1. overview

The BlueFire API for Xamarin development is available on GitHub at <https://github.com/BlueFire-LLC/BlueFire-API-for-Xamarin>. It consists of an API Demo app and the libraries needed to perform custom application development.

1. properties
   1. APIVersion

Type: String

Data: API version number

Description: Can be used to verify current API version. Format is “nn.nn”.

* 1. FirmwareVersion

Type: String

Data: The Adapter’s Firmware Version

Description: Format is “nn.nn”.

* 1. HardwareVersion

Type: String

Data: The Adapter’s Hardware Version

Description: Format is “nn.nn”.

* 1. IsCompatible

Type: Boolean

Data: Indicates if the Adapter is compatible with the API.

Description: The Adapter must have Firmware Version 3.1 or greater.

* 1. SerialNo

Type: String

Data: The Adapter’s Serial Number.

Description: The serial number assigned at manufacturing.

* 1. UserName

Type: String

Data: The security user name used for authenticating with the Adapter.

Description: If security authentication is used this is the user name assigned to the Adapter.

* 1. Password

Type: String

Data: The security password used for authenticating with the Adapter.

Description: If security authentication is used this is the password assigned to the Adapter.

* 1. IsCANAvailable

Type: Boolean

Data: Indicates if the J1939 CAN bus is available.

Description: In most trucks the CAN bus is detectable only when the key is on.

* 1. IgnoreJ1939

Type: Boolean

Data: Indicates if the J1939 Databus is to be ignored.

Description: This will automatically be set if the 6-Pin J1708 Adapter is being used. This must be set prior to connecting to the Adapter.

* 1. IgnoreJ1708

Type: Boolean

Data: Indicates if the J1708 Databus is to be ignored.

Description: It is recommended that if J1708/J1587 data is not required this should be set to ignore. This must be set prior to connecting to the Adapter.

* 1. LedBrightness

Type: Integer

Data: The brightness setting for the Adapter LEDs.

Description: This must be in the range of 5 to 100. Note, the brightness level is not allowed to be less than 5 due to the importance of the state of the LEDs. The API must be connected to the Adapter before setting this property.

* 1. SleepMode

Type: SleepModes

Data: Sleep mode of the Adapter

Description: The Adapter can be set for NoSleep or WakeOnApp. When WakeOnApp is used, the Adapter will go into sleep mode two minutes after no activity and will wake up when the API initiates a connection attempt. The API must be connected to the Adapter before setting this property.

* 1. MinInterval

Type: Integer

Data: The minimum interval for retrieving PGNs (in milliseconds).

Description: Sets the Adapter's minimum data transmit interval. This will reduce the Bluetooth data traffic and may help with Adapter connection issues. This is set by default to 500 milliseconds (.5 seconds) for BLE Adapters due to the limitations of Android BLE.

* 1. PerformanceMode

Type: Boolean

Data: The Adapter’s performance mode setting, on (true) or off (false).

Description: Setting this true will improve the retrieval of slower PGNs (Brake Pressures, Odometer, Temps, etc.) by interrupting faster PGNs (RPM, Speed, Fuel Economy, etc.).

* 1. SyncTimeout

Type: Integer

Data: The timeout value (in milliseconds) for synchronous truck data methods.

Description: Sets the timeout value that will cause the truck data methods to timeout if data is not retrieved (see RetrievalMethods.Synchronized in the Enums section). The default is 1000 milliseconds (one second).

* 1. ConnectionState

Type: ConnectionStates

Data: The state of the connection during and after an Adapter connection.

Description: This is the same value that is passed to the App in the Data Event Handler. It can be used when connecting to the Adapter synchronously.

* 1. ConnectTimeout

Type: Integer

Data: The timeout value (in milliseconds) for synchronous Adapter connection.

Description: Sets the timeout value that will cause the Connect method to timeout if the App fails to connect to the Adapter. The default is 1000 milliseconds (one second).

* 1. AdapterCount

Type: Integer

Data: The number of adapters that are paired with the computer.

Description: Windows UWP caches the BLE information (Device, Services, etc.) for the first adapter paired and any additional adapters that are paired will not be connected. In order to connect to multiple adapters, all previous adapters must be removed so that the adapter to be connected is the first and only adapter paired.

