



Rug-Rel
Commitment Towards Technology & Quality Services

ACCEPTANCE TEST PROCEDURE

DOC
Name
ATP

PART NUMBER
0313-000-274

IN VEHICLE CREW CONSOLE DP231

REV
A

SH No.
26

PREPD.
Shruti B R

DATE
23/01/25

Ver
1.0

No. OF SH
41

APPRD.
Athif Allam

DATE

APPENDIX 'A'-FUNCTIONAL TEST DATA RECORDS

TEST DATA RECORD SHEET – 1

VISUAL INSPECTION

Project : DP231

Date : 27/02/2025

DUT : In Vehicle Crew Console

Serial No. : R0274005

Test Condition : POST-ATP

S.NO	SPECIFICATIONS	Observed Value	REMARKS OK/NOT OK
Dimensions:			
a	Length:300mm±5%	300mm	
b	Width:400mm±5%	400mm	
c	Height:200mm±5%	210mm	
d	Weight: 12Kg	12.75kg	
Connector Description:			
e	J1(D38999/24WB5PN)	Present	
f	J2(D38999/24WB5SA)	Present	
g	J3(D38999/24WB5SA)	Present	
h	J4(D38999/24WA35PN)	Present	
i	J5(D38999/24WA35SN)	Present	
j	J6(D38999/24WC35PN)	Present	
k	J7(RE38999/24WDUSB-SB)	Present	
l	J8(RE38999/24WDUSB-SB)	Present	

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TEST DATA RECORD SHEET – 2

ISOLATION TEST

Project : DP231

Date : 27/02/2025

DUT : In Vehicle Crew Console

Serial No. : R027A005

Test Condition :

S.NO	PARAMETER	SPECIFICATIONS	Observed Value	REMARKS OK/NOT OK
a	J1 (A & C) +28V	No continuity should come	Observed	
b	J1 (B & D) GND	No continuity should come	Observed	
c	J1 (A & E) Earth	No continuity should come	Observed	

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TEST DATA RECORD SHEET – 3

Power ON & OFF Test

Project : DP231

Date : 27/02/2025

DUT : In Vehicle Crew Console

Serial No. : R0274005

Test Condition :

Power ON test:

SI No	Test Description	Specified values	Observed Value (Yes /No)	Remarks
1	Switch ON DC	PWR_ON LED RED glows	Yes	
2	"PWR SW" in ON position	SBC booted with Ubuntu 22.04	Yes	

Power OFF test:

SI No	Test Description	Specified values	Observed Value (Yes /No)	Remarks
1	Switch OFF DC	PWR_ON RED LED OFF	Yes	
2	Power supply OFF position	SBC - No output on monitor	Yes	

Power Consumption test:

	Voltage (V)	Current (A)	Remarks
18V	18V	1.30A	
24V	23.98V	0.99A	
32V	32V	0.78A	

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TEST DATA RECORD SHEET – 4

SBC Testing (Ubuntu)

Project : DP231

Date: 27/02/2025

DUT : In Vehicle Crew Console

Test Condition:

Processor Detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	Processor	CPU Detected	OK	
2	CPU manufacturer	Genuine Intel	Genuine intel	
3	CPU Type	13th Gen Intel(R) Core (TM) i7-1365UE	intel (R) core(TM) i7-1365UE	
4	CPUID	Family 6, Model 186, Stepping 3	Family 6, stepping 3	
5	Physical CPU's	1	1	
6	Cores per CPU	10	10	
7	Hyperthreading	Enabled	Enable	
8	CPU speed	1700.0 MHz	1700 MHz	

RAM Detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	RAM Test	RAM detected	OK	
2	Total Physical Memory	7718 MB	7718 MB	
3	Memory devices			
3.1	Channel A-D	8192 MB, DDR4, 3200 MT/s	8GB, DDR4, 3200MT/s	

SSD Storage detection test

SI No	Test Name	Specified values	Observed Value	Remarks
1	SSD storage detection	SSD detected		
2	Disk drive:	256GB	282.29 GB	

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TEST DATA RECORD SHEET - 5

SBC Testing (Ubuntu)

Project : DP231

Date: 27/02/2025

DUT : In Vehicle Crew Console

Test Condition:

Serial No. : R0274005

Network Ports test

Test Setup for ETH Ping:

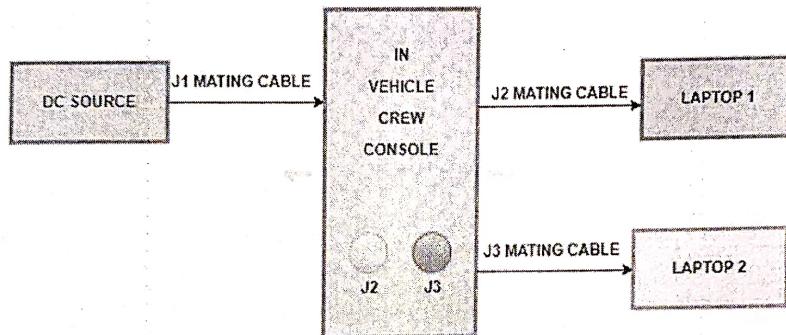


Figure 11: Test setup of Eth ping Test

Ethernet Port 1 Test

SI No	Test Name	Specified values	Observed Value	Remarks
1	Ethernet Port	Ethernet Port detected	OK	
2	Network	Intel(R) I210 Gigabit Network Connection	OK	
3	IPv4	Assign any IP address	OK	
4	Speed	1000Mb/s	OK	

Ethernet Port 2 Test

Ethernet Port 2 is connected to the ethernet switch through backplane internally. Check for the port speed showing 1000Mbps.

