

## G-API Version History

Version 2.2.9580\_Release - 8/30/2022

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### Features

Hardware Explorer:

- change default usage of DMA channels

g\_api.dll:

- added commands
  - "G\_GetHostInterfaceType"
  - "G\_GetInterfaceType"

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_Generator\_MipiDsi\_Property\_SetById"
  - "G\_Lvds\_Generator\_MipiDsi\_Property\_GetById"
  - "G\_Lvds\_Generator\_MipiCsi2\_Property\_SetById"
  - "G\_Lvds\_Generator\_MipiCsi2\_Property\_GetById"
  - "G\_Lvds\_FrameGrabber\_MipiDsi\_Property\_SetById"
  - "G\_Lvds\_FrameGrabber\_MipiDsi\_Property\_GetById"

g\_api\_trace.dll:

- added flag
  - "G\_TRACE\_\_ALLOCATE\_\_CMD\_FLAG\_\_USE\_MULTIPLE\_DEVICES"

### Changes

- Common:

- added Net2Run features to 6141, 6241 and 6242

g\_api\_trace.dll:

- changed internal sorting algorithm

### Bugfix

Hardware Explorer:

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Version 2.2.9519\_Release - 7/25/2022

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### Features

Hardware Explorer:

- Flash Firmware on Linux

- IO:

- added Trigger Source types
  - "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_CLK\_10\_MHZ"
  - "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_I2C\_M\_SCL"
  - "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_I2C\_M\_SDA"

- added Trigger Output types

- "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_I2C\_M\_SCL"
- "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_I2C\_M\_SDA"

- LVDS:

- added commands:

"G\_Lvds\_FrameGenerator\_LineTime\_Get"  
"G\_Lvds\_FrameGenerator\_LineTime\_Set"  
"G\_Lvds\_FrameGenerator\_FrameRate\_Get"

- Net2Run:
  - added parameter "SoSndBufSize" to "G\_Net2Run\_SoAd\_SoConGroup\_Config\_Cmd\_t"
- Trace:
  - added Export to MDF for Linux

## Bugfix

- hardware explorer:
  - missing file "g\_settings.xml"
  - missing support for PXIe devices

## Version 2.2.9494\_Release - 6/24/2022

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- new Hardware Explorer (change version 2.1 to 2.2)

### supported devices

- added ETH4008
- added serializer MAX96793

## Features

### G-API Service

- Plug and Play for PCIe/PXIe devices

### g\_api\_ethernet.dll:

- added commands
  - "G\_Ethernet\_Node\_Vlan\_Property\_SetById"
  - "G\_Ethernet\_Node\_Vlan\_Property\_GetById"

### g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_FrameGrabber\_MipiCsi2\_Property\_GetById"
  - "G\_Lvds\_FrameGrabber\_MipiCsi2\_Property\_SetById"
- added property to "G\_Lvds\_SerDes\_PropertyId\_t"
  - "G\_LVDS\_\_SER\_DES\_\_PROPERTY\_ID\_\_DES\_LOCK\_POL"

## Changes

### G-API Service

- changed handling of DMA channels

### Hardware Explorer

- The 'new' Hardware Explorer is now the standard for installation
- The 'old' Hardware Explorer could be installed too (until the end of the year)

## Documentation

- added missing functions:
  - "G\_Common\_Ethernet\_SubNetMask\_Set"
  - "G\_Common\_Ethernet\_SubNetMask\_Get"
  - "G\_Common\_Ethernet\_DefaultGateway\_Set"
  - "G\_Common\_Ethernet\_DefaultGateway\_Get"
  - "G\_Ethernet\_Node\_Mtu\_Set"
  - "G\_Ethernet\_Node\_Mtu\_Get"
  - "G\_Ethernet\_Node\_Vlan\_GetAll"
  - "G\_Net2Run\_InitInterface"
  - "G\_Net2Run\_SignalBlock\_Buffer\_Reset"

## Features

- added sample code "Ethernet\_Iperf2"

### g\_api\_common.dll:

- added transceiver types
  - "G\_COMMON\_TRANSCEIVER\_TYPE\_ETHERNET\_AETH\_88Q222X"
  - "G\_COMMON\_TRANSCEIVER\_TYPE\_ADIO\_6282\_TYPE\_1\_5V\_DO"
  - "G\_COMMON\_TRANSCEIVER\_TYPE\_ADIO\_6282\_TYPE\_2\_HIGH\_V\_DO"

### g\_api\_flexray.dll:

- added command:
  - "G\_FlexRay\_Monitor\_Config2"
- added property:
  - "G\_FLEXRAY\_PROPERTY\_ID\_COUNTER\_RX\_FIFO\_OVERRUN"

### g\_api\_fs.dll:

- added commands:
  - "G\_FS\_Directory\_Read"
  - "G\_FS\_Directory\_Save"
- added flag
  - "G\_FS\_DIRECTORY\_DELETE\_CMD\_FLAG\_DELETE\_CONTENT"

### g\_api\_ethernet.dll:

- added flags
  - "G\_ETHERNET\_TP\_INIT\_DO\_SO\_AD\_CMD\_FLAG\_LOCAL\_ADDR\_PHYS\_RX\_SIDE"
  - "G\_ETHERNET\_TP\_INIT\_DO\_SO\_AD\_CMD\_FLAG\_REMOTE\_ADDR\_PHYS\_RX\_SIDE"
  - "G\_ETHERNET\_TP\_INIT\_DO\_SO\_AD\_CMD\_FLAG\_LOCAL\_ADDR\_FUNCT\_RX\_SIDE"
  - "G\_ETHERNET\_TP\_INIT\_DO\_SO\_AD\_CMD\_FLAG\_REMOTE\_ADDR\_FUNCT\_RX\_SIDE"

### g\_api\_io.dll:

- added types
  - "G\_IO\_TRIGGER\_TIMESTAMP\_CLOCK\_SOURCE\_EXTERNAL\_10\_MHZ"
  - "G\_IO\_TRIGGER\_TIMESTAMP\_CLOCK\_SOURCE\_EXTERNAL\_100\_MHZ"

### g\_api\_lvds.dll:

- added flag "G\_LVDS\_FRAME\_GRABBER\_PCIE\_DMA\_CONFIG\_CMD\_FLAG\_USE\_NUM\_OF\_BUF"
- added pixel mode "G\_LVDS\_FRAME\_GENERATOR\_PIXEL\_MODE\_RAW8"
- added pixel buffer type to "G\_Lvds\_PattGen\_Init\_Cmd\_t"
- added properties:
  - "G\_LVDS\_FRAME\_GRABBER\_SYNC\_PROPERTY\_ID\_H\_SIZE"
  - "G\_LVDS\_FRAME\_GRABBER\_SYNC\_PROPERTY\_ID\_H\_SIZE\_MIN"
  - "G\_LVDS\_FRAME\_GRABBER\_SYNC\_PROPERTY\_ID\_H\_SIZE\_MAX"
  
  - "G\_LVDS\_PATT\_GEN\_PROPERTY\_ID\_PIX\_BUF\_OUTPUT"
  - "G\_LVDS\_PATT\_GEN\_PROPERTY\_ID\_PIX\_BUF\_COUNT"

## Changes

### G-API Service

- changed handling of USB devices for speeding up

### Hardware Explorer

- Beta:
  - added dialog "supported devices"
  - added dialog "About"
  - added menu entry "Remove disconnected devices"
  - added version number to splash screen and main window title
  - remember last flash file path
  - suppress console window in the background

g\_api\_net2run.dll:

- changed selector bit size possibility from 8 to 16 in commands:  
"G\_Net2Run\_PduMux\_MuxedTxPdu\_Config"  
"G\_Net2Run\_PduMux\_DemuxedTxPdu\_Config"  
"G\_Net2Run\_PduMux\_DemuxedRxPdu\_Config"

g\_api\_lvds.dll:

- G\_Lvds\_FrameGenerator\_GetHardwareInfo2:
  - added extended FPGA version
  - if Generator is not configured, it will still return serdes type and FPGA version

## Bugfix

Hardware Explorer

- missing LVDS interface icon if device is connected but interface is not available

g\_api\_lvds.dll:

- "G\_Lvds\_FrameGrabber\_PcieDma\_Config" didn't work correct with user defined number of buffers

## Documentation

- added missing commands:  
"G\_ReleaseAllLocks"  
"G\_SetResponseTimeout"  
"G\_GetResponseTimeout"  
"G\_CheckPortHandle"  
"G\_GetHostCommTypeDescription"  
"G\_GetInterfaceTypeDescription"  
"G\_Lvds\_FrameGrabber\_PcieDma\_Reset"  
"G\_Lvds\_FrameGrabber\_PcieDma\_Config"  
"G\_Lvds\_FrameGrabber\_PcieDma\_WriteLimit\_Set"  
"G\_Lvds\_FrameGrabber\_PcieDma\_WritePosition\_Get"

Version 2.1.9349\_Release - 5/4/2022

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## Features

g\_api\_common.dll

- added transceiver type:  
"G\_COMMON\_\_TRANSCEIVER\_TYPE\_\_CAN\_\_TJA1463AT"

g\_api\_ethernet.dll

- added commands:  
"G\_Ethernet\_MiiMux\_IsSourceAvailable"  
"G\_Ethernet\_MiiMux\_IsTargetAvailable"  
"G\_Ethernet\_Monitor\_Config2"  
"G\_Ethernet\_Node\_ArpEntry\_Add"  
"G\_Ethernet\_Node\_ArpEntry\_Delete"  
"G\_Ethernet\_Node\_ArpEntry\_GetAll"  
"G\_Ethernet\_Node\_NdpEntry\_Add"  
"G\_Ethernet\_Node\_NdpEntry\_Delete"  
"G\_Ethernet\_Node\_NdpEntry\_GetAll"  
"G\_Ethernet\_Node\_TcpOption\_GetById"  
"G\_Ethernet\_Node\_TcpOption\_SetById"  
"G\_Ethernet\_TxFifo\_GetConfig"

g\_api\_lvds.dll:

- Compare frames with "G\_Lvds\_FrameGrabber\_Compare" for 6222
- added commands:  
"G\_Lvds\_FrameGrabber\_GetCompareArea"  
"G\_Lvds\_Mi\_Property\_GetById"  
"G\_Lvds\_Mi\_Property\_SetById"
- added properties to "G\_Lvds\_SerDes\_PropertyId\_t":  
"G\_LVDS\_\_SER\_DES\_\_PROPERTY\_ID\_\_DES\_LOCK\_DISABLE"  
"G\_LVDS\_\_SER\_DES\_\_PROPERTY\_ID\_\_APIX\_BW\_BST\_CFG"  
"G\_LVDS\_\_SER\_DES\_\_PROPERTY\_ID\_\_APIX\_BW\_BST\_ACTIVE"

- added properties to "G\_Lvds\_FrameGrabber\_CapturePropertyId\_t":  
 "G\_LVDS\_\_FRAME\_GRABBER\_\_CAPTURE\_PROPERTY\_ID\_\_DISCARDED\_FRAMES\_COUNTER"  
 "G\_LVDS\_\_FRAME\_GRABBER\_\_CAPTURE\_PROPERTY\_ID\_\_IS\_INITIALIZED"  
 "G\_LVDS\_\_FRAME\_GRABBER\_\_CAPTURE\_PROPERTY\_ID\_\_IS\_BUFFERING"
- added flag "G\_LVDS\_\_FRAME\_GRABBER\_\_CAPT\_2\_BUF\_2\_\_CMD\_FLAG\_\_DMA\_GET\_NEWEST\_FRAME"

g\_api\_net2run.dll:

- added flag:  
 "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_CONFIG\_\_FLAG\_\_USE\_FIFO"

## Changes

g\_api\_lvds.dll:

- several commands are modified for series 62 compare operations:
- "G\_Lvds\_SerDes\_Reset" use APIX bandwidth bootstrap pin if necessary
- "G\_Lvds\_FrameGrabber\_CaptureToBuffer2" with DMA returns now the oldest frame in the buffer
- "G\_Lvds\_Common\_Config\_Get" and "G\_Lvds\_Common\_Config\_Set" return now 0x02060019 if some error occurred

## Bugfix

g\_api\_lvds.dll:

- config:
  - get pattern generator properties (wrong number of frames and data type)
  - frame generator: missing channel information

Installer:

- Linux: fixed issue with root rights

## Version 2.1.9290\_Release - 3/29/2022

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## Features

Hardware Explorer:

- new Hardware Explorer in Beta variant for first testing

g\_api\_io.dll:

- added flags:  
 "G\_IO\_\_SENT\_\_TRANSMITTER\_\_INIT\_\_CMD\_FLAG\_\_DN4\_AND\_DN5\_AS\_COUNTER"  
 "G\_IO\_\_SENT\_\_TRANSMITTER\_\_INIT\_\_CMD\_FLAG\_\_DN6\_AS\_INV\_COPY\_OF\_DN1"

g\_api\_lvds.dll:

- virtual DMA channels

## Changes

Installer:

- 3rd party:
  - update Microsoft VC Redistributable to version 14.31.31103

## Bugfix

g\_api\_net2run.dll:

- missing status interpretation in "G\_Net2Run\_TimeSyncMgr\_GetStatus", added:  
 "G\_NET2RUN\_\_TIME\_SYNC\_MGR\_\_STATUS\_\_TIMEOUT"  
 "G\_NET2RUN\_\_TIME\_SYNC\_MGR\_\_STATUS\_\_SYNC\_TO\_GATEWAY"  
 "G\_NET2RUN\_\_TIME\_SYNC\_MGR\_\_STATUS\_\_GLOBAL\_TIME\_BASE"  
 "G\_NET2RUN\_\_TIME\_SYNC\_MGR\_\_STATUS\_\_TIMELEAP\_FUTURE"  
 "G\_NET2RUN\_\_TIME\_SYNC\_MGR\_\_STATUS\_\_TIMELEAP\_PAST"

Installer:

- fixed issue with virtual storing of g\_devices.xml

## Features

g\_api\_can.dll:

- added types:
  - "G\_Can\_EventType\_t"
  - "G\_Can\_ActionType\_t"

g\_api\_common.dll:

- "G\_Common\_EA\_InitEvent" supports
  - "G\_Can\_EventType\_t"
  - "G\_Lin\_EventType\_t"
- "G\_Common\_EA\_InitAction" supports
  - "G\_Can\_ActionType\_t"
  - "G\_Lin\_ActionType\_t"

g\_api\_can.dll:

- added command:
  - "G\_Diag\_GetAsyncResponse"

g\_api\_ethernet.dll:

- added commands:
  - "G\_Ethernet\_Tp\_ResetChannel"
  - "G\_Ethernet\_TxFifo\_GetRemoteAddress"
  - "G\_Ethernet\_TxFifo\_SetRemoteAddress"
  - "G\_Ethernet\_TxTrace\_Allocate"
  - "G\_Ethernet\_TxTrace\_Free"
  - "G\_Ethernet\_TxTrace\_Download"
  - "G\_Ethernet\_TxTrace\_Play"
  - "G\_Ethernet\_TxTrace\_Property\_GetById"
  - "G\_Ethernet\_TxTrace\_Property\_SetById"
- added flags to command "G\_Ethernet\_TxFifo\_GetState"
  - "G\_ETHERNET\_\_TX\_FIFO\_\_GET\_STATE\_\_CMD\_FLAG\_\_GET\_LAST\_ERROR\_CODE"
  - "G\_ETHERNET\_\_TX\_FIFO\_\_GET\_STATE\_\_CMD\_FLAG\_\_RESET\_LAST\_ERROR\_CODE"
- added flag to command "G\_Ethernet\_RxFifo\_Config"
  - "G\_ETHERNET\_\_RX\_FIFO\_\_CONFIG\_\_CMD\_FLAG\_\_INCLUDE\_IP\_ENDPOINT"

g\_api\_lin.dll:

- added types:
  - "G\_Lin\_EventType\_t"
  - "G\_Lin\_ActionType\_t"
- new sample:
  - "FeatureCode" to get/set lock code to enable features

## Bugfix

g\_api\_can.dll

- "G\_Can\_CyclicMsgs\_ChangeMsgDataAndMsgCount" for CAN FD

g\_api\_trace.dll

- missing differentiation between CAN and CAN FD entries in ASC Export

## Features

- added sample "Diagnostics\_UDS\_basedOn\_ISO15765"

g\_api\_ethernet.dll

- added flags:
  - "G\_ETHERNET\_\_MONITOR\_\_ITEM\_\_FRAME\_\_FLAG\_\_MAC\_TX\_ERROR"
  - "G\_ETHERNET\_\_MONITOR\_\_ITEM\_\_FRAME\_\_FLAG\_\_MAC\_TX\_ERROR"

g\_api\_lvds.dll

- config file
- frame generator channel config

## Changes

- trace binaries are now located in "C:\ProgramData\GOEPEL electronic\G-API\Temp" for windows

## Bugfix

g\_api\_lvds.dll

- config file
- reading comments in APIX3 registers

g\_api\_trace.dll

- Export to PCAPNG: wrong 'block total length' in 'interface description block'

## Documentation

- adding missing commands:
  - "G\_Sequence\_Replay\_AddDelay2"
  - "G\_Sequence\_Replay\_DeleteFile"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_Config\_Set"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_Config\_Get"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_FileName\_Set"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_FileName\_Get"

## Version 2.1.9140\_Release - 12/16/2021

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## Features

g\_api\_lvds.dll

- added serdes
  - "LVDS\_PARAM\_\_SER\_DES\_\_DS90UB971"
  - "LVDS\_PARAM\_\_SER\_DES\_\_DS90UB981"
  - "LVDS\_PARAM\_\_SER\_DES\_\_DS90UB9702"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_MIPI\_CSI2\_RX"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_MIPI\_CSI2\_TX"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_MIPI\_DSI\_RX"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_MIPI\_DSI\_TX"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_OPEN\_LDI\_RX"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_NONE\_\_OPEN\_LDI\_TX"
- added functions
  - "G\_Lvds\_FrameGenerator\_PropertyGetById"
  - "G\_Lvds\_FrameGenerator\_PropertySetById"
- added property to "G\_Lvds\_FrameGrabber\_PropertyId\_t"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MODE"
- added properties to "G\_Lvds\_Generator\_PropertyId\_t"
  - "G\_LVDS\_\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_CSI2\_DT"
  - "G\_LVDS\_\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_DSI\_DT"
  - "G\_LVDS\_\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MODE"
- config file
  - added Open LDI Mode to Grabber and Generator
- added "PixelMode" to "G\_Lvds\_FrameGenerator\_Config\_Cmd\_t"

## Changes

g\_api\_diag.dll

- increasing polling interval for "G\_Diag\_GetResponse" to save resources

## Bugfix

- missing files "g\_xml.h" and "g\_xml.lib" in installation path are now available again

### g\_api\_lvds.dll

- config file
  - set frame generator now disables the channel request before configuring

## Version 2.1.9105\_Release - 11/15/2021

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## Features

### g\_api\_can.dll

- added functions:
  - "G\_Can\_Node\_Property\_SetById"
  - "G\_Can\_Node\_Property\_GetById"

