

Version 1.8.0 includes the following updates 07-07-2016

1. FrmSetup method humDbLab_Click modified to initialize label property "as Object" to correct click issue that caused numeric keypad to not be displayed.
2. clsCtrlData method readEventsEnable modified to enable or disable event checkbox visibility correctly during runtime based on configuration settings.
3. Version numbers updated to 1.8.0.

Version 1.7.0 includes the following updates 11-17-2014

4. Bug corrected in FrmRecipe method backEntryBtn_Click. Previous logic incorrectly setting first recipe event word to event word 2 selections if any selections made for events in second event word. Logic corrected so that event selections are properly set to both event words.
5. Bug corrected in clsGuiUpdate method updateRecipe. Core temp value in listView changed to CM register 19 (was CM register 26). Core value on profile status screen will now update properly.
6. Version numbers for assembly and form flnit updated to 1.7.0.

Version 1.6.0 includes the following updates 05-06-2014

1. All screen and menu code update for iSeries displays (7"/10").
 2. Updated code to all "class" based with no module code remaining.
 3. Version numbers for assembly and form flnit updated to 1.6.0.
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1. s G_firstScan is true.

Version 1.5.0 includes the following updates 12-04-2009

Runtime release date December 04, 2009, 2:34:15 PM

Config release date December 04, 2009, 2:33:09 PM

1. Bug corrected in frmDataLog procedure "plotDoneBnt_click". Yleft axis auto scale was not being set to "auto" when "done" button was pressed. This caused the scale to display incorrect values each time a historical plot was displayed since the autoscale property is disabled during plotting so 20% can be added to the top of the Y axis scale value.
2. Bug corrected in clsDataLog procedure writeDfileKilnSteril. Procedure did not include the pal3 probe in data file because the wrong default array element was used to dynamically display and log the point to the file. Corrected to element 3 instead of element 1 of default startup array. Also changed procedure createSterileFile to add Pal3 probe to the data header correctly based on system being setup as a kiln/sterilizer combo or just a sterilizer. If kiln/sterilizer probe array enable 3 must be active for pal3 to be added to file. If sterilizer only, probe array enable 0 must be active for pal 3 to be added to file.

Version 1.4.0 includes the following updates 06-30-2009

Runtime release date June 30, 2009, 10:52:04 AM

Config release date June 30, 2009, 10:51:13 AM

1. Bug corrected in clsComms procedures processCommWrites incremented variable G_startAdd each time a comms write was made from the GUI to the CM. This variable should only be incremented if a profile was being downloaded to the CM and reset each time a new profile is downloaded. New conditional code added so the variable only increments if a profile is being downloaded.

```
'increment read if profile register. G_startAdd is always initialized  
'when first called and incremented by 9 each write till done.  
If profileWriting Then G_startAdd = G_startAdd + 12S 'increment
```

Symptoms of this bug would be the GUI displaying a "write error" once the **G_startAdd** register exceeded a value of 32767. This would take 40 writes (non profile user based) per day, 5 days a week and 2-1/2 years to see this error. The error would only be seen if the unit was not powered down in that time since the variable is reset to 0 every power down or when a profile is downloaded.

Version 1.3.0 includes the following updates 02-24-2009

Runtime release date February 24, 2009, 5:25:58 AM

Config release date February 24, 2009, 5:25:32 AM

2. Bug corrected in clsDataLog that caused GUI interface to lock when starting a new data file on a daily basis automatically by system. Procedure assignFileName assigned values to class property variables directly from objects in the main GUI thread. Since the data log code that starts a new file each day is located in a different thread and plnvoke was not used for GUI object assignment, data log thread caused a lock up in .Net. New procedure assignBatchLotInfo was written in frmDataLog to assign filename, batch, lot and opName to clsDataLog class variables when manual log, schedule or steril run is started. Datalog class and updateDataLog thread will use these class variables instead of direct calls to GUI objects.

