

MOST

BLF Logging Format

Specification

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Status	Completed
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Document Management

Revision list

Version	Date	Editor	Section	Changes, comments
1.0.0	2008-12-10	Mm	All	Initial Version Created; reviewed and released for CANoe/CANalyzer versions 5.1, 5.2, 6.0, 6.1, 7.0, 7.1
1.2.0	2009-01-30	Mm	2.18-2.24	MOST150 events; reviewed and released for CANoe/CANalyzer 7.1 SP2
1.3.0	2009-04-29	Mm	2.24	MOST System Event added reviewed and released for CANoe/CANalyzer 7.1 SP4
1.4.0	2009-05-18	Mm	1	Added disclaimer
1.4.1	2009-08-03	Mm	3.1.10	Special register event transports MAC address for Ethernet over MOST150 since CANoe/CANalyzer 7.2
1.5.0	2009-09-24	Mm	3.1.8, 3.3, 3.8, 3.25	AckNack and State fields adapted; MOST150 Allocation Table event added; new HW modes; new stress modes; reviewed and released for CANoe/CANalyzer 7.2
1.6.0	2010-01-08	Mm	3.12, 3.21, 3.22, 3.25, 3.26, 3.27	Additional DataLost flag; Events for MOST50; reviewed and released for CANoe/CANalyzer 7.2 SP3
1.7.0	2010-02-17	Sha	3.1.2; 3.1.3	New member mObjectVersion in VBLObjectHeader and VBLObjectHeader2
1.7.1	2010-04-15	Mm	3.1.7, 3.1.8, 3.18, 3.19, 3.20, 3.26, 3.27	Detailed information about transmission state added; reviewed and released for CANoe/CANalyzer 7.2 SP3
1.8	2010-11-10	Mm	3.6, 3.19, 3.23	Added max packet length; reviewed and released for CANoe/CANalyzer 7.2 SP3
1.8.1	2011-04-12	Mm	3.3.28	ECL event added
1.8.2	2011-06-07	Tlr	3.21, 3.22, 3.23	Max value for mFirstDataLen in VBLMOST150MessageFragment , VBLMOST150PktFragment and VBLMOSTEthernetPktFragment changed to 1524; reviewed and released for CANoe/CANalyzer 7.6 SP2
1.8.3	2011-09-29	Mm	3.8, 3.17	HW mode flag EthSpy added, Stress mode added; reviewed and released for CANoe/CANalyzer 7.6 SP3
1.8.4	2012-01-24	Mm	3.18-23 3.1.12	PAck and CAck details Fragments are now marked as MOST50 or MOST150

Version	Date	Editor	Section	Changes, comments
1.8.5	2012-04-12	Mm	all	Minor corrections; reviewed and released for CANoe/CANalyzer 8.0
1.8.6	2012-08-16	Mm	3.21-23 3.25	Explanation of length fields in fragment events Maximum number of free bytes in AllocTable event
1.8.7	2013-03-20	Tlr	3.24	New value for mld
1.8.8	2016-04-19	Mom	All	CI and layout
1.9	2020-02-07	vsn	3	Public API uses standard types, e.g. uint32_t instead of DWORD. Mentioned Linux libbinlog.so

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1 Disclaimer

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2 Overview

The document specifies the format of MOST events in the CANoe/CANalyzer BLF logging. The described structures can be used to read and write BLF logging files using the binlog.dll, or libbinlog.so, which can be found in the CANoe/CANalyzer User Data folder:

<UserDataFolder>\Programming\BLF_Logging

3 Format Description

3.1 Common Data Types

3.1.1 VBLObjectHeaderBase

Description: Object header base structure.

