backup data before firmware update and disable power down detection.

If you are upgrading from lower version to this version please perform below steps before proceed to use the unit.

1. Perform firmware upgrade for both IO and MB.
2. Power cycle the unit
3. Send DIAG:FLASH:ERASE? To the unit (this step will erase all your previous log data).

For future upgrade from this version onwards, step 3 is not required.

00.53-00.59 Version Information

Main Changes

IO

1. Change Cont measurement display to 4.5 digits.
2. Change Cont measurement refresh rate to 50ms.
3. Solve SAD00454977 where bracket shown when selecting GPIB address in GPIB menu.
4. Solve SAD00454905 & SAD00454937.
5. Include OL readings in log statistics.
6. Solve trigger hang issue in Emulator mode.
7. Solve display clear in utility menu when sending *rst during emulator mode.
8. Solve SAD00454940.

MB

1. FRES 20% cal point (zero cal fail)
2. LFREQ change to 60Hz, causing high voltage an high current wrong reading.
3. CAP auto range show OL in range lower than 10mF issue.
4. Data log missing count issue.

00.52-00.58 Version Information

Main Changes

IO

1. Solve issue SAD00454903, SAD00454905, SAD00454883 , SAD00454920 and SAD00454924.
2. Update minimum data log sample timer for OCOMP and DCV-ACV.
3. USB product ID change to 0xb318.

IO Bootloader (V0.03)

1. USB product ID change to 0xb318.

MB

1. Longer ACV DCV Dual function settling time for DCV1KV~ACV100mV,1V and DCV100V~ACV100mV case to 6.5 seconds.
2. Ocomp negative voltage compensation treatment (OL detection).
3. For LFREQ Set to 60Hz problem (100mV Slow read 1xxmv for 250V i/p)
4. For Datalog error after Diag:Flash:Erase?

Firmware Update Utility (V1.0.0.3)

1. Use VISA library directly instead of using TM Framework for communication with instrument.
2. Detect USB instrument with Product ID of 0xb318.

![KEYSIGHT logo]

00.51–00.57 Version Information

Main Changes

IO

1. Include log statistics.
2. OL value is changed to 1E9 in emulator mode.
3. Enable button lock feature in remote mode.
4. Include log list search feature.
5. Update minimum data log sample timer for OCOMP.
6. Solve issue SAD00452669, SAD00454568, SAD00454752, SAD00454806, SAD00454815, SAD00454817, SAD00454816, SAD00454820 and SAD00454250.
7. Fix input buffer full issue when looping *cls command.
8. Report -363, input buffer overrun error when rs232 input buffer full.

MB

1. Fixes for RES Ocomp Fast and Medium, OL case.
2. Fixes for FRES Ocomp Fast mode, OL case.
3. For auto range Ocomp on RES and FRES limit to 10Kohm range.
4. Fix Emulator TRIGGER2 adn above hang issue
5. Fix for DC path get incorrect reading when changing language between L1 and L2. (LFREQ change to 60Hz)
6. CAP auto range return OL.

00.50-00.56 Version Information

Main Changes

IO

1. Include OCOMP commands.
2. Include GPIB Fluke emulator.
3. Update the data log minimum sample timer for auto ranging.
4. Solve SAD00454655, SAD00454433, SAD00454432, SAD00454414, SAD00454511 and SAD00454513.
5. Enable END byte detection of gpib chip.
6. Enable holdoff on every end byte (hdfe) of gpib chip.
7. Update serial poll register of gpib chip only when the status byte value changes.

MB

1. MnMxSet, MINSET, MAXSET count cannot run, due to Math function pointer no update.
2. SAD00454581 Dual function(e.g.DCV-DCI) Primary range changed while changing 2nd function range. – Local variable not update (state) as if in local CurrStateTempBuffer May changed
3. SAD00453832 Correction on Calibration Count increment for CAP open, DCV 1V, RES100MOhm.
4. SAD00454523 Power On Reset - HiZ is not stored while power on reset is off
5. SAD00454333 CAP get OL when no i/p at 10mF range - when measurement fail but 1st and 2nd also fired, set to 0.0 instead of OL.
6. SAD00454512 CAP get OL in auto range with i/p - add treatment in auto range to discharge fully (1st time) before get reading.
7. SAD00454413 unit hang if try 15time in AR in slow mode DC path - average condition not clear in give up case (after 15 attempts) thus keep getting average reading.
8. SAD00454659 DATA:LAST issue when log data is big. – this is due to no take care of roll over case when read last number. verified.
9. SAD00454246: RES - Get incorrect range in when input signal is within 100ohm range - For AZ sometime 1st reading not correct/wrong range for AR, this is due to R=NAZ-AZ is get in NAZ case, sometime AZ not yet get ==0, thus get wrong range thus R=NAZ-AZ should be done in calc after meas task. (This solution apply to all DC path with Auto Zero on(Slow mode)). (SAD00454516, SAD00454647)
10. SAD00454333 CAP OL for Manual Range, throw 1st reading (>4mF get OL issue).
11. Self test for ACV adjust the reference higher.
12. Increase ACI auto range threshold from 10% to 12%.
13. Ocomp OL handling for FRES.