* 1. ConnectToLastAdapter

Type: Boolean

Data: Indicates whether to connect to the Adapter using the last Bluetooth Device Id.

Description: Setting this true will cause the API to only connect to an Adapter that has its Bluetooth Device Id equal to the last Bluetooth Device Id that was saved the last time a connection was successful.

* 1. AdapterIdFilter

Type: Array List

Data: Contains Adapter Ids that are to be ignored when establishing an Adapter connection.

Description: Any Adapter Id in the filter list will be ignored when connecting to the Adapter.

* 1. MaxConnectAttempts

Type: Integer

Data: The maximum number of retries the API should attempt during an Adapter connection (default is 10)

Description: Each connection attempt can take several seconds so this value should be set carefully and accurately. Issuing a Disconnect command will stop the connection.

* 1. MaxReconnectAttempts

Type: Integer

Data: The maximum number of retries the API should attempt during an Adapter reconnection (default is 10)

Description: Each reconnection attempt can take several seconds so this value should be set carefully and accurately. Issuing a Disconnect command will stop the reconnection.

* 1. DiscoveryTimeout

Type: Integer

Data: The time in milliseconds that the API should wait for the Bluetooth Discovery process to find an Adapter (in milliseconds, default is 30000 (30 seconds).

Description: This will only occur if the Adapter is not initially paired manually and will only occur once for each Adapter the API connects to.

* 1. Truck

Type: Class

Data: See data retrieval methods below.

Description: Contains all the truck related information retrieved from the Adapter.

* 1. Faults

Type: Class

Data: See the GetFaults method below.

Description: Contains active fault information retrieved from the Adapter.

* 1. PGNData

Type: Class

Data:

PGN (Integer)

Source (Integer)

Data (Byte[8])

Description: Contains the PGN data that is returned by the Adapter. This is used when requesting a PGN with the SendPGN method.

* 1. ErrorMessage

Type: String

Data: An error message from the adapter.

Description: This is a system error message. It should be logged for later analysis.

* 1. ErrorException

Type: Exception

Data: An error exception from the adapter.

Description: This is an exception thrown by the API. It should be logged for later analysis.

1. methods
   1. Constructor

Parameters: An App Event Handler

Description: Constructs the API and hooks up the Event Handler for the App to receive API connection events. The App Event Handler needs to receive and process the ConnectionState (see Enums below).

* 1. Initialize

Parameters: None

Description: Initialize the API. This is an asynchronous task and must be called directly after the API constructor.

* 1. Connect

Parameters:

Synchronized (Boolean - optional, default is false)

Returns:

Connection Status (Boolean)

Description: Initiate a connection attempt to the Adapter. If not synchronized then this is an asynchronous task so call it appropriately. If Synchronized is set, the method will block until either a connection is established, the connection fails (eg. authentication), or a timeout occurs. If the Connect method fails, the last state of the connection can be examined with the ConnectionState (see Enums ConnectionStates). The timeout value can be set with the ConnectTimeout property.

* 1. Disconnect

Parameters:

WaitForDisconnect (Boolean - optional, default is false)

Description: Disconnects the API from the Adapter. If the WaitForDisconnect parameter is true, the call will block until the Adapter has disconnected. This is an asynchronous task so call it appropriately.

* 1. Reboot

Parameters: None

Description: Initiates a reboot of the Adapter. The API must be connected to the Adapter before calling this method. When the Adapter reboots, the API will detect a disconnection and will attempt to reconnect.

* 1. UpdateSecurity

Parameters:

UserName (String, 0-20 characters)

Password (String, 0-12 characters)

Description: Updates your user name and password for adapter security authentication. The UserName and Password are case sensitive. Adapter authentication occurs at connection time so this must be called prior to connecting to the Adapter. If security authentication is not being used this is not necessary.

* 1. ClearData

Parameters: None

Description: Clears all the data retrieval requests from the Adapter and any data already retrieved from the API.

* 1. Dispose

Parameters: None

Description: Disconnects the API from the Adapter and disposes the API.

* 1. GetVehicleInfo

Parameters: None

Returns:

Make

Model

Serial Number

Unit Number

Description: Retrieves vehicle information from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetEngineVIN

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Engine VIN

Description: Retrieves the engine VIN from the Adapter.

