V 3.09.1 (2026-04-23)

- Pluvio² – ERR 15 Mitigation
  Internal driver behavior and timing sequences were adjusted to prevent potential occurrences of ERR 15 when operating with Pluvio² sensors.
- Camera File Size Limitation
  The maximum permissible camera file size has been reduced to 600 kB.
  (Note: The increase to 1 MB in the previous release 3.08.7 introduced an internal limitation that could not be resolved reliably.)
- Modem Authentication Corrections
- Resolved issues related to customer-specific APN configurations and PAP/CHAP authentication for both internal and external modems.
- Corrected handling and persistence of PAP/CHAP authentication settings.
- Time Synchronization Fix
- Fixed an issue that could cause invalid system timestamps (e.g., year 2004 or 2036) on certain stations due to improper time synchronization.
- Fixed a Modbus RTU Client issue introduced in an in-between Version V 3.08.9

V 3.08.8 (2052-10-10)

- Fix of critical bug for external modem operation

V 3.08.7 (2052-09-27)

- SL3-xmtr Pre-trigger Adjustment: Reduced pre-trigger time from 3 minutes to 60 seconds to resolve Meteosat satellite transmission issues.
- Camera File Size Limit: Increased maximum allowed camera file size to 1 MB.
- Modem Authentication Fixes:
  Resolved CHAP authentication bug for legacy internal modem versions G30 and GE910.
  Fixed PAP/CHAP configuration handling.
- MQTT/S Enhancements: Improved startup performance and optimized packet size for data retransmissions.
- Webserver Bug Fixes:
  o fixed issue whit active time synch and no access to a SNTP server
  o fixed issue with netDL restarting when webserver is active in a specific configuration
- MIS File Handling: Bug fixes and optimizations applied to MIS file processing
- Various small improvements and fixes

V 3.08.6 (2024-04-04)

- Possibility to shift timestamp for values - Time correction of Pluvio² NEZ time stamp in netDL
- Activate SDI Log (error logging)
- Activate Parsivel² logs
- Add event on problem writing to NAND (error code printed as number)
- Extended SDI log
- Add events in database for err 15

- New Libraries for NAND memory
- Add check for password over USB
- Enhance timeout for read check on NAND
- other NAND related adjustments
- adjusted memory handling for OTT Parsivel² spectrum files
- correction OTT Parsivel² name set

V 3.08.3 (2023-10-19)

- Adjustments for future hardware revisions
- Several other minor firmware optimizations and bug fixes

V 3.08.1 ... V 3.08.2

- Internal versions; not published

V 3.08.0 (2022-05-09)

- New device type: "Tetra Radio".
- "PUT" added in addition to "HTTP GET" and "POST" (primarily for use with an Azure Web Server).
  – Bugfixes:
- Problem with ".jpeg" and ".jpg" file formats of an external camera fixed;
- Issue related to "Azure"- key generation fixed;
- Several minor bugfixes.

V 3.07.1 (2021-08-26)

- The OTT netDL now supports an external IoT modem (4G LTE-M/Cat-M1; specified and offered by OTT HydroMet).
- CSV file format: the optional (first) CSV column can be defined as "last column", so that an additional character can be added at the end of a record.
- Hach Solitax sc Process Probes: the Modbus communication now allows the simultaneous readout of the measured values "Turbidity" and "Suspended solids".
- Disabling of a data transfer via XML command possible.
- Several other minor firmware optimizations and bug fixes

V 3.07.0 (2021-04-20)

- The OTT netDL now supports the network protocols "MQTT" and "MQTTS" (machine-to-machine communication; M2M)
- New server type "FTPS" added. The setting options are identical to those of the "FTP" server type. The port is preset to "990" (changeable).
- Added another data format to IP data transfers: "Sandre XML".
- For a satellite data transmission (GOES DCPRS) the content of the "UUID 1" field (function block "netDL 500/1000: ...", tab "Communication") can be appended to the data to be transmitted (checkbox "UUID 1"). This provides the option of also transmitting a short customer-specific character string. Likewise, the serial number of the OTT netDL can be added (checkbox "Serial no 1").