### g\_api\_common.dll

- added events:
  - "G\_COMMON\_EA\_EVENT\_TYPE\_BUS\_ACTIVITY"
  - "G\_COMMON\_EA\_EVENT\_TYPE\_BUS\_NO\_ACTIVITY"
  - "G\_COMMON\_EA\_EVENT\_TYPE\_ETHERNET\_TX\_TRACE\_LOW\_MARK"
  - "G\_COMMON\_EA\_EVENT\_TYPE\_SO\_AD\_SO\_CON\_STATE\_CHGD"
- added action:
  - "G\_COMMON\_EA\_ACTION\_TYPE\_NOTIFY\_HOST"

### g\_api\_ethernet.dll

- added functions:
  - "G\_Ethernet\_Node\_Property\_SetById"
  - "G\_Ethernet\_Node\_Property\_GetById"
  - "G\_Ethernet\_Tools\_Iperf2\_Config"
  - "G\_Ethernet\_Tools\_Iperf2\_Reset"
  - "G\_Ethernet\_Tools\_Iperf2\_GetState"
  - "G\_Ethernet\_Tools\_Iperf2\_GetResult"
- added flags to "G\_Ethernet\_RxFifo\_Config"
  - "G\_ETHERNET\_RX\_FIFO\_CONFIG\_CMD\_FLAG\_PROMISCUOUS\_MODE"
  - "G\_ETHERNET\_RX\_FIFO\_CONFIG\_CMD\_FLAG\_USE\_TIMESTAMP"

### g\_api\_io.dll

- added functions:
  - "G\_Io\_Inputs\_Analog\_Range\_Get"
  - "G\_Io\_Inputs\_Analog\_Range\_Set"
  - "G\_Io\_Outputs\_Analog\_Range\_Get"
  - "G\_Io\_Outputs\_Analog\_Range\_Set"

### g\_api\_lvds.dll

- added functions to get more details about the configuration errors
  - "G\_Lvds\_Common\_Config\_GetNumberOfErrors"
  - "G\_Lvds\_Common\_Config\_GetErrors"

### g\_api\_net2run.dll

- added function:
  - "G\_Net2Run\_SoAd\_Pdu\_Config"

- samples

- new sample "Ethernet\_PTP\_timeSync"

## Changes

### g\_api\_lvds.dll

- behaviour of the configuration in
  - "G\_Lvds\_Common\_Config\_Set"
  - "G\_Lvds\_Common\_Config\_Get"
- commands try to do all configuration steps
- errors could be extract by the new function "G\_Lvds\_Common\_Config\_GetErrors"



## g\_api\_net2run.dll

- added parameter "PduDataMaxLength" and its flag to the functions
  - "G\_Net2Run\_SecOc\_RxPduProcessing"
  - "G\_Net2Run\_SecOc\_TxPduProcessing"
- added the following parameters and their flags to the function:
  - "G\_Net2Run\_SoAd\_SoConGroup\_Config"
  - "TcpMss"
  - "SoRcvBufSize"
- hardware explorer
  - temperature update of the device could be triggered by a button in the toolbar
  - the update every 5 seconds could be controlled only in the general settings
- VersionHistory.pdf in startmenu
- relocate the file "g\_device.xml" to the ProgramData Folder

## Bugfix

- hardware explorer:
  - detection of GCAR devices 6281 and 6223 over USB
  - several missing feature infos

## g\_api\_trace.dll

- multiple interfaces in one trace in a long run resulted in a delay

## Version 2.1.9044\_Release - 10/7/2021

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## Features

### g\_api\_lvds.dll

- added properties to "Lvds\_Param\_Gen\_PropertyId\_t":
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_OPEN\_LDI\_GE\_DT"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_NUM\_LANES"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_CONTINUOUS\_HS\_CLK"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_T\_PRE"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_T\_POST"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_TX\_GAP"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_MIPI\_CSI2\_CFG\_TWAKEUP"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_IF\_AUTO\_RE\_SYNC\_EN"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_CH\_GEN\_EN\_REQ"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_CH\_GEN\_EN\_STATE"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_CH\_FRAME\_COUNT"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_CH\_FRAME\_COUNTER"
  - "G\_LVDS\_GENERATOR\_PROPERTY\_ID\_CH\_FRAME\_COUNTER\_2"
- added Mipi Dsi Loop functions
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_ConfigSet"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_ConfigGet"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_Reset"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_Start"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_Stop"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_ScanDataGet"
  - "G\_Lvds\_Generator\_MipiDsi\_Loop\_ScanDataReset"
- added frame generator functions for device 6222:
  - "G\_Lvds\_FrameGenerator\_Reset"
  - "G\_Lvds\_FrameGenerator\_Config"
  - "G\_Lvds\_FrameGenerator\_Init"
  - "G\_Lvds\_FrameGenerator\_DeInit"
  - "G\_Lvds\_FrameGenerator\_Start"
  - "G\_Lvds\_FrameGenerator\_Stop"

### g\_api\_net2run.dll

- added time sync over ethernet functions
  - G\_Net2Run\_EthIf\_Init
  - G\_Net2Run\_EthIf\_DeInit
  - G\_Net2Run\_EthTimeSync\_Config\_Socket
  - G\_Net2Run\_EthTimeSync\_Config\_Master
  - G\_Net2Run\_EthTimeSync\_Config\_Slave

- added function
  - G\_Net2Run\_EthIf\_MacAddr\_Set
- hardware explorer
  - added feature code for
    - Net2Run time sync

## Changes

- linux
  - one installation file for all distros (without drivers)
  - an additional file for driver installation (version 1.8)

g\_api\_lvds.dll

- "G\_Lvds\_Common\_Data\_SpiTransfer": increased maximum of Tx and Rx bytes for Video Dragon 2 (from 8 to 16)
- "G\_Lvds\_Common\_Config\_Set": frame generator for device 6222

## Bugfix

G-API Service

- crashed, when an USB device is connected, which isn't a Göpel electronics device

## Documentation

g\_api\_net2run.dll

- add description about net2run

## Version 2.1.8994\_Release - 9/10/2021

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### Changes

g\_api\_lvds.dll

- clear separation between common generator and frame generator functions
  - "G\_Lvds\_FrameGenerator\_Property\_SetById" is deprecated, use "G\_Lvds\_Generator\_Property\_SetById" instead
  - "G\_Lvds\_FrameGenerator\_Property\_GetById" is deprecated, use "G\_Lvds\_Generator\_Property\_GetById" instead
  - "G\_Lvds\_FrameGenerator\_MuxSource\_Set" is deprecated, use "G\_Lvds\_Generator\_MuxSource\_Set" instead
  - "G\_Lvds\_FrameGenerator\_MuxSource\_Get" is deprecated, use "G\_Lvds\_Generator\_MuxSource\_Get" instead
- increased buffer size from 4096 x 2160 with 24 Bit to 4096 x 2160 with 32 Bit

## Version 2.1.8977\_Release - 8/26/2021

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### Features

g\_api\_flexray.dll

- added property to "G\_FlexRay\_PropertyId\_t":
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_NUMBER\_OF\_MINI\_SLOTS"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_NUMBER\_OF\_SLOTS"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_P\_KEY\_SLOT\_ID"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_G\_PAYLOAD\_LENGTH\_STATIC"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_P\_PAYLOAD\_LENGTH\_DYN\_MAX"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_G\_MACRO\_PER\_CYCLE"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_SYNC\_STATE"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_COUNTER\_NO\_TX\_MSG\_BUFFER\_STATIC"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_COUNTER\_NO\_TX\_MSG\_BUFFER\_DYNAMIC"
  - "G\_FLEXRAY\_\_PROPERTY\_ID\_\_NUMBER\_OF\_MSG\_BUFFERS\_RX\_FIFO"

g\_api\_lvds.dll

- add flag "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_56\_BIT"

## Bugfix

g\_api\_lvds.dll

- "G\_Lvds\_Common\_Config\_Set" now handles the Apix Mode correct again

g\_api\_lvds.so:

- Write\_I2C\_Registers\_From\_File for linux : handle empty lines

## Version 2.1.8929\_Release - 7/9/2021

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### Features

Hardware Explorer:

- show USB connection version for GCAR

g\_api\_lvds.dll

- added commands
  - "G\_Lvds\_PattGen\_MipiCsi2\_Property\_SetById"
  - "G\_Lvds\_PattGen\_MipiCsi2\_Property\_GetById"
- added node "LineCmdEnable" to the Pattern Generator in the Config File
- added property to "G\_Lvds\_Common\_Data\_PropertyId\_t"
  - "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_I2C\_MASTER\_DELAY\_TIME"
- added node "I2cMasterDelayTimeInNs" to the Data Properties in the Config File

### Changes

G-API Service

- Debug mode
  - added debug options for filtering information - interface type
- USB 62 Driver
  - added error codes

## Bugfix

- Linux

- GetApiVersion returned wrong values

g\_api\_net2run.dll

- "G\_Net2Run\_Signal\_Read" does not accept valueSize

## Version 2.1.8910\_Release - 6/29/2021

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### Features

supported devices

"GPCIE6242"  
"GPXIE6242"

g\_api.dll

- added command
  - "G\_ReleaseAllLocks"
- added flag to "G\_OpenInterface2\_CmdFlags\_t"
  - "G\_OPEN\_INTERFACE\_2\_\_CMD\_FLAG\_\_NO\_LOCK"

g\_api\_common.dll

- added flag to "G\_Common\_OpenInterface2\_CmdFlags\_t"
  - "G\_COMMON\_\_OPEN\_INTERFACE\_2\_\_CMD\_FLAG\_\_NO\_LOCK"

g\_api\_can.dll

- added flag to "G\_Can\_InitInterface\_CmdFlags\_t"  
"G\_CAN\_\_INIT\_INTERFACE\_\_CMD\_FLAG\_\_IGNORE\_LOCK"

g\_api\_io.dll

- added flag to "G\_Io\_InitInterface\_CmdFlags\_t"  
"G\_IO\_\_INIT\_INTERFACE\_\_CMD\_FLAG\_\_IGNORE\_LOCK"

g\_api\_lin.dll

- added flag to "G\_Lin\_InitInterface\_CmdFlags\_t"  
"G\_LIN\_\_INIT\_INTERFACE\_\_CMD\_FLAG\_\_IGNORE\_LOCK"

g\_api\_lvds.dll

- added pixel modes to "G\_Lvds\_FrameGrabber\_PixelMode\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_BGR888\_24"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RGB888\_24"

## Changes

G-API Service

- Debug mode
  - time of day in milliseconds instead time in milliseconds since server start
- added debug options for filtering information
- commands listed with a meaningful name instead of a pure number ("speaking server")

Hardware Explorer

- 'Reset Device' restarts the firmware completely

## Bugfix

G-API Service

- GCAR6222: Reset Device and Flash Firmware

g\_api\_lvds.dll

- LVDS Config file:
  - set pattern generator properties
  - problems with channel number > 2
  - close file handle, if an error occurs
  - read/write apix registers for page 8
  - set/get frame grabber polarities for Open Ldi

## Documentation

- added missing commands:
  - "G\_OpenInterface2"
  - "G\_Common\_OpenInterface2"
  - "G\_GetLockStatus"
  - "G\_GetLock"
  - "G\_ReleaseLock"

Version 2.1.8844\_Release - 4/28/2021

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## Features

g\_api\_can.dll

- added commands  
"G\_Can\_Diag\_Config\_Uds"

g\_api\_lvds.dll

- added commands  
"G\_Lvds\_FrameGrabber\_Fpga\_ChannelUsage\_Get"  
"G\_Lvds\_FrameGrabber\_ChAssignmentStrategy\_Set"
- add property to "G\_Lvds\_FrameGrabber\_PropertyId\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_CH\_ASSIGNMENT\_STRATEGY"

- add pixel mode to "G\_Lvds\_FrameGrabber\_PixelMode\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_YUV422\_8\_Y1U1Y2V1"
- add property to "G\_Lvds\_FrameGrabber\_CapturePropertyId\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_CAPTURE\_PROPERTY\_ID\_\_SUPPORTED\_PIXEL\_MODES"

## Changes

g\_api\_lvds.dll

- the property "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_NUMBER\_OF\_CHANNELS" can be set

## Bugfix

g\_api\_lvds.dll

- set timings for Open Ldi (in LVDS Config File)
- no Open LDI polarity for 4121
- read serdes device config for frame generator
- multifunction pins and serdes gpio in lvds config file for input type

## Version 2.1.8785\_Release - 3/29/2021

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## Features

g\_api.dll

- added command  
"G\_GetHostCommunicationType"

g\_api\_lvds.dll

- added commands  
"G\_Lvds\_Apix3\_ConfigRegister\_Read"  
"G\_Lvds\_Apix3\_ConfigRegister\_Write"  
"G\_Lvds\_PattGen\_Property\_GetFrameRate"  
"G\_Lvds\_PattGen\_Property\_SetFrameRate"
- add values to config file
  - VideoSettings Properties -> Data Rate Select
  - Grabber Configuration -> Channel Data Type Open LDI
  - Pattern Generator -> Data Types Open LDI
- add property to "G\_Lvds\_FrameGrabber\_PropertyId\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_GE\_DT"
- added pixel modes to "G\_Lvds\_FrameGrabber\_PixelMode\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RGB101010\_30"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_YUV422\_8\_MIPI\_CS12"
- config file:
  - loop-through for Open LDI

## Changes

g\_api\_lvds.dll

- deprecated functions:
  - "G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_SetById"  
use "G\_Lvds\_Common\_VideoSettings\_Property\_SetById" instead
  - "G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_GetById"  
use "G\_Lvds\_Common\_VideoSettings\_Property\_GetById" instead

Hardware Explorer

- set ethernet via right click on device "Change IP Address,..."

## Bugfix

g\_api\_lvds.dll

- read multifunction pins from 'old' config file
- sync polarities for Open Ldi in LVDS Config File

## Hardware Explorer

- error while starting at GetFirmwareVersion (rc = 0x02010006)

## Version 2.1.8771\_Release - 3/24/2021

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### Features

#### g\_api.dll

- added command  
"G\_GetHostCommunicationType"

#### g\_api\_lvds.dll

- added commands  
"G\_Lvds\_Apix3\_ConfigRegister\_Read"  
"G\_Lvds\_Apix3\_ConfigRegister\_Write"  
"G\_Lvds\_PattGen\_Property\_GetFrameRate"  
"G\_Lvds\_PattGen\_Property\_SetFrameRate"
- add values to config file
  - VideoSettings Properties -> Data Rate Select
  - Grabber Configuration -> Channel Data Type Open LDI
  - Pattern Generator -> Data Types Open LDI
- add property to "G\_Lvds\_FrameGrabber\_PropertyId\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_GE\_DT"
- added pixel modes to "G\_Lvds\_FrameGrabber\_PixelMode\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RGB101010\_30"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_YUV422\_8\_MIPI\_CSI2"

### Changes

#### g\_api\_lvds.dll

- deprecated functions:
  - "G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_SetById"  
use "G\_Lvds\_Common\_VideoSettings\_Property\_SetById" instead
  - "G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_GetById"  
use "G\_Lvds\_Common\_VideoSettings\_Property\_GetById" instead

## Hardware Explorer

- set ethernet via right click on device "Change IP Address,..."

### Bugfix

#### g\_api\_lvds.dll

- read multifunction pins from 'old' config file
- sync polarities for Open Ldi in LVDS Config File

## Version 2.1.8687\_Release - 2/26/2021

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- improvements in Performance of the Linux G-API (change version 2.0 to 2.1)

### Features

#### g\_api\_common.dll

- added commands:  
"G\_Common\_GetHardwareVersion"

#### g\_api\_lvds.dll

- added commands:  
"G\_Lvds\_Mi\_GetHardwareInfo"  
"G\_Lvds\_FrameGrabber\_GetCaptureState"  
"G\_Lvds\_FrameGrabber\_SyncInfo\_PermanentScan\_GetState"
- added property to "G\_Lvds\_Common\_VideoSettings\_PropertyId\_t":  
"G\_LVDS\_\_COMMON\_\_VIDEO\_SETTINGS\_\_PROPERTY\_ID\_\_DATA\_RATE\_SELECT"

## Hardware Explorer

- added device property  
"Hardware Version"
- added interface properties  
"Interface Version"  
"Interface Instance Id"
- added LVDS interface properties:  
"MediaInterface Version"  
"Connector Type"  
"MII"

## Bugfix

### g\_api\_lvds.dll

- correct VideoRouting for frameGenerator

## Hardware Explorer

- feature infos (e.g. "ETHERNET DIAG/TP" was not correct checked)
- feature APIX MII now correct

## Version 2.0.8619\_Release - 2/8/2021

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## Features

### g\_api\_lvds.dll

- config file:
  - schema\_version of config file is set to 1.30
  - pattern generator
- read config files generated by Dragon Suite

## Bugfix

### g\_api.dll

- wrong TCP port

### g\_api\_lvds.dll

- capturing failures after G\_Lvds\_Config\_Set
- Mux not available for 4121

## Version 2.0.8567\_Release - 1/11/2021

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## Features

### G-API Service and Hardware Explorer

supports USB for Serie 62 (GCAR6222 and GCAR6282)

### G-API in general

version type (Release/Beta) in \*.dll product version  
version type (Release/Beta) in Hardware Explorer product version  
version type (Release/Beta) in G-API service product version an name  
version type (Release/Beta) in Installer name

### g\_api.dll

- added command  
"G\_Interface\_GetInterfaceList\_Usb62xx"

### g\_api\_lvds.dll

- added support for OpenLDI  
added "G\_LVDS\_\_IF\_TYPE\_\_OPEN\_LDI" to "G\_Lvds\_IfType\_t"
- added data types for OpenLDI "G\_Lvds\_OpenLdiGeDt\_t"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB666\_18"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB888\_24"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB101010\_30"

- added properties to "G\_Lvds\_FrameGenerator\_PropertyId\_t"
  - "G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MAP\_SEL"
  - "G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_DE\_POL"
  - "G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_HSYNC\_POL"
  - "G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_VSYNC\_POL"
  - "G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_LOOP"
- added properties to "G\_Lvds\_FrameGrabber\_PropertyId\_t"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_NUMBER\_OF\_CHANNELS"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MAP\_SEL"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_DE\_POL"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_HSYNC\_POL"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_VSYNC\_POL"
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_LOCK"
- added properties to "G\_Lvds\_FrameGrabber\_SyncInfo\_Id\_t"
  - "G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK"
  - "G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK\_MIN"
  - "G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK\_MAX"
- added property to "G\_Lvds\_PattGen\_PropertyId\_t"
  - "G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_IS\_INITIALIZED"
- added property to "G\_Lvds\_PattGen\_PicFormat\_t"
  - "G\_LVDS\_\_PATT\_GEN\_\_PIC\_FORMAT\_\_NULL"

## Changes

### g\_api\_lvds.dll

- commands
  - "G\_Lvds\_Common\_Config\_Get"
  - "G\_Lvds\_Common\_Config\_Set"
  - "G\_Lvds\_FrameGrabber\_SetCaptureArea" was sending to much data
- config file:
  - schema\_version of config file is set to 1.20
  - capture area for each channel

## Bugfix

### Hardware Explorer

- renaming interface

## Version 2.0.8457 - 11/16/2020

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## Features

### supported devices

- "GCAR6281"
- "GCAR6223"
- "GPCIE6241"
- "GPXIE6241"

