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| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0063 | Title<br>PSA IVI Crony2 Product Datasheet |                      |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>FOR REVIEW |



PSA IVI Crony2  
Product Datasheet

fcc

HISTORY

| Rev | Status    | Date       | Author    | Reviewer | Description                                     |
|-----|-----------|------------|-----------|----------|-------------------------------------------------|
| 3.3 | IN REVIEW | 2024/02/14 | C.PIREYRE |          | Label update<br>Addition of product description |
|     |           |            |           |          |                                                 |
|     |           |            |           |          |                                                 |
|     |           |            |           |          |                                                 |

REFERENCE DOCUMENTS

| N° | REF | Ver | Name |
|----|-----|-----|------|
|    |     |     |      |
|    |     |     |      |

|                                 |                            |                                           |                      |
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## 1 SCOPE

The Essential platform has been selected for the Crony2 IVI program.  
The solution targets different worldwide markets listed below:

|                           |               |                           |
|---------------------------|---------------|---------------------------|
| Albania                   | Georgia       | New Caledonia             |
| Algeria                   | Germany       | New Zealand               |
| Angola                    | Ghana         | Niger                     |
| Australia                 | Greece        | Nigeria                   |
| Austria                   | Guadeloupe    | Norway                    |
| Azerbaijan                | Guinea        | Oman                      |
| Bahrain                   | Guinea-Bissau | Palestine                 |
| Belarus                   | Hungary       | Peru                      |
| Belgium                   | Iceland       | Poland                    |
| Benin                     | Ireland       | Portugal                  |
| Bosnia & Herzegovina      | Israel        | Qatar                     |
| Botswana                  | Italy         | Reunion                   |
| Bulgaria                  | Ivory Coast   | Romania                   |
| Burkina Faso              | Japan         | Saint Martin              |
| Cabo Verde                | Jordan        | Saint Pierre and Miquelon |
| Cameroon                  | Kazakhstan    | Saudi Arabia              |
| Chad                      | Kosovo        | Senegal                   |
| Chile                     | Kuwait        | Serbia                    |
| Colombia                  | Latvia        | Sierra Leone              |
| Congo                     | Lebanon       | Singapore                 |
| Congo Democratic Republic | Liberia       | Slovakia                  |
| Croatia                   | Libya         | Slovenia                  |
| Cyprus                    | Lithuania     | South Africa              |
| Czech Republic            | Luxembourg    | Spain                     |
| Denmark                   | Macedonia     | Sweden                    |
| Ecuador                   | Madagascar    | Switzerland               |
| Egypt                     | Mali          | Taiwan                    |
| Equatorial Guinea         | Malta         | Togo                      |
| Estonia                   | Martinique    | Tunisia                   |
| Finland                   | Mauritania    | Turkey                    |
| France                    | Mayotte       | Ukraine                   |
| French Guyana             | Moldova       | United Arab Emirates      |
| French Polynesia          | Montenegro    | United Kingdom            |
| French Temporary Transit  | Morocco       | Uruguay                   |
| Gabon                     | Namibia       |                           |
| Gambia                    | Netherlands   |                           |

## 1 PRODUCT DESCRIPTION

The Crony 2 product is an In Vehicle Infotainment system including a display.

Principal features:

- Wifi 5 GHz
- AM/FM
- DAB depending on variants
- 10,25" display with capacitive touch

|                                 |                            |                                           |                   |
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- Bluetooth
- Media USB 2.0
- Audio and mic interface
- GNSS
- Vehicle network CAN
- Android Auto wired/wireless
- CarPlay wired/wireless
- RVC interface
- SWC interface

