Please note: Not all of the versions listed have been released or are planned for release.

IO-Link Master PNIO Application Base History (1800468)

Revision:	1.5.28
What Changed:	profinetio 1.5.1.10 -> 1.5.1.12

 * Fix an issue where Different Access Ways Port 2 Port test case failed due to invalid PDPortDataReal.MediaType.

 * Fix a bug where the input value of one SIO mode port was reported to a different SIO mode port.

 * Fix an issue that caused AR-ASE test case failure.

 * Fix an issue where gateway fails Different Access Ways test case when running Automated RT Tester.

 * Get Ethernet port MAC addresses from serial flash tags (ethport1mac and ethport2mac) when available.

web ui 1.5.0.37 -> 1.5.0.38

 * Don't convert "xsi:type" attribute into "type" attribute when the value is "EventDescT". This prevents collision with the node's "type" attribute.

 * Catch exceptions thrown by SimpleXMLElement() inside XML parsing callbacks: log the error to syslog and discard the node's data.

 * Web Help content updates.

Date:	11/19/18

Revision:	1.5.27
What Changed:	opcua 1.5.1.11 -> 1.5.1.13

 * Fix bug causing crash when 0 is written to ISDU/Request.

 * Fix handling of Writes to ISDU index/subindex by clients that include status along with value (e.g. Ignition, freeopcua-python). Was causing random index/subindex to be used, which usually caused read/write to fail.

 * When 0 is written to ISDU/Request, clear 32-bit data node to 0 (other data nodes were already being cleared).

profinetio 1.5.1.9 -> 1.5.1.10

 * Fix an issue where gateway fails Different Access Ways test case when running Automated RT Tester.

 * Get Ethernet port MAC addresses from serial flash tags (ethport1mac and ethport2mac) when available.

 * web help content updates.

Date:	09/19/18

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<mark>Revision:</mark>	<mark>1.5.26</mark>
What Changed:	Changes since application base 1.5.24:
	_webui 1.5.0.33 -> 1.5.0.37
	* Fix handling of conditional submenus: it didn't work right when there were multiple instances of a submenu with different condition.
	* Fix handling of standard variables V_ProcessDataInput and V_ProcessDataOutput variables in v1.1 IODD files.
	* Add '*' to access column for items that are excluded from data storage.
	_iolink-driver 1.5.0.12 -> 1.5.0.13
	* Fix IOLinkEmcResetCounters(-1) call that is used to reset counters for all ports. It was broken by change at r8278. Only affects EMC utility used by HWE during testing.
Date:	09/10/18
<mark>Revision:</mark>	<mark>1.5.24</mark>
What Changed:	web-user-interface 1.5.0.32 -> 1.5.0.33
	* Fix handling of condition values greater than 9 or with bit widths greater than 8.
	profinetio 1.5.1.6 -> 1.5.1.9
	* Add support for new 8P IP20 PNIO model.
	* Add support for DR-8-PNIO-P, DR-8-PNIO-T, 8-PNIO-L models.
	* Update to reflect the module ID number changes in GSDML 1800473 v4.06.
	* Apply SIO default output option when boot-up, and when port config changes and there is no PLC connection.
	iolinkutils 1.5.0.46 -> 1.5.0.046
	* Fixed pulse-stretching problem.
Date:	08/28/18
<mark>Revision:</mark>	<mark>1.5.23</mark>
What Changed:	Changes since application base 1.5.18:
	_web-user-interface 1.5.0.29 -> 1.5.0.32
	* Add new HW models.
	* Modify port names for Leuze version.
	* Add some missing German translation strings for IODD Port page.
	_application-manager 1.5.0.2 -> 1.5.0.3
	* If attempt to unmount /apps partition fails during app-base update, write to syslog a list of apps that are still using /apps partition.
	_configuration-manager 1.5.0.3 -> 1.5.0.4

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* Change directory to '/' so that we don't start up the dhcp client with cwd in the /apps partition (it prevents app base updating until unit is rebooted).

* Fix one of the error checks in config_put_object_by_path() that detects when path doesn't exist.

_iolink-driver 1.5.2.11 -> 1.5.2.12

* Clear shared and internal PDO valid flags when devicelost happens.

_event-log 1.5.0.1 -> 1.5.0.2

* Add declaration for eventlogGetTimestamp() to eventlog.h.

_web-help 1.5.0.2 -> 1.5.0.3

* Update to "1.5.14" version of contents.

Date:	07/02/18
Revision:	1.5.18
What Changed:	modbus 1.5.0.019 -> 1.5.0.020

* Improve throughput performance.