Parameter	Type	Description
mSignature	uint32_t	Object signature, must be BL_OBJ_SIGNATURE.
mHeaderSize	uint16_t	Size of header in bytes, set this member to sizeof(VBLObjectHeader) or sizeof(VBLObjectHeader2) depending on the object header type used for the object.
mHeaderVersion	uint16_t	Version number of object header. Set this member to 1 if the object has a member of type VBLObjectHeader. Set this member to 2 if the object has a member of type VBLObjectHeader2.
mObjectSize	uint32_t	Object size in bytes.
mObjectType	uint32_t	Object type (BL_OBJ_TYPE_*).

3.1.2 VBObjectHeader

Description: Object header. Version 1.

Parameter	Type	Description
mBase	VBObjectHeaderBase	Common object header base. See 3.1.1.
mObjectFlags	uint32_t	Unit of object timestamp. Following values are possible: 1: Object time stamp is saved as multiple of ten microseconds (BL_OBJ_FLAG_TIME_TEN_MICS) 2: Object time stamp is saved in nanoseconds. (BL_OBJ_FLAG_TIME_ONE_NANS)
mReserved	uint16_t	Reserved, must be 0.
mObjectVersion	uint16_t	Object specific version, has to be set to 0 unless stated otherwise in the description of a specific event.
mObjectTimeStamp	uin64_t	Time stamp of this object in the unit specified in mObjectFlags.

3.1.3 VBObjectHeader2

Description: Object header. Version 2.

Parameter	Type	Description
mBase	VBObjectHeaderBase	Common object header base. See 3.1.1.
mObjectFlags	uint32_t	Unit of object timestamp. Following values are possible: 1: Object time stamp is saved as multiple of ten microseconds (BL_OBJ_FLAG_TIME_TEN_MICS) 2: Object time stamp is saved in nanoseconds. (BL_OBJ_FLAG_TIME_ONE_NANS)
mTimeStampStatus	uint8_t	Bit field. The bits have the following meanings: Bit 0: Determines whether original timestamp member is valid (1) or not (0). Bit 1: Timestamp is generated by software (1) or by hardware (0). Bit 5: This bit has protocol specific meaning.
mReserved1	uint8_t	Reserved, must be 0.

Parameter	Type	Description
mObjectVersion	uint16_t	Object specific version, has to be set to 0 unless stated otherwise in the description of a specific event.
mObjectTimeStamp	uin64_t	Time stamp of this object in the unit specified in mObjectFlags.
mOriginalTimeStamp	uin64_t	Original timestamp in the unit specified in mObjectFlags..

3.1.4 Direction

Direction of message events.

Value	Description
0	Rx (received)
1	Tx (transmit receipt)
2	Tx Request (transmit request)

3.1.5 Control message sub type

Sub type of a MOST 25 Control message (see data sheet of OS8104 also).

Value	Description
0	Normal
1	RemoteRead
2	RemoteWrite
3	Alloc
4	Dealloc
5	GetSource
>5	not used so far

3.1.6 Addressing mode

Addressing mode of MOST25 Control messages.

Value	Description
0x00	Device (logical node address)
0x10	Node position
0x20	Broadcast
0x30	Groupcast
0xFF	Unknown

3.1.7 Transmission state MOST25

Transmission state of a MOST25 Control message.

Bit	Meaning	Restriction
0	0: bus inactive 1: bus active	only for Dir = Rx (VBLMOSTCtrl) or VBLMOSTSpy
1	1: unlock event during transmission (Unl)	only for Dir = Rx (VBLMOSTCtrl) or VBLMOSTSpy
4	1: acknowledged (Ack)	only for Dir = Tx (always set to 1 for Rx messages in node mode)
5	1: not acknowledged (NAck)	only for Dir = Tx
6	Send result: 0: Transmission error (TxF) 1: OK	only for Dir = Tx (VBLMOSTCtrl)

Note: In case of broadcast transmission, Ack and NAck can both be set.

3.1.8 Transmission state MOST50/150

Transmission states of MOST50/150 messages and packets.

