V2I LITE IOD on CX821 – Cluster STSS

V1.4

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Project: *V2I LITE*

1.0 V2I LITE IOD

1.1 Functional Description

This STSS handles the functions associated with the V2I(Vehicle to Infrastructure) LITE feature When V2I LITE function is available(which means the system is in normal working conditions and has traffic light data), Cluster shall provide the corresponding UI: Traffic Light Information, Green Light Notification, Green Wave indicator, Road Side Information, Red Light Violation Warning.
The Instrument Cluster receives the pre-defined Bus signals from IVI, the communication mode will vary according to the configuration of the vehicle program, as shown in the following table.

Table 1.0 Communication Mode between Cluster and IVI

EEA(Electrical and Electronic Architecture) of Cluster	Communication Mode	Comments
CDC(Central Display Controller)	Dbus	Detailed signal lists refer to ***Table 1.1***.
Non-CDC	CAN Bus	

1.2 Interfaces

Figure 1.0 V2I LITE IOD Function Context Diagram

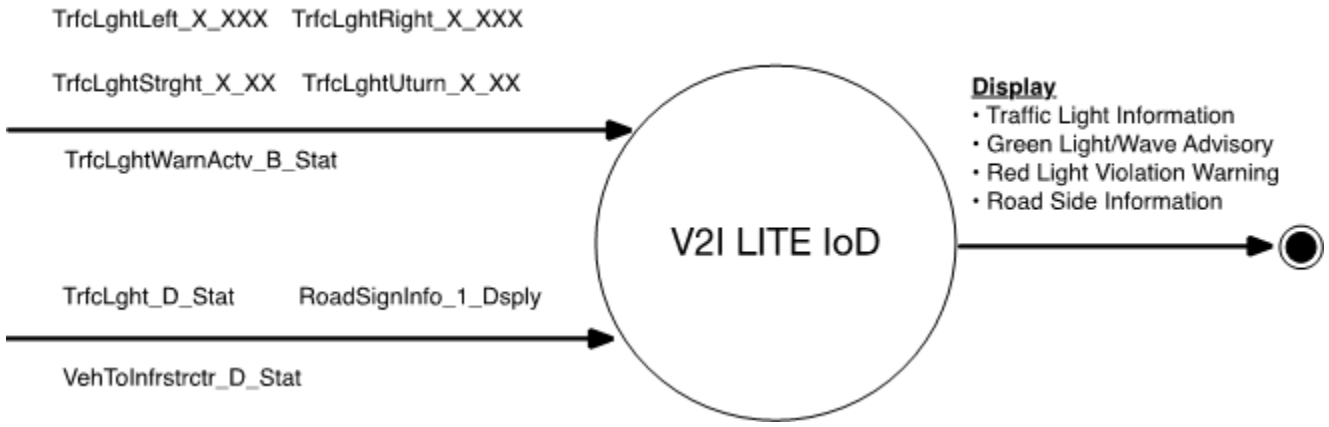


Table 1.1 V2I LITE Dbus and CAN Bus signal lists

V2I LITE Dbus and CAN Bus Signals are in one-to-one correspondence.

GROUP ID Value	Message ID	Length	Byte[x]	Byte[x]'s Name	Byte[x]'s Description (MSB)	Needed by Cluster
Dbus(0086)	0	8	Byte[0]-Byte[7]	RoadSignInfo1_D_Dsply	Range: 0-255	Yes
		16	Byte[16]-Byte[31]	RoadStopLine_L_Est	Range: 0-65533	No
		1	Byte[32]	TrfcLghtVActv_B_Stat	Range: 0-1	Yes
		3	Byte[33]-Byte[35]	TrfcLghtDir_D_Stat	Range: 0-7	Yes
		3	Byte[36]-Byte[38]	TrfcLght_D_Stat	Range: 0-7	Yes
		1	Byte[39]	RoadStopLineL_B_Avail	Range: 0-1	No
		8	Byte[40]-Byte[47]	TrfcLght_V_Mn	Range: 0-253	Yes

