

# DriveConfig

## InteliDrive PC software

### SW version 4.0.0

2 Changes in the version 4.0.0 .....	3
3 Changes in the version 3.13.1 .....	5
4 Changes in the version 3.12.0 .....	6
5 Changes in the version 3.11.0 .....	8
6 Changes in the version 3.10.0 .....	9
7 Changes in the version 3.9.3 .....	10
8 Changes in the version 3.9.2 .....	11
9 Changes in the version 3.9.0 .....	13
28 Notes .....	33

# 1 General information

## 1.1 Version information

A small version primarily for the correction of reported errors in the generation of screens and PLCs. The IntelliDrive Mobile support for IntelliVision displays has also been requested on the PC side. The configuration tool supports a new security policy.

## 1.2 Clarification of Notation

**Note:** *This type of paragraph calls the reader's attention to a notice or related theme.*

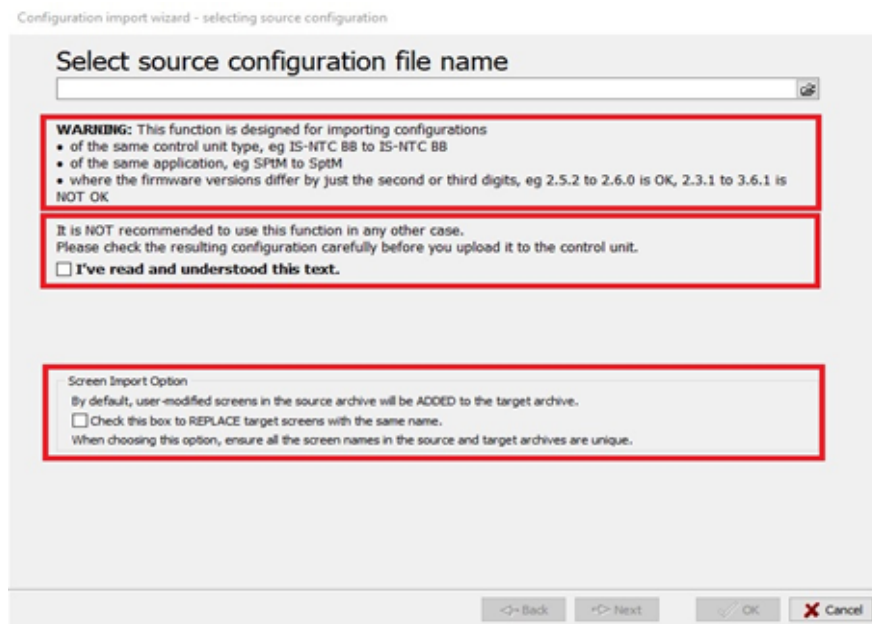
**IMPORTANT:** This type of paragraph highlights a procedure, adjustment etc., which can cause a damage or improper function of the equipment if not performed correctly and may not be clear at first sight.

**Example:** This type of paragraph contains information that is used to illustrate how a specific function works.

# 2 Changes in the version 4.0.0

## 2.1 New features

- > We moved application development under the new generation of development suite which, among others, brings new UI components
- > Support of new firmware version with an extended number of binary PLC outputs and analog PLC outputs, detail information can be found in related controllers guide
- > I/O:
  - » Support "A+H indication" protection for binary and analog inputs, detail information can be found in related controllers guide
- > Import wizard:
  - » Added warning message with recommendation in which cases the function can be used
  - » Added checkbox to confirm understanding
  - » Added option to overwrite screens during configuration import. When the checkbox is checked, the screens from target archive with the same name will be overridden by screens modified by user from source archive.
  - » This behavior does not apply to the ECU and modules screens.



## 2.2 Repairs

- > Modules:
  - » Resolves an issue: when ECU parameters were changed than error message was displayed. This behavior occurred in case the configuration was created with older ESL file
    - Fixed

- > ScreenEditor:
  - » Button link – resolves an issue when the button was not linked properly to required screen
  - » Resolves an issue when name of "Select binary communication object" dialog window was not displayed properly
  - » Consistency check dialog box – resolves an issue when index of instrument was not presented properly
    - Fixed
- > User sensor:
  - » Resolves an issue where width of right panel had been returning to default size – values in column "Converted" were not visible as desired
    - Fixed
- > PLC Editor:
  - » Resolves an issue when the full input name had not been displayed in hints
    - Fixed
- > Protections:
  - » Resolves an issue when error message was displayed after configuring more than one protection
    - Fixed

# 3 Changes in the version 3.13.1

## 3.1 New features

- > Default Protection Level for RPU Extension module will be set to Warning. This setting is used for ID-DCU-Marine firmware.