3. When logging manually, batch and lot heading in data file will be set to "Batch: N/A" and "Lot N/A" instead of empty fields in previous version. This will make all files for manual logging, schedule logging and steril logging consistent in field heading for data log files. When manually data logging the file will always use the user logged in for the operator (Orion Kiln system) since there is no way to enter a user for manual logging.

Version 1.2.0 includes the following updates 08-21-2008

Runtime release date August 21, 2008, 12:09:26 PM

Config release date August 21, 2008, 12:08:45 PM

4. User login form modified and "shift" key added. This allows user login keypad to show special chars and lower/upper case chars to match normal keypad entries for user logins. Previous version only allowed upper case and numeric value entries so if user used special chars in user name or password, they could not log on properly since login keypad did not support these char via the "shift" key.

Version 1.1.0 includes the following updates 04-23-2008

Runtime release date April 23, 2008, 11:24:29 AM

Config release date April 23, 2008, 11:24:10 AM

- 1.) Function showEmailSelect in clsEmail. Bug in function corrected that tried to set index of drop down combo to "0" before the system checked if any email users had been entered. System now checks to make sure that at least one email user has been entered before setting index of "email" drop down list.
- 2.) Password fields for FTP, email and VNC will now display "*" char instead of actual text chars that user enters for passwords. "returnPswdChar" function added to MbitFunctions module to return "*" char for each actual char in password. Actual text password is now stored in label ".tag" property instead of .text property for read/write to disk. User can not see .tag property since it is an internal property of the label object. Functions for read/write to/from disk for these fields have been changed to reflect the actual .tag and .text properties.
- 3.) Adjusting time/NTS/DST settings forces initialization of real time trend back to zero. This is required since new time setting could be hours off and mix new and old time setting in array that is set for a one minutes change in each array element. If NTS updates and time is off more than one minute, trend will eventually catch up and display accurately when all array elements are updated (max 12 hours).
- 4.) Version number in Config and runtime updated to V1.1 (including static field in about screen).

Version 1.0.0 includes the following updates 03-05-2008

Runtime release date March 05, 2008, 8:16:03 AM

Config release date March 05, 2008, 8:15:39 AM

- 1.) Kiln and Sterlizer control combined to make a single unit that combines kiln and sterilizer operations.
- 2.) MC probes disabled in logic and Orion interface Config set for temp probes only for monitor and core usage. In future MC probes will be connected via RS232 communications to wireless/wired MC probes with serial interface board.
- 3.) Security modified so the if the last user deleted (security) is the only administrator, user

will be prompted and security turned off so user does not lock themselves out. Also, the new settings will be written to disk without the user going to the security settings to press "Save"

- 4.) FTP server component added to system
- 5.) Email alarms component added to system
- 6.) VNC server component added to system.
- 7.) Help for new components added to system.
- 8.) Data history plot code update to correctly add 20% to "Y" axis if values are positive or negative.
- 9.) EMC monitor and alarm/continue step code added for EMC operations.
- 10.) Schedule control off of EMC/core or both simultaneously.