Bit	Meaning	Restriction
0	0: bus inactive 1: bus active	only for Dir = Rx or mTransferType = Spy
4	1: acknowledged (Ack)	only for mTransferType = Node and Dir = Tx (always set to 1 for Rx messages in node mode)
5	1: not acknowledged (NAck)	only for Dir = Tx
6	Send result: 0: Transmission error (TxF) 1: OK	only for Dir = Tx only for mTransferType = Node

3.1.9 Acknowledge code

AckNAck holds the transmit status of a control message (see Transmit Status Register of OS8104 for MOST25).

Bit	Meaning	Restriction
0	1: no response (NoResp)	only for Dir = Tx or spy messages
1	1: valid receipt (Valid)	only for Dir = Tx or spy messages
2	1: CRC Error (CRCErr)	only for Dir = Tx or spy messages
3	1: receive buffer full (RxBufFull)	only for Dir = Tx or spy messages
4	1: acknowledged (Ack)	only for Dir = Tx or spy messages (always set to 1 for Rx messages in node mode)
5	1: negative acknowledge (NAck)	only for Dir = Tx or spy messages

3.1.10 Register event sub type

Operation type of a register event.

Value	Description
kUnspecified = 0	unspecified (or HW does not support sub types)
kNotify = 1	notification on register change (spontaneous)
kReadRequest = 2	request of a register read operation
kWriteRequest = 3	request of a register write operation
kReadResult = 4	result of a register read operation
kWriteResult = 5	result of a register write operation
kReadFailed = 6	register read operation failed
kWriteFailed = 7	register write operation failed

3.1.11 Register ID

IDs for identifying registers (VBLMOSTGenReg).

Value	Meaning
kEmpty = 0x0	
kNPR = 0x87	8 bit Node Position register
kGA = 0x89	8 bit Group (Group Address = 0x0300 + Group)
kNA = 0x8A	16 bit Node Address
kNDR = 0x8F	8 bit Node Delay (MOST25 only)
kMPR = 0x90	8 bit Number of nodes with open bypass
kMDR = 0x91	8 bit Maximum Delay (MOST25 only)
kSBC = 0x96	8 bit Synchronous Bandwidth Control (SBC) Synchronous Bandwidth = 4 x SBC Maximum values for SBC: MOST25: 15 (= 60 Bytes) MOST50: 29 (= 116 Bytes) MOST150: 93 (= 372 Bytes)
kAPA = 0xE8	16 bit Alternate Packet Address (MOST25 only)
kXTIM = 0xBE	8 bit Transmit Retry Time
kXRTY = 0xBF	8 bit Number of send attempts
kMacAdr = 0xFE	48 bit MAC address (EUI-48, conforming to the IEEE standard; MOST150 only)

3.1.12 Fragment Mask

If a bit in the mask is set, the corresponding data field has been seen on the bus.

Bit	Data field
0: 0x00000001	mDataLenAnnounced
1: 0x00000002	mSourceAdr
2: 0x00000004	mDestAdr
3: 0x00000008	mAckNack
4: 0x00000010	mPAck
5: 0x00000020	mPIndex
6: 0x00000040	mPriority
7: 0x00000080	mCRC
8: 0x00000100	mCAck
9: 0x00000200	mSourceMacAdr
10: 0x00000400	mDestMacAdr
31: 0x80000000	0: MOST150 fragment; 1: MOST50 fragment

3.1.13 Transfer Type

Message-like events can either be recorded through the MOST transceiver chip or through a separate network spy.

Transfer Type	Meaning
1: Node	MOST transceiver reported the message (either due to a successful reception or as acknowledgment for a transmit request).
2: Spy	Message was reported by the network spy. The Spy sees all messages independently of the destination address.

3.2 VBLMOSTSpy

Description: Message from MOST 25 Control Channel; received in spy mode (listen only).