Date:	05/23/18
Revision:	1.5.17
What Changed:	opcua 1.5.1.8 -> 1.5.1.11

* When in SIOInput mode, read PDI via iolinkutils library instead of directly from driver so that filtering/stretching works.

* Allow PDO read/write when in SIOOutput mode. Allow PDI read when in SIOInput mode. Make PDI/PDO bytecount values return valid values in SIO modes.

* Change value rank of most nodes from -2 (Any) to -1 (Scalar).

Date:	05/10/18
Revision:	1.5.16
What Changed:	profinetio 1.5.1.4 -> 1.5.1.6

* Fix the diagnostics-debug utility to produce valid JSON to be compatible with the HTTP status API .

* Add support for new IOLM IP67 8P models.

discovery 1.5.0.0 -> 1.5.0.1

* When network settings are saved, restart profinetio application (even if settings are unchanged).

iolink-driver 1.5.2.5 -> 1.5.2.11

* Add logic to avoid cutting off slave responses with a new command when the rx polling has been delayed.

* Add a new command line app.

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* Don't change shared-memory copy of pdo valid unless the SetMode() call to the stack to change it was successful.

* In diagnostic output, show PDI/PDO data when in SIOInput and SIOOutput mode.

* Fix bug that prevented the tx messages to be sent out each cycle.

Date: 05/03/18

What Changed: _config manager 1.5.0.0 -> 1.5.0.3_

 * Add library calls: config_default_object(), config_default_array()

 * Add library call: config_default_set().

 * Add 'config default' command.

 * Removed handling of switchposition==888. That's now done earlier in the startup sequence. Requires system 1.29.

iolink-driver 1.5.0.3 -> 1.5.1.1

 * Change shared memory condition variables so they use CLOCK_MONOTONIC instead of the default CLOCK_REALTIME (to avoid problems when date/time is stepped).

 * Add IOLinkLockPDO() and IOLinkUnlockPDO() calls to libiolink. Change IOLinkWritePDO() to return specific error status when PDO is locked by somebody else.

 * Generate a newly defined event (S_MODE_CHANGE) when IOLinkSetMode() is called by clients.

* diagnostics-iolink: In "port status" string, don't include "PDI Valid" if there are no PDI data.

 * monitorPorts utility: Flush stdout after each line so that it's more useful when redirected to a file or pipe.

 * If it doesn't exist, create config field "InvertAux" based on old "InvertIO" field if it exists -- if it doesn't, default to false.

 * Use new config field "InvertSIO" to control SIO invert mode instead of old "InvertIO" field. If new one is missing, create it with value from old one.

opcua 1.5.0.5 -> 1.5.1.5

 * Switch to using libiolinkutils for reading DIO, Aux, and SIO.

 * Return data for PDI/PDO reads even when they are invalid. Value will have status of "NODATA", but if a value is readible, then you have to return read data in order to allow writes.

 * Any time PDO is written set PDO state to valid.

 * Write back default settings to config file if any are missing.

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 * Add special handling for the error returned by the iolink library when we try to write PDO when it's locked by another application.

* Add 8/16/32 bit integer representations for ISDU read/write data (in addition to existing bytesting representation).

modbus 1.5.0.8 -> 1.5.0.17

 * Always use proper port index for examining json.

 * Use the proper port index when reading "PdiDataBlockSize".

 * Moved a variable from local to global to prevent 4port from crashing.

 * Modbus would keep running after clearing config, now it won't.

 * New timing for NTP.

 * Support for more modbus polls.

 * Added an unlink call at the beginning of main so that modbus can bind to a socket after the IPK is installed. Without this, you would have to reboot for the bind to work.

 * Uses linux sockets.

iolinkutils 1.5.0.11 -> 1.5.0.37

 * Only expose symbols needed by protocols.

 * Switched away from wall clock (due to NTP).

 * Improved pulse stretching algorithm.

 * Fix for switching from DO to DI back to DO.

 * Digital IO Diagnostics status row wasn't correct for Digital Outs.

 * The dio diagnostics code needed to return a boolean instead of a string for the invert IO option.

 * Fixed an issue where a configuration update would change D2,D4 digital outs, even if there was a PLC connection. Now that change won't be applied until there is no PLC connection.

 * Have the Invert option on the digital IO diagnostics page display true/false instead of on/off.

* Added support for inverting SIO inputs.

* Better digital output handling.

 * Calling unlink in the init function so we can bind without needing a reboot.

 * Only primary protocols will have a thread running that checks for diagnostic messages.