Version 1.2.0 includes the following updates 06-13-2007

Runtime release date June 13, 2007, 1:46:32 PM

Config release date June 13, 2007, 1:46:12 PM

1. GUI runtime form frmSecurity, procedure enableSecChk_Click(), disabled/de-selected audit trail checkbox but not re-authentication checkbox when security was disabled by user. Issue corrected in version 1.2.0. When user disables security, re-authentication is also disabled and checkbox is de-selected.
2. GUI runtime form FrmTxtEntry, procedure backSpaceBtn_Click(), used wrong variable for substring operation during password entry. Backspace key did not delete correct characters during backspace operation. Issue corrected in version 1.2.0
3. Profile insert step bug corrected in Version 1.2.0. If total number of segments = 99 then insert step function will not insert step or cause index error to error log.
4. GUI runtime does not check for a corrupt profile file when it is downloaded. GUI now checks profile for any empty fields before profile is allowed to download to PLC so plc can not lock up trying to accept null values. checkEmptyRecipe function modified to check profile array before download to PLC.
5. FrmSecurity, event deleteBtn_Click code corrected. Procedure did not correctly delete users if all 30 users were entered into the system. If 30 users were entered then the last user was duplicated instead of deleted. Corrected in version 1.2.0
6. frmLogon Done_Btn code update so when user logs on, user trying to log on goes into temp vars and is not entered to security vars until user passes validate user function. This keeps the actual user logged on to system logged on until another user actually passes logon validation. M_Security functions validateUser and userLogin functions updated to assign temp user login vars to permanent vars after login passes.
7. Security updated so Administrator can have password aging applied. Any time password aging expires; user will be required to enter a new password for their account before continuing. Old password can not be used.
8. Guaranteed soak band added for DB and WB for profile operations. Band is +- value entered. GS events added for each segment.
9. Recycle count and recycle step data added to each segment for the profile for recycle operation.
10. Profile array increase from 10 elements to 12 elements (0 based).
11. Profile insert, delete, copy, paste and updateProfile array functions updated for new profile array size.
12. profile read/write functions and ClearProfArray functions updated for new profile array size.
13. Event for customer event 1 change to cool down which when selected will use the core probe for advance segment when DB drops below setpoint. When not selected and a core value is entered, the stage will advance when DB > core setpoint.
14. Customer events number changed from 7 to 6 since "cool down" event takes place of

- customer 1 event.
15. Bug corrected in sub `readProfFile`. Directory to read last profile downloaded was "Profiles" instead of "Recipes". This caused the last profile downloaded not to be loaded as the default on startup of Orion.
 16. Modules for alarms, datalogging, communications and trending changed to classes.
 17. Datalog timer removed and replaced in thread for background operation. This allows more accurate operation for datalogging of points as well as background processing of data.
 18. Historical file read functions modified to read data file at a single pass so data file read is much faster. Parsing of data will be done when plotting or running avg reports instead of on file read which slows system down.
 19. File transfer utilities will allow all files types to be copied or deleted while datalogging is running. The system will not copy or delete the currently running data log file for safety but allow the user to backup or delete files so the CF card can be cleared without interrupting a data file.
 20. Profile print report modified to add new fields for recycle count and recycle step per stage.
 21. autolog on startup and log on recipe can not be used at the same time and are mutually exclusive.
 22. Spray PB max value changed from 300 to 100.
 23. Audit trail sample changed to "Kiln System" from "Enviropak System"
 24. Configurator: Probes selection screen modified so no LED's are lit and no checkbox set when first going to screen. Only LED's will be lit based on which bit is set in PLC. This was due to setup for static screen shots for manual.
 25. Stop scheduleLogging on recipe function on main form deleted and standard function for `stopDataLog` in `frmDataLog` is now used to stop a data file when logging stops. The old function did not clear the data log name property in the `dataLog` class. This caused the property string `<> ""`, therefore the file transfer did not erase or copy the last data log file in the directory since the file utilities thought the file was still active. Active data log files can not be copied or erased when data logging is active.
 26. CoolDown option in manual operation is disabled at all times like the MC probe selection. No need to select these option when running in manual mode.
 27. Configurator: Alarm timers were not assigned properly when and alarm type from the main list box was selected. Code modified to match listbox selection with proper alarm delay as well as no selection for profile hold since it does not require or allow a delay on that digital input.
 28. `clsDataLog` function "createDfile" modified to batch and lot number are only entered into file if "log on recipe" is set. Data not entered when manual logging is set since the batch and lot number is unknown.
 29. `clsDataLog` function "assignFileName" modified to include lot number to data file name. Data file name will consist of schedule name from PLC, lot number and datetime.
 30. Config: static names on form for events changed to match cool down option. Cust Event 1 is now cool down and cust event 2 through 7 renamed to cust event 1 through 6.
 31. `M_File` IO functions `readOptionEnable` and `readEventsEnable` corrected for additions of GS checks/labels for Guar soak DB/WB. Code modified to enable/disable and change labels for all events with exception of GS events.
 32. Web server checkbox property set to "autocheck". Version 1.0 and 1.1 did not check due to autocheck property being set to false.