Corresponding object type: BL_OBJ_TYPE_MOST_SPY

Parameter	Type	Description
mHeader	VBLObjectHeader	Common header type. See 3.1.2.
mChannel	uint16_t	Channel the message was sent or received.
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address

Parameter	Type	Description
mDestAdr	uint32_t	Target address
mMsg[17]	uint8_t	17 data bytes
mRTyp	uint16_t	See 3.1.5
mRTypAdr	uint8_t	See 3.1.6
mState	uint8_t	See 3.1.7
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check

3.3 VBLMOSTCtrl

Description: Message on MOST 25 Control Channel; received or transmitted in node mode.

Corresponding object type: BL_OBJ_TYPE_MOST_CTRL

Parameter	Type	Description
mHeader	VBObjectHeader	Common header type. See 3.1.2.
mChannel	uint16_t	Channel the message was sent or received.
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mMsg[17]	uint8_t	17 data bytes
mRTyp	uint16_t	See 3.1.5
mRTypAdr	uint8_t	See 3.1.6
mState	uint8_t	See 3.1.7
mAckNack	uint8_t	See 3.1.9 (since CANoe/CANalyzer 7.2)

3.4 VBLMOSTLightLock

Description: This event refers to the optical or electrical modulated signal at the transceiver's Rx.

"Signal On" means that a modulated signal has been detected.

"Lock" means that the receiver PLL (Phase Locked Loop) was able to establish synchronization with the phase of the modulated signal (to "lock").

"Stable Lock" means that for a certain period of time no unlock occurred (see MOST specification).

In case of a series of unlocks, the time of the different unlocks are accumulated. If this accumulated time is greater than a certain threshold, it is called "Critical Unlock" (details see MOST specification).

Corresponding object type: BL_OBJ_TYPE_MOST_LIGHTLOCK

Parameter	Type	Description
mHeader	VBObjectHeader	Common header type. See 3.1.2.
mChannel	uint16_t	Application channel
mState	int16_t	Signal state: 0x01 – Signal On + Lock 0x02 – Signal Off (implies No Lock) 0x03 – Signal On + No Lock 0x10 – Stable Lock 0x20 – Critical Unlock

3.5 VBLMOSTStatistic

Description: The event transports common network statistics. Usually the event is not visible in a trace window.

Corresponding object type: BL_OBJ_TYPE_MOST_STATISTIC

Parameter	Type	Description
mHeader	VBObjectHeader	Common header type. See 3.1.2.
mChannel	uint16_t	Application channel
mPktCnt	uint16_t	Number of messages on Asynchronous channel since the last Statistic event
mFrmCnt	int32_t	Number of messages on Control channel since the last Statistic event
mLightCnt	int32_t	Number of signal stat transitions since the last Statistic event
mBufferLevel	int32_t	Receive buffer level of Optolyzer G1 in spy mode

3.6 VBLMOSTPkt

Description: This event structure was never and should never be used. Use VBLMOSTPkt2 instead.

Corresponding object type: BL_OBJ_TYPE_MOST_PKT

3.7 VBLMOSTPkt2

Description: Message on MOST25 Packet Data Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_PKT2

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel

Parameter	Type	Description
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mArbitration	uint8_t	Arbitration byte
mTimeRes	uint8_t	Obsolete member; read/write 0
mQuadsToFollow	uint8_t	Number of quadlets
mCRC	uint16_t	Cyclic Redundancy Check
mPriority	uint8_t	Priority
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	Transmission state 0 for Rx 0x40 for TxOk (transmit request)
mPktDataLength	uint32_t	Length of variable data in bytes (1014 max)
mPktData	BL_LPBYTE	Variable data

3.8 VBLMOSTHWMMode

Description: This event is fired when one or more HW state changes. HW states are the AllBypass bit (e.g. ABY of OS8104), the Master/Slave selection (e.g. MTR of OS8104), the Control spy and the Asynchronous spy. The event transports all states even if only a single state has changed. <HWModeMask> denotes which state differs regarding to the previous HW mode event.