GROUP ID Value	Message ID	Length	Byte[x]	Byte[x]'s Name	Byte[x]'s Description (MSB)	Needed by Cluster
		8	Byte[48]-Byte[55]	TrfcLght_V_Mx	Range: 0-253	Yes
		1	Byte[56]	TrfcLghtWarnActv_B_Stat	Range: 0-1	Yes
		7	Byte[57]-Byte[63]	TrfcLghtDecel_A_Dsply	Range: 0-125	No
		3	Byte[64]-Byte[66]	VehToInfrstrctr_D_Stat	Range: 0-7	Yes
	1	8	Byte[0]-Byte[7]	TrfcLghtLeft_T_Actl	Range: 0-253	Yes
		2	Byte[8]-Byte[9]	TrfcLghtLeftType_D_Stat	Range: 0-3	Yes
		3	Byte[10]-Byte[12]	TrfcLghtLeftOn_D_Stat	Range: 0-7	Yes
		3	Byte[13]-Byte[15]	TrfcLghtLeftColr_D_Stat	Range: 0-7	Yes
		8	Byte[16]-Byte[23]	TrfcLghtRight_T_Actl	Range: 0-253	Yes
		2	Byte[24]-Byte[25]	TrfcLghtRightType_D_St	Range: 0-3	Yes
		3	Byte[26]-Byte[28]	TrfcLghtRightOn_D_Stat	Range: 0-7	Yes
		3	Byte[29]-Byte[31]	TrfcLghtRightColr_D_St	Range: 0-7	Yes
		8	Byte[32]-Byte[39]	TrfcLghtStrght_T_Actl	Range: 0-253	Yes
		2	Byte[40]-Byte[41]	TrfcLghtStrghtType_D_St	Range: 0-3	Yes
		3	Byte[42]-Byte[44]	TrfcLghtStrghtOn_D_Stat	Range: 0-7	Yes
		3	Byte[45]-Byte[47]	TrfcLghtStrghtColr_D_St	Range: 0-7	Yes
		8	Byte[48]-Byte[55]	TrfcLghtUturn_T_Actl	Range: 0-253	Yes
		2	Byte[56]-Byte[57]	TrfcLghtUturnType_D_St	Range: 0-3	Yes
		3	Byte[58]-Byte[60]	TrfcLghtUturnOn_D_Stat	Range: 0-7	Yes
		3	Byte[61]-Byte[63]	TrfcLghtUturnColr_D_St	Range: 0-7	Yes
CAN Bus	0x273	8	Byte[0]-Byte[7]	RoadSignInfo1_D_Dsply	Range: 0-255	NaN
		16	Byte[16]-Byte[31]	RoadStopLine_L_Est	Range: 0-65533	
		1	Byte[32]	TrfcLghtVActv_B_Stat	Range: 0-1	
		3	Byte[33]-Byte[35]	TrfcLghtDir_D_Stat	Range: 0-7	
		3	Byte[36]-Byte[38]	TrfcLght_D_Stat	Range: 0-7	
		1	Byte[39]	RoadStopLineL_B_Avail	Range: 0-1	
		8	Byte[40]-Byte[47]	TrfcLght_V_Mn	Range: 0-253	