* 1. GetEngineData1

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

RPM

Percent Torque

Driver Torque

Torque Mode

Description: Retrieves engine data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetEngineData2

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Percent Load

Accelerator Pedal Position

Description: Retrieves engine data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetEngineData3

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Max Speed

Vehicle Speed

Brake Switch

Clutch Switch

Park Brake Switch

Cruise Control Switches

Description: Retrieves engine data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetOdometer

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Low Resolution Distance,

High Resolution Distance,

Description: Retrieves engine distance from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetTemps

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Oil Temp

Coolant Temp

Intake Manifold Temp

Description: Retrieves engine temperature data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetPressures

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Oil Pressure

Coolant Pressure

Intake Manifold (Boost) Pressure

Description: Retrieves engine temperatures from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetCoolantLevel

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Coolant Level

Description: Retrieves the engine coolant level from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetFuelData

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Fuel Rate

Throttle Position

Instant Fuel Economy

Average Fuel Economy

Total Low Res Fuel Used

Total High Res Fuel Used

Total Idle Fuel Used

Description: Retrieves engine fuel data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetEngineHours

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Total Idle Hours

Total Engine Hours

Description: Retrieves engine hours from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetBrakeData

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Brake Application Pressure

Brake Primary Pressure

Brake Secondary Pressure

Description: Retrieves brake data from the Adapter. The API must be connected to the Adapter before calling this method.

* 1. GetTransmissionGears

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Current Gear

Selected Gear

Description: Retrieves the transmission gears from the Adapter. This will only be available if the transmission ECM provides the data. The API must be connected to the Adapter before calling this method.

* 1. GetBatteryVoltage

Parameters:

RetrievalMethod (RetrievalMethods - see Enums, optional, default is OnChange)

Interval (Integer – in milliseconds, optional, required for RetrievalMethod OnInterval).

Returns:

False if unable to retrieve synchronized data, otherwise the following data will be returned in the Truck Data class (asynchronously if not synchronizing):

Battery Potential (Voltage

Description: The API must be connected to the Adapter before calling this method.

* 1. GetFaults

Parameters: None

Returns:

SPN

FMI

Conversion

Occurrence

Description

Description: Retrieves all active faults from the Adapter. Use the Faults class to retrieve the Fault data. The API must be connected to the Adapter before calling this method.

* 1. ResetFaults

Parameters: None

Description: Resets any active faults. Note, the API sends the appropriate Fault Reset command to all ECUs. It is up to the ECUs to accept and process the Reset command. The API must be connected to the Adapter before calling this method.

* 1. MonitorPGN

Parameters:

Source (Integer)

PGN (Integer)

Interval (Integer) – in milliseconds, optional, default is 0 (on data change).

IsOnRequestPGN (Boolean) – optional, default is false.

Description: Monitors a PGN. Data will be returned based on the Interval. If IsOnRequestPGN is true, the PGN will be sent to the CAN Bus as an on-request PGN. The maximum number of concurrent monitoring PGNS is 20. Use the StopMonitoringPGN method to remove a PGN from this count. The API must be connected to the Adapter before calling this method.

* 1. StopMonitoringPGN

Parameters:

Source (Integer)

PGN (Integer)

Description: Stops monitoring a PGN. This will remove the PGN from the maximum number of monitoring PGNs (20). The API must be connected to the Adapter before calling this method.

* 1. RequestPGN

Parameters:

Source (Integer)

PGN (Integer)

IsOnRequestPGN (Boolean – optional, default is false)

Description: Request PGN data once only. If IsOnRequestPGN is false, the PGN will be monitored and will return the first data received. If IsOnRequestPGN is true, the PGN will be sent to the CAN Bus as an on-request PGN. The API must be connected to the Adapter before calling this method.

* 1. SendPGN

Parameters:

PGN (Integer)

Priority (Byte - optional, default is 6)

Source (Integer - optional, default is 43)

PGN Data (Byte Array, size is 8)

Description: Send a non-standard API PGN to the Adapter. Any response can be retrieved with the PGNData property. The API must be connected to the Adapter before calling this method.

* 1. RequestPID

Parameters:

MID (Integer)

PID (Integer)

IsOnRequestPGN (Boolean – optional, default is false)

Description: Request J1587 PID data once only. If IsOnRequestPGN is false, the PID will be monitored and will return the first data received. If IsOnRequestPGN is true, the PID will be sent to the J1708 Bus as an on-request PID. The API must be connected to the Adapter before calling this method.