Corresponding object type: BL_OBJ_TYPE_MOST_HWMODE

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mHWMMode	uint16_t	Bit 0x01: Bypass: 0: open; 1: active Bit 0x02: Timing mode: 0: slave; 1: master Bit 0x04: Master mode: 0: static master; 1: non-static master Bit 0x08: 0: Ethernet Spy active: 1: blocks "Ethernet Spy over MOST" channel Bit 0x10: Control channel spy: 1: active Bit 0x20: Async. channel spy: 1: active Bit 0x40: 1: no "Ethernet over MOST" events (MOST150) Bit 0x80: 1: no events from async. channel

Parameter	Type	Description
mHWMModeMask	uint16_t	Bitmask of changed bits

3.9 VBLMOSTReg

Description: This event transports a register read or write result (e.g. reading the routing engine of the OS8104). Unlike the special register event (VBLMOSTGenReg) this event does not occur spontaneous.

Corresponding object type: BL_OBJ_TYPE_MOST_REG

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mSubType	uint8_t	See 3.1.10
mHandle	uint32_t	Operation handle (obsolete; write 0)
mOffset	uint32_t	Register address offset
mChip	uint16_t	ID of chip 1 – OS8104
mRegDataLen	uint16_t	Number of valid bytes in mRegData
mRegData[16]	uint8_t	Register data

3.10 VBLMOSTGenReg

Description: This event reports the change of an important transceiver register like node position or node address. It can occur spontaneous or as result of a read/write operation. Directly after measurement start the current values of the special registers are reported even if they have not changed.

Corresponding object type: BL_OBJ_TYPE_MOST_GENREG

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mSubType	uint8_t	See 3.1.10
mHandle	uint32_t	Operation handle (obsolete; write 0)
mRegId	uint16_t	See 3.1.11
mRegValue	uin64_t	Register value

3.11 VBLMOSTNetState

Description: Network state derived by MOST Supervisor Layer I+II

Corresponding object type: BL_OBJ_TYPE_MOST_NETSTATE

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mStateNew	uint16_t	Current network state 0 (undefined): Before the first event (shortly after measurement start) the network status is unknown. 1 (reserved for Ring Break Diagnostics mode) 2 (PowerOff): The network interface to the MOST ring is deactivated. The Tx FOT is not emitting any light. 3 (NetInterfaceInit): The network interface is ready to communicate in the MOST ring. 4 (ConfigNotOk): The network interface is in normal operating mode (stable lock). 5 (ConfigOk): From the perspective of the Network Master the system configuration is valid. 6 (NetOn/InitReady): NetOn/InitReady reported to application
mStateOld	uint16_t	Previous network state

3.12 VBLMOSTDataLost

Description: Indicates loss of data. (Number of lost messages and start and end time stamp of data loss.)

Corresponding object type: BL_OBJ_TYPE_MOST_DATA_LOST

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mInfo	uint32_t	Data loss information Bit0: 1: data loss on control channel (spy) Bit1: 1: data loss on control channel (node) Bit2: 1: data loss on asynchronous channel (spy) Bit3: 1: data loss on asynchronous channel (node) Bit4: 1: data loss on synchronous channel Bit5: 1: data loss since driver queue full
mLostMsgsCtrl	uint32_t	Number of lost messages on Control channel
mLostMsgsAsync	uint32_t	Number of lost messages on Packet Data Channel channel
mLastGoodTimeStampNS	uint64_t	Absolute time in nano-seconds
mNextGoodTimeStampNS	uint64_t	Absolute time in nano-seconds

3.13 VBLMOSTTrigger

Description: Transports changes of HW IO pins. The event is used for debugging purposes only.

