v3.88
18-Jun-18
For Monaco, round the pulse energy in the drop-down list to the nearest 2uJ if it is
100uJ or more
Monaco:#1023 - Adjusted GUI Modelock Window Tool to match new firmware
Cancel AVIA NX/LX optimizations before displaying the message box to the user to
avoid multiple messages being shown
Monaco:#1028 - Always ask the user to select which firmware version to install
Added a lookup table button for HyperNX
When firmware upgrade tool cannot upload a file to the laser it now suggests power
cycling the laser and trying again
Removed "32-bit" from installation message for SQL CE to avoid confusing 64-bit
users
When adding extra points to the charts to show the trend don't include those points
in the statistics calculations
Changed the handling of the EXT parameters so they are not sent back to the GUI with
slightly different timestamps, causing duplicate datapoints in the GUI
Don't include points outside of the x-axis when auto scaling a chart
Don't include data points from outside the x-axis when calculating the min/max
statistics in charts
Don't assume that the EXT parameters have not changed just because no data has been
read from the laser when displaying charts
Don't extend the mutex in TerminalControl when sending the ?SESSIONS query to avoid
changing the HB setting in the reply
Monaco:#988 - Enable the GUI to import from zip files which contains non-ASCII
characters in the filename
The GUI already ignores ?HF (Fault History) in the reply to ?HELP but it did not
ignore ?WF (Warning History). This caused stale warning history to be displayed in
the HyperNX GUI
Changed maximum value for WFMAX in HyperNxGui from 10 to 20 after seeing a laser set
to 13
Added support for "Maint" state to HyperNxGui
Keep XML comments when opening and saving configuration and sequence files for Hyper
NX
Fixed the "Get Older Data" button in the EventViewerForm for HyperNX
Don't allow the HyperNX Sequence Editor to be used unless the GUI is connected using
USB or Ethernet, to avoid displaying files from the wrong laser
Data in chart windows can now be filtered using the value of a parameter
Added a datalogger product type to support Dilas
AVIANX:#1048 - Change message displayed when installing SQL CE to reduce confusion
Install CohrHOPS.inf when GUI is installed
Fixed a problem with the SHG and THG controls in the HyperNX GUI
Use PEN to enable the average power display for Monacos with AG or later headboards
AVIA LX:#477 - Add control for TRIG_INPUT_SEL
AVIA LX:#477 - Make the GUI work with either TRIG_INPUT_SEL or TI
Converted HyperNxGui to use the new GuiUpDownControl
Fixed a problem where the GUI would forget the password entered by the user if the
settings form was opened a second time
Make the AVIA LX GUI tolerant of LRT or LR1T
Flush the latest data cache once a minute, rather than waiting until the the
connection to the laser is closed
In AVIA NX & LX the chart of UP could be opened by double-clicking the label but not
the power value in the GUI,
this wasn't very intuitive and this commit allows the chart to be opened by
double-clicking the value as well
When resizing the export form, only resize the panel containing the data
Fixed a bug with removing parameters from the export tool
AVIA LX:#465 - Don't add extra data points to the ?UP chart
When notifying the user about new builds on Jenkins the release notes button now
open the actual Release Notes.txt file from Jenkins
AVIA NX:#1052 - Add support for THGO=2
AVIA LX:#465 - Corrected the logic for detecting data values which have changed to
text values

Added support for the G18
Add one decimal place to the optimum current display in the Monaco
ModelockWindowForm
Monaco:#1023 - Change labels in ModelockWindowForm from "DSC 95% ..." to "DSC Window
..." to make it more clear
Monaco:#1023 - Added "DSC Sweep Min" and "DSC Sweep Max" to ModelockWindowForm
Fixed a problem in windows with multiple charts where the charts are not resized
when the x-axis changes between time and date/time,
this problem leaves the lower chart having less space than the other charts
Caught an exception when the FieldMaxII DLL cannot be found
Upgraded to WiX Setup 3.11.1
Monaco:#1023 - If the PD4 optimizer fails due to a fault then display an error
message on the GUI
AVIA NX:#1053 - Ask production users if they want to optimize TT without changing
the current
Monaco:#1023 - Added a DSC Threshold to the ModelockWindowForm