## 1.1 VARIANTS

| Option                   | VAR 1                               | VAR 2                        | VAR 3                                     | VAR 4                                     |
|--------------------------|-------------------------------------|------------------------------|-------------------------------------------|-------------------------------------------|
| Long Name                | IVI Premium_DAB_AACP_<br>No NAV_ATB | IVI Premium_DAB_AACP_NAV_ATB | IVI Premium_No DAB_AACP_<br>No NAV_No ATB | IVI Premium_No DAB_AACP_<br>NAV_No ATB    |
| AM/FM                    | AM/FM                               | AM/FM                        | AM/FM                                     | AM/FM                                     |
| DAB                      | DAB                                 | DAB                          | -                                         | -                                         |
| GNSS                     | GNSS                                | GNSS                         | GNSS                                      | GNSS                                      |
| Rear USB                 | -                                   | REAR USB                     | -                                         | -                                         |
| RAM                      | RAM 2GB                             | RAM 2GB                      | RAM 2GB                                   | RAM 2GB                                   |
| EMMC                     | EMMC 8GB                            | EMMC 16GB                    | EMMC 8GB                                  | EMMC 16GB                                 |
| Media USB                | Media USB 6 Pin                     | Media USB 6 Pin              | Media USB 6 Pin                           | Media USB 6 Pin                           |
| CAN Termination Resistor | Not Required in IVI                 | Not Required in IVI          | CAN Termination Resistors required in IVI | CAN Termination Resistors required in IVI |

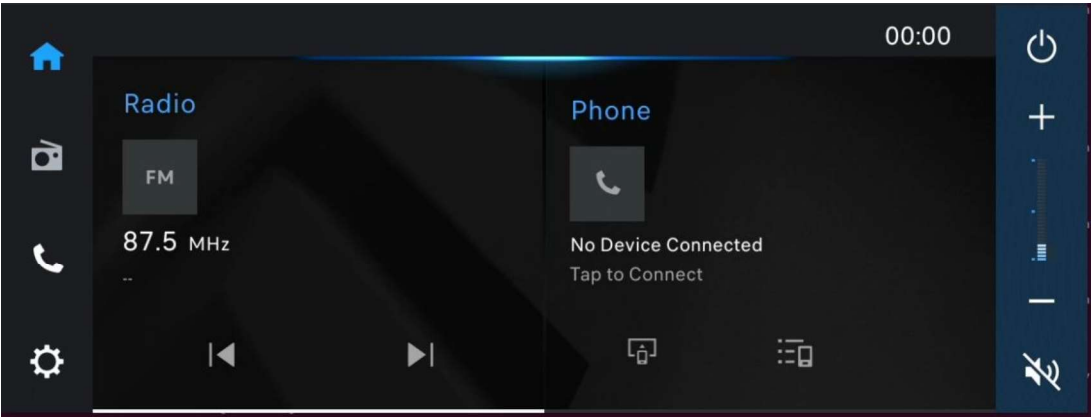
## 1.2 PRODUCT CHARACTERISTICS

| Feature                         | Min   | Typ    | Max    | Unit | Comment                                                            |
|---------------------------------|-------|--------|--------|------|--------------------------------------------------------------------|
| Nominal Voltage Range           | 9     | 13.5   | 16     | V    |                                                                    |
| Cold crank threshold            | 3.0   | 5.6    | 8.0    | V    |                                                                    |
| Operational Current Consumption | 15.59 | 16.318 | 17.508 | A    | Mentioned Values are as per worst case theoretical calculation @9V |
| Operating temperature range     | -30   |        | 85     | °C   |                                                                    |
| Storage temperature             | -40   |        | 85     | °C   |                                                                    |
| Sleep current (CAN offline)     | 70    |        | 85     | uA   |                                                                    |

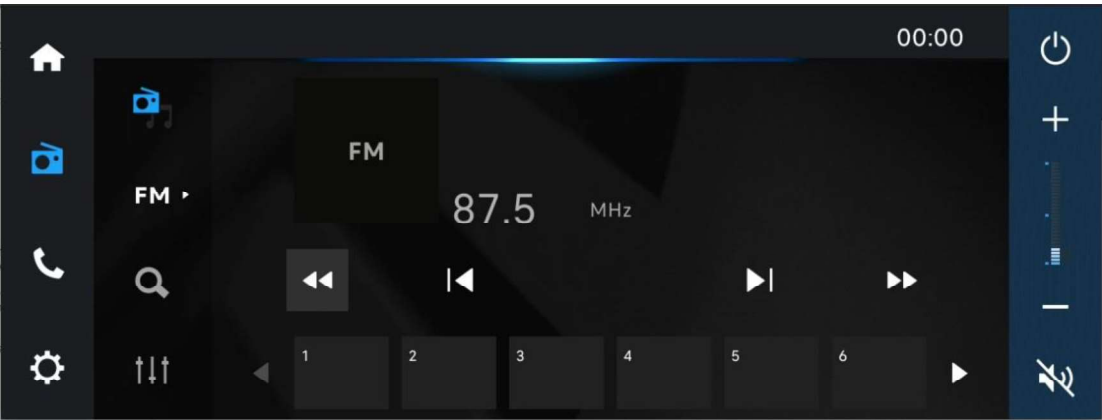
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## 2 HMI