* 1. MonitorPID

Parameters:

MID (Integer)

PID (Integer)

Interval (Integer – in milliseconds, optional, default is 0, on data change)

IsOnRequestPGN (Boolean – optional, default is false)

Description: Monitors a J1587 PID. Data will be returned based on the Interval. If IsOnRequestPGN is true, the PID will be sent to the J1708 Bus as an on-request PID. The API must be connected to the Adapter before calling this method..

* 1. StopMonitoringPID

Parameters:

MID (Integer)

PID (Integer)

Description: Stops monitoring a J1587 PID. The API must be connected to the Adapter before calling this method.

1. Enums
   1. RetrievalMethods

**OnChange** (default)

Data will be retrieved when it changes. Use this with caution with Android as BLE may become unstable if the data rate is high.

**OnInterval**

Data will be retrieved on the specified interval only if it changes. If the interval is less than MinInterval, MinInterval will be used.

**Synchronized**

Data will be retrieved immediately. This will force a blocking call. Timeout occurs after the SyncTimeout value expires.

* 1. ConnectionStates

**NotConnected**

Initial state of the Adapter

**Initializing**

**Initialized**

Occurs during

**Discovering**

Occurs if Bluetooth Discovery is invoked

**Connecting**

**Connected**

Occurs when connecting to the Adapter and a Bluetooth connected is established.

**Authenticating**

**Authenticated**

**NotAuthenticated**

Occurs after connecting to the Adapter and the API is authenticating the Adapter version and the App security.

**Ready**

**RetrievingData**

Occurs after the App is authenticated with the Adapter and the Adapter settings are being retrieved.

**KeyIsTurnedOn**

Occurs when the ignition key if turned on.

**KeyIsTurnedOff**

Occurs when the ignition key is turned off.

**Disconnecting**

**Disconnected**

Occurs when the App or the API is disconnecting from the Adapter.

**Reconnecting**

**Reconnected**

**NotReconnected**

Occurs when the API is reconnecting to the Adapter after a loss of connection.

**DataAvailable**

Occurs when there is Truck data available for the App to process.

**CANFilterFull**

Occurs when too many data requests have been sent to the Adapter. This applies specifically to J1939 PGNs.

**DataError**

Occurs when an Adapter data error is detected by the API. This will cause the API to disconnect and reconnect the Adapter. The ErrorMessage property will contain the data error message.

**CommTimeout**

**ConnectTimeout**

**AdapterTimeout**

Occurs when a timeout happens between the Adapter and the App. The Adapter will be disconnected.

**NoAdapter**

Indicates that an Adapter was not detected when attempting to connect. This will also occur if pairing is canceled.

**BluetoothNA**

Indicates that Bluetooth is not available on the connecting device.

**IncompatibleVersion**

Occurs then the API is authenticating the Adapter version and discovers an incompatible firmware version (firmware version 3.9+ is required).

**SystemError**

Occurs when the API encounters a code exception. The ErrorMessage and ErrorException properties will contain the exception information.

1. truck data
   1. RPM

Type: Integer

Data: Engine RPM

* 1. Speed

Type: Float

Data: Vehicle Road Speed (metric, kph)

* 1. AccelPedal

Type: Float

Data: Accelerator Pedal Position (0-100%)

* 1. ThrottlePos

Type: Float

Data: Throttle Position (0-100%)

* 1. MaxSpeed

Type: Integer

Data: Maximum Set Speed (kph)

* 1. HiResMaxSpeed

Type: Float

Data: High Resolution Maximum Set Speed (kph)

* 1. Distance

Type: Float

Data: Low Resolution Distance (kilometers)

* 1. Odometer

Type: Float

Data: High Resolution Distance (meters)

* 1. TotalHours

Type: Float

Data: Total Engine Hours

* 1. IdleHours

Type: Float

Data: Total Engine Idle Hours

* 1. PctLoad

Type: Integer

Data: Percent Load

* 1. PctTorque

Type: Integer

Data: Percent Torque

* 1. DrvPctTorque

Type: Integer

Data: Drivers Percent Torque

* 1. TorqueMode

Type: TorqueModes

Data: Torque Mode

* 1. FuelRate

Type: Float

Data: Fuel Rate (liters / hour)