v3.87
16-Apr-18
Correct a problem with importing the CUSTOM column when using firmware before the
lut_library changedRowKey
Suppressed trailing zeros in the lookup table data to make it easier to read
Change to LookupTableForm to support importing files with different columns than the
laser
Corrected a problem where the baud rate from the previous session was not used at
the start of the next session
Improved the error message about the update folder not being empty to suggest trying
a power cycle
Cleanup of LaserSerialPort.Close() to retain mutex through entire process of closing
the port
Don't send GUI= and EN=1 to AVIA Classic

v3.86
10-Apr-18
Caught an exception in the OBIS GUI
Monaco:#988 - Don't use non-ASCII characters in the name of the zip created when
downloading data
Monaco:#989 - Cannot delete a chart from a multi-chart window
Added retries when starting AVIA NX optimizations
Prevented an exception when the GUI asks which RS232 port to use when it first opens
AVIANX:#1040 - Add Save as button to firmware upgrade form
Resize the columns in the details tab when connecting to a laser
Make the LookupTableForm more generic to allow it to be shared between projects
Added a form to view the contents of the blog for this laser, without opening a web
browser
Fixed a problem in the Monaco GUI where the rep rate could flicker between 1 MHz and
1000 kHz due to rounding
Monaco:#1003 - Added a new control called GuiUpDownControl, which reads a parameter
from the laser to verify that the correct value is displayed when the user clicks on
the control
Monaco:#1008 - Don't upload both the 50MHz and 60MHz FPGA files
Resized the rep rate column in the LookupTableForm to show the contents as well as
the header
Fixed a problem with working offline with AVIA NX systems due to the new BRAND
feature
Monaco:#1005 - Ask the user to confirm the setting of LMPOWER before enabling the
lookup table
Monaco:#1018 - Lost LUT data when upgrading from v1.000
Corrected a problem with reading lookup table data from .txt files
Added code to purge StringID data from the datalogger which is no longer being used
AVIANX:#1043 - Show N/A for the hours column in the crystal tab in customer mode
When the user is prompted about installing new firmware, call the virtual method so
that the logic for the relevant product us used during the upgrade

v3.85
1-Mar-18
Monaco:#963 - No longer installs the 60MHz FPGA if the existing FPGA has no suffix
The display of ?UP for AVIA LX and AVIA NX now uses two lines of text if needed
Handle large numbers better when drawing the vertical axis of the charts
Add and remove parameters from the drop-down list in chart windows when changing
access level
Monaco:#964 - Added a control to adjust PWFINE to fine tune the pulse width
Removed the "GUI Manual" button as there is no such document, also removed the
developer names from the about tab
Monaco:#779 - Subtract the offset from PD4V while calculating the modelocking window
width
Monaco:#810 - Added an optimizer for STRT
Allowed retires up to 10000000 in the HyperNX SequenceForm, also switched off the
thousands separator
Added the email address gui@coherent.com to the GUI
Monaco:#810 - Added an optimizer for D1C
Switched floating point format in charts from "e3" to "e+3"
Monaco:#970 - At least one pulse in the burst must be set to 100%
Removed the timestamp column from the Monaco lookup table as it is no longer
relevant after we moved the data into the storage manager
Display the error message from the laser if the user enters an invalid setting for
PERIOD in the settings form
Remove the temperature tab from the settings form when not connected to a laser
Monaco:#967 - Remove A1S from LUT for Monaco lasers with headboard Rev AG or a later
version
Monaco:#968 - Remove A1RN from LUT for laser with Rev AG or later headboard
Clear the selected scrip step when running the script
Monaco:#981 - Warn about unsaved burst shape edits
Monaco:#981 - Prompt the user to save the burst shape when switching rows
Monaco:#983 - Display the MPWSA column when working with old lookup tables
Improved display of decimal places in charts with large numbers and a small range of
values
Clear the clipboard after using it to paste data into Excel
Added buttons to DataImportForm to save and restore selected items
Save path for data import, offline file, window layout, and scripts
Improve formatting of pulse count data in AVIA NX and AVIA LX GUIs
GUI can now query old data from the cloud
Used invariant culture when sending timestamps in queries to the cloud and
processing the results, to make cloud queries work on German PCs
Add a spinner to the chart windows when waiting for data from the cloud
Use ?ST in off-line mode to lookup the state name to match ?L
Increased the default width of MessageBoxNonProportional to allow for the new HB
column in the ?SESSIONS query
Added a minimum window size to TerminalForm
When saving and restoring layouts the graph scales are now included
Added button to graph scale form to set time axis to show all data
Added a column to LogFileListView to show the earliest timestamp for each laser

