README: E1/E2 FIRMWARE R1.2d

September 28, 2023

This readme applies to the following Opto 22 products:

- E1 brain board
- E2 brain board

KB numbers: A number with the prefix "KB" next to an item in this readme, such as KB49909, refers to a KnowledgeBase article published by Opto 22. A KB article provides additional information about a feature or bug. To find a particular KB article, either click on the KB article number below, or go to the Opto 22 website, www.opto22.com, and enter the KB number in the search field.

Version R1.2d

March 3, 2022. Updated September 28, 2023.

Important: As of March 2, 2022, some E1 and E2 brains ship with new Ethernet components, along with E1/E2 firmware R1.2d (or higher). E1/E2 units with the new Ethernet components will not permit installing firmware lower than R1.2d.

Version R1.2c

March 1, 2019

Fixed Bugs

The following bugs have been corrected:

KB86247 E1/E2 Serial Optomux Comm Watchdog Timeout May Fail

Version R1.2b

September 14, 2016

Fixed Bugs

The following bugs have been corrected:

- KB86238 E1/E2 Serial Optomux watchdog timeout does not work
- KB85952 Optomux responses on E1/E2 may be delayed
- KB85462 Spikes in Optomux serial response time on E1 and E2 brains
- KB85877 Some E1/E2 configuration values not properly stored to flash memory
- KB85968 Powerup Clear Expected Error always transmitted as a Write Response

Version R1.2a

March 28, 2016; updated March 30, 2016.

IMPORTANT: It may take over 15 minutes to upgrade E1 and E2 brains that currently have firmware R1.1f or lower. DO NOT CYCLE POWER when upgrading to R1.2a firmware. The upgrade is complete only after the STAT LED stops blinking for more than 5 seconds. (Firmware R1.2a fixes a defect that causes excessive time to upgrade. See KB85696 for details.)

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New Features

Firmware now supports configuring E2 analog points with standard G1 module part numbers in PAC Control R9.5a (or higher) or PAC Manager R9.5a (or higher).

Enhancements

Both the E1 and E2 can now handle up to eight concurrent Modbus/TCP client connections.

To be consistent with SNAP PAC brains, the default value for E1 digital input points is now 0x100. Previously, the default was 0x00.

Note: PAC Control R9.5a (and higher) and PAC Manager R9.5a (and higher) require E1/E2

Firmware R1.2a.

Fixed Bugs

The following bugs have been corrected:

- KB84396 OptoMMP addresses not used by E1/E2 brains do not return an "Invalid Address" error.
- KB84401 The length of an OptoMMP Read Block Request is not properly limited.
- KB84402 The length of an OptoMMP Write Block Request is not properly limited.
- KB84403 On E1/E2 brains, read-only areas of OptoMMP can be written to.
- KB84404 Some OptoMMP commands to E1/E2 brain boards do not return appropriate error.
- KB84426 E1/E2: DNS Server cannot be set when brainboard has a static IP address.
- KB84428 E1/E2: Host and Domain Names cannot be edited.
- KB84591 E1/E2 brain board may be unresponsive after changing IP settings.
- KB85250 E1 or E2 firmware update may fail intermittently.
- KB85696 E1/E2 firmware upgrade takes too long

Version R1.1f

October 12, 2015

Fixed Bugs

The following bugs have been corrected:

- KB85158 E1 and E2 brain boards with R1.1e firmware may fail to communicate on startup.
- KB85204 E1 and E2 brains may be corrupted if reset during startup.

Version R1.1e

October 21, 2014

Fixed Bugs

The following bugs have been corrected:

- KB81203 SET TIME DELAY command does not work with an E1 brain board.
- KB82498 E2 shows incorrect counts in OptoMMP protocol for AD20 rate (frequency).
- KB82508 With E2 brain, PAC Manager shows DA6 configuration offset by -5V.
- KB82626 E2 brain may output full scale at bootup.
- KB83667 E1 and E2 brains: Some configured values not stored to flash.
- KB83965 E1 brain handles the n Timer resolution command differently than the B1 does.

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- KB83976 E2 Brain uses half counts for DA4, DA4T, and DA6 modules.
- KB84011 Optomux command B takes longer to execute on E2 than B2.
- KB84013 E1 and E2 respond more slowly than B1 and B2 to Optomux commands.
- KB84022 E2 may incorrectly report underrange Optomux counts.
- KB82173 Default Host Name corrupted in E1 or E2 memory map.
- KB83912 E2 brain incorrectly implements Set Temperature Probe Type command (k)

Version R1.1d

October 25, 2012

Fixed Bugs

The following bugs have been corrected:
- KB82333 E1 and E2 does not acknowledge a Power-up Clear (PUC).
- KB81671 I/O Unit Hardware Revision displayed for E1 and E2 is always 2005-05-05.

Version R1.1c

November 7, 2008

Fixed Bugs

The following bugs have been corrected:
- KB54359 E1 and E2 may not respond if accessed while booting up.
- KB53864 E2 may have incorrectly scaled analog input module readings.
- KB48313 Optomux High Resolution Square Wave command and E1 brain boards.

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