 * linux sockets, digital IO transitions.

webui 1.5.0.10 -> 1.5.0.21

 * Config page edit-mode: Change boolean fields from checkboxes to true/false dropdowns. That way the field always gets posted. With checkboxes an

unchecked box doesn't get submitted, and the UI either leaves the value as/is or uses the default.

 * Fix bug on configuragion table pages that have both per-port and global items, where saving the global items forces all of the per-port integers to 0 and booleans to false.

* Add more statistics data for DIO, SIO and auxiliary input to PNIO diagnostics page.

 * Add help links for iothub, opc ua, config load/save, config clear.

 * Change OPC UA pdo write enable from global to per-port.

 * Advanced/Accounts page: Move "current admin password" entry row and re-label it to make it more obvious that you must enter the current admin password in order to make any changes.

 * Allow config POST request to create new fields (we used to ignore new fields that were present in request but not in current config).

 * Fix handling of attached-devices/port page manual ISDU read operation so that it ignores value/status shown by previous operation. 'Get' operation used to fail if there was anything other than hex values displayed in the right-hand textbox.

 * When checking modbus pdo write status, allow write if modbus isn't running and returns empty diag data.

 * Change digitial IO diag "invert" field type to boolean.

 * Change required system version to 1.29 due to changes in config/rootfs that move check for switch position 888 to a point earlier in startup.

 * Remove config page note about pulse stretching being unsupported on PNIO models.

 * Create seperate config settings for inverting SIO and Aux inputs.

 * Add input hold time to digital I/O diagnostics page.

 * Enable pulse-stretching items for Profinet build.

profinetio 1.5.0.1 -> 1.5.1.1

 * PNIO application now locks/unlock PDO as PLC connections are established/dropped (requires iolink driver 1.5.1.0)

 * Switch to libiolinkutils and add pulse stretching support to digital IOs, auxiliary inputs, and SIO inputs.

 * Notify libiolinkutils when PLC connection established or dropped. It used to be when digital IO thread started or stopped.

 * Fix an issue where a port in SIO output mode stopped working when the Invert SIO option was set to true.

web help

 * Updates for all flavors.

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Date:	04/04/18
Revision:	1.4.41
What Changed:	webui 1.4.1.30-opcua-r7170
	opcua 1.4.0.19-internal-test.
Date:	01/24/18
Revision:	1.4.40
What Changed:	Fix an issue where the code enabled/disabled all multicast MAC addresses instead of a single multicast address.
Date:	09/28/17
Revision:	1.4.39
What Changed:	Fixed an issue with Command buttons that have a subindex. The SPDU write was being done with the incorrect subindex.
Date:	08/08/17
Revision:	1.4.38
What Changed:	Apply Siemens PROFINET IO development kit patch 4.1.4.
Date:	07/25/17
Revision:	1.4.37
What Changed:	Add code to IO-Link driver where it handles port mode setting so that when a port mode is being set to RESET, it will also abort any pending client requests. This prevents port from going permanently "busy".
Date:	06/12/17
Revision:	1.4.36
What Changed:	Fix bug that killed IO-Link communications on all ports when switching a port from SIO-input to IO-Link mode.
Date:	06/01/17
Revision:	1.4.35
What Changed:	Increase cycle time margin to avoid connection issues on sensors with large PDI/PDO size compared with minimum cycle time.
Date:	05/12/17
Revision:	1.4.34
What Changed:	Fixed an issue where the SF LED of IO controller may remain on after all channel diagnostics are removed.
Date:	03/30/17
Revision:	1.4.33
What Changed:	Enhanced IODD-related web UI system.
	Enhanced HTTP API for iodd and datastorage.

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	Fix diagnostic page table resize problem.
	Fix problem caused by use of quote in hostname.
	Fix handling of invalid sensor serial number strings.
Date:	03/09/17
<mark>Revision:</mark>	<mark>1.4.32</mark>
What Changed:	Fix an issue that caused fatal error randomly
	Don't log normal discovery requests.
	Don't log complaints about DM discovery requests.
Date:	02/14/17
<mark>Revision:</mark>	<mark>1.4.31</mark>
What Changed:	Fix an issue where the initial value of digital I/O were not set correctly.
	Fix an issue where initial input was not updated correctly when a port is in SIO Digital In mode
	Fix a possible race condition that might cause modules not being plugged correctly at connection.
	Various improvements to PNIO log file and AR up time display on web page.
	Don't send ISDU requests for Page-1 info to ports that aren't in IOLink mode
	When updating diagnostic info, don't send ISDU requests to sensors that indicated via Page-1 data that they have no ISDU support.
	Fix broken JSON format in output of diagnostics data
	Fix problem that caused sensors to run at 50ms after they were unplugged then reconnected.
Date:	1/30/17
<mark>Revision:</mark>	<mark>1.4.30</mark>
What Changed:	Add MRP support.
	Incorporate Profinet stack updates from Siemens.
	Disable the "To many senders" error messages in pnio log file.
	Make AR list access thread safe.
	Made major improvements in the IODD handler to work with newer sensor models and support all the features that were not there previously.
	Fix problem where DS subsystem was consuming a writeCon() that should go to the user application code.
	Fix IOLinkPDFormatLength() macro that was broken for PDI/PDO length==32 and was returning 0 instead.
	Implement support for the "last pdo" field in the data returned by the IOLinkGetModeExt() call.

