FIRMWARE RELEASE NOTES

Model: Communication Link Controller (CLC)

Version: 2.2.192

Date: February 2025

Firmware Release Notes for CLC v2.2.192 indicate revisions made to the CLC Firmware version since its initial release.

Compatibility

These firmware updates are compatible with all PhysioTel™ Digital Implants and hardware, Ponemah versions 5.10+, 6.xx and all associated service packs. However, Ponemah v5.20-SP9+ and v6.33+ require CLC firmware 1.29.206 or later.

Firmware version 1.30.80 or later is required when using the following implant models: L03, L04, M0G, M1G.

Release History

Version	0.1.20*	0.1.21	0.1.22/23	0.1.24	0.1.25	0.1.26	0.1.27
Release Date	December 2012	January 2014	DSI Internal Releases	April 2014	February 2016	June 2016	October 2016
Version	0.1.28	1.29.206	1.30.80	1.31.190	2.0.96	2.1.23	2.2.192
Release Date	August 2017	August 2017	April 2018	September 2018	June 2019	June 2020	February 2025

*Original firmware released with CLC.

New features, enhancements, and fixes

Reference #	Release Version	Description	Disposition
51667	2.2.192	Enhanced interference detection to further prevent the transmission of frame beacons as required by Listen Before Talk (LBT). This improvement requires TRX firmware 6.341 or newer.	Enhancement
48074	2.2.192	Fixed a CLC firmware crash that occurred when the reset button was held for more than 20 seconds.	Fix
46524	2.1.23	Added ability to upgrade Power On Detector (POD) firmware via the CLC to permit future implant model support.	Enhancement
46303	2.1.23	Updated the default number of implant supported by the CLC from 4 to 6 for North America (F1), Europe (F2), and Japan (F3) frequencies. The default implant support for Chine (F4) remains at 5. Compatibility: - Implant versions 1.50030 and earlier are no longer supported by default - Must have version 1.62816 or newer (released February 2017)	Enhancement
46232	2.1.23	Fix added to prevent data dropout from causing an occasional issue where 16 samples of data from the previous second gets incorrectly inserted into the next second of data.	Fix
43916	2.0.96	Added Finished goods number and revision the Diagnostic homepage.	Enhancement
44175	2.0.96	Exposed ReadSurf command to Diagnostic TRX-page to read register value.	Enhancement
42430	1.31.190	Added new commands to the Implant Diagnostics webpage to permit changing how the implant behaves when searching for a system to join to conserve battery life.	Enhancement

42426	1.31.190	The NTP Configuration file was updated to pass log information into the CLC system logs.	Enhancement
42349	1.31.190	The NTP Configuration file was updated reduce the polling time from 64 seconds to 8 seconds to more quickly react to time synchronization changes.	Enhancement
38257	1.30.80	Added support for large animal glucose implant channels.	Enhancement
39288	1.30.80	Disabled CLC debug logging to the CLC SD Card by default. When using Ponemah v6.41+ or Ponemah v5.20-SP11+ (i.e. DSI-Link2.0), these logs are saved to the acquisition computer.	Enhancement
39619	1.30.80	Fixed data synchronization gap (~15 samples) between implants on the same CLC after signal dropout.	Enhancement
39635	1.30.80	Added PhysioTel Digital Support for additional geographic regions.	Enhancement
39710	1.30.80	Added the GetStatus implant command to the Diagnositics webpage to permit Implant operation mode to be obtained while in Diagnostics.	Enhancement
40185	1.30.80	Support up to 500Hz hardware sample rate on some models (e.g. L03/L04).	Enhancement
40403	1.30.80	Implant data samples will be averaged over 1 seconds if channel sample rate is set to 1Hz in the software.	Enhancement
40887	1.30.80	Increased the frequency the Implant will attempt to communicate with a CLC for better responsiveness in obtaining status updates.	Enhancement
37840	1.29.206	Improving process for reconnecting with implants that were out of range, and have come back into range. Will result in a quicker re-connection.	Enhancement
38676	1.29.206	Change the CLC firmware revision scheme to include a unique build number. (Releases changing from 0.1.28, to 1.29.xxx)	Enhancement