GROUP ID Value	Message ID	Length	Byte[x]	Byte[x]'s Name	Byte[x]'s Description (MSB)	Needed by Cluster
		8	Byte[48]-Byte[55]	TrfcLght_V_Mx	Range: 0-253	
		1	Byte[56]	TrfcLghtWarnActv_B_Stat	Range: 0-1	
		7	Byte[57]-Byte[63]	TrfcLghtDecel_A_Dsply	Range: 0-125	
		3	Byte[64]-Byte[66]	VehToInfrstrctr_D_Stat	Range: 0-7	
	0x276	8	Byte[0]-Byte[7]	TrfcLghtLeft_T_Actl	Range: 0-253	
		2	Byte[8]-Byte[9]	TrfcLghtLeftType_D_Stat	Range: 0-3	
		3	Byte[10]-Byte[12]	TrfcLghtLeftOn_D_Stat	Range: 0-7	
		3	Byte[13]-Byte[15]	TrfcLghtLeftColr_D_Stat	Range: 0-7	
		8	Byte[16]-Byte[23]	TrfcLghtRight_T_Actl	Range: 0-253	
		2	Byte[24]-Byte[25]	TrfcLghtRightType_D_St	Range: 0-3	
		3	Byte[26]-Byte[28]	TrfcLghtRightOn_D_Stat	Range: 0-7	
		3	Byte[29]-Byte[31]	TrfcLghtRightColr_D_St	Range: 0-7	
		8	Byte[32]-Byte[39]	TrfcLghtStrght_T_Actl	Range: 0-253	
		2	Byte[40]-Byte[41]	TrfcLghtStrghtType_D_St	Range: 0-3	
		3	Byte[42]-Byte[44]	TrfcLghtStrghtOn_D_Stat	Range: 0-7	
		3	Byte[45]-Byte[47]	TrfcLghtStrghtColr_D_St	Range: 0-7	
		8	Byte[48]-Byte[55]	TrfcLghtUturn_T_Actl	Range: 0-253	
		2	Byte[56]-Byte[57]	TrfcLghtUturnType_D_St	Range: 0-3	
		3	Byte[58]-Byte[60]	TrfcLghtUturnOn_D_Stat	Range: 0-7	
		3	Byte[61]-Byte[63]	TrfcLghtUturnColr_D_St	Range: 0-7	

1.2.1 Inputs

- Signals are divided into two CAN messages: **0x276 & 0x273,** or two Dbus messages
- CAN Bus/Dbus Signal Inputs from V2I LITE APP on APIM(SYNC+)

Table 1.2 V2I LITE CAN signal lists

Msg Id	Description	Units	Min	Max	Transmitters	Signal Receivers
0x276	**TrafficLight_Data_2**				**APIM_CISM**	**GWM IPC**
	TrfcLghtLeft_T_Actl	second	0 (0x0)	253 (0xFD)		
	TrfcLghtLeftColr_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtLeftOn_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtLeftType_D_Stat	SED	0 (0x0)	3 (0x3)		
	TrfcLghtRight_T_Actl	second	0 (0x0)	253 (0xFD)		
	TrfcLghtRightColr_D_St	SED	0 (0x0)	7 (0x7)		
	TrfcLghtRightOn_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtRightType_D_St	SED	0 (0x0)	3 (0x3)		
	TrfcLghtStrght_T_Actl	second	0 (0x0)	253 (0xFD)		
	TrfcLghtStrghtColr_D_St	SED	0 (0x0)	7 (0x7)		
	TrfcLghtStrghtOn_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtStrghtType_D_St	SED	0 (0x0)	3 (0x3)		
	TrfcLghtUturn_T_Actl	second	0 (0x0)	253 (0xFD)		
	TrfcLghtUturnColr_D_St	SED	0 (0x0)	7 (0x7)		
	TrfcLghtUturnOn_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtUturnType_D_St	SED	0 (0x0)	3 (0x3)		
0x273	**TrafficLight_Data_1**				**APIM_CISM**	**GWM IPC**
	RoadSignInfo1_D_Dsply	SED	0 (0x0)	255 (0xFF)		
	TrfcLght_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtDir_D_Stat	SED	0 (0x0)	7 (0x7)		
	TrfcLghtVActv_B_Stat	SED	0 (0x0)	1 (0x1)		
	TrfcLght_V_Mn	km/hour	0 (0x0)	253 (0xFD)		
	TrfcLght_V_Mx	km/hour	0 (0x0)	253 (0xFD)		
	TrfcLghtDecel_A_Dsply	km/hour	0 (0x0)	125 (0x7D)		
	TrfcLghtWarnActv_B_Stat	SED	0 (0x0)	1 (0x1)		
	VehToInfrstrctr_D_Stat	SED	0 (0x0)	7 (0x7)		