- Time synchronization of the OTT netDL revised: until now, time synchronization was dependent on an executed IP data transmission. If a web server has been set up and is active, a check is now made after each request to determine whether time synchronization is required; regardless of a potential data transmission. The prerequisite for this is that time synchronization is defined and activated.
- Web server monitoring: The internal web server checks at regular intervals whether an IP connection is still valid. In the event of an error, the check is repeated three times. If an IP connection is still not possible, the OTT netDL restarts the internal web server. The prerequisite for this is that a maintenance window has been created and the "Dynamic DNS" function has been set up and activated.
- Several other minor firmware optimizations and bug fixes

V 3.06.0 (2020-08-24)

- Option to disable the WEB UI has been added to the configuration.
- Additional CSV data format options have been added - matching the options of the OTT ecoLog 1000.
- IP stack has been adjusted to support the current TLS 1.2* encryption suites.
- Added option to transmit the serial number in MIS data format using the "UUID" data field.
- TLS* handshake has been revised.
- internal voice announcement in connection with switched supply voltage on terminal "N" and maintenance window
- 24-hour total with offset
- Several minor bugfixes

** Transport Layer Security; encryption protocol*

V 3.05.0

- Internal version; not published

V 3.03.6 (2020-02-18)

- Control of the new analog modem "HSM ECO V.92" has been optimized
- The DNS resolver for longer address strings has been improved
- Closing process for HTTP-sessions has been optimized
- Bugfix in the function block "Sum" (24 h sum with offset)
- Several other minor firmware optimizations and bug fixes

V 3.03.5 (2019-10-18)

- Support of external 4G modems with SIM cards for closed user groups
- "Station name" in the "Custom Build Format" added
- Allows now to request data via IP in ZRXP, ZRXP 3.0, MIS and CSV format via web server
- Support of Cat 4G eodems improved
- Data readout with the OTT Data Logger Operating Program via USB interface has been optimized
- The OTT Parsivel² is now initialized by the OTT netDL (station ID and time).
- Improved reading of data on a USB memory stick
- OTT Parsivel² psf files (spectrum) can now be read with the Data Logger Operating Program via the serial or USB interface

- Added latitude and longitude information to station header of OTT-ML data (if not set to "0")
- Optimized OTT-DCP GOES data transmission
- Several other minor firmware optimizations and bug fixes

V 3.30.2 ... V 3.03.4

- Internal versions; not published

V 3.03.1 (2018-07-06)

- Bugfix: in the web user interface
- Bugfix: when initializing the voice announcer

V 3.03.0 (2018-05-16)

- Function block "SDI-12 Master" and "OTT SDI RS485": now 30 measured values per channel possible (previously 20; "Concurrent Mode" activated).
- Bugfix: sending an alarm-email without active data transmission
- Bugfix: number of characters in observer entries in OTT-ML format

V 3.02.2 (2018-02-02)

- Integration of voice announcer has been completed: this firmware version enables the confirmation of alarm messages from telephones with dual tone multifrequency option (DTMF). This option is available with all OTT netDLs, version „C“* from serial number 438777!
  * OTT netDL with integrated radio modem GSM/GPRS and Audio-Codec-Module for voice announcer
- Bugfix: data transmission via satellite communication unit with 1200 Baud (DCP)

V 3.02.1

- Internal version; not published

V 3.02.0 (2017-10-04)

- Signaling of LED "Modem" has been changed (for detailed information see chapter 10 of OTT netDL operating instructions)
- OTT netDL devices produced later than October 2017 (Hardware status "E/0") and variant "B..." + "D...": the "Modem" LED is now always "off", even if the modem is active to save energy. Press the jog-shuttle to activate the LED and to show the current operating status of the modem. If required this behavior can be switched off in the operating program.
  (With devices produced before October 2017, the LED permanently shows the current operating status of the modem.)
- SMS alarms can now also be sent via the same device (modem) when the IP connection is active. To send an SMS, the OTT netDL temporarily interrupts the IP connection.
- XML commands can now also be used with the data formats "OTT MIS" and "OTT protocol binary". (Recommendation: to make use of the full scope of functions of OTT Hydras 3 net, use the data format "OTT-ML".)

