

OpenLCB MTI Definitions

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		Full MTI Format															CAN																																	
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		
		15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
		Reserved	Reserved	Special	Stream or Datagram		Priority		Type within priority (decimal)			Simple Protocol		Address present		Event# present		Modifier within Priority/Type		Full MTI (Hex)		Priority	Frame-type	CAN Frame Type		CAN-MTI or Destination-alias ("Variable Part") (hex)								Source-alias								CAN Header (hex)		Data-Part { } = optional						
Number of bits in field:		1	1	1	1	2	5			1	1	1	2	16		1	1	3	12								12								29		64													
Basic	Initialization Complete	0	0	0	0	0	8			0	0	0		0100		1	1	1	100								sss								[19100sss]		Full Source Node ID													
	Verify Node ID Number Addressed	0	0	0	0	1	4			0	1	0		0488		1	1	1	488								sss								[19488sss]		fddd													
	Verify Node ID Number Global	0	0	0	0	1	4			1	0	0		0490		1	1	1	490								sss								[19490sss]															
	Verified Node ID Number	0	0	0	0	0	11			1	0	0		0170		1	1	1	170								sss								[19170sss]		{Full Source Node ID}													
	Optional Interaction Rejected	0	0	0	0	0	3			0	1	0		0068		1	1	1	068								sss								[19068sss]		fddd, error, optional info													
	Terminate Due to Error	0	0	0	0	0	5			0	1	0		00A8		1	1	1	0A8								sss								[190A8sss]		fddd, error, optional info													
Protocol Support	Protocol Support Inquiry	0	0	0	0	2	1			0	1	0		0828		1	1	1	828								sss								[19828sss]		fddd													
	Protocol Support Reply	0	0	0	0	1	19			0	1	0		0668		1	1	1	668								sss								[19668sss]		fddd, Protocol flags													
Event Exchange	Identify Consumer	0	0	0	0	2	7			1	0	1		08F4		1	1	1	8F4								sss								[198F4sss]		EventID													
	Consumer Range Identified	0	0	0	0	1	5			0	0	1		04A4		1	1	1	4A4								sss								[194A4sss]		EventID with mask													
	Consumer Identified w validity unknown	0	0	0	0	1	6			0	0	1	3	04C7		1	1	1	4C7								sss								[194C7sss]		EventID													
	Consumer Identified as currently valid	0	0	0	0	1	6			0	0	1	0	04C4		1	1	1	4C4								sss								[194C4sss]		EventID													
	Consumer Identified as currently invalid	0	0	0	0	1	6			0	0	1	1	04C5		1	1	1	4C5								sss								[194C5sss]		EventID													
	Consumer Identified (reserved)	0	0	0	0	1	6			0	0	1	2	04C6		1	1	1	4C6								sss								[194C6sss]		EventID													
	Identify Producer	0	0	0	0	2	8			1	0	1		0914		1	1	1	914								sss								[19914sss]		EventID													
	Producer Range Identified	0	0	0	0	1	9			0	0	1		0524		1	1	1	524								sss								[19524sss]		EventID with mask													
	Producer Identified w validity unknown	0	0	0	0	1	10			0	0	1	3	0547		1	1	1	547								sss								[19547sss]		EventID													
	Producer Identified as currently valid	0	0	0	0	1	10			0	0	1	0	0544		1	1	1	544								sss								[19544sss]		EventID													
	Producer Identified as currently invalid	0	0	0	0	1	10			0	0	1	1	0545		1	1	1	545								sss								[19545sss]		EventID													
	Producer Identified (reserved)	0	0	0	0	1	10			0	0	1	2	0546		1	1	1	546								sss								[19546sss]		EventID													