Corresponding object type: BL_OBJ_TYPE_MOST_TRIGGER

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mMode	uint16_t	Trigger mode: 0 – unknown 1 – synchronization master 2 – synchronization slave
mHW	uint16_t	HW that generated the trigger event 0 – unknown 1 – Optolyzer 2 – reserved 3 – reserved 4 – VN2600/VN2610 5 – OptoLyzer OL3150o 6 – VN2640 7 – OptoLyzer OL3050e 8 – SMSC PCI 50 9 – MOCCAcompact50e
mPreviousTriggerValue	uint32_t	value of IO register
mCurrentTriggerValue	uint32_t	value of IO register

3.14 VBLMOSTStatisticEx

Description: Event transports some bus statistic information that was previously (until CA-Noe/CANalyzerVersion 6.1) carried by the main bus statistic event but was not logged. Usually the event is not visible in a Trace window.

Corresponding object type: BL_OBJ_TYPE_MOST_STATISTICEX

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mCodingErrors	uint32_t	Number of coding errors
mFrameCounter	uint32_t	MOST frame counter

3.15 VBLMOSTTxLight

Optical physical layer: Information about light output of the Fiber Optical Transmitter

Electrical physical layer: Signal output state

Corresponding object type: BL_OBJ_TYPE_MOST_TXLIGHT

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mState	uint16_t	0 – TxLight/Signal off 1 – TxLight/Signal enabled 2 – TxLight/Signal forced on

3.16 VBLMOSTAllocTab

Description: Transports current state of the MOST25 Allocation Table of connected hardware interface.

Corresponding object type: BL_OBJ_TYPE_MOST_ALLOCTAB

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mLength	uint16_t	Length of variable data (usually 60 bytes for MOST25)
mTableData	BL_LPBYTE	Allocation Table The label of a synchronous connection can be distributed over several bytes in the Allocation Table. Each byte in mTableData contains a value that specifies the identification number of the label it belongs to. If the device is a timing master, the MSB of the byte value is used to indicate if the label is in use or not, otherwise the MSB should be ignored. The label number thus can be determined by byte value & 0x7F. If the resulting label number is 0x70, the byte is not used for any label.

3.17 VBLMOSTStress

Description: Information about Stress activity of the hardware interface.

Corresponding object type: BL_OBJ_TYPE_MOST_STRESS

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel

Parameter	Type	Description
mState	uint16_t	State of Stress mode: 0 – Stopped 1 – Started
mMode	uint16_t	Stress mode of HW interface: 1 – Light 2 – Lock 3 – Busload Ctrl 4 – Busload Async 5 – Rx Buffer Ctrl 6 – TxLight power 7 – Bypass toggling 8 – SystemLock flag usage 9 – Shutdown flag usage 10 – Rx Buffer Async

3.18 VBLMOST150Message

Description: Message on MOST150 Control Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_150_MESSAGE

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	See 3.1.8
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check
mPAck	uint8_t	Pre-emptive acknowledge code (spy only) 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter (spy only) 0x00: No Response 0x01: CRC error 0x04: OK
mPriority	uint8_t	Priority

Parameter	Type	Description
mPIndex	uint8_t	Packet index, increments per message on MOST
mMsgLen	uint32_t	Length of variable data in bytes (6...51)
mMsg	BL_LPBYTE	Variable data

3.19 VBLMOST150Pkt

Description: Message on MOST150 Packet Data Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_150_PKT

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	See 3.1.8
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check
mPack	uint8_t	Pre-emptive acknowledge code (spy only) 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter (spy only) 0x00: No Response 0x01: CRC error 0x04: OK
mPriority	uint8_t	Priority (not used; write 0x00)
mPIndex	uint8_t	Packet index, increments per message on MOST
mPktDataLength	uint32_t	Length of variable data in bytes (1524 max)
mPktData	BL_LPBYTE	Variable data

3.20 VBLMOSTEthernetPkt

Description: Message on MOST Ethernet Packet Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_ETHERNET_PKT

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mDir	uint8_t	See 3.1.4
mSourceMacAdr	uin64_t	48 bit source address
mDestMacAdr	uin64_t	48 bit target address
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	See 3.1.8
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check
mPack	uint8_t	Pre-emptive acknowledge code (spy only) 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter (spy only) 0x00: No Response 0x01: CRC error 0x04: OK
mPktDataLength	uint32_t	Length of variable data in bytes (1506 max)
mPktData	BL_LPBYTE	Variable data

3.21 VBLMOST150MessageFragment

Description: Partial transmitted MOST50 or MOST150 Control Channel message. Fragments are reported from a network spy if the message transmission is corrupted or terminated.

