Asterion AC Master Controller Firmware Release Notes

# Supported Instruments:

# Asterion Series 1U/2U/4U

# Release Notes:

### V2.35: Date: 15-Sep-23

* Issue Fixed: CSW Mode High-Range AC PONS OVP is set to -3V. In High-Range there is inability to edit PONS OVP.

### V2.34: Date: 12-Apr-23

* Issue Fixed: External sync feature is out of calibration if the command [CAL:PASS “5000”] is sent to the unit
* Meister Curve test levels changed as per the new IEC413 Standard 61000-4-13:2002

### V2.32: Date: 17-Nov-22

* Issue Fixed: The Output switch should reset a fault when the switch is cycled off and then back on, but it was possible to get the switch action to lock up where it would not turn the output back on. The LED of the Output switch would then give the wrong indication: It would be on, but the output of the unit was shut down. The AC input power had to be cycled off and then back on to recover from the lockup.
* Re-enable the DFI State to ON during the initialization
* Registering the Fan Fault and Temperature Faults is skipped for first 15 seconds.
* Fixed the PONS OVP setting issue when the unit is set to AST mode from Legacy and vice versa
* Fixed the User Voltage limit setting issue when the range is changed

### V2.23: Date:21-Apr-2022

* Added SCPI command support for Power ON Settings of OVP

### V2.20: Date:15-Feb-2022

* Modified the Phase calibration frequency points from 505 to 555 Hz frequency.
* Modified the Phase calibration frequency points from 1010 to 1210 Hz frequency.
* Fix the problem related to overvoltage pulse while running a transient list.

### V2.17: Date: 03-Feb-2022

* Fix the problem with calibration coefficient issue.

### V2.14: Date: 6-April-2021

• Fix the problem with external calibration that require INST:COUP to be set to NONE

• Adjust Calibration tolerance for voltage to 10mV, it was set at 3 mV.

• Fix a problem related to VXI-11, some commands cause the output voltage to drop.

### V2.11: Date: 26-February-2021

• When firmware is upgraded from revisions below 2.0 to revision 2.0 and above. The update requires move data from old location to new location. The move was missing high range current calibration.

### V2.10: Date: 23-February-2021

• Corrected loss of communication and front panel lock-up when Ethernet cable is not connected to a server and DHCP is enabled.

• Corrected RI bit in Status Condition Register being cleared when Remote Inhibit still applied and output is changed to ON.

• Corrected condition when RI is applied and Output is OFF, that the Output LED is still ON, and the condition when RI is applied, that the Output On command is ignored but the Output LED is ON.

• Corrected condition when RI is applied and Output is OFF, that the Output LED is still ON, and the condition when RI is applied, that the Output On command is ignored but the Output LED is ON.

• Created new error message when ADC offset calibration for Analog Devices ADC is accessed in hardware (unit with AKM ADC) that does not support it. New error message generated: 36 “Command not available for this model”.

• Changed the second current calibration frequency limit from 1000Hz to 1200Hz.

### V2.07: Date: 17-December-2020

• Save Remote Inhibit mode setting. Will now power up at the last set mode.

• Fix problem where output voltage is programmed to zero at power up regardless of the PONS(Power On Setting).

• Fix problem on Asterion 1U where Constant Current LED stays on once set and does not turn off when switching to Constant Voltage Mode.

### V2.00: Date: 30-September-2020

• Accept commands separated with termination character in the same message.

• Added Voltage Fault. A voltage fault will be triggered if the error between the set voltage and measured voltage exceed 20% of the set voltage and at or above 2V that last for 5 seconds. Fault is not active in current limit condition

• ALC correction is activated at set voltage of 2V or higher.

### V1.51: Date: 17-September-2020

• Modify constant power so that current increases up to it rated value while not exceeding its limits.

### V1.49: Date: 5-August-2020

• Fix problem related to VXI/LXI, read request messages. The maximum size of the return message was calculated based on 16 bit and should be based on 32 bit.

### V1.48: Date: 22-April-2020

• Fix problem related to VXI/LXI, read messages were missing line feed.

• Fix error message not appearing on front panel display when a voltage fault or current fault

occurred.

• Fix problem when open a second INST will cause the original to drop out.

• If auto IP is set to off, the ethernet will not fault and will wait for IP address form the DHCP server.