v3.84
5-Feb-18
Fixed a problem where duplicate data can appear in the LatestData table in the
database
Improvements to the error messages shown while upgrading the firmware
Fixed a problem with upgrading from GUIs before v3.81 to v3.83 or later
Small tweak to code which starts worker thread in TimeGraphForm to try to avoid
having orphaned windows
The Export Tool now starts with all the parameters in the left hand list (i.e. not
selected)
Reduced flicker when adding lots of data to the Event Log Viewer
Improved the message from the GUI when it fails to start its Telnet Server, also
prompt the user to stop the telnet server before opening a connection to localhost

AVIA LX:#299 - Restore the icon pinned to the task bar after upgrading the GUI
AVIA LX:#221 - Allow lookup table to be edited by deleting cells, update check boxes after applying changes
When deleting systems from the log file just remove the row from the ListView instead of refreshing the ListView, as that can take a very long time
Added support to FtpForm for listing files and deleting folders
ToradexUpgradeForm now cleans out old files from the update folder before starting, it also uses the ?UPDATE query to validate the files before sending the UPDATE command
ToradexUpgradeForm displays "Verifying upload" in status bar while the ?UPDATE query is running
Monaco:#952 - Allow the GUI to upload .dat files into the laser to restore the settings
Improve the process of switching from one laser type to another
AVIA NX:#1034 - Improved offline mode with branding
Added a form to select a systemID from the cloud
GUI now downloads the latest data from the cloud periodically when connected offline
Fixed a problem in ExportForm where CMDS could be added twice, causing an exception
Fixed a timezone problem when deciding whether to add extrapolated data to TimeGraphForm

v3.83
24-Jan-18
AVIA LX:#319 - Use THG2OT instead of THG2ST for firmware 0.48.3 or later
VSTS:#429 - Added support for FieldMaxII power meter
Monaco:#859 - Only check for new firmware once every 3 hours
Copied feature to check for new firmware from Monaco GUI to AVIA NX, AVIA LX & HyperNX GUIs
Monaco:#892 - Allow for slower mutex timeouts at lower baud rates
Monaco:#860 - Make firmware update failure message more visible
Monaco:#853 - Allow LookupTableForm to create new rows in laser when importing
Added the "New GUI Window" button to the other product GUIs
Added support for saving and restoring the positions of multiple GUI windows
SqlCeWrapper now caches ParamIDs to significantly increase performance when connecting to a new laser type for the first time
Monaco:#834 - Fixed a problem with opening a second GUI when the main GUI is larger than the default size
Monaco:#834 - Made sure the OnConnection() event handler of all the derived classes is called when opening a new GUI window
Monaco:#834 - Don't disconnect from the new data event if the user cancels closing the GUI after being warned about the heartbeat timeout
Added code to deal with having two different ParamIDs in the database for the same param for the same product
Monaco:#859 - Allow for the build number when checking for new firmware for AVIA NX
Changed the LatestData class to hold the first and last timestamps and the count of the number of samples where the value did not change
Added interpolated data from the LatestData cache to the chart windows
Corrected the order of the tabs in the HyperNxGuiForm
AVIA LX:#319 - Update the THG2 offset if it is changed in a command prompt, and don't display the offset in the chart
Send the latest value of each parameter to the cloud, even if it has not changed value
AVIA LX:#319 - Don't set THG2ST or THG2OT when connecting
AVIA LX:#334 - Change ThermEQ to PulseEQ
Don't write NaN data for floating point numbers into the database
Monaco:#853 - Fixed a problem with adding new rows to the lookup table when some of the columns contain illegal values
Added support for LabMax Pro power meter
Added support for GenTec P-Link power meter
The WelcomeForm now looks better when the PC is using large fonts
Tweak to the SettingsForm to prevent a problem when using a USB power meter on a PC with no COM ports
Catch an exception in the blog form when the TX controls have not been installed