39292	1.29.206	CLC will now blink the yellow TRX LED if there is an error with the TRX, or if there is a CRC error between the communication of the CLC and TRX.	Enhancement
39401	1.29.206	CLC can get stuck in a loop if implant is out of range while doing scheduled sampling. It would not be possible for the CLC to every acquire data from that implant again even if it was brought back into range.	Fix
39514	1.29.206	Fixes a bug when using new CLC FW versions with the older (SP8, SP6) configuration or wizard process. It was not possible to proceed with the wizard if changing the CLC frequency.	Fix
39555	1.29.206	TRX Power can be adjusted by EU & CH Users	Enhancement
37813	0.1.28	Fix a bug within CLC to show the correct status of the implant in Ponemah 6.x	Fix
37512	0.1.28	Fix issue of the CLC reporting an impossibly high battery voltage to DSILink	Fix
36961	0.1.28	Improve the shutdown/reboot process of the CLC to prevent lockups	Fix
37023	0.1.28	CLC Logs can now be obtained by a button on the System Status page of the CLC Webpage	Enhancement
38303,38305	0.1.28	Decreasing amount of data written to SD card, and adding ability to stop writing data to SD card by checkbox on CLC Settings Page	Fix
37941,37940	0.1.28	Fixes a data loss bug within the CLC dealing with reading/writing data from memory	Fix
36810	0.1.28	CLC will no longer support Listen Before Talk in EU/Japan while in Assessement mode. This will prevent the TRX reporting an error of an unrecognizable command	Fix
36738	0.1.28	Update to support the Frame Beacon Lock to prevent implants from listening to beacons from adjacent systems	Enhancement
36812	0.1.28	CLC will notify DSILink of an implant reset as a reset instead of an error. CLC will also record what caused the reset in its logs, and send to DSILink as well	Fix

35660	0.1.28	TRX Power can be adjusted by EU only Users	Enhancement
34885	0.1.28	PhysioTel Digital China support	Enhancement
34887,34888,35279, 35156,38306,38322	0.1.28	Updates to support 6 implants per CLC	Enhancement
386677, 38381, 37195	0.1.28	Updates to improve user experience with DSILink 1.9	Enhancement
34470	0.1.28	Fix for uploading TRX firmware	Fix
35270	0.1.27	Fix for implant channel signal misalignment when sampled using different sampling rates.	Fix
34804	0.1.26	Fixed an issue that caused Ponemah v5.xx and v6.00 to crash when launching the PhysioTel Digital configuration if a CLC with firmware 0.1.25 was on the same network as the acquisition computer.	Fix
34355, 34470, 33515	0.1.26	Fixes to reduce the amount of data loss seen by the system.	Fix
34083	0.1.26	Improved rare issue that prevented the CLC from being able to boot up properly after upgrading CLC firmware.	Enhancement
34284	0.1.26	Fixed issue where CLC diagnostics page would list multiple System IP Addresses.	Fix
32955	0.1.25	Fixed an issue where data loss would occur or an implant could drop off the system while in range of a Transceiver (TRX).	Fix
23255, 29652	0.1.25	Improved network performance between the CLC and the acquisition system to prevent disconnects.	Enhancement
30172	0.1.25	Improved system reconnection following a power loss to the CLC.	Enhancement
30169	0.1.25	Improved 3rd part software communication by allowing users to enter IP address for the Network Time Protocol (NTP) server.	Enhancement
28080	0.1.25	Prevention of unnecessary system warnings and messages from being displayed to the end user.	Fix

16618	0.1.25	Support added for PhysioTel Digital product release in other geographies.	New Feature
25452	0.1.25	Corrected the implant voltage value displayed in the PhysioTel Digital configuration dialog.	Fix
23187	0.1.25	Enhancements were made to the system radio frequency (RF) performance between the implant and TRX to reduce data loss.	Enhancement
665	0.1.24	Red LED would illuminate if the CLC failed to obtain an IP Address upon boot.	Enhancement
648	0.1.24	Improved the speed at which the CLC system log is downloaded.	Enhancement
16931	0.1.24	Added the Clear Channel Assessment checkbox to the PhysioTel Digital Diagnostics page.	Enhancement
664	0.1.24	Fix for TRXs being listed within the TRX Status within the PhysioTel Digital Diagnostics page after being unplugged from the CLC.	Fix
647	0.1.24	Updated the IP Address used to obtain the CLC system log file.	Fix
637	0.1.24	Fix for TRX Status information within the PhysioTel Digitial Diagnostics displaying blank information after the TRX is reset.	Fix
18800	0.1.24	Improved CLC communication with NTP server.	Fix
18156	0.1.24	Improved CLC communication with implant.	Fix
17810	0.1.21	Fix for TRX entering an unusable state upon updating the TRX firmware.	Fix