## 3.2 Repairs

- > Modules:
  - » Parameters of configured ECU modules with extended range of analog values were not displayed properly.
  - » Incorrect communication object of DFF Soot Load value was configured in added AfterTreatment screens
  - » AfterTreatment screens were not added when ECU module Cummins CM2350 was configured
    - Fixed
- > ScreenEditor :
  - » "Invalid floating point" error messages were displayed when user had navigated to the screen in IntelliVision 12 tab and when the Windows version was 2004 and higher
    - Fixed
- > When an archive that uses the PLC\_XL modules was opened in older version of DriveConfig (e.g. 3.12.0), the error messages was displayed.
  - » Fixed

# 4 Changes in the version 3.12.0

## 4.1 New features

- Support of new firmware version - IBF-CU-Mobile 1.6.0
- Setpoint value forcing

The setpoints are adjustable points of the controller, which are adjusted from PC or controller front panel and the adjustment is stored permanently in EEPROM memory. However it may be required to force temporarily different setting into a setpoint by a binary input.

**Example:** The genset nominal load is normally adjusted to real rated power of the genset, but in hot summer days when the ambient temperature rises above certain level the nominal load needs to be reduced to prevent overheating. The force value function can be used to solve this requirement

Follow this procedure to configure force value function onto a setpoint:

1. Go to the **Setpoints** tab, select the required setpoint and click on the ... button. If the button is not displayed then the particular setpoint does not support forcing.
2. Click on the **Wizard** button at the bottom of the force value window.
3. Enter name for this force value item, e.g. "ReducedNominal".
4. Select a binary object that will be used for activation of this force value item. It can be either a physical binary input (e.g. if the force value item will be activated by a switch on the switchboard) or a logical binary output (e.g. output from a PLC block). The wizard automatically configures the forcing LBI onto selected binary object. The configuration of the LBI can be later checked or modified on the LBI tab.
5. Select type of setpoint that will be used for adjusting of the alternative value.
  - Use **Select other object** in case you want to force the same alternative value into more setpoints and you have already defined the forcing setpoint by the previous forcing item.
  - Use **Use default setpoint** to create new forcing setpoint.
6. If new forcing setpoint is created then give a suitable name to it (e.g. "Reduced Pnom") and adjust initial value of it.

**Note:** *If there are more than one force value blocks configured onto one setpoint then the highest priority has the block with the lowest index (i.e. the first active block according to the list displayed in DriveConfig in the Force value window at the related setpoint).*

### Force value window

1. Name of the target setpoint where the alternative settings will be forced
2. Forcing item 1
3. Forcing item 2
4. Names of the source setpoints for adjusting of the alternative settings
5. Initial setting of the alternative setpoints
6. Names of the LBI that are used to activate the forcing items
7. Buttons for moving of items in the list. If more items are active at the same time, the one in most upper position takes place.

## 4.2 Repairs

- > Protection:
  - » Error message was displayed during closing confirm message
    - Fixed
- > I/O:
  - » Configured protection HistRecOnly was not saved properly
    - Fixed

# 5 Changes in the version 3.11.0

## 5.1 New features

- > New Consistency check dialog window – all messages of consistency checks will be displayed in one dialog window
- > New ECU Consistency check dialog window - all messages of ECU consistency checks will be displayed in one dialog window
- > New PLC consistency check dialog window - all messages of PLC consistency checks will be displayed in one dialog window

## 5.2 Repairs

- > PLC Editor:
  - » PLC Analog signal was shown as binary
  - » In PLC block - Comp Time was allowed wrong setpoint range
- > Confusing ECU error/warnings messages modification
- > About window update



# 6 Changes in the version 3.10.0

## 6.1 New features

- Support of IntelliVision 12 Touch for IntelliDrive Mobile
  - New bookmark is also available in Configuration import Wizard for IV12T
- Deactivating source value selection for binary output type Point Injection (source variable is fixed in code)
- Support of new security policy - user must set password for programming in most cases