### g\_api\_lvds.dll

- added commands
  - "G\_Lvds\_Apex\_AShellMsg\_SetBaseAddress"
  - "G\_Lvds\_Apex\_AShellMsg\_GetBaseAddress"
- added flags to "G\_Lvds\_Apex\_AShellMsg\_ReadWrite\_CmdFlags\_t"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_NONE"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_AUTO\_OFFSET\_ADDRESS"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_RESTORE\_BASE\_ADDRESS"

### g\_api\_io.dll

- added commands
  - "G\_Io\_Uart\_A\_Reset"
  - "G\_Io\_Uart\_A\_Init"
  - "G\_Io\_Uart\_A\_Monitor\_Reset"
  - "G\_Io\_Uart\_A\_Monitor\_Init"
  - "G\_Io\_Uart\_A\_Monitor\_Start"



"G\_Io\_Uart\_A\_Monitor\_Stop"  
"G\_Io\_Uart\_A\_Monitor\_Read"

-bugfixes

g\_api\_lvds.dll

- SerDes reset when loading config file with no change in APIX mode
- sync check error when loading config file
- changed data sequence and offset address of AShell Messages

g\_api\_trace.dll:

- command "G\_Trace\_ExportToMDF" for Linux

Hardware Explorer

- accelerated refreshing, if new devices are detected

## Documentation

- added missing commands

"G\_Flasher\_ResetController"  
"G\_Flasher\_FlashDevice"

"G\_Io\_Sent\_Receiver\_Reset"  
"G\_Io\_Sent\_Receiver\_Init"  
"G\_Io\_Sent\_Receiver\_Enable"  
"G\_Io\_Sent\_Receiver\_Disable"  
"G\_Io\_Sent\_Receiver\_Property\_GetById"  
"G\_Io\_Sent\_Receiver\_Property\_SetById"  
"G\_Io\_Sent\_Receiver\_Monitor\_Init"  
"G\_Io\_Sent\_Receiver\_Monitor\_Start"  
"G\_Io\_Sent\_Receiver\_Monitor\_Stop"  
"G\_Io\_Sent\_Receiver\_Monitor\_Read"  
"G\_Io\_Sent\_Receiver\_Monitor\_Property\_GetById"  
"G\_Io\_Sent\_Receiver\_Monitor\_Property\_SetById"  
"G\_Io\_Spi\_A\_Monitor\_Read"

"G\_Lin\_Relays\_GetState"

G\_UserCode\_File\_StopAll

## Version 2.0.8416 - 10/20/2020

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- G-API for LINUX available now:

- Debian RT
- OpenSuse
- Ubuntu

## Features

g\_api\_lvds.dll:

- added commands

"G\_Lvds\_Apix\_AShellMsg\_Read"  
"G\_Lvds\_Apix\_AShellMsg\_Write"  
"G\_Lvds\_PattGen\_Pattern1\_VideoTimings\_Set"  
"G\_Lvds\_PattGen\_Pattern1\_VideoTimings\_Get"

- added property ids to enum "G\_Lvds\_FrameGenerator\_PropertyId\_t"

G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_CSI2\_CONT\_CLK  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_DSI\_CONT\_CLK  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_EN  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_REMOVE\_BLANKING  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_REMOVE\_NULL  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_HS\_BURST\_EN  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_SYNC\_EN  
G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_SYNC\_REQ

- added property ids to enum "G\_Lvds\_PattGen\_PropertyId\_t"

G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_IS\_ENABLED  
G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_HOR\_PIX\_SIZE\_IN\_BITS

g\_api\_net2run.dll:

- "G\_Net2Run\_Fvm\_Custom5\_AuthBroadcast":
  - added flag "SESSION\_COUNTER"
  - added flag "SENDER"
  - added flag "IGNORE\_REPLAY"
  - added parameter "SessionBasedCounterLength"
- "G\_Net2Run\_Fvm\_Custom5\_PartEcuChallenge":
  - added flag "SESSION\_COUNTER"
  - added parameter "SessionBasedCounterLength"
- "G\_Net2Run\_Fvm\_Custom5\_TimeServerEcuResponse":
  - added flag "SESSION\_COUNTER"
  - added parameter "SessionBasedCounterLength"

g\_api\_trace.dll:

- added commands
  - "G\_Trace\_ClearChannelList"
  - "G\_Trace\_ExportToMDF"
- add flag to command "G\_Trace\_Start"
  - G\_TRACE\_\_START\_\_CMD\_FLAG\_\_LOG\_TO\_MDF
- added property ids to enum "G\_Trace\_PropertyId\_t"
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_NAME
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_MAX\_SIZE
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_AUTHOR
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_DEPARTMENT
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_PROJECT
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_SUBJECT

## Bugfix

G-API Service

- version in executable

Hardware Explorer:

- "Send Message" in Device Context Menu removed
- temperature bugs

- "G\_Lvds\_I2C\_Write\_Register\_From\_File" now allows any number of lines

## Changes

- Sample modified
  - Ethernet Trace PCAP

## Documentation

- added missing commands
  - "G\_Lvds\_Apix\_Read"
  - "G\_Lvds\_Apix\_Write"
  - "G\_Lvds\_Apix\_Command"
  - "G\_Lvds\_Apix\_CommandWithResponse"
  - "G\_Lvds\_Apix\_ConfigByFile"
  - "G\_Lvds\_I2C\_Write\_Register\_From\_File"

Version 1.4.8297 - 9/17/2020

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## Features

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_Start"
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_Stop"
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_GetVcs"

"G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_GetDts"  
"G\_Lvds\_GetDataTypeName\_ByIfType"

- added data types enum "G\_Lvds\_MipiDsi2Dt\_t"
- added mux source types "G\_Lvds\_Gen\_MuxSourceType\_t"
- added data types to enum "G\_Lvds\_MipiCsi2Dt\_t"
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_NULL
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_BLANKING
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_10\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT\_LEGACY
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT\_CHROMA\_SHIFTED
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_10\_BIT\_CHROMA\_SHIFTED
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV422\_8\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV422\_10\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB444
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB555
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB565
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB666
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW6
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW7
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW14
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW20
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_USER\_DEFINED\_8\_BIT\_DATA\_TYPE\_1 to 8
- added ids to enum "G\_Lvds\_FrameGrabber\_SyncInfo\_Id\_t"
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_MIPI\_DSI\_DT
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_H\_RES\_MIN
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_H\_RES\_MAX
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_V\_RES\_MIN
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_V\_RES\_MAX

## Bugfix

Hardware Explorer:

- non-feature-controlable devices can be flashable
- corrected feature info for GPC1e6281/GPX1e6181 cards
- corrected feature info for GPC1e6222/GPX1e6222 and GCAR6222 cards
- temperature
- Enable BaudRate Detection in LIN Interfaces
- missing SerDes detection if temperature is not available

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## Version 1.2.3\_Beta - 2/11/2021

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### Bugfix

g\_api\_lvds.dll

- correct VideoRouting for frameGenerator

Hardware Explorer

- feature infos (e.g. "ETHERNET DIAG/TP" was not correct checked)

## Version 2.0.8619\_Release - 2/8/2021

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### Features

g\_api\_lvds.dll

- config file:
  - schema\_version of config file is set to 1.30
  - pattern generator
  - read config files generated by Dragon Suite

## Bugfix

g\_api.dll

- wrong TCP port

g\_api\_lvds.dll

- capturing failures after G\_Lvds\_Config\_Set
- Mux not available for 4121

## Version 2.0.8567\_Release - 1/11/2021

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## Features

G-API in general

- version type (Release/Beta) in \*.dll product version
- version type (Release/Beta) in Hardware Explorer product version
- version type (Release/Beta) in G-API service product version an name
- version type (Release/Beta) in Installer name

supported devices

- USB for Serie 62 (GCAR6222 and GCAR6282)

g\_api.dll

- added command  
"G\_Interface\_GetInterfaceList\_Usb62xx"

g\_api\_lvds.dll

- added support for OpenLDI  
added "G\_LVDS\_\_IF\_TYPE\_\_OPEN\_LDI" to "G\_Lvds\_IfType\_t"
- added data types for OpenLDI "G\_Lvds\_OpenLdiGeDt\_t"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB666\_18"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB888\_24"  
"G\_LVDS\_\_OPEN\_LDI\_GE\_DT\_\_RGB101010\_30"
- added properties to "G\_Lvds\_FrameGenerator\_PropertyId\_t"  
"G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MAP\_SEL"  
"G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_DE\_POL"  
"G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_HSYNC\_POL"  
"G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_VSYNC\_POL"  
"G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_LOOP"
- added properties to "G\_Lvds\_FrameGrabber\_PropertyId\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_NUMBER\_OF\_CHANNELS"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_MAP\_SEL"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_DE\_POL"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_HSYNC\_POL"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_VSYNC\_POL"  
"G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_OPEN\_LDI\_\_LOCK"
- added properties to "G\_Lvds\_FrameGrabber\_SyncInfo\_Id\_t"  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK"  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK\_MIN"  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_PIXEL\_CLOCK\_MAX"
- added property to "G\_Lvds\_PattGen\_PropertyId\_t"  
"G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_IS\_INITIALIZED"
- added property to "G\_Lvds\_PattGen\_PicFormat\_t"  
"G\_LVDS\_\_PATT\_GEN\_\_PIC\_FORMAT\_\_NULL"

## Changes

g\_api\_lvds.dll

- commands  
"G\_Lvds\_Common\_Config\_Get"  
"G\_Lvds\_Common\_Config\_Set"  
"G\_Lvds\_FrameGrabber\_SetCaptureArea" was sending to much data
- config file:

- schema\_version of config file is set to 1.20
- capture area for each channel

## Bugfix

Hardware Explorer

- renaming interface

## Version 2.0.8457 - 11/16/2020

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## Features

supported devices

- added GCAR6281
- added GCAR6223
- added GPCIE6241
- added GPXIE6241

g\_api\_io.dll

- added commands
  - "G\_Io\_Uart\_A\_Reset"
  - "G\_Io\_Uart\_A\_Init"
  - "G\_Io\_Uart\_A\_Monitor\_Reset"
  - "G\_Io\_Uart\_A\_Monitor\_Init"
  - "G\_Io\_Uart\_A\_Monitor\_Start"
  - "G\_Io\_Uart\_A\_Monitor\_Stop"
  - "G\_Io\_Uart\_A\_Monitor\_Read"

g\_api\_lvds.dll

- added commands
  - "G\_Lvds\_Apix\_AShellMsg\_SetBaseAddress"
  - "G\_Lvds\_Apix\_AShellMsg\_GetBaseAddress"
- added flags to "G\_Lvds\_Apix\_AShellMsg\_ReadWrite\_CmdFlags\_t"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_NONE"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_AUTO\_OFFSET\_ADDRESS"
  - "G\_LVDS\_\_APIX\_\_ASHELL\_MSG\_\_READ\_WRITE\_\_CMD\_FLAGS\_\_RESTORE\_BASE\_ADDRESS"

## Bugfix

g\_api\_lvds.dll

- SerDes reset when loading config file with no change in APIX mode
- sync check error when loading config file
- changed data sequence and offset address of AShell Messages

g\_api\_trace.dll:

- command "G\_Trace\_ExportToMDF" for Linux

Hardware Explorer

- accelerated refreshing, if new devices are detected

## Documentation

- added missing commands
  - "G\_Flasher\_ResetController"
  - "G\_Flasher\_FlashDevice"
  
  - "G\_Io\_Sent\_Receiver\_Reset"
  - "G\_Io\_Sent\_Receiver\_Init"
  - "G\_Io\_Sent\_Receiver\_Enable"
  - "G\_Io\_Sent\_Receiver\_Disable"
  - "G\_Io\_Sent\_Receiver\_Property\_GetById"
  - "G\_Io\_Sent\_Receiver\_Property\_SetById"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Init"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Start"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Stop"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Read"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Property\_GetById"
  - "G\_Io\_Sent\_Receiver\_Monitor\_Property\_SetById"

"G\_Io\_Spi\_A\_Monitor\_Read"

"G\_Lin\_Relays\_GetState"

"G\_UserCode\_File\_StopAll"

Version 2.0.8416 - 10/20/2020

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## Features

### G-API in general

- G-API for LINUX available now:
  - Debian RT
  - OpenSuse
  - Ubuntu

### g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_Apex\_AShellMsg\_Read"
  - "G\_Lvds\_Apex\_AShellMsg\_Write"
  - "G\_Lvds\_PattGen\_Pattern1\_VideoTimings\_Set"
  - "G\_Lvds\_PattGen\_Pattern1\_VideoTimings\_Get"
- added property ids to enum "G\_Lvds\_FrameGenerator\_PropertyId\_t"
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_CSI2\_CONT\_CLK
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_MIPI\_DSI\_CONT\_CLK
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_EN
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_REMOVE\_BLANKING
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_REMOVE\_NULL
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_HS\_BURST\_EN
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_SYNC\_EN
  - G\_LVDS\_\_FRAME\_GENERATOR\_\_PROPERTY\_ID\_\_IF\_SYNC\_REQ
- added property ids to enum "G\_Lvds\_PattGen\_PropertyId\_t"
  - G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_IS\_ENABLED
  - G\_LVDS\_\_PATT\_GEN\_\_PROPERTY\_ID\_\_HOR\_PIX\_SIZE\_IN\_BITS

### g\_api\_net2run.dll:

- "G\_Net2Run\_Fvm\_Custom5\_AuthBroadcast":
  - added flag "SESSION\_COUNTER"
  - added flag "SENDER"
  - added flag "IGNORE\_REPLAY"
  - added parameter "SessionBasedCounterLength"
- "G\_Net2Run\_Fvm\_Custom5\_PartEcuChallenge":
  - added flag "SESSION\_COUNTER"
  - added parameter "SessionBasedCounterLength"
- "G\_Net2Run\_Fvm\_Custom5\_TimeServerEcuResponse":
  - added flag "SESSION\_COUNTER"
  - added parameter "SessionBasedCounterLength"

### g\_api\_trace.dll:

- added commands
  - "G\_Trace\_ClearChannelList"
  - "G\_Trace\_ExportToMDF"
- add flag to command "G\_Trace\_Start"
  - G\_TRACE\_\_START\_\_CMD\_FLAG\_\_LOG\_TO\_MDF
- added property ids to enum "G\_Trace\_PropertyId\_t"
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_NAME
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_MAX\_SIZE
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_AUTHOR
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_DEPARTMENT
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_PROJECT
  - G\_TRACE\_\_PROPERTY\_ID\_\_MDF\_LOG\_FILE\_\_SUBJECT

## Changes

- Sample modified
- Ethernet Trace PCAP

## Bugfix

g\_api\_lvds.dll:

- "G\_Lvds\_I2C\_Write\_Register\_From\_File" now allows any number of lines

G-API Service

- version in executable

Hardware Explorer:

- "Send Message" in Device Context Menu removed
- temperature bugs

## Documentation

- added missing commands
  - "G\_Lvds\_Apix\_Read"
  - "G\_Lvds\_Apix\_Write"
  - "G\_Lvds\_Apix\_Command"
  - "G\_Lvds\_Apix\_CommandWithResponse"
  - "G\_Lvds\_Apix\_ConfigByFile"
  - "G\_Lvds\_I2C\_Write\_Register\_From\_File"

Version 1.4.8297 - 9/17/2020

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## Features

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_Start"
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_Stop"
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_GetVcs"
  - "G\_Lvds\_FrameGrabber\_SyncInfo\_IfScan\_GetDts"
  - "G\_Lvds\_GetDataTypeName\_ByIfType"
- added data types enum "G\_Lvds\_MipiDsi2Dt\_t"
- added mux source types "G\_Lvds\_Gen\_MuxSourceType\_t"
- added data types to enum "G\_Lvds\_MipiCsi2Dt\_t"
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_NULL
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_BLANKING
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_10\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT\_LEGACY
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_8\_BIT\_CHROMA\_SHIFTED
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV420\_10\_BIT\_CHROMA\_SHIFTED
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV422\_8\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_YUV422\_10\_BIT
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB444
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB555
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB565
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RGB666
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW6
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW7
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW14
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_RAW20
  - G\_LVDS\_\_MIPI\_CSI2\_DT\_\_USER\_DEFINED\_8\_BIT\_DATA\_TYPE\_1 to 8
- added ids to enum "G\_Lvds\_FrameGrabber\_SyncInfo\_Id\_t"
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_MIPI\_DSI\_DT
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_H\_RES\_MIN
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_H\_RES\_MAX
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_V\_RES\_MIN
  - G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_\_PROPERTY\_ID\_\_V\_RES\_MAX

## Bugfix

Hardware Explorer:

- non- feature-controlable devices can be flashable
- corrected feature info for GPC1e6281/GPX1e6181 cards
- corrected feature info for GPC1e6222/GPX1e6222 and GCAR6222 cards
- temperature
- Enable BaudRate Detection in LIN Interfaces
- missing SerDes detection if temperature is not available

>>>>>>> .r8688

Version 1.4.8236 - 8/27/2020

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## Features

g\_api.dll:

- added commands
  - "G\_FeatureControl\_LockCode\_Get"
  - "G\_FeatureControl\_LockCode\_Set"
  - "G\_GetHostInterfaceTypeDescription"

g\_api\_common.dll:

- added commands
  - "G\_Common\_GetTemperature"
  - "G\_Interface\_GetSerialNumber"

g\_api\_ethernet.dll:

- added command
  - "G\_Ethernet\_Tp\_Init\_DoSoAd"

g\_api\_flexray.dll:

- added commands
  - "G\_FlexRay\_Node\_GetTransceiverMode"
  - "G\_FlexRay\_Node\_SetTransceiverMode"

g\_api\_net2run.dll:

- added commands
  - "G\_Net2Run\_Fvm\_Custom5\_TimeServerEcu"
  - "G\_Net2Run\_Fvm\_Custom5\_PartEcu"
  - "G\_Net2Run\_Fvm\_Custom5\_AuthBroadcast"
  - "G\_Net2Run\_Fvm\_Custom5\_PartEcuChallenge"
  - "G\_Net2Run\_Fvm\_Custom5\_TimeServerEcuResponse"

g\_api\_sequence.dll:

- added commands
  - "G\_Sequence\_Replay\_GetNumberOfFiles"
  - "G\_Sequence\_Replay\_GetFileName"

Hardware Explorer:

- added "Core Temperature" and "Board Temperature" to device info
- added Tool Button to enable/disable temperature updating (every 5 seconds)
- added information which devices are supported (Menu: "Help"->"Supported Devices")
- added feature info dialog to 'decrypt' the feature code of a device (Right click on a device: "Feature Code"->"Info")
- added "LVDS Type" to LVDS Interface info (Generator or Grabber)
  
- change starting and refreshing behaviour (throw error message earlier, if G-API service is not running)
- change LVDS Interface Icons to Grabber or Generator (add an arrow)

## Changes

g\_api\_trace.dll:

- reduced asc export format for lin, to speed up import process

## Documentation

- added chapter "Trace Functions"



## Features

g\_api\_lvds.dll:

- added pixel mode to enum "G\_Lvds\_FrameGrabber\_PixelMode\_t"  
G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW10\_MIPI\_CS12  
G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_YUV422\_10\_MIPI\_CS12
- added data type "MipiDsiDt" to "G\_Lvds\_Common\_Config\_Grabber\_ChannelConfig\_Channel\_t"
- added MipiDsi to ConfigFile