Version 1.1.0 includes the following updates 02-12-2007

5. `G_firstScan` variable set to false in "UpdateProfProgress" sub only after profile is downloaded and no comm error exists. In version 1.2, value was set to false after during profile download. Even if comm errors existed which would cause the display not to pick up a communications read error when going back to main screen (cable broken). Alarms are only

- reported if G_firstScan is set to true (after 3 good comms reads) and this will not happen in the comms module since the outcome event will not fire again due to the broken cable.
6. Date and time for data file write done in hh:mm format rather than h:m format like in version 1.2. This gives the user that is exporting data 01:05 in 24hour format rather than 1:1
 7. M_ClearListViews module removed. Listviews that are required to be cleared are cleared directly in code without requiring the resetting of the header for the listview using the ".items.clear" method for the object. When entering alarm history and audit trail from menus, grids are always cleared to save a step for operator.
 8. Set/Reset of all colors for alarms moved to two subs in same module (M_Alarms). When alarms are cleared from real time alarm grid, if alarm is still active, it will be re-posted to grid but background colors will not change to red and alarm log will not be written to each time alarm is cleared but still active.
 9. Security modified so the "Access Security" can not be disabled by Administrators. This makes sure the administrator can not lock him/herself out of the system. Does not affect password protection, just the ability to make sure admin always has access to security with proper password and can never be locked out by accident.
 10. Password Aging for administrators is allowed in the system to be consistent for all users. Also allows the master administrator to age other administrators entered into the system.
 11. When change password function is used by the user, the user full name is shown instead of the userID for safety.
 12. Password aging updated so any time user logs in and their password is aged, they will be forced to update their password. If they don't remember their orig password they can not change their password to a new password. They also have to enter a new password and can not use their old password if admin has set aging for the user.
 13. Corrected historical trend plot data cursor bug. When trending only 6 points and data cursor selected to view values/trend labels, label 6 did not update. Bug corrected.
 14. Delete stage bug corrected so stage 99 can be deleted and proper array elements will be kept. Deletion below stage 99 moves array positions down 1 element, deletion of stage 99 will keep array positions the same 1 through 98 since there are no elements of data above 99.
 15. Profile menu bug corrected so when profiler is in hold under normal conditions or on power up during power recovery, the "stop" menu is available when profile is in hold.
 16. ReadProfFile sub bug fixed so if file profile does not exist on startup (user deleted), system will not try and open file and report error to errorlog.csv.
 17. Decimal point for power out time recover set to "none". Old version allowed 1 decimal selection for minutes which was incorrect.
 18. New numeric keypad added for writes to PLC or direct to text box. Keypad look and feel the same but functionality different. keypad will not allow user to enter values larger than the decimal requirements for the field selected. If 0 decimal for field, decimal button is dimmed, if one decimal, keypad presses will not continue after the first decimal is selected. If two decimals, keypad presses will not continue after the second decimal is selected. Range checking is done when user presses "Done" key.
 19. Text keypad modified so maximum number of chars allowable is checked while user is entering chars rather than when done button is pressed. When chars in field > 15 chars the touch screen keys will no longer put chars in the field.
 20. Profile "delete step" bug corrected. When total steps = 99, step delete did not work properly and decrement the total number of steps.
 21. Profile entry bug corrected when setting "total number of steps". Previous version allowed user to set "total number of steps" below the current step being edited. Corrected so if user sets total number of steps < current step, total number of steps will equal the current step and not a value below.
 22. Alarm log bug corrected. Header for alarm object in history viewer did not have columns so data would not fill grid.