* 1. FuelUsed

Type: Float

Data: Total Fuel Used (liters)

* 1. HiResFuelUsed

Type: Float

Data: High Resolution Total Fuel Used (liters)

* 1. IdleFuelUsed

Type: Float

Data: Total Idle Fuel Used (liters)

* 1. AvgFuelEcon

Type: Float

Data: Average Fuel Economy (kilometers / liter)

* 1. InstFuelEcon

Type: Float

Data: Instant Fuel Economy (kilometers / liter)

* 1. BrakeAppPressure

Type: Float

Data: Brake Application Pressure (kPa)

* 1. Brake1AirPressure

Type: Float

Data: Brake Primary Air Pressure (kPa)

* 1. Brake2AirPressure

Type: Float

Data: Brake Secondary Air Pressure (kPa)

* 1. OilTemp

Type: Float

Data: Oil Temperature (Celsius)

* 1. OilPressure

Type: Integer

Data: Oil Pressure (kPa)

* 1. IntakeTemp

Type: Float

Data: Intake Temperature (Celsius)

* 1. IntakePressure

Type: Float

Data: Intake (Boost) Pressure (kPa)

* 1. CoolantTemp

Type: Float

Data: Coolant Temperature (Celsius)

* 1. CoolantLevel

Type: Float

Data: Coolant Level (0-100%)

* 1. CoolantPressure

Type: Float

Data: Coolant Pressure (kPa)

* 1. TransCurrentGear

Type: Float

Data: Transmission’s Current Gear

* 1. TransSelectedGear

Type: Float

Data: Transmission’s Selected Gear

* 1. BatteryPotential

Type: Float

Data: Battery Potential (Voltage)

* 1. VIN

Type: String

Data: Vehicle Identification Number

* 1. Engine.Make

Type: String

Data: Engine Make

* 1. Engine.Model

Type: String

Data: Engine Model

* 1. Engine.SerialNo

Type: String

Data: Engine Serial Number

* 1. Engine.UnitNo

Type: String

Data: Engine Unit Number

* 1. CruiseState

Type: CruiseControlStates

Data: Cruise Control State

* 1. CruiseSpeed

Type: Integer

Data: Cruise Control Set Speed (kph)

* 1. CruiseSwitches

Type: SwitchStates

Data: Cruise Control Switches

CruiseActive

CruiseSwitch

CruiseSet

CruiseCoast

CruiseResume

CruiseAccel

* 1. ActiveFaultsCount

Type: Integer

Data: Number of Active Faults

* 1. Faults.Items[x].Source

Type: Byte

Data: Fault Source

* 1. Faults.Items[x].SPN

Type: Integer

Data: Fault SPN

* 1. Faults.Items[x].FMI

Type: Integer

Data: Fault FMI

* 1. Faults.Items[x].Conversion

Type: Boolean

Data: Fault Conversion

* 1. Faults.Items[x].Occurrence

Type: Integer

Data: Fault Occurrence

* 1. Faults.Items[x].LampType

Type: LampTypes

Data: Fault Lamp

* 1. Faults.Items[x].Code

Type: String

Data: Fault SPN and FMI

* 1. Faults.Items[x].Description

Type: String

Data: Fault SPN Description

* 1. Faults.Items[x].SourceDescription

Type: String

Data: Fault Source Description

* 1. Faults.Items[x].ToString()

Type: String

Data: Full description including Source, SPN, and FMI descriptions.

1. Truck Enums
   1. SleepModes

NoSleep

NA

WakeOnApp

* 1. SwitchStates

Off

On

Error

NA

* 1. CruiseControlStates

Off

Hold,

Accelerate,

Decelerate,

Resume,

Set,

AccelOverride,

NA

* 1. TorqueModes

LowIdleGovernor,

AccelPedal,

CruiseControl,

PTOGovernor,

RoadSpeedGovernor,

ASRControl,

TransControl,

ABSControl,

TorqueLimiting,

HighSpeedGovernor,

BrakingSystem,

RemoteAccelerator,

ServiceProcedure,

NotDefined,

Other,

NA

1. Appendix
   1. Common J1939 Sources

0 = Engine

3 = Transmission

11 = Brakes

23 = Instruments

25 = Climate Control

33 = Body

49 = Cab

85 = AfterTreatment

255 = Global

* 1. Common J1939 PGNs

57344 = Cab Message (1 s)