- Home Screen



- Radio home



- Radio settings



|                                 |                            |                                           |                   |
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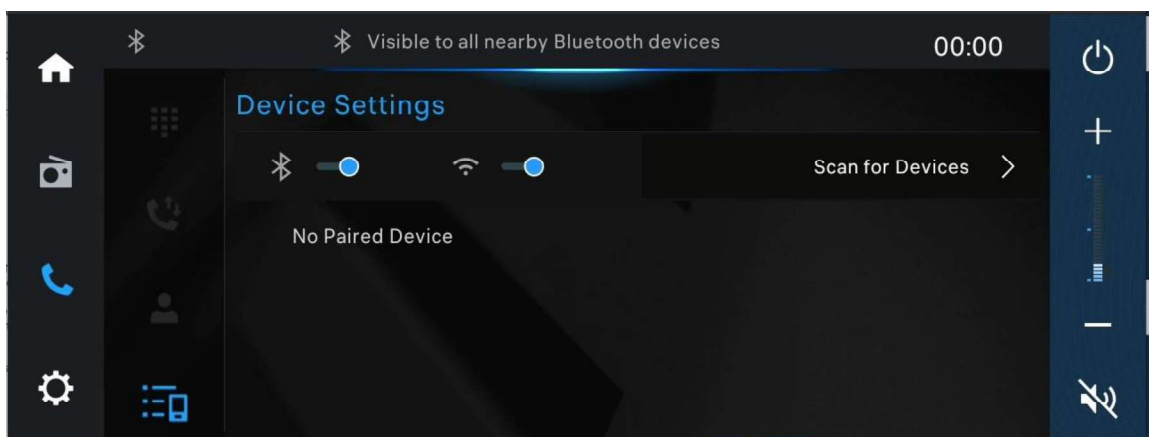
- Media via USB