## 6.2 Repairs

- Fixed duplicate screen generation with ECU AI name for extension modules
- Fixed the program error if the dimension of the PLC Setpoint was erased
- Fixed the correct display of the logo in the About window
- Fixed Import Wizard error if the ECU kind (for some values) changed between source and target archive
- Fixed a program error if Fast edit setpoint refers to a non-existent communication object
- Fixed accidental removal of the assigned output of PLC blocks (e.g. PLC output configured for logical function) if we delete another PLC block connected to the previous source.
- Fixed transfer of user-defined screens when using Configuration Import Wizard

# 7 Changes in the version 3.9.3

## 7.1 New features

- > The Modbus bit position attribute is newly visible on the ECU Fault code card for controllers supporting this view (at the time of issue of the documentation, it applies to IntelliDrive DCU Marine hw 2.0).
  - » The read-only value is used to check the content of the configuration, or to check the content of the ESC file in which it is firmly defined.
  - » In brief, this feature allows you to set up a logical binary output based on the ECU diagnostic message activation. Usable, for example, for alarm management via Modbus protocol.
  - » Controller has predefined Binary outputs (e.g. in value group Info you can find ECU Alarms 1 ...4) where every binary has 16 bits. Communication object number or Modbus register number can be found after Generate Cfg Image.
  - » Modbus bit position represents an absolute position over all dedicated binary outputs - the first group has positions 1-16, the second group has positions 17-32 etc. So if we see position 43 it means that it is the third group of binary outputs and eleventh position within the given 16bit binary (for example, we can see the activation of the ECU Alarms 3 - 11th bit from the left)
  - » The zero position (Modbus Bit Pos.=0) means that no additional bit is activated based on the Fault code.
- > Change of AirGate ID font to Microsoft True Type

## 7.2 Repairs

- > Importing specifically configured archives repaired (using ECU and large PLC)
- > All ECU attributes including Modbus Bit Position are correctly transferred during import.
- > Fix the PLC handling of the Delay block.
- > Proper processing of protections Class A, B, C.
- > Enhanced ECU import processing when some ECU value is missing in the target configuration.

# 8 Changes in the version 3.9.2

**Note:** Version 3.9.1 was not officially release. All changes are covered by version 3.9.2.

## 8.1 New features

- > A wizard has been added when configuring multiple ECU modules with conflicting addresses.
  - » If there is a conflict pop up window is shown and user should set non-conflicting ECU address
  - » If the ECU, currently being added, does not support ECU address change and is in conflict, then the particular ECU cannot be added
  - » Conflicting fault codes are overwritten. The warning is shown for conflicting ones (if the text is different)
  - » Conflicting ECU values are disabled to be manually added
- > Added control if an incompatible ESF file is configured in an older archive. This can be the case, for example, using an extended structure in an ESF file with a high identifier number.
- > Added new file type support for Firmware Import \* .ixc. The user can define multiple types of extensions at once. Utility available in the *Options* menu - *Import firmware ...*
- > New file is being distributed with DriveConfig package - QtNetwork4.dll. This library is required for IntelliVision 12 Touch support.
- > Support for unencrypted ECU protocols (files with ESF extension) has been terminated - the information is valid from version 3.9.0. Only encrypted ESC files can be configured.
  - » If an ECU list contains a reference to the uncoded ESF file, an alarm will appears

## 8.2 Repairs

- > Added check to see if maximum number of dimensions has been exceeded. If the limit is reached, the new dimension is not allowed to define.
  - » The information is read from the configuration table. Most controllers can have 32 different dimension, newer controllers allow 64 different dimensions.
- > Correction of the function assignment for PLC block output if the block was removed outside of the PLC editor (removing the extension module or ECU).
- > Correcting a consistency error when there is a difference between the ESF version configured in the controller and the version of the corresponding ESF file on the computer.
  - » This problem can occur, for example, if a special ECU list is used that contains an ESF file with a different version compared to the file defined in standard ECU list (assuming to use the same ESF identifier).
- > Bug fix of visualisation I/O bookmark of Import wizard
- > Bug fix of Impulse input form
- > Some minor bug fix of displaying Chinese mutation of DriveConfig - the correct use of the code page for graphical user interface components.
- > Bug fix of enlarge the image by double-clicking on the User modules tab.
- > Peripheral module configuration error for InteliBifuel fixed. InteliBifuel Denox and other extensions are fully configurable, and uploading / saving of archives does not cause parameter corruption.
- > Abstract error corrected for the import wizard related to ID-Mobile controller type.