## Changes

G-API Service

- Debug mode
  - time in milliseconds since server start instead of seconds since 01/01/1970
- added thread ids output
- SAddr/TAddr to CONT (controler number)
- SPort/TPort to INTF (interface number)
- App to Port (portHandle)
- Mod deleted
- more structured Connecting and Disconnecting Output

## Features

g\_api\_lvds.dll:

- added interface type to enum "G\_Lvds\_IfType\_t"  
"G\_LVDS\_\_IF\_TYPE\_\_MIPI\_DSI"
- added data types for Mipi DSI "G\_Lvds\_MipiDsiDt\_t"  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SYNC\_EVENT\_\_V\_SYNC\_START  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_COLOR\_MODE\_OFF  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_SHORT\_WRITE\_0  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_READ\_0  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_DCS\_SHORT\_WRITE\_0  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_DCS\_READ\_0  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_COMPRESSION\_MODE  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_EOTP  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_NULL  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PPS  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_COMPRESSED\_PIXEL\_STREAM  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_LOOSLY\_PACKED\_PIXEL\_STREAM\_\_YCBCR422\_20\_24  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_RGB101010\_30  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_RGB565\_16  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SYNC\_EVENT\_\_V\_SYNC\_END  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_COLOR\_MODE\_ON  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_SHORT\_WRITE\_1  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_READ\_1  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_DCS\_SHORT\_WRITE\_1  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_EXECUTE\_QUEUE  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_BLANKING  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_YCBCR422\_24  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_RGB121212\_36  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_RGB666\_18  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SYNC\_EVENT\_\_H\_SYNC\_START  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SHUTDOWN\_PERIPHERAL  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_SHORT\_WRITE\_2  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_READ\_2  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_GENERIC\_LONG\_WRITE  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_YCBCR422\_16  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_LOOSLY\_PACKED\_PIXEL\_STREAM\_\_RGB666\_18\_24  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SYNC\_EVENT\_\_H\_SYNC\_END

G\_LVDS\_\_MIPI\_DSI\_DT\_\_TURN\_ON\_PERIPHERAL  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_SET\_MAXIMUM\_RETURN\_PACKET\_SIZE  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_DCS\_LONG\_WRITE  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_YCBCR420\_12  
G\_LVDS\_\_MIPI\_DSI\_DT\_\_PACKED\_PIXEL\_STREAM\_\_RGB888\_24

- added property id to enum "G\_Lvds\_FrameGrabber\_PropertyId\_t"  
G\_LVDS\_\_FRAME\_GRABBER\_\_PROPERTY\_ID\_\_MIPI\_DSI\_DT

g\_api\_net2run.dll:

- added commands for "Sync over CAN"  
"G\_Net2Run\_CanTimeSync\_Config\_Master"  
"G\_Net2Run\_CanTimeSync\_Config\_Slave"  
"G\_Net2Run\_TimeSyncMgr\_TimeBase\_Config"  
"G\_Net2Run\_TimeSyncMgr\_TimeCorrection\_Config"  
"G\_Net2Run\_TimeSyncMgr\_GetCurrentTime"  
"G\_Net2Run\_TimeSyncMgr\_SetGlobalTime"  
"G\_Net2Run\_TimeSyncMgr\_UpdateGlobalTime"  
"G\_Net2Run\_TimeSyncMgr\_SetOffset"  
"G\_Net2Run\_TimeSyncMgr\_GetOffset"  
"G\_Net2Run\_TimeSyncMgr\_GetRateDeviation"  
"G\_Net2Run\_TimeSyncMgr\_SetRateCorrection"  
"G\_Net2Run\_TimeSyncMgr\_GetTimeLeap"  
"G\_Net2Run\_TimeSyncMgr\_GetStatus"  
"G\_Net2Run\_TimeSyncMgr\_TrigTimeTransmission"  
"G\_Net2Run\_TimeSyncMgr\_GetUpdateCounter"  
"G\_Net2Run\_TimeSyncMgr\_SetUserData"  
"G\_Net2Run\_TimeSyncMgr\_SetInitValue"  
"G\_Net2Run\_TimeSyncMgr\_GetInitValue"

Hardware Explorer:

- added "UserComment" for interfaces

g\_device.xml:

- added "deviceTypeName" to device nodes

## Bugfix

g\_api\_lvds.dll:

- enabled GCAR6222 for command "G\_Lvds\_FrameGrabber\_Init2"

Hardware Explorer:

- added icons for PXIe cards  
- changed icons for PCIe cards

## Version 1.4.7905 - 5/19/2020

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### Features

g\_api\_can.dll:

- added commands  
"G\_Can\_TxTrace\_Allocate"  
"G\_Can\_TxTrace\_Free"  
"G\_Can\_TxTrace\_Download"  
"G\_Can\_TxTrace\_Play"  
"G\_Can\_TxTrace\_GetState"  
"G\_Can\_TxTrace\_Property\_SetById"  
"G\_Can\_TxTrace\_Property\_GetById"

## Version 1.4.7838 - 4/29/2020

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### Features

g\_api.dll:

- added functions:  
"G\_Interface\_UpdateAllInterfaces"

## examples

- added projects in example folder:
  - "AsyncCommunication\_Tp\_Direct\_GetResponse"
  - "Ethernet\_Trace\_PCAP"
  - "LVDS\_CANoverUART"

## Bugfix

### g\_api\_lvds.dll:

- enabled command "G\_Lvds\_Common\_Config\_Set" for new LVDS host devices

### g\_api\_trace.dll:

- increased internal monitoring buffer size to 64k

### Hardware Explorer:

- added support for GPxie6281

## Version 1.4.7787 - 3/30/2020

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## Features

### g\_api\_io.dll:

- added functions:
  - "G\_Io\_Uart\_Fifo\_Reset"
  - "G\_Io\_Uart\_Fifo\_Init"
  - "G\_Io\_Uart\_Fifo\_TxFifo\_Write"
  - "G\_Io\_Uart\_Fifo\_RxFifo\_Read"

## Changes

- renamed functions "G\_Lvds\_Gen\_..." to "G\_Lvds\_FrameGenerator\_..." (for consistency reasons)

## Version 1.4.7771 - 3/23/2020

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## Bugfix

- removed dependencies on "g\_platform.h"

## Version 1.4.7760 - 3/17/2020

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## Bugfix

- added "g\_platform.h" to installer

## Version 1.4.7756 - 3/16/2020

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## Bugfix

- removed Plug&Play for GPX1e 62er cards

## Version 1.4.7752 - 3/11/2020

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## Features

### g\_api\_ethernet.dll:

- added flags:
  - "G\_ETHERNET\_PKT\_FLT\_FLT\_SET\_CMD\_FLAG\_USE\_FILTER\_ID"
  - "G\_ETHERNET\_PKT\_FLT\_FLT\_RESET\_CMD\_FLAG\_USE\_FILTER\_ID"
- added parameter "FilterID" to
  - command "G\_Ethernet\_PktFilter\_Filter\_Set\_Cmd\_t"
  - command "G\_Ethernet\_PktFilter\_Filter\_Reset\_Cmd\_t"
- added SourceType
  - "G\_ETHERNET\_MII\_MUX\_SOURCE\_TYPE\_SWITCH\_OUT"

- added TargetType  
"G\_ETHERNET\_\_MII\_MUX\_\_TARGET\_TYPE\_\_SWITCH\_IN\_0"  
"G\_ETHERNET\_\_MII\_MUX\_\_TARGET\_TYPE\_\_SWITCH\_IN\_1"  
"G\_ETHERNET\_\_MII\_MUX\_\_TARGET\_TYPE\_\_SWITCH\_IN\_2"

g\_api\_lvds.dll:

- added commands:  
"G\_Lvds\_Gen\_Property\_SetById"  
"G\_Lvds\_Gen\_Property\_GetById"

## Version 1.4.7680 - 2/18/2020

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### Features

g\_api.dll:

- added functions:  
"G\_Interface\_GetPortHandleByInterfaceType"  
"G\_Interface\_GetPortHandleByInterfaceTypeAndInstance"

g\_api\_lvds.dll:

- added functions  
"G\_Lvds\_Mi\_Mfp\_PinConfig\_Get"  
"G\_Lvds\_Mi\_Mfp\_PinConfig\_Set"
- added LVDS interface type "G\_LVDS\_\_IF\_TYPE\_\_MIPI\_DS12"

g\_api\_net2run.dll:

- "G\_Net2Run\_Pdu\_PduList\_Get": added parameter "BusType"
- added function  
"G\_Net2Run\_Pdu\_NumberOfIncludedSignals\_Get2"

### Bugfix

g\_api\_common.dll:

- "G\_Common\_Xcp\_Daq\_ReadRxSignals" and "G\_Common\_Xcp\_Daq\_ReadRxSignalsTs":  
set alignment to 4 bytes on 64 bit version

g\_api\_lvds.dll:

- "G\_Lvds\_Common\_Config\_Get" could fail on FrameGrabber devices
- "G\_Lvds\_Common\_Data\_UartTransfer": changed value of  
"G\_LVDS\_\_COMMON\_\_DATA\_\_UART\_\_TRANSFER\_\_MAX\_NUMBER\_OF\_RX\_DATA" to 2295

Hardware Explorer:

- PCIE6222 interfaces could appear twice
- SerDes type info on GCAR6222 devices was not available
- When flashing firmware the user is not allowed to click into main window.

## Version 1.4.7601 - 1/23/2020

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### Features

g\_api\_ethernet.dll:

- "G\_Ethernet\_Tp\_Init\_Iso13400": added parameter "VehIdentReqRepetitions"

g\_api\_io.dll:

- added trigger source type "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_LVDS\_MI\_O\_MFP"
- added trigger output type "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_LVDS\_MI\_O\_MFP"

g\_api\_lvds.dll:

- added I2C slave baud rate enum values:  
"G\_LVDS\_\_I2C\_SLAVE\_BAUD\_RATE\_\_1000\_KHZ"  
"G\_LVDS\_\_I2C\_SLAVE\_BAUD\_RATE\_\_3400\_KHZ"  
"G\_LVDS\_\_I2C\_SLAVE\_BAUD\_RATE\_\_5000\_KHZ"
- added I2C master baud rate enum values:  
"G\_LVDS\_\_I2C\_MASTER\_BAUD\_RATE\_\_1000\_KHZ"

"G\_LVDS\_\_I2C\_MASTER\_BAUD\_RATE\_\_3400\_KHZ"  
"G\_LVDS\_\_I2C\_MASTER\_BAUD\_RATE\_\_5000\_KHZ"

- added SerDes types:  
"G\_LVDS\_\_COMMON\_\_SER\_DES\_\_INAP562R"  
"G\_LVDS\_\_COMMON\_\_SER\_DES\_\_INAP562T"

## Bugfix

g\_api\_can.dll:

- "G\_Can\_CyclicMsgs\_Checksum\_Define\_AddBytes": input signal size may be 0
- "G\_Can\_CyclicMsgs\_Checksum\_Define...": fixes "invalid value" error because of internal reserved byte

g\_api\_lvds.dll:

- property "G\_LVDS\_\_COMMON\_\_PROPERTY\_ID\_\_CAN\_GENERATE" could return wrong value under some circumstances

g\_api\_trace.dll:

- ASC file entries compatible to newer Vector software

## Version 1.4.7538 - 12/18/2019

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## Features

supported devices

- added GCAR6222

g\_api\_can.dll:

- added flag "G\_CAN\_\_NM\_\_CONFIG\_\_AUTOSAR\_\_NODE\_\_CMD\_FLAG\_\_SET\_IMMEDIATE\_TRANS" to command "G\_Can\_Nm\_Config\_Autosar\_Node"
- added command "G\_Can\_CyclicMsgs\_Checksum\_Define\_AddBytes"
- added support for CAN FD frames to checksum commands  
G\_Can\_CyclicMsgs\_MultiplexBytes\_Define  
G\_Can\_CyclicMsgs\_Checksum\_Define  
G\_Can\_CyclicMsgs\_Checksum\_Define\_XorWithUserBytes  
G\_Can\_CyclicMsgs\_Checksum\_Define\_GeneralCrcWithUserBytes  
G\_Can\_CyclicMsgs\_Checksum\_Define\_Custom12  
G\_Can\_CyclicMsgs\_Checksum\_Define\_AddBytes

g\_api\_ethernet.dll:

- added functions:  
G\_Ethernet\_Node\_Vlan\_GetAll  
G\_Ethernet\_Phy\_Temperature\_Get  
G\_Ethernet\_Phy\_LegacyMode\_Set  
G\_Ethernet\_Phy\_HwRevision\_Get
- added MiiMux source type "G\_ETHERNET\_\_MII\_MUX\_\_SOURCE\_TYPE\_\_PKT\_FILTER"
- added MiiMux target type "G\_ETHERNET\_\_MII\_MUX\_\_TARGET\_TYPE\_\_PKT\_FILTER"
- added Phy transceiver type  
"G\_ETHERNET\_\_PHY\_\_TRANSCEIVER\_TYPE\_\_AETH\_88Q2112\_A2" with corresponding enum "G\_Ethernet\_Phy\_LegacyMode\_Aeth88q2112A2\_t"

g\_api\_io.dll:

- added commands  
G\_Io\_Relays\_GetStateDirect (now for real)  
G\_Io\_Spi\_A\_Reset  
G\_Io\_Spi\_A\_Init  
G\_Io\_Spi\_A\_Monitor\_Reset  
G\_Io\_Spi\_A\_Monitor\_Init  
G\_Io\_Spi\_A\_Monitor\_Start  
G\_Io\_Spi\_A\_Monitor\_Stop  
G\_Io\_Spi\_A\_Monitor\_Read

- added trigger source types

G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_M\_MOSI  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_M\_SCLK  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_M\_SSO  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_M\_SS1  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_M\_SS2  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_SPI\_S\_MISO  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_2\_SER\_DES\_GPIO  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_3\_SER\_DES\_GPIO  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_2\_TRIGGER\_OUT  
G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_3\_TRIGGER\_OUT

- added trigger output types

G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_M\_MISO  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_S\_MOSI  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_S\_SCLK  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_S\_SS  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_MISO  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_MOSI  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_SCLK  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_SSO  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_SS1  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_SPI\_A\_SS2  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_2\_SER\_DES\_GPIO  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_3\_SER\_DES\_GPIO  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_2\_TRIGGER\_IN  
G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_3\_TRIGGER\_IN

g\_api\_lvds.dll:

- added pattern generator property  
"G\_LVDS\_PATT\_GEN\_PROPERTY\_ID\_IS\_ACTIVE"

g\_api\_net2run.dll:

- added commands  
G\_Net2Run\_EthIf\_Controller\_Config  
G\_Net2Run\_UdpNm\_Autosar\_Ecu\_Config  
G\_Net2Run\_UdpNm\_Autosar\_RxPdu  
G\_Net2Run\_UdpNm\_Autosar\_TxPdu

## Bugfix

G-API in general

- Monitoring:  
- If a monitor instance was closed, other instances on the same interface could have been closed, too.

g\_api\_ethernet.dll:

"G\_Ethernet\_Monitor\_GetData" could return too much data ("ghost packets")

## Version 1.4.7457 - 11/18/2019

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## Features

G-API in general

- Monitoring:  
- multiple monitor instances can be used on the same interface by switching instance IDs with commands:  
"G\_Monitor\_InstanceId\_Set"  
"G\_Monitor\_InstanceId\_Get"

g\_api\_can.dll:

- added support for CAN FD signal offset (up to 511 bits) when defining ramps or checksums  
- added support for CAN FD data in command "G\_Can\_CyclicMsgs\_DefineDisturbance"  
- added commands "G\_Can\_Tar\_AddTxItems\_Simple2" and "G\_Can\_Tar\_AddTxItems\_Standard2" for supporting CAN FD frames in TAR

g\_api\_io.dll:

- added command "G\_Io\_Relays\_GetStateDirect"

g\_api\_tp.dll:

- added asynchronous functionality for "G\_Tp\_Direct\_GetResponse" with commands:
  - "G\_Tp\_Direct\_GetResponse\_Async\_AddCallback"
  - "G\_Tp\_Direct\_GetResponse\_Async\_RemoveCallback"
  - "G\_Tp\_Direct\_GetResponse\_Async\_Enable"
  - "G\_Tp\_Direct\_GetResponse\_Async\_Disable"

Hardware Explorer:

- added "Feature Control" option in context menu for devices

## Bugfix

g\_api\_diag.dll:

- "G\_Diag\_Start" did not update parameter "responseLength" correctly in some cases

g\_api\_ethernet.dll (x64):

- correctly exports ethernet functions

g\_api\_lvds.dll:

- "G\_Lvds\_Common\_Config\_Set" UART Baudrate is only set when value is not "0"
- "G\_Lvds\_Common\_Data\_UartTransfer" returned wrong number of data bytes when timestamp is activated

Hardware Explorer:

- PCIe devices connected via Thunderbolt extension box are detected correctly
- DefaultGateway parameter for ethernet devices can be reset to "0" even if current value is "0" (= not available)

## Version 1.4.7271 - 9/19/2019

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### Features

g\_api\_lvds.dll:

- added commands:
  - "G\_Lvds\_PattGen\_Pattern1Data\_Set"
  - "G\_Lvds\_PattGen\_Pattern1Data\_Get"
  - "G\_Lvds\_PattGen\_Pattern1Def\_Set"
  - "G\_Lvds\_PattGen\_Pattern1Def\_Get"
  - "G\_Lvds\_PattGen\_Timing\_Set"
  - "G\_Lvds\_PattGen\_Property\_SetById"
  - "G\_Lvds\_PattGen\_Property\_GetById"

## Version 1.4.7246 - 9/5/2019

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### Features

g\_api\_can.dll:

- added commands:
  - "G\_Can\_CyclicMsgs\_Property\_SetById"
  - "G\_Can\_CyclicMsgs\_Property\_GetById"

g\_api\_common.dll:

- added support for ETHERNET transceiver type AETH\_88Q2112\_A2

g\_api\_diag.dll:

- added commands:
  - "G\_Diag\_Flag\_SetById"
  - "G\_Diag\_Flag\_GetById"
  - "G\_Diag\_GetLastError"
  - "G\_Diag\_Property\_SetById"
  - "G\_Diag\_Property\_GetById"
  - "G\_Diag\_Session\_Reset"
  - "G\_Diag\_Reset"

g\_api\_lvds.dll:

- added commands:
  - "G\_Lvds\_PattGen\_Reset"
  - "G\_Lvds\_PattGen\_Init"
  - "G\_Lvds\_PattGen\_Default\_Create"
  - "G\_Lvds\_PattGen\_Enable"
  - "G\_Lvds\_PattGen\_Disable"
  - "G\_Lvds\_PattGen\_Start"
  - "G\_Lvds\_PattGen\_Stop"
- added SerDes type "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_DS90UB940"

## Bugfix

g\_api\_common.dll:

- "G\_Common\_Xcp\_Cmd\_ProgramClear" ProjectSpecific data is updated correctly

g\_api\_diag.dll:

- "G\_Diag\_Start" did not return response data in some cases

g\_api\_ethernet.dll:

- "G\_Ethernet\_Tar\_AddItems" could raise firmware error "invalid command length"

g\_api\_trace.dll:

- Trace monitor listens only to monitor instance 0 (only for CAN, Ethernet and FlexRay traces)

## Version 1.4.7155 - 7/25/2019

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### Features

g\_api\_lvds.dll:

- "G\_Lvds\_FrameGrabber\_CaptureToBuffer2" uses DMA mode only when configured via "G\_Lvds\_FrameGrabber\_PcieDma\_Config"

g\_api\_net2run.dll:

- added support for "Signal Length Type" in signal configuration with commands "G\_Net2Run\_Signal\_Config" and "G\_Net2Run\_Signal\_Config2" for supporting dynamically sized data types

## Version 1.4.7097 - 7/4/2019

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### Features

g\_api\_can\_stm.dll:

- added enum members
  - "G\_CAN\_STM\_TRIGGER\_TRIGGER\_IN\_MODE\_\_AS\_HW\_TRIGGER"
  - "G\_CAN\_STM\_PARAM\_TRIGGER\_TRIGGER\_OUT\_SOURCE\_\_ESI"
  - "G\_CAN\_STM\_TRIGGER\_TRIGGER\_OUT\_SOURCE\_\_STUFF\_BIT\_COUNTER"
  - "G\_CAN\_STM\_TRIGGER\_TRIGGER\_OUT\_SOURCE\_\_ERROR\_FRAME"
  - "G\_CAN\_STM\_TRIGGER\_TRIGGER\_OUT\_SOURCE\_\_START\_OF\_FRAME"

g\_api\_ethernet.dll:

- added functions:
  - "G\_Ethernet\_Diag\_Config\_Off"

g\_api\_net2run.dll:

- added functions:
  - "G\_Net2Run\_Com\_TxPdu\_Signal\_Filter\_Config"
  - "G\_Net2Run\_SecOc\_TxPduProcessing\_Error"
- "G\_Net2Run\_Com\_Checksum\_Config":
  - added checksum mode "G\_NET2RUN\_\_CHECKSUM\_MODE\_\_ADD\_NIBBLES"



Hardware Explorer:

- show PCIe Bus data info for PCIe62xx devices

### Bugfix

G-API Service:

- service start type is set to "automatic" when service is installed via command line option

## Version 1.4.7045 - 6/12/2019

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### Features

g\_api\_ethernet.dll:

- optionally monitor items are buffered in API layer (and not on the device itself) by using flag "G\_ETHERNET\_\_MONITOR\_\_CONFIG\_\_FLAG\_\_USE\_API\_BUFFER"
- added transceiver type "G\_ETHERNET\_\_PHY\_\_TRANSCEIVER\_TYPE\_\_AETH\_88Q2112"
- added commands:
  - "G\_Ethernet\_Node\_DataRate\_Set"
  - "G\_Ethernet\_Node\_DataRate\_Get"

### Bugfix

g\_api\_lvs.dll:

- "G\_Lvds\_Common\_Config\_Get": LVDS channel configuration is written correctly to config file

Installer:

- added VCRedist package for 64 bit installs

## Version 1.4.6968 - 5/27/2019

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### Features

g\_api\_can.dll:

- added transport protocol configuration function "G\_Can\_Tp\_Config\_Iso15765"

### Bugfix

g\_api\_flexray.dll:

"G\_FlexRay\_Message\_Tx\_Define" could cause access violation error in 64 bit builds

G-API Service:

- PXIe/PCIe62xx: when trying to open a port to a disconnected device, an already established connection to a connected device could have been closed

## Version 1.4.6869 - 4/25/2019

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### Features

g\_api\_can.dll:

- added flag "G\_CAN\_\_UART\_GATEWAY\_\_INIT\_\_CMD\_FLAG\_\_LENGTH\_INCLUSIVE\_LENGTH\_BYTE" to function "G\_Can\_UartGateway\_Init"

g\_api\_io.dll:

Historically many functions in the IO Trigger section provide input- output- and channel-numbers that are starting with offset 1.

To provide a more convenient numbering scheme, especially in cross-interface-applications, the following features have been added:

- added functions
  - "G\_Io\_Trigger\_Source\_Set2"
  - "G\_Io\_Trigger\_Source\_Get2"
  - "G\_Io\_Trigger\_TriggerBusDirection\_Set2"

"G\_Io\_Trigger\_TriggerBusDirection\_Get2"

"G\_Io\_Trigger\_SoftwareOut\_Write2"

"G\_Io\_Trigger\_SoftwareOut\_Read2"

"G\_Io\_Trigger\_SoftwareIn\_Read2"

- "G\_Io\_Trigger\_TimestampConfig\_Set":
  - added flag "G\_IO\_\_TRIGGER\_\_TIMESTAMP\_CONFIG\_\_SET\_\_CMD\_FLAG\_\_NO\_OFFSET"
- "G\_Io\_Trigger\_TimestampConfig\_Get":
  - added flag "G\_IO\_\_TRIGGER\_\_TIMESTAMP\_CONFIG\_\_GET\_\_RSP\_FLAG\_\_NO\_OFFSET"
- "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Reset":
  - added flag "G\_IO\_\_TRIGGER\_\_SOFTWARE\_IN\_\_TS\_FIFO\_\_RESET\_\_CMD\_FLAG\_\_NO\_OFFSET"
- "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Init":
  - added flag "G\_IO\_\_TRIGGER\_\_SOFTWARE\_IN\_\_TS\_FIFO\_\_INIT\_\_CMD\_FLAG\_\_NO\_OFFSET"
- "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Read":
  - added flag "G\_IO\_\_TRIGGER\_\_SOFTWARE\_IN\_\_TS\_FIFO\_\_READ\_\_CMD\_FLAG\_\_NO\_OFFSET"

g\_api\_lvds.dll:

- added functions
  - "G\_Lvds\_FrameGrabber\_CaptureProperty\_SetById"
  - "G\_Lvds\_FrameGrabber\_CaptureProperty\_GetById"
- added functions
  - "G\_Lvds\_Common\_Config\_Get"
  - "G\_Lvds\_Common\_Config\_Set"as replacement for the following functions that are deprecated:
  - "G\_Lvds\_Common\_Config\_Get\_StructFromFile"
  - "G\_Lvds\_Common\_Config\_WriteToFile"
  - "G\_Lvds\_Common\_Config\_GetFromDevice"
  - "G\_Lvds\_Common\_Config\_Set\_ByFile"
  - "G\_Lvds\_Common\_Config\_Set\_ByStruct"

g\_api\_net2run.dll:

- added transfer property values
  - "G\_NET2RUN\_\_COM\_\_TRANSFER\_PROPERTY\_\_TRIGGERED\_ON\_CHANGE"
  - "G\_NET2RUN\_\_COM\_\_TRANSFER\_PROPERTY\_\_TRIGGERED\_ON\_CHANGE\_WITHOUT\_REP"
  - "G\_NET2RUN\_\_COM\_\_TRANSFER\_PROPERTY\_\_TRIGGERED\_WITHOUT\_REP"

## Bugfix

examples

- "G\_GetInterfaceList": interfaces for GPXI62xx devices were reported twice

## Version 1.4.6793 - 4/1/2019

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## Features

supported devices

- added GPCIE6281

g\_api\_common.dll:

- added command "G\_Common\_GetFeatureCode"
- added support for ETHERNET transceiver type AETH\_88Q2112

g\_api\_io.dll:

- added output type "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_UART\_RX"
- added trigger source type "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_UART\_TX"

g\_api\_lvds.dll:

- added property "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_PASSTHROUGH\_SWITCH"
- added SerDes types
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_APIX\_INAP375T\_MII"
  - "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_APIX\_INAP375R\_MII"

g\_api\_net2run.dll:

- added commands
  - "G\_Net2Run\_Fvm\_Custom2\_TimeServerEcu"
  - "G\_Net2Run\_Fvm\_Custom2\_PartEcu"
  - "G\_Net2Run\_Fvm\_Custom2\_AuthBroadcast"
  - "G\_Net2Run\_Fvm\_Custom2\_PartEcuChallenge"
  - "G\_Net2Run\_Fvm\_Custom2\_TimeServerEcuResponse"

examples

- add "LVDS\_TriggerIn"
- add "LVDS\_TriggerOut"

## Changes

g\_api\_lvds.dll:

- the following functions are deprecated:
  - G\_Lvds\_Common\_Config\_Get\_StructFromFile
  - G\_Lvds\_Common\_Config\_WriteToFile
  - G\_Lvds\_Common\_Config\_GetFromDevice
  - G\_Lvds\_Common\_Config\_Set\_ByFile
  - G\_Lvds\_Common\_Config\_Set\_ByStruct

## Bugfix

g\_api\_lin.dll:

- "G\_Lin\_Node\_Config": fixed crash when "baudRate" was 0

G-API Service:

- when using monitoring on PXI3051 or PXI3052 devices, not all handles were closed

Version 1.4.6635 - 1/31/2019

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## Features

g\_api\_ethernet.dll:

- added commands
  - "G\_Ethernet\_Node\_MacAddress\_Get"
  - "G\_Ethernet\_PktFilter\_Set"
  - "G\_Ethernet\_Phy\_LinkState\_Get"
  - "G\_Ethernet\_Phy\_LinkQuality\_Get"
- "G\_Ethernet\_Monitor\_GetData":
  - added flag "G\_ETHERNET\_\_MONITOR\_\_ITEM\_\_FRAME\_\_FLAG\_\_FCS\_ERROR"
- "G\_Ethernet\_TxFifo\_Config\_Udp6"
  - added flags
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP6\_\_CMD\_FLAG\_\_SET\_REMOTE\_ADDR\_FROM\_RX"
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP6\_\_CMD\_FLAG\_\_SET\_MCAST\_HOPS"
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP6\_\_CMD\_FLAG\_\_USE\_MCAST\_ADDR\_FLT"
  - added parameters
    - "MulticastHops"
    - "MulticastPortFilter"
    - "MulticastAddressFilter"
- "G\_Ethernet\_TxFifo\_Config\_Tcp4"
  - added flag
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_TCP4\_\_CMD\_FLAG\_\_ACT\_AS\_SERVER"
- "G\_Ethernet\_TxFifo\_Config\_Tcp6"
  - added flag
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_TCP6\_\_CMD\_FLAG\_\_ACT\_AS\_SERVER"
- "G\_Ethernet\_TxFifo\_Config\_Udp4"
  - added flags
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP4\_\_CMD\_FLAG\_\_SET\_REMOTE\_ADDR\_FROM\_RX"
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP4\_\_CMD\_FLAG\_\_MCAST\_LOOP\_DISABLE"
    - "G\_ETHERNET\_\_TX\_FIFO\_\_CONFIG\_\_UDP4\_\_CMD\_FLAG\_\_SET\_MCAST\_HOPS"
  - added parameter

"MulticastHops"

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_FrameGrabber\_Property\_SetById"
  - "G\_Lvds\_FrameGrabber\_Property\_GetById"

## Bugfix

g\_api\_can.dll:

- corrected typo in
  - G\_CAN\_TRIGGER\_INPUT\_STATE\_GET\_LEVEL\_UNKNOWN
  - G\_CAN\_TRIGGER\_OUTPUT\_STATE\_GET\_LEVEL\_UNKNOWN

g\_api\_common.dll:

"G\_Common\_Xcp\_Init\_Ethernet\_Udp6" returned "invalid command length" error

g\_api\_ethernet.dll:

- "G\_Ethernet\_RxFifo\_Read" returned wrong entry length on big endian machines (Onboard API)
- "G\_Ethernet\_MiiMux\_ResetAllSelections" - only own selection was reset

## Version 1.4.6582 - 12/20/2018

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### Bugfix

g\_api\_lvds.dll:

capture functionality was broken due to feature implementation

## Version 1.4.6579 - 12/19/2018

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### Features

g\_api\_io.dll:

- added values
  - "G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_0\_SER\_DES\_GPIO"
  - "G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_1\_SER\_DES\_GPIO"
  - "G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_0\_TRIGGER\_OUT"
  - "G\_IO\_TRIGGER\_SOURCE\_TYPE\_LVDS\_1\_TRIGGER\_OUT"to type "G\_Io\_Trigger\_SourceType\_t"

- added values
  - "G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_0\_SER\_DES\_GPIO"
  - "G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_1\_SER\_DES\_GPIO"
  - "G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_0\_TRIGGER\_IN"
  - "G\_IO\_TRIGGER\_OUTPUT\_TYPE\_LVDS\_1\_TRIGGER\_IN"to type "G\_Io\_Trigger\_OutputType\_t"

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_SerDesGpio\_IocPinConfig\_Get"
  - "G\_Lvds\_SerDesGpio\_IocPinConfig\_Set"
  - "G\_Lvds\_TriggerIn\_SourceConfig\_Get"
  - "G\_Lvds\_TriggerIn\_SourceConfig\_Set"
  - "G\_Lvds\_TriggerIn\_TargetConfig\_Get"
  - "G\_Lvds\_TriggerIn\_TargetConfig\_Set"
  - "G\_Lvds\_TriggerOut\_Config\_Get"
  - "G\_Lvds\_TriggerOut\_Config\_Set"

### Bugfix

g\_api\_net2run.dll:

- added reserved bytes for restoring correct alignment to the following commands:
  - "G\_Net2Run\_Com\_SignalMonitor\_Config"
  - "G\_Net2Run\_Com\_SignalMonitor\_Start"
  - "G\_Net2Run\_Com\_SignalMonitor\_Stop"
  - "G\_Net2Run\_Com\_SignalMonitor\_GetSignalInfo"
  - "G\_Net2Run\_Com\_SignalMonitor\_GetSignalData"

- G\_Net2Run\_Com\_SignalMonitor\_GetSignalData:  
when reading physical signal values, monitor data was corrupted

- G\_API Service:
  - Pxi61xx devices are sorted by geographic address per device type

## Version 1.4.6533 - 11/12/2018

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### Features

- g\_api\_lvds.dll:
  - added SerDes type "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_DS90C386"

### Bugfix

- G\_API Service:
  - could crash when PXI62xx is disconnected

## Version 1.4.6514 - 10/25/2018

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### Features

- g\_api\_can.dll:
  - G\_Can\_Tp\_Config\_IsoTp:
    - added flags
      - "G\_CAN\_\_TP\_\_ISOTP\_\_FLAG\_\_USE\_PADDING\_BYTE"
      - "G\_CAN\_\_TP\_\_ISOTP\_\_FLAG\_\_IGNORE\_CF\_WITH\_WRONG\_SN"
      - "G\_CAN\_\_TP\_\_ISOTP\_\_FLAG\_\_USE\_PHYSICAL\_TX\_DL"
      - "G\_CAN\_\_TP\_\_ISOTP\_\_FLAG\_\_USE\_FUNCTIONAL\_TX\_DL"
    - added parameters
      - "PaddingByte"
      - "PhysicalTxDI"
      - "FunctionalTxDI"
- g\_api\_io.dll:
  - added command
    - "G\_Io\_Trigger\_Timestamp\_Get"

## Version 1.4.6487 - 10/4/2018

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### Features

- g\_api\_lvds.dll:
  - added SerDes types
    - G\_LVDS\_\_COMMON\_\_SER\_DES\_\_DS90UB954
    - G\_LVDS\_\_COMMON\_\_SER\_DES\_\_DS90UB953
  - added pixel modes
    - G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW12\_16\_SHIFTED\_LE
    - G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW16\_LE
- g\_api\_net2run.dll:
  - added commands
    - G\_Net2Run\_Com\_SignalMonitor\_Config
    - G\_Net2Run\_Com\_SignalMonitor\_Delete
    - G\_Net2Run\_Com\_SignalMonitor\_Start
    - G\_Net2Run\_Com\_SignalMonitor\_Stop
    - G\_Net2Run\_Com\_SignalMonitor\_GetSignalInfo
    - G\_Net2Run\_Com\_SignalMonitor\_GetSignalData
    - G\_Net2Run\_Com\_SignalMonitor\_SwitchToNextSignal

## Features

g\_api\_lvds.dll:

- added LVDS SerDes types
  - G\_LVDS\_\_COMMON\_\_SER\_DES\_\_RGB888R
  - G\_LVDS\_\_COMMON\_\_SER\_DES\_\_RGB888T
  - G\_LVDS\_\_COMMON\_\_SER\_DES\_\_MAX9295A\_MAX9296A
- added Pixel Modes
  - G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW8
  - G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW12\_MIPI\_CS12
  - G\_LVDS\_\_FRAME\_GRABBER\_\_PIXEL\_MODE\_\_RAW16\_MIPI\_CS12

## Features

g\_api\_flexray.dll:

- "G\_FlexRay\_Monitor\_Config": added command flags
  - G\_FLEXRAY\_\_MONITOR\_\_CONFIG\_\_FLAG\_\_ENABLE\_\_START\_\_EVENT
  - G\_FLEXRAY\_\_MONITOR\_\_CONFIG\_\_FLAG\_\_ENABLE\_\_STOP\_\_EVENT
- "G\_FlexRay\_Tp\_Init\_Iso10681": added parameter "TxPduPendingLimit"

## Bugfix

Installer

- added FPGA file for PXI4009 to installer

## Documentation

- added G\_Ethernet\_Monitor... section
- added monitor entry types to "G\_FlexRay\_Monitor\_GetData"

## Features

g\_api\_common.dll:

- "G\_Common\_EA\_InitEvent": added event types
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_COM\_\_RX\_PDU\_SIGNAL\_\_RX\_IND
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_COM\_\_TX\_PDU\_SIGNAL\_\_TX\_CON
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_FLEXRAY\_\_PDU\_\_RX\_IND
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_FLEXRAY\_\_PDU\_\_TX\_CON
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_FLEXRAY\_\_SYNCHRONIZED
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_FLEXRAY\_\_SYNC\_LOSS
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_ETHERNET\_\_LINKED
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_ETHERNET\_\_LINK\_LOSS
  - G\_COMMON\_\_EA\_\_EVENT\_\_TYPE\_\_ETHERNET\_\_RX\_FIFO\_\_NEW\_ENTRY

g\_api\_net2run.dll:

- "G\_Net2Run\_Com\_TxPdu\_Checksum\_Config": added checksum types
  - G\_NET2RUN\_\_CHECKSUM\_MODE\_\_CUSTOM\_14
  - G\_NET2RUN\_\_CHECKSUM\_MODE\_\_ADD\_BYTES\_\_XOR\_NIBBLES
- added command "G\_Net2Run\_Fvm\_StopCommunication"
- added signal types
  - G\_NET2RUN\_\_SIGNAL\_\_TYPE\_\_S64
  - G\_NET2RUN\_\_SIGNAL\_\_TYPE\_\_U64

## Bugfix

g\_api\_lvds.dll:

- when calling "G\_Lvds\_FrameGrabber\_SyncInfo\_GetById" the permanent scan is no longer interrupted

!!!ATTENTION!!! This requires firmware version >= 1.18.2

g\_api\_net2run.dll:

- "G\_Net2Run\_Signal\_Config" & "G\_Net2Run\_Signal\_Config2":  
check for duplicate ComIds in signal configuration

g\_api\_trace.dll:

- G\_Trace\_GetItems: fixed crash when "startIndex" > number of buffer items available

Installer:

- when reverting to an older version, all files are correctly replaced

## Version 1.4.6427 - 7/23/2018

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## Bugfix

Installer:

- when reverting to an older version, all files are correctly replaced

## Version 1.4.6426 - 7/23/2018

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## Features

g\_api\_lvds.dll:

- increased internal frame buffer size for supporting 4k resolution

g\_api\_trace.dll:

- added flags  
G\_TRACE\_\_START\_\_CMD\_FLAG\_\_LOG\_TO\_ASC  
G\_TRACE\_\_START\_\_CMD\_FLAG\_\_DISABLE\_PAGE\_FILE  
to command "G\_Trace\_Start"
- added property ids  
G\_TRACE\_\_PROPERTY\_ID\_\_ASC\_LOG\_FILE\_\_NAME  
G\_TRACE\_\_PROPERTY\_ID\_\_ASC\_LOG\_FILE\_\_MAX\_SIZE

## Bugfix

g\_api\_lvds.dll:

- increased internal frame data reception timeout

Installer

- fixed double entries in Windows uninstall list

## Version 1.4.6404 - 6/28/2018

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## Features

g\_api\_lvds.dll:

- increased internal frame buffer size for supporting 4k resolution

## Bugfix

g\_api\_lvds.dll:

- increased internal frame data reception timeout

### Features

g\_api\_net2run.dll:

- added commands  
"G\_Net2Run\_SignalBlock\_Buffer\_Config"  
"G\_Net2Run\_SignalBlock\_Buffer\_Read"

g\_api\_trace.dll:

- added flag "G\_TRACE\_\_EXPORT\_TO\_ASC\_\_CMD\_FLAG\_\_SPLIT\_FILE" to command  
"G\_Trace\_ExportToASC"

### Bugfix

- fixed "Invalid device type" error with certain combinations of USB devices

### Features

Installer

- added 64 Bit Version to installer

### Bugfix

g\_api\_can.dll:

- changed flag "G\_CAN\_\_TP\_\_ISOTP\_\_FLAG\_\_USE\_TIME\_BR\_BETWEEN\_CF\_AND\_FC" to the correct value

g\_api\_lin.dll:

- restored alignment for buffer monitor entry types to 4 bytes

g\_api\_lvds.dll:

- "G\_Lvds\_FrameGrabber\_CaptureToFile" and "G\_Lvds\_FrameGrabber\_CaptureToFile2" could return error when writing files

### Features

g\_api\_ethernet.dll:

- added command "G\_Ethernet\_Tar\_AddItems" that makes the following commands obsolete:

"G\_Ethernet\_Tar\_AddItems\_Udp4"  
"G\_Ethernet\_Tar\_AddItems\_Tcp4"  
"G\_Ethernet\_Tar\_AddItems\_Udp6"  
"G\_Ethernet\_Tar\_AddItems\_Tcp6"

- added "VlanID" parameter to commands

"G\_Ethernet\_TxFifo\_Config\_Icmp6"  
"G\_Ethernet\_TxFifo\_Config\_Udp6"  
"G\_Ethernet\_TxFifo\_Config\_Tcp6"

- added RX Fifo commands:

"G\_Ethernet\_RxFifo\_Config"  
"G\_Ethernet\_RxFifo\_Delete"  
"G\_Ethernet\_RxFifo\_Read"

g\_api\_net2run.dll:

- added commands:

"G\_Net2Run\_CanNm\_Autosar\_Config"  
"G\_Net2Run\_Fvm\_SetFreshness"  
"G\_Net2Run\_Fvm\_GetFreshness"  
"G\_Net2Run\_Com\_TxPdu\_Property\_SetById"  
"G\_Net2Run\_Com\_TxPdu\_Property\_GetById"  
"G\_Net2Run\_Fvm\_GetFreshness"  
"G\_Net2Run\_Fvm\_SetFreshness"



- added type "G\_NET2RUN\_\_SIGNAL\_\_TYPE\_\_U8\_DYN"
- added routing target "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_TARGET\_\_FVM\_\_RX" and routing source "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_TARGET\_\_FVM\_\_TX" to PduRouter
- G\_Net2Run\_Com\_TxPdu\_Config:
  - added parameter "ClearUpdateBit"
- G\_Net2Run\_Com\_Signal\_TxPduSignal\_Mapping:
  - added flags:
    - "G\_NET2RUN\_\_COM\_\_SIGNAL\_\_TX\_PDU\_SIGNAL\_\_MAPPING\_\_FLAG\_\_READ\_SIGNAL"
    - "G\_NET2RUN\_\_COM\_\_SIGNAL\_\_TX\_PDU\_SIGNAL\_\_MAPPING\_\_FLAG\_\_DISABLE\_UPD\_NOT"
- G\_Net2Run\_Com\_Signal\_RxPduSignal\_Mapping:
  - added flags:
    - "G\_NET2RUN\_\_COM\_\_SIGNAL\_\_RX\_PDU\_SIGNAL\_\_MAPPING\_\_FLAG\_\_READ\_SHADOW\_BUFFER"
    - "G\_NET2RUN\_\_COM\_\_SIGNAL\_\_RX\_PDU\_SIGNAL\_\_MAPPING\_\_FLAG\_\_DISABLE\_UPD\_NOT"
- G\_Net2Run\_Com\_RxPdu\_Signal:
  - added flag "G\_NET2RUN\_\_COM\_\_RX\_PDU\_\_SIGNAL\_\_FLAG\_\_IS\_GROUP\_SIGNAL" and parameter "RxPduSignalGroupId"
- G\_Net2Run\_Fvm\_FreshnessValue\_Custom1:
  - added flag "G\_NET2RUN\_\_FVM\_\_FRESHNESS\_VALUE\_\_CUSTOM\_1\_\_CMD\_FLAG\_\_WAIT\_FOR\_TX\_CONF"
  - replaced parameter "TxPduId\_Authenticator" with "BroadcastTpMessagePartDelay"

## Bugfix

### G-API in general

- restored 4-byte-alignment for critical structures after changing u64\_t data type

### g\_api\_can.dll:

- G\_Can\_TxFifo\_QueueMsgs: data was not sent correctly

### g\_api\_lvds.dll:

- increased reset time after configuration of deserializer vector

### Hardware Explorer:

- fixed inconsistency when connecting to USB3085 devices that could lead to "device not connected" error

## Version 1.3.6245 - 3/20/2018

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- maintenance release for Onboard API

## Version 1.3.6227 - 3/1/2018

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## Features

### supported devices

- added ETH4009
- added ETH3100

### g\_api\_net2run.dll:

- added command "G\_Net2Run\_InitInterface"

## Changes

- changed definition of host type "u64\_t" to real 64 bit type for future compatibility

## Bugfix

g\_api\_resistors.dll:

- when resistor values are reset, "G\_Resistors\_Values\_Get" will return 0xFFFFFFFF instead of 0

## Version 1.3.6149 - 1/11/2018

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### Features

g\_api\_io.dll:

- added
  - "G\_Io\_BrrFault\_Faults\_Set"
  - "G\_Io\_BrrFault\_Faults\_Get"
  - "G\_Io\_BrrFault\_Property\_SetById"
  - "G\_Io\_BrrFault\_Property\_GetById"

## Version 1.3.6030 - 12/7/2017

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!!! LAST SUPPORTED VERSION FOR WINDOWS XP !!!

### Features

- supported devices
  - added ETH4045

### Bugfix

- fixed USB3060 device access

## Version 1.3.5986 - 11/23/2017

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### Features

- supported devices
  - added PXI4009

g\_api\_lvds.dll:

- added SerDes type "G\_LVDS\_\_COMMON\_\_SER\_DES\_\_RGB888"
- "G\_Lvds\_Common\_DeserializerVector\_Config":
  - added command flag "G\_LVDS\_\_COMMON\_\_DES\_VECTOR\_\_CONFIG\_\_CMD\_FLAG\_\_NO\_RESET"

g\_api\_net2run.dll:

- added commands
  - "G\_Net2Run\_SecOc\_GetVerificationStat"
  - "G\_Net2Run\_Fvm\_StartCommunication"

### Bugfix

- fixed "unsupported target" error when flashing PXI6141
- corrupted update files handled correctly when flashing devices

## Version 1.3.5949 - 10/23/2017

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### Features

g\_api\_io.dll:

- added trigger source type
  - "G\_IO\_\_TRIGGER\_\_SOURCE\_TYPE\_\_CAN\_STM\_TRIGGER\_OUT"
- added commands
  - "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Reset"
  - "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Init"
  - "G\_Io\_Trigger\_SoftwareIn\_TsFifo\_Read"

g\_api\_lvds.dll:

- added commands
  - "G\_Lvds\_Common\_Config\_GetSerDesName"
  - "G\_Lvds\_Common\_Config\_GetFromDevice"
  - "G\_Lvds\_Common\_Config\_Get\_StructFromFile"
  - "G\_Lvds\_Common\_Config\_Set\_ByStruct"
  - "G\_Lvds\_Common\_Config\_Set\_ByFile"

g\_api\_net2run.dll:

- added bus type "G\_NET2RUN\_\_BUS\_TYPE\_\_ETHERNET"
- added commands:
  - "G\_Net2Run\_SecOc\_RxPduProcessing"
  - "G\_Net2Run\_SecOc\_RxSecuredPdu"
  - "G\_Net2Run\_SecOc\_RxSecuredPduCollection"
  - "G\_Net2Run\_SecOc\_RxAuthenticPdu"
  - "G\_Net2Run\_SecOc\_TxPduProcessing"
  - "G\_Net2Run\_SecOc\_TxAuthenticPdu"
  - "G\_Net2Run\_SecOc\_TxSecuredPdu"
  - "G\_Net2Run\_SecOc\_TxSecuredPduCollection"
  - "G\_Net2Run\_Csm\_Job"
  - "G\_Net2Run\_Csm\_Key\_128Bit"
  - "G\_Net2Run\_Fvm\_FreshnessValue\_Custom1"
- PduRouter:
  - added sources:
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_SOURCE\_\_SO\_AD\_\_RX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_SOURCE\_\_UDP\_NM\_\_RX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_SOURCE\_\_SEC\_OC\_\_RX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_SOURCE\_\_SEC\_OC\_\_TX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_SOURCE\_\_FVM\_\_TX"
  - added targets:
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_TARGET\_\_SO\_AD\_\_TX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_TARGET\_\_SEC\_OC\_\_RX"
    - "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_TARGET\_\_SEC\_OC\_\_TX"

## Bugfix

g\_api\_common.dll:

- G\_Common\_Xcp\_Cmd\_ProgramClear:
  - added reserved byte in command structure to ensure proper alignment

Version 1.3.5927 - 9/22/2017

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## Features

Installer:

- added G\_FlashServer to installer

## Bugfix

Onboard API :

- eliminated memory leak when closing interface

Version 1.3.5629 - 7/13/2017

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## Features

- added G\_FlashServer
- added interface type "G\_INTERFACE\_TYPE\_\_CAN\_STM"
- added DLL "g\_api\_can\_stm.dll"
- added sample code "Ethernet\_TxFifo\_Tar"

g\_api\_lvds.dll:

- added command "G\_Lvds\_Apix\_Write" for writing raw data

## Bugfix

- correctly open interfaces when  
host interface type = "G\_HOST\_INTERFACE\_TYPE\_\_ETHERNET"  
and flag "G\_INTERFACE\_INFO\_\_FLAG\_\_ETHERNET" is not set
- Series61 PCI devices are correctly detected as PCI devices (not PXI)
- changed connection sequence of Series61 PXI/PCI devices for  
preventing deadlock on cards

g\_api\_ethernet.dll:

- "G\_Ethernet\_TxFifo\_Write" could return error  
"G\_ERROR\_\_DLL\_\_API\_\_RESPONSE\_BUFFER\_TOO\_SMALL"

Version 1.3.5503 - 5/4/2017

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## Features

g\_api\_common.dll:

- added command  
"G\_Common\_Xcp\_Init\_Ethernet\_Udp4"  
"G\_Common\_Xcp\_Init\_Ethernet\_Udp6"  
"G\_Common\_Xcp\_Init\_Ethernet\_Tcp4"  
"G\_Common\_Xcp\_Init\_Ethernet\_Tcp6"

g\_api\_ethernet.dll:

- added commands  
"G\_Ethernet\_Node\_LocalIp6Address\_Add"  
"G\_Ethernet\_Node\_LocalIp6Address\_Remove"  
"G\_Ethernet\_Node\_LocalIp6Address\_GetAll"  
"G\_Ethernet\_Node\_Vlan\_Config"  
"G\_Ethernet\_Node\_Vlan\_Delete"  
  
"G\_Ethernet\_Phy\_LinkState\_Get"  
"G\_Ethernet\_Phy\_TransceiverType\_Get"  
  
"G\_Ethernet\_Tar\_Config\_Udp4"  
"G\_Ethernet\_Tar\_Config\_Tcp4"  
"G\_Ethernet\_Tar\_Config\_Udp6"  
"G\_Ethernet\_Tar\_Config\_Tcp6"  
"G\_Ethernet\_Tar\_Config\_Off"  
"G\_Ethernet\_Tar\_AddItems\_Udp4"  
"G\_Ethernet\_Tar\_AddItems\_Tcp4"  
"G\_Ethernet\_Tar\_AddItems\_Udp6"  
"G\_Ethernet\_Tar\_AddItems\_Tcp6"  
"G\_Ethernet\_Tar\_Start"  
"G\_Ethernet\_Tar\_Stop"  
"G\_Ethernet\_Tar\_GetState"  
  
"G\_Ethernet\_TxFifo\_Config\_Raw"  
"G\_Ethernet\_TxFifo\_Config\_Icmp6"  
"G\_Ethernet\_TxFifo\_Config\_Udp6"  
"G\_Ethernet\_TxFifo\_Config\_Tcp6"  
"G\_Ethernet\_TxFifo\_Config\_Udp4"  
"G\_Ethernet\_TxFifo\_Config\_Tcp4"  
"G\_Ethernet\_TxFifo\_Delete"  
"G\_Ethernet\_TxFifo\_Write"  
"G\_Ethernet\_TxFifo\_Connect"  
"G\_Ethernet\_TxFifo\_Disconnect"  
"G\_Ethernet\_TxFifo\_GetState"
- added flag  
"G\_ETHERNET\_\_TP\_\_INIT\_\_ISO13400\_\_CMD\_FLAG\_\_USE\_VLAN\_ID"

g\_api\_lvds.dll:

- added command  
"G\_Lvds\_Apix\_Read"

## Version 1.3.5413 - 3/6/2017

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### Bugfix

Hardware Explorer:

- only 128 interfaces could be displayed per host interface (PXI, USB, ...)

## Version 1.3.5395 - 2/23/2017

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### Features

g\_api\_can.dll:

- added UART Gateway functionality with commands  
G\_Can\_UartGateway\_Reset  
G\_Can\_UartGateway\_Init
- added documentation for command "G\_Lvds\_Common\_VideoSettings\_ResetExtensionBoard"

### Bugfix

g\_api\_common.dll:

- XCP DOWNLOAD and PROGRAM command order could be wrong  
under some circumstances

g\_api\_flasher.dll, Hardware Explorer:

- flash operation was not possible on devices without user code interface

## Version 1.3.5369 - 2/9/2017

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### Features

g\_api\_common.dll:

- added XCP commands  
"G\_Common\_Xcp\_Cmd\_Connect"  
"G\_Common\_Xcp\_Cmd\_Disconnect"  
"G\_Common\_Xcp\_Cmd\_GetStatus"  
"G\_Common\_Xcp\_Cmd\_GetCommModelInfo"  
"G\_Common\_Xcp\_Cmd\_GetSeed"  
"G\_Common\_Xcp\_Cmd\_Unlock"  
"G\_Common\_Xcp\_Cmd\_SetMta"  
"G\_Common\_Xcp\_Cmd\_Download"  
"G\_Common\_Xcp\_Cmd\_Upload"  
"G\_Common\_Xcp\_Cmd\_GetPgmProcessorInfo"  
"G\_Common\_Xcp\_Cmd\_GetSectorInfo"  
"G\_Common\_Xcp\_Cmd\_ProgramClear"  
"G\_Common\_Xcp\_Cmd\_BuildChecksum"  
"G\_Common\_Xcp\_Cmd\_ProgramReset"  
"G\_Common\_Xcp\_Cmd\_Program"

g\_api\_lvds.dll

- added command "G\_Lvds\_FrameGrabber\_CaptureToBuffer2"

g\_api\_net2run.dll

- added commands  
"G\_Net2Run\_PduMux2\_ContainedRxPduPool\_Config"  
"G\_Net2Run\_PduMux2\_ContainerRxPdu\_Config"  
"G\_Net2Run\_PduMux2\_ContainedRxPdu\_Config"

## Bugfix

g\_api.dll

- when using "G\_HOST\_INTERFACE\_TYPE\_\_ETHERNET", internal device parameters are set correctly
- limited max param size for onboard api builds

g\_api\_common.dll

- increased fifo buffer size for commands "G\_Common\_Xcp\_Cmd\_Download" and "G\_Common\_Xcp\_Cmd\_Program"

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## Version 1.3.5347 - 1/25/2017

## Bugfix

Hardware Explorer:

- fixed error "port handle not initialized"
- updated internal XML parser to fix alignment bug

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## Version 1.3.5273 - 11/10/2016

## Features

g\_api\_net2run.dll:

- added functions "G\_Net2Run\_PduMux2\_ContainerTxPdu\_Config" "G\_Net2Run\_PduMux2\_ContainedTxPdu\_Config"

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## Version 1.3.5267 - 11/7/2016

## Bugfix

Hardware Explorer:

- error "invalid port handle" when flashing firmware on VideoDragon devices

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## Version 1.3.5252 - 10/27/2016

## Features

Hardware Explorer:

- added status box to flash dialog for displaying warnings and errors

g\_api\_lvds.dll:

- added support for writing register blocks to command "G\_Lvds\_Common\_Data\_Register\_Write"

g\_api\_net2run.dll:

- added CAN-FD support to commands "G\_Net2Run\_CanIf\_RxPdu\_Config" "G\_Net2Run\_CanIf\_TxPdu\_Config"
- added commands "G\_Net2Run\_CanIf\_Controller\_Config" "G\_Net2Run\_CanIf\_BaudrateFd\_Config"

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## Version 1.3.5207 - 10/10/2016

## Features

Hardware Explorer:

- added status box to flash dialog for displaying warnings and errors

## Version 1.3.5200 - 10/6/2016

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## Features

g\_api\_common.dll:

- added commands
  - "G\_Common\_Ethernet\_FtpServer\_AutoStart\_Enable"
  - "G\_Common\_Ethernet\_FtpServer\_AutoStart\_Disable"
  - "G\_Common\_Ethernet\_FtpServer\_AutoStart\_GetState"

g\_api\_lvds.dll:

- added command "G\_Lvds\_FrameGenerator\_DisplayBuffer"

g\_api\_net2run.dll:

- added flags "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_CONFIG\_\_FLAG\_\_DELETE"  
and "G\_NET2RUN\_\_PDU\_ROUTER\_\_ROUTING\_PATH\_\_CONFIG\_\_FLAG\_\_DELETE\_ALL"  
to command "G\_Net2Run\_PduRouter\_RoutingPath\_Config"

## Bugfix

g\_api\_fs.dll:

- "G\_FS\_File\_Read" could return error on large files

## Version 1.3.5171 - 9/15/2016

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## Features

G-API in general

- added interface type to error description for "no response from device"

g\_api\_can.dll:

- added commands "G\_Can\_Node\_FdState\_Get" and "G\_Can\_Node\_FdState\_Set"

G-API Service:

- added more detailed error description in case a connection error occurs

## Bugfix

g\_api\_lvds.dll:

- substantiated error code and description for command  
"G\_Lvds\_FrameGrabber\_SyncInfo\_GetById" when permanent scan was not started
- changed parameter name in structure "G\_Lvds\_FrameGrabber\_Init\_Parameters\_t"  
from "SyncWidth" to "BackPorch" to reflect correct parameter usage

Hardware Explorer:

- firmware update of VideoDragon devices did end with "no response from device"  
in some cases

Installer

- added notification when files could not be updated while installing

## Version 1.3.5112 - 6/20/2016

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## Bugfix

g\_api\_can.dll:

- "G\_Can\_Monitor\_BufferMode\_Start": buffer size was set bigger than user value

g\_api\_io.dll:

- "G\_Io\_Relays\_GetState" could cause error 0x0100000E when called with numberOfRelais > 1

g\_api\_lvds.dll:

- in command "G\_Lvds\_Common\_VideoSettings\_Property\_SetById" the extension board reset is performed for properties  
G\_LVDS\_\_COMMON\_\_VIDEO\_SETTINGS\_\_PROPERTY\_ID\_\_BUS\_WIDTH\_SELECT and  
G\_LVDS\_\_COMMON\_\_VIDEO\_SETTINGS\_\_PROPERTY\_ID\_\_MODE\_SELECT
- increased response size for command "G\_Lvds\_Common\_Data\_UartTransfer" for timestamp data

Hardware Explorer:

- Application was not responsive for several seconds when G-API Service was not running

## Documentation

- updated documentation for LVDS Common Data commands

## Version 1.3.5076 - 5/11/2016

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## Features

g\_api\_lvds.dll:

- added flags "G\_LVDS\_\_COMMON\_\_DATA\_\_UART\_TRANSFER\_\_CMD\_FLAG\_\_READ\_ALL" and "G\_LVDS\_\_COMMON\_\_DATA\_\_UART\_TRANSFER\_\_CMD\_FLAG\_\_WITH\_TIMESTAMP" to command "G\_Lvds\_Common\_Data\_UartTransfer"
- added property id "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_I2C\_SLAVE\_BAUDRATE"
- added "G\_LVDS\_\_COMMON\_\_DATA\_\_DATA\_MODE\_\_I2C\_SLAVE\_TO\_DESERIALIZER" and "G\_LVDS\_\_COMMON\_\_DATA\_\_DATA\_MODE\_\_I2C\_SLAVE\_TO\_SERIALIZER" to property id "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_DATA\_MODE"
- added flags "G\_LVDS\_\_COMMON\_\_DATA\_\_UART\_TRANSFER\_\_CMD\_FLAG\_\_READ\_ALL" and "G\_LVDS\_\_COMMON\_\_DATA\_\_UART\_TRANSFER\_\_CMD\_FLAG\_\_WITH\_TIMESTAMP" to command "G\_Lvds\_Common\_Data\_UartTransfer"
- added commands  
"G\_Lvds\_Common\_Data\_I2cSlaveDevice\_Define"  
"G\_Lvds\_Common\_Data\_I2cSlaveDevice\_Delete"  
"G\_Lvds\_Common\_Data\_I2cSlaveRegister\_Define"  
"G\_Lvds\_Common\_Data\_I2cSlaveRegister\_Delete"

g\_api\_net2run.dll:

- added flags parameter to type "G\_Net2Run\_PduInfo\_t"

## Bugfix

g\_api\_lvds.dll:

- data transfer was initiated only at second call with the following functions:  
"G\_Lvds\_Common\_Data\_I2cTransfer"  
"G\_Lvds\_Common\_Data\_I2cTransferEx"  
"G\_Lvds\_Common\_Data\_SpiTransfer"  
"G\_Lvds\_Common\_Data\_UartTransfer"
- commands "G\_Lvds\_FrameGrabber\_CaptureToFile" and "G\_Lvds\_FrameGrabber\_CaptureToFile2" were broken on VideoDragon devices with firmware version prior 1.16.18

## Changes

g\_api\_lvds.dll:

- changed property id names from  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_INFO\_ID\_PIXEL\_CLOCK\_FREQ\_MINIMUM" and  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_INFO\_ID\_PIXEL\_CLOCK\_FREQ\_MAXIMUM" to  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_INFO\_ID\_PIXEL\_CLOCK\_FREQ\_DIV\_MINIMUM" and  
"G\_LVDS\_\_FRAME\_GRABBER\_SYNC\_INFO\_ID\_PIXEL\_CLOCK\_FREQ\_DIV\_MAXIMUM"



## Version 1.3.5064 - 4/14/2016

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### Bugfix

- fix for "file not found" error when scanning for available devices

## Version 1.3.5051 - 3/31/2016

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### Features

supported devices

- added ETH3116
- added ETH3118
- added ETH3132
- added ETH3164
- added ETH31128

g\_api\_lvds.dll:

- added command "G\_Lvds\_FrameGrabber\_SetPixelMode"

Hardware Explorer:

- added flashing functionality for ETH3030

### Bugfix

g\_api\_flexray.dll:

- "G\_FlexRay\_GetConfigData\_FromFibex": WakeUp Channel was set wrong in some cases

## Version 1.3.5030 - 2/25/2016

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### Bugfix

- PXI4112 and PXI4113 are detected properly

g\_api\_fs.dll:

- fixed error handling when file save operation went into timeout

g\_api\_lvds.dll:

- "G\_Lvds\_Common\_Data\_I2cTransferEx": data bytes are read correctly
- "G\_Lvds\_Apix\_ConfigByFile" configuration of APIX RX board works now as expected

## Version 1.3.5013 - 2/11/2016

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### Features

g\_api\_lvds.dll:

- added commands

"G\_Lvds\_Common\_Data\_I2cTransferEx"  
"G\_Lvds\_Common\_Data\_SpiTransfer"  
"G\_Lvds\_Common\_Data\_UartTransfer"

- added extended data bytes to commands "G\_Lvds\_Common\_Data\_Register\_Read"  
and "G\_Lvds\_Common\_Data\_Register\_Write"

- added properties "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_UART\_BAUDRATE"  
and "G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_UART\_PARITY" to  
"G\_Lvds\_Common\_Data\_PropertyId\_t"

- added type "G\_Lvds\_Common\_Data\_DataMode\_t" for property id  
"G\_LVDS\_\_COMMON\_\_DATA\_\_PROPERTY\_ID\_\_DATA\_MODE"

## Version 1.3.4989 - 1/21/2016

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### Bugfix

- eliminated possible race condition when multiple port handles to the same interface were closed simultaneously

## Version 1.3.4964 - 12/10/2015

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### Features

g\_api\_lvds.dll:

- added properties "G\_LVDS\_\_COMMON\_\_PROPERTY\_ID\_\_CAN\_GRAB" and "G\_LVDS\_\_COMMON\_\_PROPERTY\_ID\_\_CAN\_GENERATE"

### Bugfix

g\_api\_can.dll:

- "G\_Can\_Monitor\_BufferMode\_GetItems\_Large" could return invalid monitor data in some circumstances

Hardware Explorer:

- decreased timeout while scanning for ethernet devices

## Version 1.3.4912 - 10/29/2015

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### Features

g\_api\_lvds.dll:

- "G\_Lvds\_FrameGrabber\_Config\_DeserializerVector2" can be used for VideoDragon generator devices

### Bugfix

Hardware Explorer:

- Properties of VideoDragon generator devices are shown in Hardware Explorer

## Version 1.3.4898 - 10/20/2015

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### Features

g\_api\_net2run.dll:

- added functions
  - "G\_Net2Run\_ComManager\_User\_Config"
  - "G\_Net2Run\_Com\_TxPdu\_Checksum\_IncludedBytes"
  - "G\_Net2Run\_Com\_TxPdu\_Checksum\_Wrapper"
  - "G\_Net2Run\_Com\_TxPdu\_Ramp\_Config"
  - "G\_Net2Run\_Com\_TxPdu\_Ramp\_Control"

### Bugfix

g\_api\_lvds.dll:

- "G\_Lvds\_FrameGrabber\_CaptureToFile": fixed internal buffer size error for USB4120 devices
- "G\_Lvds\_FrameGrabber\_LoadReferenceFromBuffer": error when loading files > 4MB on USB4115

g\_api\_net2run.dll:

- "G\_Net2Run\_Com\_TxPdu\_Checksum\_Config": flags were not handled correctly

Hardware Explorer:

- Hardware Version of 4121 devices was not displayed correctly

## Version 1.3.4882 - 9/15/2015

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### Features

g\_api\_net2run.dll:

-added functions:

- G\_Net2Run\_SignalGroup\_TxPdu\_Config
- G\_Net2Run\_SignalGroup\_TxPdu\_Mapping
- G\_Net2Run\_SignalGroup\_RxPdu\_Config
- G\_Net2Run\_SignalGroup\_RxPdu\_Mapping
- G\_Net2Run\_SignalGroup\_TxPdu\_Write
- G\_Net2Run\_SignalGroup\_RxPdu\_Read

### Bugfix

G-API Service:

- fixed errorhandling when a port handle to a disconnected device was opened (G\_ERROR\_\_SERVER\_\_TOO\_MANY\_DEVICES\_TO\_MAP)
- fixed error when interfaces of a device with multiple controllers were used

## Version 1.3.4874 - 8/5/2015

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### Features

g\_api\_lvds\_dll:

- added commands

- "G\_Lvds\_FrameGrabber\_SyncInfoPermanentScan\_Start"
- "G\_Lvds\_FrameGrabber\_SyncInfoPermanentScan\_Stop"
- "G\_Lvds\_FrameGrabber\_SyncInfo\_GetById"

### Bugfix

Hardware Explorer:

- error message when server could not be found on device scanning

## Version 1.3.4870 - 7/23/2015

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### Bugfix

Hardware Explorer:

- device list could be corrupted when USB devices were disconnected without closing port handles correctly

## Version 1.3.4857 - 7/9/2015

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### Features

g\_api\_lvds.dll:

- added function "G\_Lvds\_FrameGenerator\_SetDisplayProperties2"
- added function "G\_Lvds\_FrameGenerator\_GetHardwareInfo2"
- added function "G\_Lvds\_FrameGenerator\_GetImage"

### Bugfix

G-API Service:

- fixed rare crash when opening and closing interfaces in multiple threads

## Version 1.3.4848 - 6/30/2015

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## Bugfix

G-API Service:

- fixed possible crash when connecting to USB device that is currently unavailable

## Version 1.3.4847 - 6/29/2015

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### Features

g\_api\_can.dll:

- added support for CAN FD to command "G\_Can\_CyclicMsgs\_ChangeMsgDataAndMsgCount"

### Bugfix

g\_api\_can.dll:

- fixed error in command "G\_Can\_CyclicMsgs\_ChangeMsgDataAndMsgCount" when mode "G\_CAN\_\_CYCLIC\_MSGS\_\_CHANGE\_MSG\_DATA\_\_CHANGE\_MODE\_\_WITH\_MINIMUM\_DELAY" was selected

g\_api\_net2run.dll:

- fixed inconsistency in G\_Net2Run\_SignalBlock functions when reading or writing with signal length information

G-API Service:

- fixed rare locks when port was closed

## Version 1.3.4836 - 6/11/2015

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### Features

- VideoDragon: capture operation is temporarily stopped when configuring deserializer vector to prevent capture errors

g\_api\_net2run.dll:

- added signal block functionality:
  - G\_Net2Run\_SignalBlock\_Config
  - G\_Net2Run\_SignalBlock\_Delete
  - G\_Net2Run\_SignalBlock\_Write
  - G\_Net2Run\_SignalBlock\_Read

### Bugfix

g\_api\_net2run.dll:

- fixed memory leak in "G\_Net2Run\_Signal\_Config"
- fixed crash when RBS file contained non-subsequent signal ids

## Version 1.3.4825 - 5/20/2015

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### Bugfix

G-API Service:

- possible stack overflow

g\_api\_common.dll:

- XCP DAQ could cause access violation on de-initialization

## Version 1.3.4783 - 4/15/2015

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### Features

g\_api\_lvds.dll:

- added functions
  - G\_Lvds\_FrameGrabber\_Data\_Property\_SetById
  - G\_Lvds\_FrameGrabber\_Data\_Property\_GetById
  - G\_Lvds\_FrameGrabber\_Data\_Register\_Write

G\_Lvds\_FrameGrabber\_Data\_Register\_Read  
G\_Lvds\_FrameGrabber\_Data\_I2cTransfer  
G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_SetById  
G\_Lvds\_FrameGrabber\_VideoSettings\_Property\_GetById

g\_api\_net2run.dll:

- added function G\_Net2Run\_Signal\_Config2 for configuration of RBS signals without RBS file

### Bugfix

- VideoDragon: improved stability

## Version 1.3.4765 - 3/17/2015

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### Features

- added command "G\_FlexRay\_Diag\_Config\_Off" for deactivating FlexRay diagnostics

### Bugfix

- VideoDragon: fixed interface assignments for file system functions
- DLL version info is written correctly into DLL files

## Version 1.3.4739 - 3/11/2015

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### Features

- added possibility to set and query baud rate for CAN FD with commands "G\_Can\_Node\_BaudrateFd\_Set" and "G\_Can\_Node\_BaudrateFd\_Get"

Hardware Explorer:

- improved speed when scanning for ETH3030 devices

### Bugfix

Installer:

- the user gets notified if binaries could not be updated when installing

Hardware Explorer:

- updating device list could lead to exception

G-API Service

- could crash in rare occasions with Series61 PXI/PCI devices

## Version 1.3.4705 - 2/9/2015

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### Features

- added CAN FD functionality to "G\_Can\_TxFifo\_QueueMsg", "G\_Can\_InitInterface", "G\_Can\_CyclicMsgs\_DefineMsg", "G\_Can\_CyclicMsgs\_ChangeMsg", "G\_Can\_CyclicMsgs\_ChangeMsgData"
- added SENT receiver functionality to IO interface
- added commands: "G\_Can\_TxFifo\_QueueMsgs2", "G\_Can\_Monitor\_BufferMode\_Start2", "G\_Can\_Monitor\_BufferMode\_GetItems\_Large", "G\_Io\_Sent\_Receiver\_Reset", "G\_Io\_Sent\_Receiver\_Init", "G\_Io\_Sent\_Receiver\_Enable"

"G\_Io\_Sent\_Receiver\_Disable"  
"G\_Io\_Sent\_Receiver\_Property\_GetById"  
"G\_Io\_Sent\_Receiver\_Property\_SetById"  
"G\_Io\_Sent\_Receiver\_Monitor\_Init"  
"G\_Io\_Sent\_Receiver\_Monitor\_Start"  
"G\_Io\_Sent\_Receiver\_Monitor\_Stop"  
"G\_Io\_Sent\_Receiver\_Monitor\_Read"  
"G\_Io\_Sent\_Receiver\_Monitor\_Property\_GetById"  
"G\_Io\_Sent\_Receiver\_Monitor\_Property\_SetById"  
"G\_Io\_Tle4998Prog\_Reset"  
"G\_Io\_Tle4998Prog\_Init"  
"G\_Io\_Tle4998Prog\_Property\_GetById"  
"G\_Io\_Tle4998Prog\_Property\_SetById"  
"G\_Io\_Tle4998Prog\_WriteCmd"  
"G\_Io\_Tle4998Prog\_ReadState"  
"G\_Io\_Tle4998Prog\_ReadData"  
"G\_Io\_Tle4998Prog\_VddControl"

## Version 1.3.4671 - 12/17/2014

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### Features

- command "G\_Lvds\_FrameGrabber\_LoadReferenceFromFile" now accepts top-down- AND bottom-up-bitmaps

### Bugfix

- XCP DAQ could cause access violation

## Version 1.3.4656 - 11/25/2014

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### Bugfix

- stability improvements

## Version 1.3.4635 - 11/12/2014

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### Features

- added SENT Transmitter commands to IO interface DLL

### Bugfix

- fixed possible crash when opening a port handle quickly after the same handle was closed

## Version 1.3.4622 - 11/4/2014

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### Features

- added support for Ethernet interface on Series61
- added transport protocol ISO13400 and diagnostic protocol UDS on Ethernet interface

### Bugfix

- fixed crash when configuring Net2Run restbus simulation under certain circumstances

## Version 1.3.4585 - 10/16/2014

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### Features

supported devices

- added PXI4112 (LVDS Multiplexer)
- added PXI4113 (LVDS Splitter)

Hardware Explorer:

- PXI devices are sorted by geographic address

### Bugfix

- when working with multiple processes simultaneously, the error "Pipe not found" could occur
- G\_Common\_Events were not reset automatically

Hardware Explorer under Windows 7 64 Bit:

interface assignments were mixed up when working with multiple PXI3051, PXI3052, PXI3072 or PXI3080 cards  
!ATTENTION!: after G-API update you need to check interface names in Hardware Explorer!