1.2.2 Outputs

- Display the designated UI

1.3 Function/Performance

1.3.1 Operational Modes

Table 1.3 V2I LITE Operational Modes

Mode	Differentiating Vehicle Conditions
Sleep Mode	V2I LITE IOD Disabled
Limited Mode	V2I LITE IOD Disabled
Normal Mode	V2I LITE IOD Enabled / Disabled
Crank Mode	V2I LITE IOD Enabled / Disabled

1.3.2 V2I LITE Display Modes

If V2I LITE IOD is activated, the Cluster shall enter one of the below display modes:

Table 1.4 V2I LITE Display Modes

Display Mode	Differentiating Vehicle Conditions
Cruise Mode	In this mode, the cluster shall show an individual V2I IOD.
Navigation Mode	In this mode, V2I information can be displayed with Navigation IOD.

1.3.3 Voltage Levels

Refer to the Cluster Features table located in the Operational Modes and Voltage Range Strategies Section in this SPSS.

1.3.4 Human-Machine Interface

1.3.4.1 Traffic Light Information (TLI)

TLI enables to Driver to be informed the Traffic Light information from his/her intention with Current Light status, phases, countdown, types etc. Basically, four directional information will be provided to customer, Straight, Left, Right & U-turn with same CAN signals set and structure.

Table 1.5 Maneuver and signal descriptions

Maneuver	Signal Name	Description
	TrfcLght_D_Stat	The total number of traffic information (maneuver) lights.
Straight Traffic Light		
	TrfcLghtStrght_T_Actl	The straight traffic light countdown to the current light color(phase).
	TrfcLghtStrghtColr_D_St	The straight traffic light color.
	TrfcLghtStrghtOn_D_Stat	The straight traffic light visual effect.
	TrfcLghtStrghtType_D_St	The straight traffic light style.
Left Traffic Light		
	TrfcLghtLeft_T_Actl	The Left traffic light countdown to the current light color(phase).
	TrfcLghtLeftColr_D_Stat	The Left traffic light color.
	TrfcLghtLeftOn_D_Stat	The Left traffic light visual effect.
	TrfcLghtLeftType_D_Stat	The Left traffic light style.
Right Traffic Light		
	TrfcLghtRight_T_Actl	The Right traffic light countdown to the current light color(phase).
	TrfcLghtRightColr_D_St	The Right traffic light color.
	TrfcLghtRightOn_D_Stat	The Right traffic light visual effect.
	TrfcLghtRightType_D_St	The Right traffic light style.
U-turn Traffic Light		
	TrfcLghtUturn_T_Actl	The Uturn traffic light countdown to the current light color(phase).
	TrfcLghtUturnColr_D_St	The Uturn traffic light color.
	TrfcLghtUturnOn_D_Stat	The Uturn traffic light visual effect.
	TrfcLghtUturnType_D_St	The Uturn traffic light style.

Table 1.6 Straight signal as a detailed meaning example

Signal Name	Size(bits)	Detail Meanings	Units	Res.	Offset	State Encoded
TrfcLghtStrght_T_Actl	8		second	1	0	
		NoDataExists				0xFE
		Faulty				0xFF
TrfcLghtStrghtColr_D_St	3		SED	1	0	
		Inactive				0x0
		Red				0x1
		Orange				0x2
		Green				0x3
		NotUsed_1				0x4
		NotUsed_2				0x5
		NoDataExists				0x6
		Faulty				0x7
TrfcLghtStrghtOn_D_Stat	3		SED	1	0	
		Inactive				0x0
		On				0x1
		Blink				0x2
		FocusedOn				0x3
		FocusedBlink				0x4
		NotUsed				0x5
		NoDataExists				0x6
		Faulty				0x7
TrfcLghtStrghtType_D_St	2		SED	1	0	
		Inactive				0x0
		RoundBall				0x1
		DirectionalArrow				0x2
		Faulty				0x3