- Communication connection OTT netDL <-> Operating program via IP connection: apart from the "HTTP" protocol there is now also a "HTTPS" protocol available. Encryption protocols are optional "---"(none; default) "SSL 3.0", "TLS 1.0", "TLS 1.1", "TLS 1.
  Note: it may take up to 60 seconds to establish a connection (typ. 45 seconds).
- Data transmission via Sutron SatLink3 XMTR and GOES Satellit: Data format "SHEF" has been added. Via "Append Options" it is possible to add information which shall be transmitted additionally. (For this purpose it is required to configure IDs in the individual UUID1 settings of a channel.)
- The maintenance window is now updated every 2 minutes (before every 5 minutes).
- Data transmission via SMTP: Optional encryption protocols "SSL 3.0", "TLS 1.0", "TLS 1.1", "TLS 1.2" have been added.
- Optimized IP Routing.
- Several minor firmware optimizations and bugfixes.

V 3.01.5 (2017-03-30)

- Bugfix: Erroneous sending of SMS messages by the device versions "OTT netDL 500 Bxx" and "OTT netDL 1000 Bxx" fixed

V 3.01.4

- Internal version; not published

V 3.01.3 (2017-02-23)

- Incorrect rounding of measured values during data transmission has been fixed (error does not occur during passive transmission (pull via OTT protocol))
- Error in "observer" function in combination with OTT-ML format and OTT protocol has been fixed

V 3.01.1 + V 3.01.2

- Internal versions; not published

V 3.01.0 (2016-11-02)

- Support of OTT netDL with GSM/GPRS/UMTS/HSPA+ modem (version code: Dxxx).
- The extremes which were formerly known as OTT Protocol extremes are now also available in OTT-ML data output. The "VSTAT" tags have been added in the time series at midnight and represent the daily minimum and maximum of this channel.
- The ZRXP 3.0 protocol (relevant parts of) have been added to the data protocols of the logger. This allows also a direct data push to the WISKI system (without Soda)
- The Voice Announcer can be switched in a maintenance mode if a sensor is maintained or does not work. The maintenance mode is activated by the Data Logger Operating Program or the Web Interface.
- To add special Ids to the channels or the station a „Unique ID identifier“ so called UUID was implemented. For the station as well as for the channels up to three UUIDs can be defined. The UUID is ASCII and must not contain any special characters.

- Sutron Satlink 3 integration. For GOES and MeteoSat the new SatLink3/XMTR transmitter from Sutron has been integrated in the logger and the Data Logger Operating Program. The device can be configured when satellite GOES DCPRS VS V2.0 or METEOSAT TD 16 is chosen.
- Acknowledgement and commands in one message.To have a faster and smarter way of command handling it is now possible to send a command to the data logger directly in the ACK of the OTT-ML message. That means no additional connection has to be established, which is a big time gain when doing SSL/TLS communication.
- Further improvements
- Improved Webserver communication speed
- Parallel measurement of OTT Parsivel² spectrum and values
- Error on modem init is shown in display
- Added Task IDs in diagnosis output for better information
- Various bugfixes

V 3.00.3 (2016-06-09)

- Bugfix in connection with internal date and time management

V 3.00.2 (2016-06-01)

- Bugfix in connection with the USB interface

V 3.00.1

- Internal version; not published

V 3.00.0 (2016-04-18)