# 9 Changes in the version 3.9.0

## 9.1 New features

- Taken over Modules panel from GenConfig - first page of configuration tool with basic configuration controller's extensions. DriveConfig has received features resulting from GenConfig's Modules tab.

**Note:** *New Modules panel is visible only for configuration table version 11 and higher. Firmwares with the previous version of configuration table will see the module settings in the same way as before.*

- Support of multi ECU configuration - possible individual configuration up to 10 electronic devices
  - New way of allocation ECU input/output resources
  - User can define 10 character name for each ECU module
  - Separate ECU consistency check
  - Add ECU Fault code configuration
  - Update of ECU Alarm list regarding multi device connection
- Full configurability of Inteli extension modules - for example all possible setting of Inteli AIN8 including impulse input
- Update ScreenEditor for user configuration InteliVision 12Touch
- Generating aftertreatment (Tier 4 Final) screen for ID-DCU internal display
- Support of controller history with 4096 records

## 9.2 Repairs

- The new version of Screen editor fixed bugs that persisted in previous releases.
  - Correct warning messaging
  - Trouble-free viewing and configuration InteliVision 12Touch screens
  - Correct handling of missing InteliVision libraries
  - Verifying suitable version of InteliVision library (DLL)
  - Correct ScreenEditor default layout
- Corrected all program messages (mainly referring to Drive Monitor)

# 10 Changes in the version 3.8.0

## 10.1 Repairs

- An issue about not working Screen Editor after installation of GenConfig 3.8.0 has been fixed.

## 10.2 New features

- Support of PLCsheets locking has been implemented, see the instruction bellow.

# 11 Changes in the version 3.7.0

## 11.1 New features

- > Recommended max value of Graphic data length was increased 8 kB
- > ECU size selection is now possible by selecting the ECU size by CHECK box
  - » ECU sizes:
    - Standard (1 ECU module)
    - Large (2 ECU modules)
    - Extra large (3 ECU modules)
    - XXL (4 ECU modules)
- > Support of logging from ECU connected to CAN2 in **ID-Mobile-Logger 2.4.0** and newer
  - » There are available up to 4 ECU modules for CAN1 and 2 ECU modules for CAN2 in the ECU size configuration (if supported by controller)
  - » Only the same ESF file (Engine type) can be used for both ECU
    - All ECU values are available for configuration for both "CAN 1 ECU modules" and "CAN2 ECU modules"
    - DM1 messages from CAN2 are not supported, they are not configurable
    - ECU CAN2 has configurable inputs (AINs and BINs) only, outputs (BOUT and AOUT) are not supported. Corresponding BOUT and AOUT I/O modules for CAN 2 ECU are not available
    - ECU2 values are not configured to BINs and LAIs automatically after esf configuration, they shall be configured manually or the configuration of CAN1 ECU can be copied to CAN2 by "Copy CAN1 Configuration" button.
  - » There are available up to 4 ECU modules for CAN1 and 2 ECU modules for CAN2 in the ECU size configuration (if supported by controller)
  - » ECU modules in Analog inputs are named
    - ECU 1-1 .. 1-4 for CAN1
    - ECU 2-1 .. 2-2 for CAN2
  - » Protection of configuration is joined for CAN1 and CAN2 ECU, it is not distinguished from which ECU the communication has failed
  - » Value names:
    - ECU 1 modules - standard names from ESF
    - ECU 2 modules
      - When ECU2 configuration is copied from ECU1, value names for ECU2 will be taken from the custom ECU1 value names and following changes will be applied to them:
        - If the value name length <= 12 symbols: name of ECU1 value + suffix "-2"
        - If the value name length >= 13 symbols, add suffix + suffix "-2" to the name after reducing name length to 12 with following rules:
          - Remove 1 or 2 symbols (number to reach 12 symbols) in order from left except first character with these priorities:

- Gaps
- Vowels - low case in following order: e, a, o, i, u
- If the value name lower than 12 is not reached - last characters to reach 12 chars are cut

## 11.2 Repairs

- > Issue about Screen Editor which failed to open with IBF-Mobile controller has been fixed.