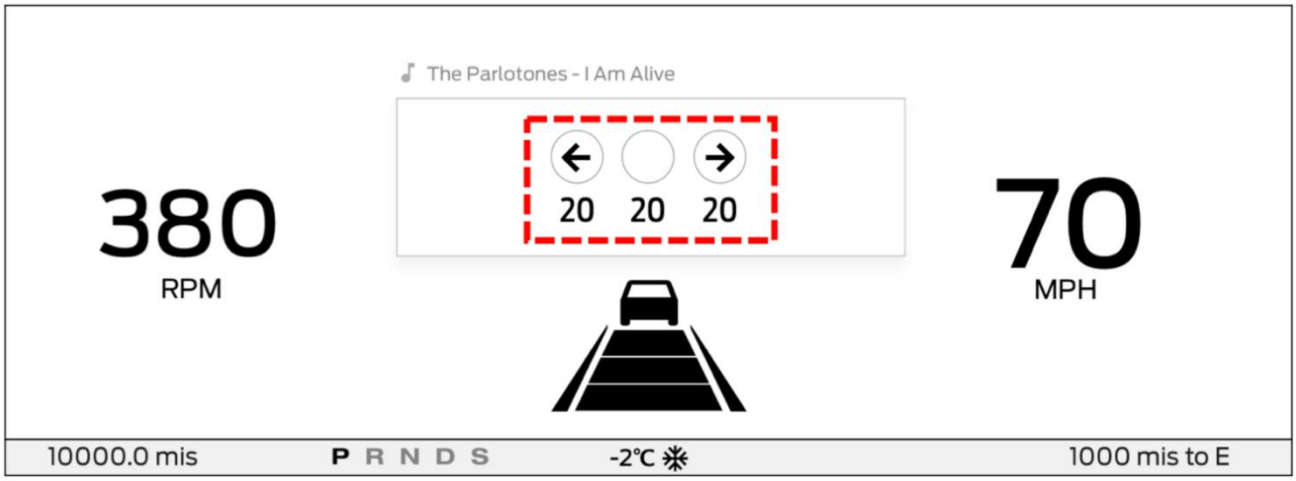
* The frequency of TrfcLghtStrghtOn_D_Stat = Blink || FocusedBlink shall be at least 1Hz.
* The size of Traffic Light itself needs to be bigger(focused) than rest of Lights if its TrfcLghtStrghtOn_D_Stat set to FocusedOn or FocusedBlink.
* The maximum number can be presented on IPC is two digits (99). Any received value from TrfcLghtXXX_T_Actl bigger than 99 shall be presented as 99 on IPC.
* Any received value from TrfcLghtXXX_T_Actl is equal or smaller than 3 seconds need to be hided/concealed.

Fig 1.1 TLI under Cruise Mode in V2I LITE IOD

Fig 1.2 TLI coexist with other IOD under Navigation Mode

Fig 1.3 TLI coexist with Navi Pop-up message under Navigation Mode (To be Defined)

Fig 1.4 TLI display under difference THEME (ECO， SPORT..)


The Parlotones - I Am Alive
380
RPM
20 20 20
70
MPH
10000.0 mis
P R N D S
-2°C
1000 mis to E

1.3.4.2 Green Wave/Light Optimal Advisory

GW/LOA enables the customer to be assisted on whether the vehicle can pass through the intersection clearly on time and improve the traffic efficiency. Cluster may receive the CAN signals as following table

Table 1.7 GWLOA signal descriptions

Signal Name	Descirption
TrfcLghtDir_D_Stat	The maneuver on which Green Light Optimal Speed Avdisory(GLOSA) / Red Light Violation Warning(RLVW) is activiated.
TrfcLghtVActv_B_Stat	Green Wave/Light Optimal Speed Advisory(GLOSA) is actived.
TrfcLght_V_Mn	The minimum speed for Green Wave/Light Optimal Speed Advisory(GLOSA).
TrfcLght_V_Mx	The maximum speed for Green Wave/Light Optimal Speed Advisory(GLOSA).