SI No	Test Name	Specified values	Observed Value	Remarks
1	Ethernet Port	Ethernet Port detected	OK	
2	Network	Intel(R) I210 Gigabit Network Connection	OK	
3	IPv4	Assign any IP address	OK	
4	Speed	1000Mb/s	OK	

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Procedure for ping test:

- Connect J2 mating cable to laptop.
- Assign IP address and gateway in network setting as shown above.
- Open the "Open in terminal".
- Type "ping" in the black box and hit the space bar.
- Type the IP address you'd like to ping (e.g., 10.XXX.X.X).
- Ping reply should be received.

RS422-COM1 Port test:

SI No	Test Name	Specified values	Observed Value	Remarks
1	COM Port	COM Ports detected	OK	
2	Communications Port:	TtyS0	OK	
3	Serial Port: ttyS0	Result: PASS	OK	

USB port test

SI No	Test Name	Specified values	Observed Value	Remarks
1	USB Ports	USB Ports detected	OK	
2	USB Ports	USB x HCI Compliant Host Controller	OK	

Note: The above results are obtained when USB key board or joystick is connected.

Check for the working of Keyboard.

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TEST DATA RECORD SHEET – 6

RS422 – COM 3 PORT TEST (Ubuntu)

Project : DP231

Date: 27/02/2025

DUT : In Vehicle Crew Console

Serial No.: R0274005

Test Condition:

RS422 - COM3 port test (Ubuntu)

SI No	Test Name	Specified values	Observed Value	Remarks
1	RS422 Port	RS422 Port detected	OK	
2	RS422 Port	Keys pressed on the keyboard to be shown on GUI of Minicom. E.g.: 00 AA EE WW.	OK	

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TEST DATA RECORD SHEET - 7

MEMBRANE KEYBOARD & BEZEL KEYS TEST (Ubuntu)

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Date: 27/02/2025

Test Condition:

Membrane Keyboard LED Test:

SI No	Test Description	Observed Value	Remarks
1	Click the "Turn All ON" button. All LEDs in the GUI will turn ON	OK	
2	Click the "Turn All OFF" button. All LEDs in the GUI will turn OFF	OK	

Membrane Keyboard Test:

SI No	Bezel Keys Name	Observed Value	Remarks
1	Press the button(e.g., Engine) on the physical membrane keyboard, the button in the GUI will ON & OFF Condition	OK	

Note: Repeat the same procedure for all the button on the membrane keyboard.

Bezel Key Test:

SI No	Test Description	Observed Value	Remarks
1	Press the button(e.g., F1) on the physical membrane keyboard, the button in the GUI will ON&OFF Condition	OK	

Note: Repeat the same procedure for all the button on the Bezel keys.

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TEST DATA RECORD SHEET - 8

JOYSTICK TEST (Ubuntu)

Project : DP231

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Serial No. : R0274005

Test Condition:

Joystick Test:

SI No	Test Description	Observed Value	Remarks
1	Press the button(e.g., B1) on the physical Joystick, the button will ON & OFF Condition	OK	
2	Move the joysticks in all directions and the axis values changing from -32767 to 32767	OK	

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TEST DATA RECORD SHEET – 9

10.2" DISPLAY TEST (Ubuntu)

Project : DP231

Date: 27/02/2025

DUT : In Vehicle Crew Console

Serial No. : R024005

Test Condition:

Display test:

SI No	Test Description	Specified values	Observed Value	Remarks
1	Resolution	1920 x 1080	OK	
2	Touch	Checking the interact with a device or system through physical touch	OK	

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TEST DATA RECORD SHEET – 10

EMERGENCY BUTTON TEST (Ubuntu)

Project : DP231

Date: 27/02/2025

DUT : In Vehicle Crew Console

Serial No. : R0274005

Test Condition:

Emergency Button Test:

SI No	Test Description	Observed Value	Remarks
1	Press the EMG.OFF button, observe that the state in the terminal block shows "EMG.OFF_0 ON".	OK	
2	Release the EMG.OFF button, observe that the state in the terminal block shows "EMG.OFF_0 OFF".	OK	
3	Press the EMG.STOP button, observe that the state in the terminal block shows "EMG.STOP_2 ON".	OK	
4	Release the EMG.STOP button, observe that the state in the terminal block shows "EMG.STOP_2 OFF".	OK	

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