## Version 1.3.4576 - 9/30/2014

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### Features

- improved Net2Run performance when configuring an RBS

### Bugfix

- application could freeze when port handles were open and a dll was unloaded from the process
- application could freeze when multiple port handles to an USB4120 were opened

## Version 1.3.4552 - 8/21/2014

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### Features

g\_api\_common.dll:

- added command "G\_Common\_Xcp\_Daq\_Start2" for XCP DAQ with extended parameters

## Version 1.3.4549 - 8/8/2014

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### Bugfix

g\_api\_can.dll: fixed wrong flag of

"G\_CAN\_\_CYCLIC\_MSGS\_\_CHANGE\_MSG\_\_CYCLE\_TIME\_\_CMD\_FLAG\_\_CANCEL\_RESTORE"

- fixed a bug where multithreaded access to different USB devices could lead to unexpected behaviour

## Version 1.3.4528 - 7/24/2014

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### Features

- added file system functions for Series61 and VideoDragon devices (see documentation)

## Version 1.3.4513 - 7/3/2014

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### Features

g\_api\_common\_dll:

- added timestamp information to XCP DAQ (see G\_Common\_Xcp\_Daq\_ReadRxSignalsTs)

## Version 1.3.4508 - 6/5/2014

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### Features

- improved LVDS VideoDragon performance
- added command "G\_Lvds\_FrameGrabber\_SetCaptureArea" to g\_api\_lvds.dll

### Bugfix

Hardware Explorer:

- flashing firmware on devices without interface #1 failed
- warning dialog for ethernet scan properties could open behind main window

g\_api\_common.dll:

- adapted XCP DAQ status mask to regard only specified bits (XCP v.1.1)
- when an application did not close a port handle properly, the error "no lock" could have been raised

## Version 1.3.4476 - 5/6/2014

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### Features

- added LVDS features

## Version 1.3.4441 - 3/20/2014

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### Features

- added command "G\_Lvds\_FrameGrabber\_CaptureToFile2" (see documentation for details)

## Version 1.3.4439 - 3/13/2014

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### Features

- added support for VideoDragon USB communication

### Bugfix

- closing an interface did not free all resources
- fixed access violation error in monitor

## Version 1.3.4430 - 2/19/2014

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### Bugfix

G-API Service:

- closing all handles on Series61 PCI/PXI devices
- Server could cause deadlock when multiple port handles were closed concurrently

## Version 1.3.4429 - 2/18/2014

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### Bugfix

g\_api\_lvds.dll:

- fixed bug in "G\_Lvds\_FrameGenerator\_Data\_Write" where error "response buffer undersized" could be returned

Hardware Explorer:

- VideoDragon devices now show up with the correct firmware and deserializer info

G-API Service:

- not all handles were closed when application was disconnected



## Version 1.3.4422 - 2/4/2014

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### Features

g\_api\_common.dll:

- added support for XCP DAQ

### Bugfix

Hardware Explorer:

- fixed problems with resetting G-API server
- fixed bug when multithreaded applications opened ports concurrently
- silent mode installer now runs really silent (no errors are indicated), therefore it is recommended to perform a restart after a silent mode install

## Version 1.3.4398 - 12/19/2013

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### Features

g\_api\_flexray.dll:

- added command "G\_FlexRay\_Pdu\_Search"

### Bugfix

Hardware Explorer:

- when scanning network adapter list deselected entries were scanned

## Version 1.3.4392 - 12/13/2013

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### Features

- compatibility improvements for G\_API LabVIEW wrapper

## Version 1.3.4391 - 12/13/2013

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### Features

g\_api\_lvds.dll:

- added support for APIX Rx boards in command "G\_Lvds\_Apix\_ConfigByFile"

g\_api\_user\_code.dll

- added functions "G\_UserCode\_File\_GetNumberOfDirectories" and "G\_UserCode\_File\_GetDirectoryNameByNumber"

### Documentation

- added description for "G\_GetErrorDescription2" to manual

### Bugfix

Hardware Explorer:

- Ethernet Scan Warning Dialog was opened behind main window

## Version 1.3.4319 - 10/30/2013

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### Bugfix

Hardware Explorer:

- fixed possible crash on startup when no COM ports were detected
- corrupted device configuration file will be deleted on startup

## Version 1.3.4279 - 10/14/2013

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### Bugfix

g\_api\_tp.dll

- fixed command length bug when starting and stopping tp direct

g\_api\_common.dll

- "G\_Common\_Xcp\_ReadDtoRxFifo" and "G\_Common\_Xcp\_ReadCtoRxFifo" returned wrong data length
- magicCAR3 was not accessible under some circumstances

Hardware Explorer:

- formerly disconnected devices were scanned when "Do not scan for new devices" was activated

## Version 1.3.4263 - 10/2/2013

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### Features

- basicCON4121 (VideoDragon) support enhanced

## Version 1.3.4259 - 9/30/2013

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### Features

- basicCON4121 (VideoDragon) support enhanced
- added XCP support (g\_api\_common.dll)
- added support for FlexRay Tx Fifo (g\_api\_flexray.dll)

### Bugfix

g\_api\_net2run.dll:

- configuring pdus without signals could lead to crash
- flashing new VHDL design on USB4120 could fail

## Version 1.3.4165 - 8/21/2013

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### Features

supported devices

- added basicCON4121 (VideoDragon)

## Version 1.3.4156 - 8/15/2013

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### Features

supported devices

- added APIX2 ADK boards

g\_api\_lvds.dll:

- added serializer type DS90UR925Q

- added deserializer types:

- APIX\_INAP375R
- ADV7611
- DS90UB914
- DS90UB925
- DS90UB913
- MAX9259

- added commands:

- G\_Lvds\_FrameGrabber\_SetColourTolerance
- G\_Lvds\_FrameGrabber\_Config\_DeserializerVector2

## Bugfix

g\_api\_lvds.dll

- fixed output selection in
  - "G\_Lvds\_Splitter\_Outputs\_Enable"
  - "G\_Lvds\_Splitter\_Outputs\_Disable"

## Version 1.3.4057 - 7/11/2013

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### Features

- added support for APIX2 ADK boards

## Version 1.3.4036 - 7/1/2013

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### Features

g\_api\_common.dll

- added parameter "InstanceId" to
  - "G\_Common\_GetInterfaceInfo"
- added commands
  - "G\_Common\_GetTransceiverInfoForCurrentInterface"
  - "G\_Common\_GetInterfaceNumber"

g\_api\_lvds.dll

- added deserializer type
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_DESERIALIZER\_\_DS90UB926"
- added commands
  - "G\_Lvds\_FrameGenerator\_Data\_Write"
  - "G\_Lvds\_FrameGenerator\_Data\_Read"

g\_api\_can.dll

- added checksum "Custom12"

g\_api\_flexray\_dll

- added parameter "UpdateBit" in function
  - "G\_FlexRay\_NPduPool\_Rx\_AddNPdu"
- added commands
  - "G\_FlexRay\_Property\_SetById"
  - "G\_FlexRay\_Property\_GetById"
  - "G\_FlexRay\_Monitor\_Property\_SetById"
  - "G\_FlexRay\_Monitor\_Property\_GetById"

Hardware Explorer: Windows are resizeable

## Version 1.3.3967 - 3/19/2013

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### Features

g\_api\_lvds.dll

- added deserializer type
  - "G\_LVDS\_\_FRAME\_GRABBER\_\_DESERIALIZER\_\_DS90UB926"

## Version 1.3.3956 - 3/7/2013

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### Bugfix

- flashing firmware on Series61 devices returned with an error when no user code interface was present

## Version 1.3.3945 - 2/27/2013

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### Features

- "G\_Can\_Monitor\_MonitorTime\_Get" returns real 64 bit timestamps on Series61 devices

### Bugfix

- flashing firmware on Series61 devices returned with an error when no user code interface was present

## Version 1.3.3942 - 2/21/2013

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### Features

- On Series61 devices all running user code programs are stopped when flashing firmware
- magicCAR3: improved slave device detection

### Bugfix

- fixed crash in "G\_FlexRay\_ConfigFromFibex" and "G\_FlexRay\_GetConfigData\_FromFibex" when providing an invalid filename

## Version 1.3.3896 - 1/28/2013

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### Features

- added serializers "APIX\_INAP375T" and "DS90UR905Q" to LVDS frame generator

### Bugfix

- dump files were not created under some circumstances
- G-API-Server crashed when multiple magiCAR3 slave devices were accessed
- "G\_Lvds\_FrameGenerator\_GetMemoryInfo" returned wrong file system state flag

## Version 1.3.3866 - 12/5/2012

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### Bugfix

- magicCAR3: slave devices were not recognized correctly under some circumstances

## Version 1.3.3861 - 11/30/2012

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### Features

- improved Net2Run performance when configuring signals
- added FlexRay PDU functionality:
  - "G\_FlexRay\_Pdu\_Config"
  - "G\_FlexRay\_Pdu\_Delete"
  - "G\_FlexRay\_LPdu\_Config"
  - "G\_FlexRay\_LPdu\_Delete"
  - "G\_FlexRay\_PduInLPdu\_Config"
  - "G\_FlexRay\_PduInLPdu\_Delete"
  - "G\_FlexRay\_FrameTrigger\_Config"
  - "G\_FlexRay\_FrameTrigger\_Delete"
  - "G\_FlexRay\_NPduPool\_Tx\_AddPdu"
  - "G\_FlexRay\_NPduPool\_Tx\_DeletePool"
  - "G\_FlexRay\_NPduPool\_Rx\_AddPdu"
  - "G\_FlexRay\_NPduPool\_Rx\_DeletePool"
- added FlexRay monitor filter command "G\_FlexRay\_Monitor\_DefineFilter"

#### Hardware Explorer:

- under "Tools->Preferences->Ethernet" a checkbox for enabling/disabling has been added to each ip address in the ip list
- added flash functionality to USB4120 LVDS FrameGrabber devices

G-API Service: when service crashes, a dump file is generated

#### Bugfix

- 3051 and 3052 devices where not all expansion boards are assembled were not detected in hardwareExplorer
- flashing firmware on 6191 device was not possible

### Version 1.3.3835 - 10/24/2012

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#### Features

- added support for using dedicated firmware for devices via firmware packages (see quickstart manual for details)
- added command "G\_UpdateToDedicatedFirmware"
- added samples "IO\_GetAnalogInputValues" and "IO\_SetAnalogOutput"

#### Bugfix

- flashing firmware on 6191 device was not possible
- Series61 devices with interface numbers starting > 1 were not recognized correctly
- LIN monitor: data byte timestamps of normal and advanced items were not ordered correctly

### Version 1.3.3812 - 9/5/2012

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#### Bugfix

- increased internal buffer size to handle more interfaces (increased from 128 to 1024)

### Version 1.3.3785 - 7/20/2012

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#### Features

- added command "G\_FlexRay\_Node\_SendWakeUp"

### Version 1.3.3767 - 6/7/2012

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#### Features

- added parameter "UpdateBitPosition" to command "G\_FlexRay\_NPduPool\_Tx\_AddNPdu"
- added command "G\_Can\_CyclicMsgs\_ChangeCycleTime"

#### Bugfix

- magicCAR3: increased timeout for FPGA download to slave devices (could cause G\_Api\_Server.exe to crash)

### Version 1.3.3754 - 5/30/2012

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#### Features

- added function "G\_FlexRay\_Tp\_Init\_Autosar"
- added function "G\_FlexRay\_Diag\_Config\_Uds"

#### Bugfix

G-API Service:

- could lock under Windows 7

## Version 1.3.3728 - 5/7/2012

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### Features

- added functions:
  - G\_FlexRay\_GetConfigData\_FromXmlFile
  - G\_FlexRay\_GetConfigData\_FromFibex

### Bugfix

- "G\_InterfaceConfig\_GetApiVersion" returns overall revision number (not file specific revision)

Hardware Explorer:

- fixed false detection of ethernet device when option "Do not scan for new devices" was enabled

G-API Service:

- eliminated sporadic crashes when handling multiple usb devices

## Version 1.3.3671 - 3/7/2012

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### Features

- added Net2Run CAN Interface and PDU Router functions
- added possibility to query G-API version via command "G\_GetApiVersion"

### Bugfix

- improved detection of Series61 devices

## Version 1.3.3611 - 2/8/2012

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### Features

- parallel KLINE monitoring on different interfaces

## Version 1.3.3582 - 12/20/2011

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### Features

- added command line options to installer (see quickstart guide for details)
- added trigger functionality to IO interface, CAN interface and LIN interface

### Bugfix

Hardware Explorer:

- when the host connection type (PXI, Ethernet, ...) of a Series61 device was changed, interface configuration was lost

### Changes

- changed typedef of "G\_HostInterfaceType\_t" from "enum" to "u32\_t" to avoid future compatibility issues
- G\_Io\_Trigger\_Source\_Set
  - renamed output type "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_PXI\_OUT" to "G\_IO\_\_TRIGGER\_\_OUTPUT\_TYPE\_\_TRIGGER\_BUS\_OUT"
  - input and output numbers start with "1" (as in the whole IO interface)

## Version 1.3.3568 - 12/2/2011

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## Features

supported devices

- added USB4112
- added USB4113

## Bugfix

- USB61xx was not detected correctly in some cases

Hardware Explorer:

- Series61 DefaultGateway display was not updated when "Do not scan for new devices" was activated

## Version 1.3.3564 - 11/25/2011

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### Features

- added support for USB4115 LVDS FrameGenerator
- added function "G\_Interface\_Name\_Set" for setting interface names from within applications
- USB3116, USB3132, USB4009 and USB4120 can be reset from within Hardware Explorer or by command "G\_Common\_SoftwareReset"
- "G\_Interface\_GetInterfaceList" performs scan for ethernet devices only on network addresses that are selected in Preferences Menu of Hardware Explorer
- added support for USB6161, PXI6161, basicMOST6161 devices
- MOST:
  - added functions
    - "G\_Most\_Pdts\_Mep\_GetTxState"
    - "G\_Most\_Pdts\_Mep\_QueueMessage"
    - "G\_Most\_Pdts\_Mep\_SendMessage"
  - added monitor ids
    - "G\_MOST\_\_MONITOR\_\_ID\_\_SPY\_\_CONTROL\_MESSAGE"
    - "G\_MOST\_\_MONITOR\_\_ID\_\_SPY\_\_MOST\_PACKET"
    - "G\_MOST\_\_MONITOR\_\_ID\_\_SPY\_\_NETWORK\_STATUS\_INFORMATION"

### Bugfix

- Software Feature Code was not enabled properly on some PXI/PCI3051 and PXI/PCI3052 devices

## Version 1.3.3379 - 10/19/2011

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### Bugfix

- fixed stability issues with magicCAR3 and basicCAN61
- fixed resistor reset of 2nd decade on USB4009

## Version 1.3.3306 - 09/30/2011

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### Features

- added functions:
  - "G\_Can\_CyclicMsgs\_SetMsgBreakCount"
  - "G\_Can\_CyclicMsgs\_SetMsgBreakTime"
  - "G\_Can\_CyclicMsgs\_SetCalculationBreakCount"
- added support for PXI6161 devices

## Bugfix

- magicCAR3 with slave devices crashes G-API Server under Windows 7 64 Bit
- USB4009 switches more exactly on very low resistor values (< 1 ohm)

## Version 1.3.3270 - 09/12/2011

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### Features

- added functions
  - "G\_Can\_Monitor\_MonitorTime\_Get"
  - "G\_Can\_Monitor\_WriteUserEvent"
  - "G\_Io\_Outputs\_Analog\_GetNumberOfOutputs"
- G\_Can\_Monitor\_BufferMode\_GetItems" returns true 64 Bit timestamps for Series61 devices
- added support for the following devices:
  - PXI3078
  - USB3116
  - USB3132
- added support for slave devices of magicCAR3

### Bugfix

Hardware Explorer:

- Flashing Firmware of Ethernet devices could lead to a timeout.

## Version 1.3.3180 - 07/05/2011

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### Features

- added functions for generating signal curves in g\_api\_io.dll

### Bugfix

- G\_Can\_Nm\_Config\_Autosar - changed size of type G\_Can\_Nm\_Config\_Autosar\_Type\_t for correct alignment

## Version 1.3.3158 - 06/21/2011

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### Features

- added "G\_Net2Run\_Signal\_GetSignalTransmissionMode"

Hardware Explorer:

- added switch for disabling scan for new devices

## Version 1.3.3143 - 05/24/2011

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### Bugfix

- G\_Interface\_GetInterfaceList could return duplicate interfaces on some PCI/PXI devices
- G\_Interface\_GetInterfaceList could return with error 0x02000205 (no response) when another port was already connected to a device
- LVDS Tools Software did not find "g\_devices.xml" at startup

## Version 1.3.3132 - 05/11/2011

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## Bugfix

- magicCAR3 was not scanned correctly

## Version 1.3.3119 - 05/05/2011

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### Features

Hardware Explorer:

- added option to change configuration file path
- added option for scanning particular IP addresses

g\_api\_lvds.dll:

- added deserializer type MAX9260

## Bugfix

- "G\_Interface\_Name\_Get" did not return name for user code interfaces

## Version 1.3.3075 - 04/13/2011

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### Features

- added function:

- "G\_KLine\_Node\_Property\_SetById"
- "G\_KLine\_Node\_Property\_GetById"

## Bugfix

Hardware Explorer:

- "Reset G-API Service" did not close all port handles

## Version 1.3.3050 - 04/08/2011

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### Features

- added function:

- "G\_UserCode\_File\_GetNumberOfFiles"
- "G\_UserCode\_File\_GetFileInfoByNumber"
- "G\_UserCode\_File\_Save"

## Version 1.3.3039 - 04/05/2011

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### Features

Hardware Explorer:

- added editable sub net mask property to ethernet devices  
!this feature is available with firmware versions newer than 02/2011
- added common transport protocol functions in "g\_api\_tp.dll"
- added "G\_FlexRay\_Tp\_Init\_Iso10681"

## Version 1.3.3022 - 03/24/2011

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### Features

Hardware Explorer:

- reset G-API Service from Tools-Menu
- supported devices
- added USB4009
- Ethernet device discovery improved under Windows 7

## Version 1.3.2930 - 01/28/2011

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### Bugfix

Hardware Explorer:

- Ethernet Device Discovery could hang on some systems
- Revision number was not displayed correctly in main window title bar
- USB4120 LVDS FrameGrabber: Parallel accesses to the same device could deliver false data

## Version 1.3.2908 - 01/20/2011

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### Features

- added functions
  - "G\_UserCode\_File\_Save"
  - "G\_UserCode\_File\_Delete"
  - "G\_UserCode\_File\_Start"
  - "G\_UserCode\_File\_Stop"
  - "G\_UserCode\_File\_AutoPlay\_Enable"
  - "G\_UserCode\_File\_AutoPlay\_Disable"

## Version 1.3.2900 - 01/11/2011

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### Features

Hardware Explorer:

- newly detected interfaces of a device are ordered by interface type
- Automatic configuration of USB4120 - LVDS FrameGrabber includes configuration of Deserializer Vector
- added function
  - "G\_Lin\_MasterTask\_SendHeader"
- added property
  - "G\_LIN\_\_NODE\_\_PROPERTY\_ID\_\_FULL\_ID\_MODE" to "G\_Lin\_Node\_PropertyId\_t"

### Bugfix

- multiple accesses to "g\_devices.xml" now possible
- Threadsafety is assured when opening multiple ports to the same interface within one process.

## Version 1.3.2860 - 12/03/2010

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### Features

- added CAN CCP functionality
- added K-Line functionality
- added function "G\_FlexRay\_ConfigFromFibex"
- added command flag "G\_FLEXRAY\_\_STARTUP\_\_CONFIG\_\_FLAG\_\_ALLOW\_AUTO\_RESTART" to function "G\_FlexRay\_Startup\_Config"

## Version 1.3.2819 - 11/10/2010

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### Features

Hardware Explorer:

- Firmware Flasher supports basicCAN6153, basicLIN6173, basicCAR6181, basicFLEX6191 and magicCAR3
- added functions:
  - "G\_Can\_Nm\_Config\_Autosar"
  - "G\_Can\_Nm\_Config\_Autosar\_Global"
  - "G\_Can\_Nm\_Config\_Autosar\_Node"
  - "G\_Can\_Nm\_Autosar\_Node\_GetState"
  - "G\_Can\_Nm\_Autosar\_RepeatMessageRequest"

"G\_Can\_Nm\_Autosar\_RequestBusSynchronization"  
"G\_FlexRay\_ConfigFromFibex"

### Bugfix

- "G\_Lin\_AdvLib\_DominantLevel\_Set": wrong timing calculation
- "G\_Lin\_AdvLib\_RecessiveLevel\_Set": wrong timing calculation

Version 1.3.2797 - 10/28/2010

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### Features

- added functions:
  - "G\_Sequence\_Replay\_AutoPlayByInput\_Config\_Set"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_Config\_Get"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_FileName\_Set"
  - "G\_Sequence\_Replay\_AutoPlayByInput\_FileName\_Get"

Hardware Explorer:

- interface names are displayed in device list
- serial numbers are displayed in device list
- added Sequence interface

### Bugfix

- fixed division by zero when "baudrate" was set to 0
- "G\_Lin\_AdvLib\_DominantLevel\_Set", "G\_Lin\_AdvLib\_RecessiveLevel\_Set":  
corrected scaling of timing values

Version 1.3.2759 - 10/13/2010

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- added this Version History