Table 1.8 Signal detailed meanings

Signal Name	Size(bits)	Detail Meaning	Units	Res.	Offset	State Encoded
TrfcLghtDir_D_Stat	3		SED	1	0	
		Inactive				0x0
		StraightActivated				0x1
		LeftActivated				0x2
		RightActivated				0x3
		UtrunActivated				0x4
		NotUsed				0x5
		NoDataExists				0x6
		Faulty				0x7
TrfcLghtVActv_B_Stat	1		SED	1	0	
		Off				0x0
		On				0x1
TrfcLght_V_Mn	8		km/hour	1	0	
		NoDataExists				0xFE
		Faulty				0xFF
TrfcLght_V_Mx	8		km/hour	1	0	
		NoDataExists				0xFE
		Faulty				0xFF

Fig 1.5 GLOSA with Speed gauge in Navigation Mode

1.3.4.3 Red Light Violation Warning

RLVW enables the customer to be notified a warning under the emergency situation, when the vehicle comes to a Green or Yellow Light, it will give a warning for the customer to decelerate before the light changes and avoid the unintentionally violate the traffic rule before STOPE LINE. Cluster may receive the CAN signals as followings

Table 1.9 RLVW signal description

Signal Name	Description
TrfcLghtDir_D_Stat	The maneuver on which Green Light Optimal Speed Avdisory(GLOSA) / Red Light Violation Warning(RLVW) is activiated.
TrfcLghtWarnActv_B_Stat	Deceleration rate for Red Light Violation Warning(RLVW).

Table 1.10 Signal detailed meanings

Signal Name	Size(bits)	Detail Meaning	Units	Res.	Offset	State Encoded
TrfcLghtDir_D_Stat	3		SED	1	0	
		Inactive				0x0
		StraightActivated				0x1
		LeftActivated				0x2
		RightActivated				0x3
		UtrunActivated				0x4
		NotUsed				0x5
		NoDataExists				0x6
		Faulty				0x7
TrfcLghtWarnActv_B_Stat	1		SED	1	0	
		Off				0x0
		On				0x1
TrfcLghtDecel_A_Dsply	7		km/hour*hour	1	0	
		NoDataExists				0x7E
		Faulty				0x7F

1.3.4.3.1 RLVW Warning Message

The RLVW need to be arbitrated with other Global Warning Message and the details finalized as followings

Table 1.11 RLVW Warning Message

ID	Seq.#	System Name	Warn Type	Time Out	LM	ICON*	Message Color	Chime Type	Representative Text	Functional Contacts
W4411	102	V2I lite-Red Light warning	NGA	n/a	No	tbd.143	Red	Yes	Red Light Ahead! {ICON}	Yifei Li (nli26)

Fig 1.6 RLVW notify customer via Pop-up message in Navigation Mode

1.3.4.4 Road-Side Information & In-Vehicle Signage

RSI enables the customer to be broadcasted with nearby road information, for example, hazardous warning, emergency vehicle upcoming notification, construction zones, black-ice road etc.

Table 1.12 Signal description

Signal Name	Description
RoadSignInfo1_D_Dsply	The dynamic and static road side traffic information received from 3rd party content provider. For example, speed limit sign, slippery road, traffic accident etc..