1. Bug correction in security for local remote mode value was the same as fan reversal so locking out fan direction also locked out local remote mode. Bug corrected for first release.

Orion Kiln pre-release Version 0.1.0 includes the following updates 12-10-2006

1. readTrndFile function update to remove variables not used in function. "clean up" update only, will not affect operation of release.

Orion Kiln pre-release Version 0.10.0 includes the following updates 11-21-2006

1. Modbus slave address adjustable from Orion HMI.
2. Security corrected (turned on) for tuning. Security items added for edit kiln settings, access kiln settings and local/remote control mode.

Orion Kiln pre-release Version 0.1.0 includes the following updates 11-14-2006

1. Config modified so all 5 analog outputs are configurable for Heat, vent, spray control, DB and WB PV or SP retransmission. This allows user to make the most of the two analog outputs on unit before ordering additional input cards.
2. PB Offset/FOB added to tuning. If PB>0 then field adjusts PB offset. If PB set to 0 then field adjusts FOB for on/off output (+- 80 deg)
3. Fan remaining time displayed if fans are in auto and user presses "Fans" text on main display. Fan remaining time will be displayed in minutes for fwd/rev/dwell.
4. Note added to fan timing screens that fans must be disabled or off when setting times. New times for fan fwd/rev/dwell only take effect after fans are re-enabled.

Orion Kiln pre-release Version 0.1.0 includes the following updates 09-29-2006

1. taskbar object size change to match new TFT displays. No code changes in version. Version will work with both STN and TFT versions (TFT version is 320 X 234, STN version is 320 X 240)
2. Avg report calc corrected calc min/max properly by storing first reading of each var before doing min/max comparison.
3. User decimal selection (0 or 1) for db, web and monitor points selectable in setup mode by user.
4. Security updated so administrator can assign new password to user but user can change their password at any time even when required by password aging. This allows administrator to issue initial passwords but not access the user logon after the user changes his/her password. Administrator still has access to assign new passwords to users or delete users.
5. Security updated so all action performed while in security are written to the audit trail if audit trail is enabled. If audit trail is not enabled, audit trail will still be written if admin (or authorized user for security access) enables or disables security so even if audit trail is turned off, there is a trail of who and when security was enabled or disabled. Action written to audit trail when security is enabled/disable give status of security, audit trail and re-authenticate.
6. Audit trail cleared each time audit trail screen is entered so user must open the most current audit trail or older audit trail if desired.
7. Audit trail bug fixed so userID prints when report printed.
8. Local or Remote PC choice added to setup mode. When in remote PC mode, remote PC is in control so setpoints, manual events and profile run, hold, stop operations items can not be accessed at the local Orion display. Setpoints, manual events and profile run, hold, stop operations can only be accessed when in local mode. Orion will alert user when trying to access items when system is in remote PC mode.
9. Time delay for core advance/MC equalize alert added to config.
10. Security modules and audit trail writes updated to write full user name instead of userID so

userID is not shown or exposed in printouts or to user.

11. Security modules updated to even if audit trail is not enabled when users are added, deleted, password change or security setting updates, audit trail will write to keep track of security changes that administrator or user with security access makes.
12. Constant added for system login before user logs in for compatibility across all version.
13. LED's for heat spray removed. %output indication visible at all times for on/off, on/off time prop and analog output display.
14. Vent control protection added to manual and schedule fields so if user has vents set for auto (working off wb temp), then user can not set vent output when vents are set for analog control.
15. G_firstScan set to false at the end of profile download. This gives system time to get all 3 groups of registers to make sure profile name is correct before starting data file. Profile name is checked every 750ms to make sure Orion system and PC software have correct name. Delay used to make sure data file uses proper name before start since time delay can occur after profile download before new group of register are received.
16. G_firstScan set to false at the when leaving system setup. This allows system to get all groups of current comms data before reporting on-line data including alarms. Alarms will not be checked in the system unless G_firstScan is true.