	Identify Events Addressed	0	0	0	0	2	11			0	1	0		0968		1	1	1	968								sss								[19968sss]		fddd													
	Identify Events Global	0	0	0	0	2	11			1	0	0		0970		1	1	1	970								sss								[19970sss]															
	Learn Event	0	0	0	0	1	12			1	0	1		0594		1	1	1	594								sss								[19594sss]		EventID													
	Producer/Consumer Event Report	0	0	0	0	1	13			1	0	1		05B4		1	1	1	5B4								sss								[195B4sss]		EventID													
Traction	Traction Control Message	0	0	0	0	1	15			0	1	0		05E8		1	1	1	5E8								sss								[195E8sss]		fddd, data bytes													
Other	Xpressnet	0	0	0	0	2	1		0		0	0		0820		1	1	1	820								sss								[19820sss]		Xpressnet packet													
Remote Button	Remote Button Request	0	0	0	0	2	10			0	1	0	0	0948		1	1	1	948								sss								[19948sss]		fddd, data bytes													
	Remote Button Reply	0	0	0	0	2	10			0	1	0	1	0949		1	1	1	949								sss								[19949sss]		fddd, data bytes													
Ident	Simple Node Ident Info Request	0	0	0	0	3	15			0	1	0		0DE8		1	1	1	DE8								sss								[19DE8sss]		fddd													
	Simple Node Ident Info Reply	0	0	0	0	2	16			0	1	0		0A08		1	1	1	A08								sss								[19A08sss]		fddd, data bytes													
Datagram	Datagram	0	0	0	1	3	2		0		1	0		1C48																																				
	→ CAN-Datagram Content (one frame)	"															1	1	2	ddd								sss								[1Addsss]		Data (0-8 bytes)												
	→ CAN-Datagram Content (first frame)	"															1	1	3	ddd								sss								[1Bdddsss]		Data (0-8 bytes)												
	→ CAN-Datagram Content (middle frame)	"															1	1	4	ddd								sss								[1Cdddsss]		Data (0-8 bytes)												
	→ CAN-Datagram Content (last frame)	"															1	1	5	ddd								sss								[1Ddddsss]		Data (0-8 bytes)												
Stream	Datagram Received OK	0	0	0	0	2	17			0	1	0		0A28		1	1	1	A28								sss								[19A28sss]		fddd													
	Datagram Rejected	0	0	0	0	2	18			0	1	0		0A48		1	1	1	A48								sss								[19A48sss]		fddd, error code													
	Stream Initiate Request	0	0	0	0	3	6			0	1	0		0CC8		1	1	1	CC8								sss								[19CC8sss]		fddd, buffer size, srcSID													
	Stream Initiate Reply	0	0	0	0	2	3			0	1	0		0868		1	1	1	868								sss								[19868sss]		fddd, buffer size, srcSID													
	Stream Data Send	0	0	0	1	3	28			0	1	0		1F88		1	1	7	ddd								sss								[1Fdddsss]		Data (0-8 bytes)													
	Stream Data Proceed	0	0	0	0	2	4			0	1	0		0888		1	1	1	888								sss								[19888sss]		fddd, srcSID, dstSID													
Extra	Stream Data Complete	0	0	0	0	2	5			0	1	0		08A8		1	1	1	8A8								sss								[198A8sss]		fddd, srcSID, dstSID, { len }													
	Node number Allocate	0	0	1	0	0	0			0	0	0		2000		4	4	4	000								sss								[49000sss]		not carried on CAN													
	No Filtering	0	0	1	0	0	1			0	0	0		2020		4	4	4	020								sss								[49020sss]		(Still under discussion)													
	Reserved for MTI Expansion					0	0																																											
	Reserved for MTI Expansion					1	0																																											
	Reserved for MTI Expansion					2	0																																											
	Reserved for MTI Expansion					3	0																																											

