

Public Support - Support Request #626

ADTF-46726 Provide CAN-FD structure

2017-05-10 13:30 - hidden

Status: Closed	
Priority: Normal	
Category:	
Customer: ELEKTROBIT	Product Issue Numbers:
Department: SUPPORT	Affected Products: ADTF 2.14.0, ADTF 3.0.0, ADTF Device Toolbox 2.7.0
Requester's Priority: Normal	Platform: Ubuntu 12.04 64bit, Ubuntu 16.04 64bit, Windows 7 64bit
Support Level: 2nd Level	Topic: DeviceTB::CANFD
Resolution: Solved Issue	FAQ Links:
Description	
Supportanfrage:	
<p>Wir haben aktuell eine ganze Reihe von Anfragen bzgl. CAN-FD und ich bin gerade am überlegen, ob wir das für ADTF-2 in unsere ARXML-Toolbox integrieren. Um hier kompatibel zu sein mit a) der VW-Internen Implementierung und b) mit der Implementierung, die im Laufe des Jahres in ADTF-3 integriert werden soll wollte ich fragen, ob ihr die Datenstruktur mit uns teilen könnt. In der aktuellen Beta der Device-TB ist ja noch nichts in der Richtung zu finden (auf jeden Fall nicht in der Doku).</p>	
<p>Grüße, Simon</p>	
<p>Best regards - Beste Grüße Ursula Groh</p>	
<p>EB Assist ADTF Support-Team</p>	
Lösung:	
<p>Die Bereitstellung der Struktur erfolgt laut KuFo Beschluss im Rahmen des Feature Complete. Die Integration von CAN-FD in DevTB 3.x ebenso, derzeit auf 2017b geplant.</p>	
<p>Siehe canfd_types.h.</p>	

History

#1 - 2017-05-10 15:40 - hidden

- Project changed from Public Support to 7
- Description updated
- Status changed from New to In Progress
- Topic set to DeviceTB::CANFD
- Support Level changed from 2nd Level to 3rd Level
- Customer set to ELEKTROBIT
- Department set to SUPPORT
- Affected Products ADTF 2.14.0, ADTF 3.0.0, ADTF Device Toolbox 2.7.0 added
- Platform Ubuntu 12.04 64bit, Ubuntu 16.04 64bit, Windows 7 64bit added

#2 - 2017-05-11 09:33 - hidden

@Stephan:

- Bitte CAN-FD Struktur aus DevTB 2.7 hier im Ticket bekannt machen, Ticket bleibt private (!). Damit kann EB arbeiten.

@EB:

- Die Bereitstellung der Struktur erfolgt laut KuFo Beschluss im Rahmen des Feature Complete.
- Die Integration von CAN-FD in DevTB 3.x ebenso, derzeit auf 2017b geplant.

#3 - 2017-05-11 09:35 - hidden

- Support Level changed from 3rd Level to 2nd Level

#5 - 2017-05-11 11:18 - hidden

- File canfd_types.h added

- Status changed from In Progress to Customer Feedback Required

- Resolution set to Solved Issue

Hallo Ursula,

hier die CAN-FD Struktur:

Die canfd_types.h liegt im Anhang.

```
struct tCANFDData
{
    /**
     * This enum specifies the different kinds of messages
     * that may be contained in the union
     */
    enum eMessageTag
    {
        MT_Data = 0,          //!< Data
        MT_Status = 1,       //!< Status
    };

    /**
     * CAN FD message flags
     */
    enum eDataFlags
    {
        DF_NONE = 0          //!< Standard flags
        , DF_ERROR_FRAME = 1  //!< Indicates an error frame
        , DF_REMOTE_FRAME = 2  //!< Indicates a remote frame
        , DF_TX_COMPLETED = 4  //!< Notification for successful message transmission
        , DF_EXTENDED_DATA_LENGTH = 8
    };
    /**< Indicates FlexibleData-Rate (FDF Flexible Datarate Format Indicator)
     * , DF_CAN_FD_FORMAT_IDENTIFIER = DF_EXTENDED_DATA_LENGTH //!< same as Extended Data Length
     * , DF_BAUD_RATE_SWITCH = 16  //!< Indicates that the Message uses Flexible Datarate
     * , DF_SET_CAN_FD_AND_BRS = DF_CAN_FD_FORMAT_IDENTIFIER | DF_BAUD_RATE_SWITCH
    */< Helper to Set Extended Data Length and Baud Rate Switch at once
     * , DF_ERROR_STATE_INDICATOR = 32
    */< EDI Bit Indicates an Error-active state at the CAN FD Node
    };

    /**
     * CAN FD bus state flags.
     */
    enum eBusStatus
    {
        BS_OFFLINE = 1,      //!< Bus is offline
        BS_ERROR_PASSIVE = 2,  //!< One of the error counters has reached the error level.
        BS_ERROR_WARNING = 4,  //!< One of the error counters has reached the warning level.
        BS_ERROR_ACTIVE = 8   //!< Bus is online
    };

    /**
     * CAN FD message id masks. These masks should be used to check for extended or standard messages
     * and to get the correct identifier from ui32Id in tData.
     */
    enum eMsgId
    {
        MSG_IDMASK_BASE = 0x000007FF  //!< Message IDs for base frame format use 11 bit identifiers
        , MSG_IDMASK_EXTENDED = 0x1FFFFFFF
    };
    /**< Message IDs for extended frame format use 29 bit identifiers
     * , MSG_EXTENDED_FLAG = 0x80000000  //!< Extended CAN messages are marked by bit 31
    */<
    };
};
```

```

/**
 * CAN FD message header structure
 */
struct tMessageHeader
{
    tUInt8    ui8Tag;           //!< Type of contained message (see eMessageTag)
    tUInt8    ui8Channel;      //!< Channel that received this message
    tTimeStamp tmTimeStamp;    //!< Hardware timestamp in micro seconds
};

/**
 * CAN FD message data structure
 */
struct tData
{
    tUInt32    ui32Id;
    //!< id of can message. For extended CAN messages bit 31 is set. Use the members of the enum eMsgId to get the
    //!< identifier and check for extended messages.
    tUInt8    ui8Length;
    //!< length of data [0..8,12,16,20,24,32,48,64] @attention DLC on Physical layer is coded differently
    tUInt8    ui8Reserved;     //!< reserved, should be zero
    tUInt16   ui16Flags;       //!< Flags @see eDataFlags
    tUInt16   ui16Reserved;    //!< reserved, should be zero
    tUInt32   ui32Reserved;    //!< reserved, should be zero
    tUInt8    au8Data[64];     //!< data field
};

/**
 * CAN FD bus status structure
 */
struct tStatus
{
    tUInt32    ui32BitRate;     //!< Arbitration or nominal CAN FD bus bitrate
    tUInt32    ui32RxBitCount;  //!< Count of received bits
    tUInt32    ui32TxBitCount;  //!< Count of transmitted bits
    tUInt16   ui16RxErrorCounter; //!< Error counter for the receive section of the CAN controller.
    tUInt16   ui16TxErrorCounter; //!< Error counter for the transmit section of the CAN controller.
    tUInt8    ui8BusStatus;     //!< Flags @see eBusStatus
    tUInt8    ui8Reserved;     //!< reserved, should be zero
    tUInt32    ui32DataBitRate;
    //!< alternate Bitrate used for Data in CAN FD messages with BRS flag set.
    tUInt8    au8Reserved[56];  //!< reserved, should be Zero
};

tMessageHeader sHeader;      //!< CAN message header structure

union
{
    tData    sData;           //!< used when ui8Tag == MT_Data
    tStatus  sStatus;        //!< used when ui8Tag == MT_Status
};
};

```

Damit sollte das Supportticket abgeschlossen sein.

Gibt es noch Fragen dazu, ansonsten bitte ein kurzes Feedback, damit wir es schließen können.

#6 - 2017-05-16 08:16 - hidden

Bitte um Feedback bis spätestens morgen den 17.05.2017.

Thema aus Supportsicht eigentlich abgeschlossen.

#7 - 2017-05-16 12:59 - hidden

Kann geschlossen werden. Vielen Dank! :)

#8 - 2017-05-16 16:14 - hidden

- Description updated

- Status changed from Customer Feedback Required to To Be Closed

@Florian, Ticket kann geschlossen werden.

#9 - 2017-05-16 16:14 - hidden

- File deleted (image001.gif)

#10 - 2017-05-17 12:18 - hidden

- Subject changed from ADTFS-46726 FW: CAN-FD to ADTFS-46726 Provide CAN-FD structure

- Status changed from To Be Closed to Closed

#11 - 2018-01-25 12:10 - hidden

- Project changed from 7 to Public Support

- Private changed from Yes to No

Files

canfd_types.h	14.4 KB	2017-05-11	hidden
---------------	---------	------------	--------