Table 1.13 Signal detailed meanings(TBD)

Signal Name	Size(bits)	Detail Meaning	Units	Res.	Offset	State Encoded
RoadSignInfo1_D_Dsply	8		SED	1	0	
		Inactive				0x0
		SlowTrafficAhead				0x1
		RoadWorksAhead				0x2
		CrossWindAhead				0x3
		DriveWrongWay				0x4
		FogAhead				0x5
		GasPipeLeakWarning				0x6
		GoodsDrop				0x7
		Pedestrian				0x8
		RainOrSnowRoad				0x9
		RoadCrack				0xA
		FireAlarmOnRoad				0xB
		FrozenRoad				0xC
		SandstormAhead				0xD
		SlipperyRoad				0xE
		Speedlimit_10				0xF
		Speedlimit_20				0x10
		Speedlimit_30				0x11
		Speedlimit_40				0x12
		Speedlimit_50				0x13
		Speedlimit_60				0x14
		Speedlimit_70				0x15
		Speedlimit_80				0x16
		Speedlimit_90				0x17
		Speedlimit_100				0x18
		Speedlimit_110				0x19
		Speedlimit_120				0x1A
		TrafficAccidentAhead				0x1B
		TrafficControlAhead				0x1C
		TunnelInWaterAhead				0x1D
		VehicleBreak				0x1E
		VehiclesInQue				0x1F
		WaterOnRoad				0x20
		WaterPipeBreak				0x21
		DangerRoadAhead				0x22
		NotUsed_1				0x23
		NotUsed_219				0xFD
		NoDataExists				0xFE
		Faulty				0xFF

Fig 1.7 RSI display

1.3.4.5 Visual

Refer to <Feature Document - V2I LITE in SYNC+>.

1.3.4.6 Audio

None. V2I LITE will play audio from SYNC+.

1.3.4.7 Switch Control Logic

- N/A

1.3.5 System Accuracy

Within a fixed 100ms of receiving two messages, the cluster will update the display to the proper status.

1.3.6 Operation: Performance and Functional

1.3.6.1 V2I LITE IOD Function Enable/Disable

Cluster shall provide the V2I LITE IOD function and the corresponding V2I LITE Reconfigurable Telltale (abbr. RTT, detailed correspondence, see *Chapter 1.3.6.3*) if ***VehToInfrstrctr_D_Stat* = 0x0 || 0x1 || 0x2 || 0x3** (Enabled).

- Cluster shall display as *Fig 1.8* when V2I LITE function available(***VehToInfrstrctr_D_Stat*** = **0x0**)
- Cluster shall display as *Fig 1.9* when V2I LITE function unavailable(***VehToInfrstrctr_D_Stat*** = **0x1 || 0x2 || 0x3**), IOD will hide and RTT shall display the corresponding status.

Cluster shall not provide the V2I LITE IOD function and V2I LITE Reconfigurable Telltale if ***VehToInfrstrctr_D_Stat* = 0x6 || 0x7** (Disabled), as shown in *Fig 1.10*.

Fig 1.8 V2I LITE function available


V2I LITE IOD Function
13 03 03 13
100
km/h
Let's Play Guita
Gabriel Evoke
V2I LITE RTT
D READY 99999.9km
100% 续航里程530km


99 799 m 乌鲁木齐路
100
km/h
PLACEHOLDER
1 Lorem ipsum door si
2 consectetur adipisci
3 sed do eiusmod tem
4 cididunt ut labore ei
5 magna aliqua. Ut eie
OK
D READY 99999.9km
100% 续航里程530km


13
100
km/h
2.6 km
乌鲁木齐路
D READY 99999.9km
100% 续航里程530km

Fig 1.9 V2I LITE function unavailable when VehToInfrstrctr_D_Stat = 0x1 || 0x2 || 0x3, IOD will hide.

Fig 1.10 *Cluster shall not provide the V2I LITE IOD function and Reconfigurable Telltale if* ***VehToInfrstrctr_D_Stat = 0x6 || 0x7*** *(Disabled)*

1.3.6.2 Enter/Exit V2I LITE IOD Function

The cluster shall be able to use V2I LITE IOD Function status to change between different IODs and to enter (activate) or exit (deactivate) the V2I LITE IOD.