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3	Address present – this message has an address.
2	Event present – this message has an event#.
0-1	Modifier within modifier type – message specific extra information

KEY	s, sss, ssss ssss ssss – source alias
	d, ddd, dddd dddd dddd – destination alias
	x, xxx, xxxx xxxx xxxx – undefined field

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General				CAN		
		Full MTI (Hex)	Data		CAN Header (hex)	Data-Part { } = optional
Number of bits in field:		16	many		29	64
Basic	Initialization Complete	0100	Source	Initialization Complete	[19100sss]	Full Source Node ID
	Verify Node ID Number Addressed	0488	Destination, Source	Verify Node ID Number Addressed	[19488sss]	fddd
	Verify Node ID Number Global	0490	Source	Verify Node ID Number Global	[19490sss]	
	Verified Node ID Number	0170	Source	Verified Node ID Number	[19170sss]	{Full Source Node ID}
	Optional Interaction Rejected	0068	Destination, Source, error, optional	Optional Interaction Rejected	[19068sss]	fddd, error, optional info
	Terminate Due to Error	00A8	Destination, Source, error, optional	Terminate Due to Error	[190A8sss]	fddd, error, optional info
Protocol Support	Protocol Support Inquiry	0828	Destination, Source	Protocol Support Inquiry	[19828sss]	fddd
	Protocol Support Reply	0668	Destination, Source, Protocol flags	Protocol Support Reply	[19668sss]	fddd, Protocol flags
Event Exchange	Identify Consumer	08F4	EventID, Source	Identify Consumer	[198F4sss]	EventID
	Consumer Identify Range	04A4	EventID with Mask, Source	Consumer Identify Range	[194A4sss]	EventID with mask
	Consumer Identified w validity unknown	04C7	EventID, Source	Consumer Identified w validity unknown	[194C7sss]	EventID
	Consumer Identified as currently valid	04C4	EventID, Source	Consumer Identified as currently valid	[194C4sss]	EventID
	Consumer Identified as currently invalid	04C5	EventID, Source	Consumer Identified as currently invalid	[194C5sss]	EventID
	Consumer Identified (reserved)	04C6	EventID, Source	Consumer Identified (reserved)	[194C6sss]	EventID
	Identify Producer	0914	EventID, Source	Identify Producer	[19914sss]	EventID
	Producer Identify Range	0524	EventID with Mask, Source	Producer Identify Range	[19524sss]	EventID with mask
	Producer Identified w validity unknown	0547	EventID, Source	Producer Identified w validity unknown	[19547sss]	EventID
	Producer Identified as currently valid	0544	EventID, Source	Producer Identified as currently valid	[19544sss]	EventID
	Producer Identified as currently invalid	0545	EventID, Source	Producer Identified as currently invalid	[19545sss]	EventID
	Producer Identified (reserved)	0546	EventID, Source	Producer Identified (reserved)	[19546sss]	EventID
	Identify Events Addressed	0968	Destination, Source	Identify Events Addressed	[19968sss]	fddd
	Identify Events Global	0970	Source	Identify Events Global	[19970sss]	
	Learn Event	0594	EventID, Source	Learn Event	[19594sss]	EventID
	Producer/Consumer Event Report	05B4	EventID, Source	Producer/Consumer Event Report	[195B4sss]	EventID
Other	Xpressnet	0820	Source, Xpressnet packet	Xpressnet	[19820sss]	Xpressnet packet
Ident	Simple Node Ident Info Request	0DE8	Destination, Source	Simple Node Ident Info Request	[19DE8sss]	fddd
	Simple Node Ident Info Reply	0A08	Destination, Source, Data bytes	Simple Node Ident Info Reply	[19A08sss]	fddd, data bytes
Datagram	Datagram Content	1C48	Destination, Source, Data bytes	CAN-Datagram Content (one frame)	[1Adddsss]	Data (0-8 bytes)
				CAN-Datagram Content (first frame)	[1Bdddsss]	Data (0-8 bytes)
				CAN-Datagram Content (middle frame)	[1Cdddsss]	Data (0-8 bytes)
				CAN-Datagram Content (last frame)	[1Ddddsss]	Data (0-8 bytes)
	Datagram Received OK	0A28	Destination, Source	Datagram Received OK	[19A28sss]	fddd
	Datagram Rejected	0A48	Destination, Source, Error code	Datagram Rejected	[19A48sss]	fddd, error code
Stream	Stream Initiate Request	0CC8	Destination, Source, Buffer size	Stream Initiate Request	[19CC8sss]	fddd, buffer size, srcSID
	Stream Initiate Reply	0868	Destination, Source, Buffer size	Stream Initiate Reply	[19868sss]	fddd, buffer size, srcSID
	Stream Data Send	1F88	Destination, Source, Data bytes	Stream Data Send	[1Fdddsss]	Data (0-8 bytes)
	Stream Data Proceed	0888	Destination, Source, ID	Stream Data Proceed	[19888sss]	fddd, srcSID, dstSID
	Stream Data Complete	08A8	Destination, Source, ID, {len}	Stream Data Complete	[198A8sss]	fddd, srcSID, dstSID, { len }
Extra	Node number Allocate	2000	Source			
	No Filtering	2020	Source			