61443 = Engine Controller 2 (50 ms)

61444 = Engine Controller 1 (50 ms)

64777 = High Resolution Fuel Consumption (1 s)

64920 = AfterTreatment Information (On Request)

65110 = DEF Tank (1 s)

65198 = Air Pressure (1 s)

65203 = Fuel Information (On Request)

65213 = Fan Drive (1s)

65217 = High Resolution Vehicle Distance (1 s)

65226 = DM1 (Faults 1 s)

65227 = DM2 (InActive Faults On Request)

65228 = DM3 (InActive Fault Reset)

65229 = DM4 (Freeze Frames On Request)

65235 = DM11 (Active Fault Reset)

65242 = Software Id (On Request)

65244 = Idle Operation (On Request)

65248 = Vehicle Distance (100 ms)

65253 = Engine Hours Revolutions (On Request)

65257 = Fuel Consumption (On Request)

65259 = Component Id (On Request)

65260 = Vehicle Id (On Request)

65262 = Engine Temperature (1 s)

65261 = Cruise Control Speed Setup (On Request)

65263 = Engine Fluid Level Pressure (500 ms)

65265 = Cruise Control Vehicle Speed (100 ms)

65266 = Fuel Economy (100 ms)

65269 = Ambient Conditions (1 s)

65270 = Inlet Exhaust Condition (500 ms)

65271 = Vehicle Electrical Power (1 s)

65272 = Transmission Fluids (1 s)

65274 = Brakes (1 s)

65276 = Dash Display (1 s)

* 1. Common J1587 MIDs

0 = Global

128 = Engine

130 = Transmission

136 = Brakes

140 = Instruments

142 = Vehicle Management

146 = Climate Control

171 = Driver Information

249 = Body Controller

* 1. Common J1587 PIDs

41 = Cruise Switches

44 = Fault Lamps

51 = Throttle Position

68 = Percent Torque

70 = Parking Brake

74 = Max Speed

84 = Speed

85 = Cruise Control

86 = Cruise Set Speed

91 = Accelerator Pedal Position

92 = Percent Load

96 = Fuel Level

100 = Oil Pressure

102 = Intake Pressure

105 = Intake Temperature

108 = Barometric Pressure

110 = Coolant Temperature

111 = Coolant Level

116 = Brake Application Pressure

117 = Brake Primary Pressure

118 = Brake Secondary Pressure

128 = Component Request

168 = Charging Voltage

175 = Oil Temperature

177 = Transmission Temperature

183 = Fuel Rate

184 = Instant Fuel Economy

185 = Average Fuel Economy

190 = RPM

192 = Multi-Section Message

194 = Diagnostics (On Request)

195 = Clear Fault

196 = Clear Fault Response

234 = Software Id (On Request)

235 = Idle Hours (On Request)

236 = Idle Fuel Used (On Request)

237 = VIN (On Request)

243 = Component Id (On Request)

245 = Distance

247 = Total Hours (On Request)

250 = Fuel Used (On Request)

1. Version Changes
   1. Version 1.0
      1. Initial Publication
   2. Version 1.1
      1. Renamed the IsVersionIncompatible property to IsCompatible.
   3. Version 1.2
      1. Compatible with API version 1.3.
      2. Added GetEngineVIN method.
      3. Added RetrievalMethod parameter to Truck Data methods.
   4. Version 1.3
      1. Compatible with API version 1.4.
      2. Requires Adapter Firmware 3.10.7.
      3. Added enum RetrievalMethods.
      4. Added RetrievalMethods to Truck Data methods.
      5. Added property SyncTimeout.
      6. Added property AdapterIdFilter.
      7. Added property MaxReconnectAttempts.
      8. Added property ConnectionState.
      9. Added property ConnectTimeout.
      10. Added Synchronized option to the Connect method.
      11. Added ConnectionState CANFilterFull.
      12. Renamed property DiscoveryTimeOut to DiscoveryTimeout.
      13. Renamed property MaxConnectRetrys to MaxReconnectAttempts.