### V1.43: Date: 12-November-2019

• Fix problem causing close relay command to not be invoked while the inhabit is applied.

• Fix problem causing negative offset to be generated for 200 msec in DC mode when output relay is closed.

### V1.41: Date: 4-September-2019

• Add Support for ASC Model

• Add Command MEAS:USC:POW that accept W or KW as parameters. The default is W

• Fix problem may cause the front panel firmware update to fail.

### V1.34: Date: 10-July-2019

• Fix firmware upgrade problem causing Configuration Memory Lost error message.

• Fix a problem related to INST:NSEL generated by the front panel, when the display views the measurement screen, it may modify the phase selection that was made by the GPIB.

### V1.33: Date: 13-June-2019

• Communicate with PIC revision 5.0 or higher that has new message configuration for the 4U chassis.

• Add SYSTem:CMODule:QUERy[:MODE] takes ASCii or BINary default to ASC for ease of readability.

• Add SYSTem:CMODule:TEMPerature[:VALue]? [Asterion 4U ONLY]

• Add SYSTem:CMODule:TEMPerature:FAULt? [Asterion 4U ONLY]

• Add fan fault and expand temperature fault to include pfc and DC modules. [Asterion 4U ONLY]

• Remote inhabit bit was missing from the questionable status.

• Correct phase angle measurements error at high frequency.

**•** Fix problem with LAN stack repeats booting when the Ethernet cable reconnected when static IP is set.

### V1.22: Date: 28-January-2019

### • Modify display UART initialization to work with TL16C52DPFBR

### • Modify communication interface with the PIC for UART SC16C752B

### V1.21: Date: 9-October-2018

• Fix a problem of characters shifting on display.

• Download waveforms and change flat top distortion level will drop the output to zero voltage but will return to the voltage set value after download is completed. About 5 msec drop will occur during the download.

• Phase A current measurement offset calibration will retain its calibration value after firmware upgrade, phase B and Phase C will need calibration.

• GPIB remote command did not lock the front panel display, was missing DISP:REM message to display

• Offset servo in ACDC mode was limited to 115V and causes the AC servo to stop working. Expand the servo to 230V and allow AC servo to operate.

• Increase the range of data the PONS:CURR will accept.

### V1.20: Date: 25-July-2018

### • The following changes to fast range change: Front panel display 1U must be revision 2.83 or higher

### -Add command PONS:VRAN:MODE accept MANual or AUTO.

### - Add command PROG:VRAN:MODE accept MANual or AUTO

### - Voltage is programmed at zero phase angle of phase A when fast range option is enabled.

### - Fast range change is only supported in AC mode.

### • Several changes to Ethernet configuration to comply with LXI 1.5.

### • Add independent current offset calibration per phase.

### • Add DISP:CLEAR command to clear display error message. The \*CLS will also clear the display error messages.

### Front panel 2U firmware revision must be 7.9 or higher

### • Function strobe will be generated for phase A only to limit the range of change to its duration.

### • Fix a problem with measurements unstable at 43 to 45Hz.

### • Fix a problem with measurements trigger with transients.

### • Fix a problem with false duplicate IP during power cycle if PING for the same IP is active.

### • Fix problem not able to select static IP introduced with LXI update.

### V1.113: Date: 11-November-2017

•Configured the DFI to trip in response to the following errors:

- Temperature fault

- Pfc fault

- Dc to dc fault

- Ac module fault

- Over voltage protection trip

- Under voltage protection trip

- Peak current protection trip

- Output voltage fault

- Current limit fault

•Correct problem with the register 0 save and recall functions.

•\*RST will update waveform buffer if the PONS:WGROUP is different from the current waveform group

•Fixed problem causing ADC gain calibration with different sample rate not getting stored into the proper phase selection.

### V1.111: Date: 30-June-2017

• Fix reliability of Front Panel Display Firmware Utility through rs232 interface.

• Improve response from PIC query. This improves communication speed.

• Fix issue causing Ethernet connection to get lost after after plugging ethernet cable cable back in after disconnected.

• Introduce Current programming mode.

• Add Short Circuit Protection

• Add under voltage protection

• Add inrush current capabilities

• Use with 3 phase configurations

### V1.072: Date: 23-March-2017

• Initial Release