1.3.6.3 V2I LITE IOD Function status indication

The cluster shall be able to report the status via Reconfigurable Telltale and the style is {STATUS_ICON}.

Table 1.14 Signal description

No	STATUS_ICON	WORDING		DESCRIPTION
		English	Chinese	
1		Traffic Light Symbols with real-time Countdown + Phase Color.		Normal working condition. VehToInfrstrctr_D_Stat = 0x0

2		Out of Service Area	前方区域无服务	In-Service but without V2I Data. VehToInfrstrctr_D_Stat = 0x1
3		Service is temporarily unavailable	服务暂不可用	Lost Wireless / internet connection. VehToInfrstrctr_D_Stat = 0x2
4		Service is temporarily unavailable	服务暂不可用	sub-component is in malfunction, for example, car sensor, input data error etc. VehToInfrstrctr_D_Stat = 0x3

Note: The style of the status icon is subject to the actual HMI design document.

1.3.6.4 Prove Out

Not applicable

1.3.6.5 Message Center Msg

None. Refer to program specific menu structure for display text.

1.4 Error Handling

1.4.1 Missing Message Strategy

The signals will be declared missing as per the Diagnostics section of this SPSS.
DTCs states and history will be determined as per the Diagnostics section of this SPSS.

- If CAN signal VehToInfrstrctr_D_Stat is not received < 2s, use last value received.
- If CAN signal VehToInfrstrctr_D_Stat is not received >= 2s, use 0x6 value.

1.4.2 Internal signal

None.

1.5 Diagnostics

1.5.1 Self-Test

None.

1.5.2 Engineering Test Mode

None.

1.5.3 Part II Performance

None.

1.6 Reference Specification

None.

1.7 Revision History

STSS Module Revision History

Revision Level	Name	Change Description	Date
0.1	Yifei Li (nli26) Calvin Zhou (qzhou31)	Initialize document and release on feature description, Interfaces, HMI, Operations, Error handling etc.	2020-10
0.2	nli26	1.3.4.3.1 RLVW Warning message	2020-11
0.3	nli26, hpu13	1.3.4.3.1 Added W4411 Global Alert for V2i-Red Light feature approved by Stavros. 1.3.6.3 V2I LITE IOD Function temporarily unavailable	2020-12-09
0.4	nli26	1.3.4.1 TLI – frequency and visual effect requirement on TrfcLghtStrghtOn_D_Stat (Focused & Blink) 1.3.6.1 / 1.3.6.3 correct typos on signal values of VehToInfrstrctr_D_Stat and correct the condition of IOD Enable / Disable.	2021-01-22
0.5	nli26	1.3.4.1 Add TLI HMI display limitation on two digits (99 as maximum, hide/conceal the countdown close to 3 seconds.)	2021-03-14
1.1 (CDX707)	Nli26	Replace the image with CDX 707 design	2021-09-03
1.2 (CDX707)	wzhan175	1.3.6.1 Added IOD hiding display strategy.	2022-03-11

1.3 (CDX707)	wzhan175	1.3.6.3 Update WORDING of V2I LITE IOD Function status indication.	2022-05-19
1.4 (CX821)	wzhan175	All Update CX821 released UI image. 1.1 Update functional description 1.2 Updated the Dbus communication signals between IVI and IPC under the CDC architecture 1.3.4.7 Delete 'Switch Control Logic' description 1.3.6.1 Update IOD and Reconfigurable Telltale hiding display strategy. 1.3.6.3 Delete 'The cluster shall be able to report the status via Floating IOD and the style is {STATUS_ICON} + Wording.', and add 'The cluster shall be able to report the status via Reconfigurable Telltale and the style is {STATUS_ICON}'.	2023-3-3