# 12 Changes in the version 3.6.0

## 12.1 New features

- Support of IntelliBifuel Mobile
  - Software configuration of binary input type (Pull up/ Pull down)
  - Software configuration of binary output
    - Power outputs have new option:
      - Binary Output / PWM output / output **Point Injection** (parametric PWM)
      - Output polarity ( Low / High side)
  - Software configuration of analog input
    - Type of sensor - for specific inputs newly added sensor range  $\pm 85\text{mV}$ ,  $\pm 70\text{mV}$
  - Software configuration of analog output
    - Output type - current (0 - 20mA), voltage (0 - 10V)

## 12.2 Repairs

- Configuration ECU Log modules
  - Feature related to controller IntelliDrive Mobile Logger only
    - ECU is added with proper named items
- Import of user curves
  - Working import function in case of transfer larger curve (with 20 or 30 points) to archive which supports curve with less points
    - Use third level when lists of setpoints, values etc. are required

# 13 Changes in the version 3.5

## 13.1 New features

- Support of new PLC blok ForceMem
  - Temporary storage of input value/ setpoint to controller memory
- Update of User Curves sheet
  - Extended user curve is supported in some controller branches

# 14 Changes in the version 3.4

## 14.1 New features

- Extension of Analog Input protection configuration options for selected controllers – Class A, B and C protection types introduction
- Disabled option to Export / Import user screen definitions in XML format

## 14.2 Repairs

- Minor bug fixes

# 15 Changes in the version 3.3.1

## 15.1 Repairs

### > Minor bug fixes

» corrected feature to generate list of MODBUS Registers according to available vs. unavailable controller's feature to report protection statuses via MODBUS. The feature is available in following firmware versions actually:

- ID-DCU-Marine 2.1 and newer
- ID-DCU-Marine-W 2.2 and newer
- ID-Mobile-Logger 2.0 and newer

# 16 Changes in the version 3.3

## 16.1 New features

- Added option to select Preferred configuration language. The selection is available in menu Options - Settings and it is especially important during screen layout creation in Screen Editor module

## 16.2 Repairs

- Minor bug fixes

# 17 Changes in the version 3.2

## 17.1 New features

- Number of PLC user curves was extended to 255
- Support of IntelliDrive-Mobile new configuration format
- Support of new PLC blocks "Rule of Three" and "3D Map" (function supported by just some controllers)
- Support of DENOX20 as auxiliary module (function supported by just some controllers)

## 17.2 Repairs

- Minor bug fixes
- Repaired bug of not functional help hints in ECU selection sheet

# 18 Changes in the version 3.1

## 18.1 New features

- Incorporated Screen Editor tool for custom changes of IntelliVision 8 and IntelliVision 5 CAN screen layout. New sheet is displayed in DriveConfig application in case that the Screen Editor feature is supported also by controller firmware.
- Changed displayed values in Limits field (Analog Output Limit Calculator). There were displayed specific system values in the past, just now there are displayed values according to the Analog Output Limit Calculator window.
- Implemented support for ID-DCU Marine 2.1 new feature "Alarm list reading via MODBUS as a binary attributes of protection states".
- Changed Import Configuration wizard to maintain Communication Object numbers as much as possible.
- Changed list of available sheets for User and Expert Mode. There are available only sheets Modules, I/O, Setpoints, Commands, Sensors, Languages and Translator for User Mode, all sheets are available for Expert Mode.

## 18.2 Repairs

- Minor bug fixes
- Repaired PLC Print setting attributes
- Repaired controller screen generator engine in case of ID-RPU module

# 19 Changes in the version 3.0

## 19.1 New features

- Controllers cloning support (except ID-Mobile Logger)
- ID-DCU - Cummins MODBUS configuration support
- ID-Mobile Logger - ECU-Log module support
- IV5-CAN programming support

## 19.2 Repairs

- Minor bug fixes



# 20 Changes in the version 2.9

## 20.1 New features

- IntelliVision 5 CAN compatibility
- Configuration import for ID-Mobile and some corrections in importing procedure
- Analog output curves modification for ID-mobile
- Support of controller screens configuration
- Binary esf support