Corresponding object type: BL_OBJ_TYPE_MOST_150_MESSAGE_FRAGMENT

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mAckNack	uint8_t	See 3.1.9
mValidMask	uint32_t	See 3.1.12
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address

Parameter	Type	Description
mPAck	uint8_t	Pre-emptive acknowledge code 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter 0x00: No Response 0x01: CRC error 0x04: OK
mPriority	uint8_t	Priority
mPIndex	uint8_t	Packet index, increments per message on MOST
mCRC	uint32_t	Cyclic Redundancy Check
mDataLen	uint32_t	Number of transmitted user data bytes. These bytes were counted on bus. Note: The number of bytes saved in this event is stored in mFirstDataLen.
mDataLenAnnounced	uint32_t	Announced user data length at start of transmission. In some cases (e.g. sending to an invalid target address, receive buffer full of target device) the transmission is terminated before all data bytes have been sent. Then the counted number of bytes on bus is less than the announced data length (mDataLen < mDataLenAnnounced). Due to rare and very specific bit errors (degrade of end termination byte) mDataLen can also be greater than mDataLenAnnounced.
mFirstDataLen	uint32_t	Number of bytes stored in mFirstData (1524 max). Note: In order to limit the size of this event not all counted bytes on bus will be stored in the payload of the logging event.
mFirstData	BL_LPBYTE	Variable data

3.22 VBLMOST150PktFragment

Description: Partial transmitted message on MOST50 and MOST150 Packet Data Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_150_PKT_FRAGMENT

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel

Parameter	Type	Description
mAckNack	uint8_t	See 3.1.9
mValidMask	uint32_t	See 3.1.12
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mPack	uint8_t	Pre-emptive acknowledge code 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter 0x00: No Response 0x01: CRC error 0x04: OK
mPriority	uint8_t	Priority (not used; write 0x00)
mPIndex	uint8_t	Packet index, increments per message on MOST
mCRC	uint32_t	Cyclic Redundancy Check
mDataLen	uint32_t	Number of transmitted user data bytes. These bytes were counted on bus. Note: The number of bytes saved in this event is stored in mFirstDataLen.
mDataLenAnnounced	uint32_t	Announced user data length at start of transmission. In some cases (e.g. sending to an invalid target address, receive buffer full of target device) the transmission is terminated before all data bytes have been sent. Then the counted number of bytes on bus is less than the announced data length (mDataLen < mDataLenAnnounced). Due to rare and very specific bit errors (degrade of end termination byte) mDataLen can also be greater than mDataLenAnnounced.
mFirstDataLen	uint32_t	Number of bytes stored in mFirstData (1524 max). Note: In order to limit the size of this event not all counted bytes on bus will be stored in the payload of the logging event.
mFirstData	BL_LPBYTE	Variable data

3.23 VBLMOSTEthernetPktFragment

Description: Partial transmitted message on MOST Ethernet Packet Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_ETHERNET_PKT_FRAGMENT