- Expanded and revised internal database
- Value range –4.000.000 ... +4.000.000 or 0 ... +8.000.000 (32 Bit floating point)
- Stores max. 1.100.000 measured values (ring buffer)
- Supported data formats: OTT MIS, OTT ML, CSV, ZRXP, DDP, Custom Built; restrictions due to OTT Protocol/OTT Protocol binary to ± 32.768 (16 Bit floating point)!
- Supports up to 120 measuring channels (Software option against surcharge; default: 40 channels; previous firmware versions: 30 channels)
- Communication setting „Server“: selectable encryption method for „HTTPS“ protocol: „SSL“ / „TLS 1.0“ / „TLS 1.1“ / „TLS 1.2“; default setting „TLS 1.0“ (key lengths 512 ... 2048 Bit; no support of ECDH / DH algorithms).
- Graphical user surface for Internet browser (WebUI) completely revised (V 1.02.0)
  new: „HTML5“ based
- "Responsive Design“: user surface automatically adapts to the Internet browser used; use for PC, tablet, mobile phone, regardless of the operating system used
- Functions: graphical display of time rows, polling instantaneous values, make various modifications of configuration (basic parameters), poll diagnosis output.
- Possibility to connect Present Weather Sensor OTT Parsivel² via RS-485-interface with processing of all measured values; sensor type: „Parsivel PWS Spectrum“
- Completely compatible with user software OTT Parsivel ASDO

- Measured values may be transmitted to server via FTP, HTTP, HTTPS
- Measured values may optionally be stored in the OTT netDL (for 1 minute sample/storage intervals the storage capacity is 30 days)
- File size for webcam-pictures has been enlarged to 400 kB
- Supports Full HD resolution (jpg compressed)
- OTT netDL transmits pictures of an IP webcam without intermediate storage directly to a server (Software option against surcharge)
- New optimized data transfer after a communication error has occurred (for OTT-ML protocol)
- Recommended firmware version in combination with operating software Hydras 3 net
- Several minor firmware optimizations and bugfixes.

V 2.63.0 (2015-03-30)

- The OTT netDL 1000 now supports external IP devices connected to the Ethernet interface (10Base-T); e.g. a webcam, a server or another OTT netDL 1000.
- For this, an external IP device must be created and configured via the operating program in the netDL configuration. This option must be explicitly activated by an activation code!
- IP sensor: the OTT netDL 1000 receives and saves external data via the IP connection
- IP Forward: the OTT netDL 1000 receives and forwards the external data via the IP-directly to a server
- Additional functional block "RSSI" to determine and save the signal strength of the GSM-modem
- Additional type of protocol for IP data transmissions possible: "csv"-format (comma-separated values). The decimal separator ("." or ",") and the field separator are selectable
- Now supports SSL encryption for SMTP data transmissions (email)
- The USB host functionality has been optimized. Max. size for USB flash drives: 32 GB; format: "FAT 32" (NTFS-formatting and connection of external hard disks and USB hubs is not possible)
- The firmware update procedure has been slightly modified for higher security
- Various optimizations and bugfixes

V 2.60.1 (2013-12-12)

- Data processing problem in MIS format fixed
- Optimization of firmware update process, especially for more than 2 configured transmission and additional web-server
- Internal service functions optimized

V 2.60.0 (2013-12-02)

- USB Host (A) functionality
  - data readout via USB host interface (MIS an OTTML)
  - readout of configuration via USB host interface
  - readout of event-files and diagnose files
  - installation of new configurations
  - installation of new firmware
- Satellite transmission - supports new transmitters OTT HDR G3 and OTT HDR M3
- Orbcomm satellite transmission is also supported

- Analog input extension-up to four signals per input card possible
- Fieldbus connection -netDL can be integrated into a Profinet network via Unigate Gateway
- Several bugfixes

We urgently recommend to update your OTT netDL stations to V2.60.0!
Note: in case your firmware is < 2.50. remember to save the data of you OTT netDL stations BEFORE the update!