## 20.2 Repairs

- Minor bug fixes

# 21 Changes in the version 2.8

## 21.1 New features

- Improved consistency check
- Support of five-digit analog values on controller screen
- Support of common IntelliDDE server running for all ComAp PC software tools
- New PLC block: Non Linear Transformation
- New User curve – PLC non-linear curve edit screen
- Support and compatibility with ID-Mobile Logger application
- Support of four characters dimensions

# 22 Changes in the version 2.7

## 22.1 New features

- DriveConfig-2.7 is part of installation package IntelliDrive-Install-Suite-2.7r1
- The number of PLC BOUT was increased from 64 to 96
- The number of PLC AOUT was increased from 16 to 24
- The number of universal states was increased from 7 to 15
- Support of setpoints adjustment from chart – available only in ID-CCU-FM-AF branch

# 23 Changes in the version 2.6

## 23.1 New features

- > DC-2.6 is part of installation package IntelliDrive-Install-Suite-2.7
- > The number of PLC BOU was increased from 64 to 96
- > The number of PLC AO was increased from 16 to 24
- > The number of universal states was increased from 7 to 15
- > Support of setpoints adjustment from chart – available only in ID-CCU-FM-AF branch
- > **Files location change**
  - » The exe, firmware, archives, dictionary, curves and all other files are installed to different directories than before – see below
    - Exe files are located in
      - Program Files / ComAp PC Suite /
    - Application data (database) are located in
      - Documents and Settings / All Users / Application Data / ComAp PC Suite /
    - Firmware and archive files are located in
      - Documents and Settings / All Users / Documents / ComAp PC Suite /
  - » The existing files in C:\Program Files\ComAp\ ... are not changed after Suite installation procedure

# 24 Changes in the version 2.5.1

## 24.1 Repairs

- There has been done a repair of a bug from DC-2.5 version. In some cases of Expert mode there might be a block to configure an analog input

# 25 Changes in the version 2.5

## 25.1 New features

- Support of the ID-Mobile controller
- The Import configuration wizard has been added which enables import since the ID-DCU-Industrial-2.3 or ID-DCU-Marine-1.4 up to the current version
- Enhanced help support for I/O card values: Analog outputs - Basic Values, Engine Values, Info and Statistics
- Enhanced help support for Log I/O lists and for (default) setpoints in PLC card

# 26 Changes in the version 2.4

## 26.1 New features

- Import and Export of screens to XML file with possibility to edit screen structure
- Configuration lock support
- Released for ID-DCU-Industrial-2.5
- Updated Controller and New (!) Setpoints On-line help support
- New PLC functions support: Jump, Inc/Dec, Mux const., Decomposer, Convert
- Different structure of default IntelliVision screens
- "No convert" option for Analog outputs
- Option for Logical Binary outputs inversion

# 27 Changes in the version 2.3

## 27.1 New features

- IntelliVision (external color display) support
- Export Configuration command contains the PLC table
- Improvements in menu navigation from keyboard using the Up/Down keys
- Reduced number of visible screens in Non Expert mode: just Modules-I/O-Setpoints and PLC
- "Fast edit" function configurability to any setpoint (in Expert mode only)



# 28 Notes

## 28.1 Installation notes

All software tools are available under common software package IntelliDrive Install Suite. Self extracting wizard guide you through installation.

## 28.2 Document history

Revision number	Related sw. version	Date	Author
14	4.0.0	25.2.2022	Simona Krejčí
13	3.13.1	9.12.2021	Simona Krejčí
12	3.11.0	16.8.2020	Jan Kovacka
11	3.10.0	20.6.2019	Jan Kovacka
10	3.9.3	10.9.2018	Jan Kovacka
9	3.9.2	22.3.2018	Jan Kovacka
8	3.9.0	12.1.2018	Jan Kovacka
7	3.8.0	1.8.2017	Petr Weinfurt
6	3.7.0	27.4.2017	Petr Weinfurt
5	3.6.0	22.1.2016	Jan Kovacka
4	3.5.0	16.1.2015	Pavel Doubek
3	3.4	21.3.2014	Pavel Doubek
2	3.3.1	5.12.2013	Pavel Doubek
1	3.3	6.9.2013	Pavel Doubek