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mAckNack	uint8_t	See 3.1.9
mValidMask	uint32_t	See 3.1.12
mSourceMacAdr	uin64_t	48 bit source address
mDestMacAdr	uin64_t	48 bit target address
mPacK	uint8_t	Pre-emptive acknowledge code 0x00: No Response 0x01: Buffer full 0x04: OK
mCAck	uint8_t	CRC acknowledge from the packet receiver(s) to the packet transmitter 0x00: No Response 0x01: CRC error 0x04: OK
mCRC	uint32_t	Cyclic Redundancy Check
mDataLen	uint32_t	Number of transmitted user data bytes. These bytes were counted on bus. Note: The number of bytes saved in this event is stored in mFirstDataLen.
mDataLenAnnounced	uint32_t	Announced user data length at start of transmission. In some cases (e.g. sending to an invalid target address, receive buffer full of target device) the transmission is terminated before all data bytes have been sent. Then the counted number of bytes on bus is less than the announced data length (mDataLen < mDataLenAnnounced). Due to rare and very specific bit errors (degrade of end termination byte) mDataLen can also be greater than mDataLenAnnounced.
mFirstDataLen	uint32_t	Number of bytes stored in mFirstData (1524 max). Note: In order to limit the size of this event not all counted bytes on bus will be stored in the payload of the logging event.
mFirstData	BL_LPBYTE	Variable data

3.24 VBLMOSTSystemEvent

Description: Event for various system states.

Corresponding object type: BL_OBJ_TYPE_MOST_SYSTEM_EVENT

Parameter	Type	Description
mHeader	VLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mId	uint8_t	Identification of transported data (enumeration): 1 - System Lock (MOST150) 2 - Shutdown Flag (MOST150) 3 - Shutdown Reason (MOST150)
mValue	uint32_t	Current value
mValueOld	uint32_t	Previous value

3.25 VBLMOST150AllocTab

Description: Transports current state and changes of the MOST50/150 Allocation Table.

Corresponding object type: BL_OBJ_TYPE_MOST_150_ALLOCTAB

Parameter	Type	Description
mHeader	VLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mEventModeFlags	uint16_t	Determines the data layout (see below)
mFreeBytes	uint16_t	Number of free bytes after the operation Max. 116 with SBC=29 for MOST50 Max. 372 with SBC=93 for MOST150
mLength	uint16_t	Length of variable data in bytes. The value must be a multiple of 4.
mTableData	BL_LPBYTE	Allocation Table data

The data layout mTableData depends on bit 0 of mEventModeFlags.

If bit 0 of mEventModeFlags is clear mTableData contains mLength/4 records with the following fields. (Other data layouts are not specified yet.)

Field	Start bit	Bit count	Description
LabelIdent	0	12	Synchronous Connection Label
LabelStatus	12	4	0: label unchanged 4: label has been added (allocated) 8: label has been removed (de-allocated) List removed labels at the end of the table! Listing of removed labels is optional.
LabelWidth	16	16	Width of the label in bytes

3.26 VBLMOST50Message

Description: Message on MOST50 Control Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_50_MESSAGE

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	See 3.1.8
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check
mPriority	uint8_t	Priority
mMsgLen	uint32_t	Length of variable data in bytes (5...17)
mMsg	BL_LPBYTE	Variable data

3.27 VBLMOST50Pkt

Description: Message on MOST50 Packet Data Channel.

Corresponding object type: BL_OBJ_TYPE_MOST_50_PKT

Parameter	Type	Description
mHeader	VBObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mDir	uint8_t	See 3.1.4
mSourceAdr	uint32_t	Source address
mDestAdr	uint32_t	Target address
mTransferType	uint8_t	See 3.1.13
mState	uint8_t	See 3.1.8
mAckNack	uint8_t	See 3.1.9
mCRC	uint32_t	Cyclic Redundancy Check
mPriority	uint8_t	Priority

Parameter	Type	Description
mPktDataLength	uint32_t	Length of variable data in bytes (1014 max)
mPktData	BL_LPBYTE	Variable data

3.28 VBLMOSTEcl

Description: State change of the MOST Electrical Control Line.

Corresponding object type: BL_OBJ_TYPE_MOST_ECL

Parameter	Type	Description
mHeader	VBLObjectHeader2	Common header type. See 3.1.3.
mChannel	uint16_t	Application channel
mMode	uint16_t	0 – discrete 1 – sequence
mEclState	uint16_t	mMode = 0: 0 – line low 1 – line high mMode = 1: 0 – sequence stopped 1 – sequence started