

README: E1/E2 Firmware R1.2d

March 3, 2022

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, <http://www.opto22.com>, and enter the KB number in the search engine.

Version R1.2d

March 3, 2022

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 firmware R1.2d (or higher) will not permit installing firmware lower than R1.2d on these brains.

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.)

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.

[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.