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Fix bug on devices that have PDO data: on iolink diagnostics page, PDO data bytes were being shown as most recently received PDI data

Fix bug where PDI/PDO length was incorrectly being decoded as 0 bytes when it should be 32 bytes. Other lengths were OK.

Implement the "last pdo data" field in diagnostics-iolink output.

Date:	09/13/16
Revision:	1.4.25

What Changed:

Fix operator username in editors list for misc config

Swap two Ethernet ports on IOLM 8-PNIO model so that match with the port labels (Requires U-Boot 1.17 and above).

Increased timing margins for minimum cycle time.

Updated Web Help and updated Web UI:

Enhanced the IODD handling process.

Auto detect KSZ8863 switch through SPI interface. Used to key on TLA number.

Fix an issue where digital IO module is not supported.

Fixed Baumer FADK 14U4470-S35A-IO IO-Link Device Port Page Failure

Add translation for dialog that pops up when IP address is changed and browser needs to be redirected.

Fix translation for config_clear_success_message

When redirecting after config clear, use default ip from UBoot variable instead of hard-coded default ip of 192.168.1.250.

Date:	01/20/16
Revision:	1.4.18

What Changed:

Add IP Assignment field (Statics, DHCP, IO Controller) on PROFINET IO Diagnostics page.

Treats IO-Link events that have 0xff "local" field as local (master) events, and 0x00 as remote (device) events. Remove port qualifier byte from IO-Link port module.

Combine IO-Link Activate, Error, Auxiliary Input, and PDI Valid into one IO-Link Status module.

Update to Siemens PROFINET Develop Kit V4.1.2.0. Bug fixes.

Updated the Web UI to support other changes.

Added warning in PNIO version when user is changing IP address, PLC is not connected, but current IP was set by PLC.

Update the web help

Fix an issue where PDO data could not be set when IO-Link port is not ready.

Report application base version instead of pnio application ipk file version.

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	Fix an issue where Ethernet port could not be powered off and on.
	Changing PROFINET device name from web page now takes effect immediately.
	Fix fatal error in EDD IOBUFFER handling.
	Fix a bug where order ID was not set up correctly in I&M0. Config KSZ8863 so that LLDP packets will not be forwarded between external Ethernet ports.
Date:	12/03/15
Revision:	1.4.15
What Changed:	Add a read-only "Status" section at top of network config page that shows current values for ip address, netmask, gateway and DNS server.
	When editing network config, disable (grey-out) static configuration values fields if "DHCP" is selected.
	Include hostname in DHCP request.
	Add new "DNSmode" configuration value that allows you to use manual DNS setting when DHCP is enabled. Grey out static DNS settings if "automatic" DNS mode is selected.
	Retry IO-Link wakeup sequence twice before pausing for the 0.5 - 1.0 second delay and starting over.
	Updated web help.
	Disabled some routine syslog messages to reduce log file clutter
	IOL_CALL FB PORT parameter starts from 1 instead of 0.
	Add capability to send arbitrary events to applications for testing purposes.
	Add menu to misc config page that can be used to send arbitrary events to applications for test purposes.
	Add warnings to network config page regarding PLC communications interruptions.
	Hide static network settings when dhcp/auto mode is selected.
	Restart PNIO application when network settings are changed.
Date:	11/11/15
Revision:	1.4.7
What Changed:	Updated help file.
Date:	08/19/15
Revision:	1.4.6
What Changed:	Updated to the latest IO-Link driver, PNIO app, and web UI packages.
Date:	07/31/15
Revision:	1.3.7
What Changed:	Updated webui, discovery, and pnio apps to the latest.

Please note: Not all of the versions listed have been released or are planned for release.

Date: 05/11/15

<mark>Revision: 1.3.1</mark>

What Changed: Initial release.

Date: 01/13/15