properly
Monaco:#844 - Added more protection to detect Excel or the TX Control not being installed
Monaco:#917 - Show date and time when PWAOG optimizer starts
Monaco:#917 - Abort optimization if the shutter or pulsing state changes, or the laser is stopped. Also, only allow one form to be open at a time
Monaco:#810 - Generalized the PWAOGOptimizerForm to also optimize MPWA and STRT
Added a check for dataLogger.powerMeter being null before opening a chart for the power meter
Added more error checking of the reply to ?HV when deciding which FPGA version to install on Monaco
The GUI can now read the temperature from a LabJack Digit and log it as EXTT
AVIA LX:#142 - Change the limits for the xMin and xMax controls in the AVIA LX GUI to match the firmware
Prefix www.coherent.com with https:// as our new web server seems to require that
AVIA LX:#343 - Fix a cosmetic flicker when pressing the shift back button on the crystal map tab in AVIA NX and AVIA LX
Don't include the lookup folder as a subfolder of the root folder when downloading data to build a zip file
Changed the order of setting up thg2SetUpDown in the AVIA LX GUI to avoid exceptions when switching between lasers with old and new firmware
AVIA LX:#351 - Add the firmware and GUI versions to the file when exporting setting snapshots
AVIA LX:#314 & AVIA LX:#315 - Enabled the SHG and THG optimize buttons for the AVIA LX for firmware v0.49.0 or later
AVIA LX:#315 - The AVIA LX GUI now displays the THG servo status correctly after optimizing them
Corrected a problem in the HyperNX GUI where it was expecting 4 parts of the software version
Fixed a problem in the data download tool caused when a zip file was copied to a laser and then backed up again by the laser, causing a duplication of the help.txt file
Clear the HyperNX start LED if the connection to the laser is dropped, so that it does not keep flashing
Improved error checking of all transactions while connecting to laser to avoid displaying "Could not get mutex" on the GUI after connecting
Prevents the GUI prompting to download new HyperNX firmware when the release numbers match
Correct a problem with reading lookup tables from older Monaco firmware versions
Removed the 50th anniversary logo now that it is 2018
Abort checking for new firmware before closing the GUI
Don't resend the EP command if the GUI is attempting to switch it off

v3.82
30-Nov-17
Monaco:#943 - Fixed a problem with the amplifier drop-down in Monaco when using interpolated rep rates
Display "Custom" on the triggering tab of the Monaco GUI when using a custom row
Resolved Monaco:#844 - Fail gracefully when TxControl not installed

v3.81
27-Nov-17
Added a new communication class for VCOM over USB
Extended the mutex timeout in the terminal form from 30 to 45 secs to allow for the ?HELP query in DEBUG mode
Added support for LZO decompression of communication with laser
Don't display PCs with their telnet server enabled in the EthernetDiscoveryForm
Changed the data structure used to track previous commands in TerminalControl to keep commands and replies synchronized
Added regular expression searching to the details tab, the graph scale form, the export form and the import form
Resolves Monaco:#889 - State gets stuck as "Stopping"
Resolves Monaco:#888 - Branch name not displayed correctly when upgrading the GUI

Resolves Monaco:#904 - Add support for SHGEXT
Resolves Monaco:#908 - Update seeder burst shape form
Resolves Monaco:#899 - Don't display parameter lists in SettingsForm for laser where
they are not relevant
Resolves Monaco:#917 - Added a form to optimize PWAOG
Resolves Monaco:#941 - Row cannot be set as a custom row without having a name
Monaco:#931 - Use LMPOWER to calculate the pulse energy in the amplifier drop-down
Fixed a problem with parsing and displaying the Monaco rep rate when running on a
German PC
Added a burst shape editor for Monaco
Fixed a problem in the Monaco GUI where the pulse width control would not be visible
HyperNX:#588 - Change AOM2 Width parameter in Triggering Tab dependent on firmware
version
HyperNX:#589 - Frequencies in LRRB window should be sorted by value
AVIA LX:#281 - Moved THMT control to the same y position as RFMIN to fix the
resizing the AVIA LX service triggering tab
AVIA LX:#303 - Store power meter readings in the laser if the laser supports this
Resolves AVIA LX:#291 - Add AVIA LX link to "Visit AVIA webpage" button
Resolves AVIA LX:#298 - Don't display seconds on charts in Singapore
Resolves AVIA LX:#149 - Allow commas in CrystalMapForm
Resolves AVIA LX:#297 - Reply with "Error, bad command" if ß character is sent
Resolves AVIA LX:#305 - Add "Consumed" to CrystalMapEditForm
Resolved AVIA LX:#302 - Allow Export tool to export to Excel in German
Resolves AVIA NX:#1022 - Increase mutex timeout when reading ?HELP over RS232 with
low baud rates
Resolves AVIA NX:#1003 - Release and reacquire LOCKOUT when switching from one
connection mode to another (e.g. RS232 to USB)
Resolves AVIA NX:#1024 - Don't display heartbeat warning when switching connections
if connection has been dropped
Resolves AVIA NX:#1023 - Cache ?HELP query in GUI
AVIA NX:#1022 - Scaled the mutex timeout by the connection baud rate in
TerminalControl
AVIA NX:#1026 and AVIA LX:#312. The spot temperature data has been removed from AVIA
NX
Correctly identify number of diodes for AVIA NX 355-30 and 532-45
Added servo panels for the etalon and THG to the OBIS GUI
Added support for C18

v3.80
5-Sep-17
AVIA LX:#263 - Add FPCT to Lookup table Add and Edit forms

v3.79
30-Aug-17
The number of ticks in charts now depends on the size of the chart
Chart control now looks at all the combinations of divisions and decimal places
which give a fractional error of less than or equal to 1e-4, then it chooses the one
with the fewest number of decimal places and the largest number of divisions
When auto scaling charts, multiples of 5 are now used in addition to 10
If all of the data points in a chart are integers then don't display decimal places
on the vertical axis
Increased receiver buffer in IpPort from 8K to 128K
Moved the unzip and import activities in DataImportForm into separate threads which
can run in parallel
When importing data check for floating point numbers encoded as strings, and convert
them back to floats
Changed the code to set the culture to en-US by checking the existing culture
explicitly after discovering that en-SP for Singapore caused a problem
Resolves VSTS #459 - LogFileListView holds the serial mutex for much too long
Resolves VSTS #465 - Fix Snapshot create button
Importing snapshots is now faster as the items are inserted into the form in a batch
SnapshotForm now updates the progress bar while importing from Excel
SnapshotRestoreForm no longer shows message boxes for each failed settings, it uses

a column in the form to display all the results
SnapshotRestoreForm now holds the mutex for the whole restore process, tries several times, and uses SPOTCAL=1 when needed
Copied a feature from the firmware into the GUI where if the mutex is extended while a thread is waiting for it, then the thread will wait again
Ignore notifications received from the laser after the reconnection process has started. These notifications were updating the GUI after it had been cleared before disconnecting from the previous laser.
When trying to connect using USB the GUI will now switch to RS232 if it detects a HOPS laser attached as a VCOM device
DataDownloadForm now reads from the root folder on the web server if it exists
The datalogger now acquires the iSerial mutex before changing connection type
Added support to log into OBIS lasers in service mode
Added support for changing temperature servo set-points in OBIS GUI
Resolves Monaco:#872 - GUI should display text returned by ?IRE
Resolves Monaco:#875 - Allow switching to the existing interpolated mode
Resolves Monaco:#760 - Don't display the -VP part of the Monaco model name
Monaco:#779 - Correct spelling of "Optimizer" on PD4 Optimizer window title
Monaco:#835 - DataDownloadForm now embeds the zip within another zip
Changed "Burst" to "Process Burst" in the Monaco GUI
Made IRP work the same way as IRE in the Monaco GUI in terms of displaying the text from the firmware
Fixed a problem in the Monaco Lookup Table where edits to the active row were not applied
The PD4OptimizerForm for Monaco now displays correctly on Japanese PCs
AVIA LX:#241 - Enable the THGT2 chart button when reconnecting to the laser
Resolves AVIA LX:#252 - Allow SPXMAXS up to 20000 in the crystal map form
Resolves AVIA LX:#241 - Make THG2 controls in GUI work properly
Resolves AVIA LX:#281 - Reorganize Triggering Tab
Resolves AVIA LX:#263 - Add FPCT to the lookup table