- Audio settings

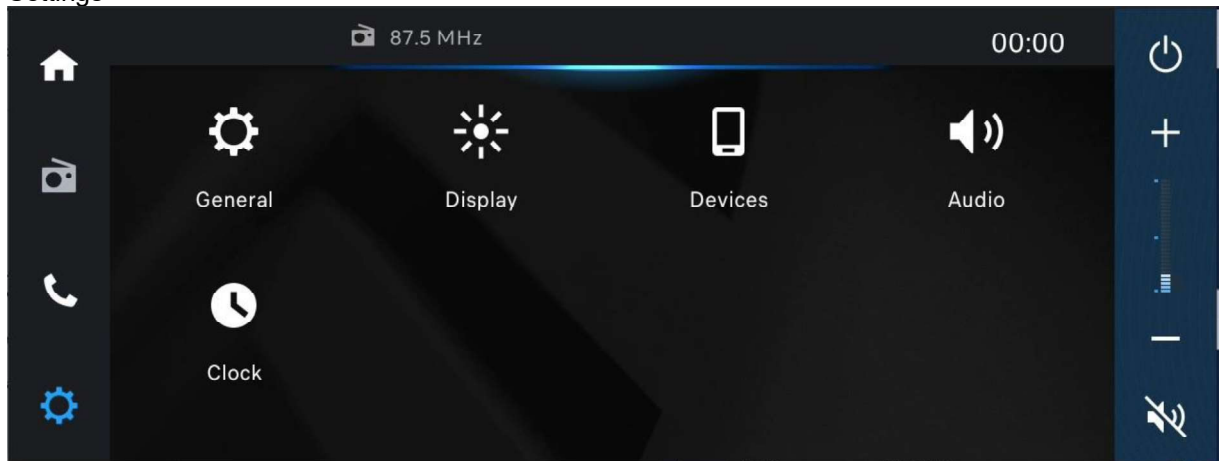


- BT Connectivity screen

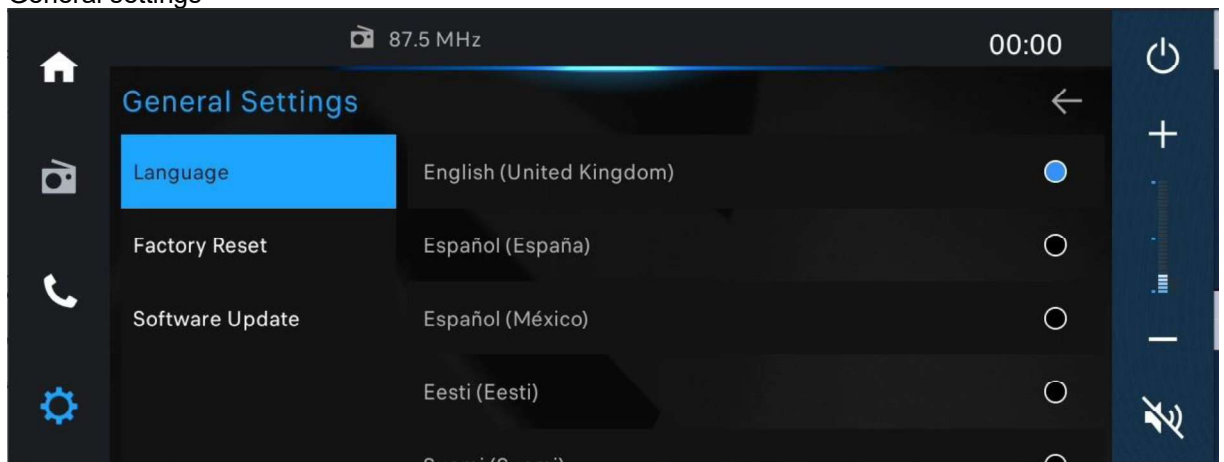


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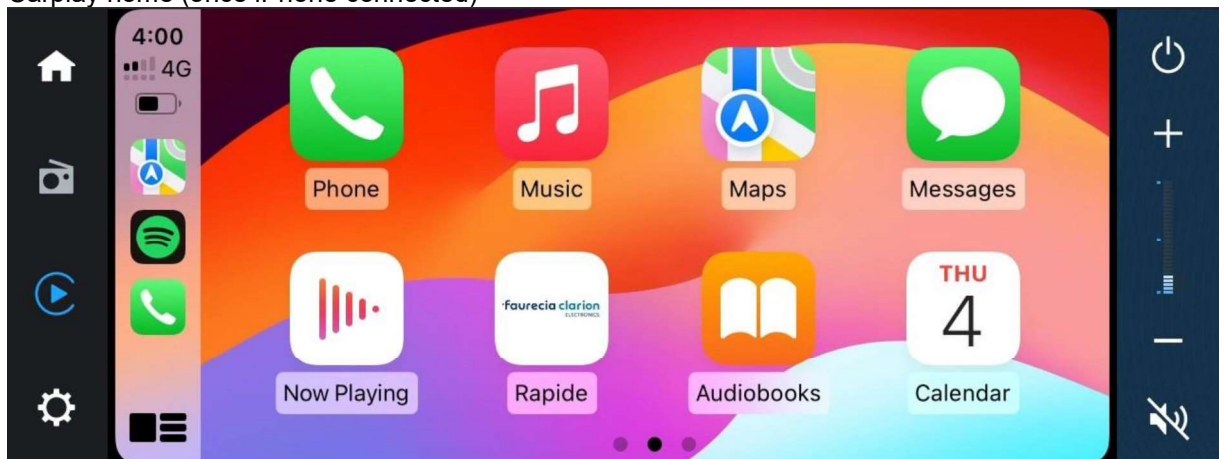
- Settings



- General settings



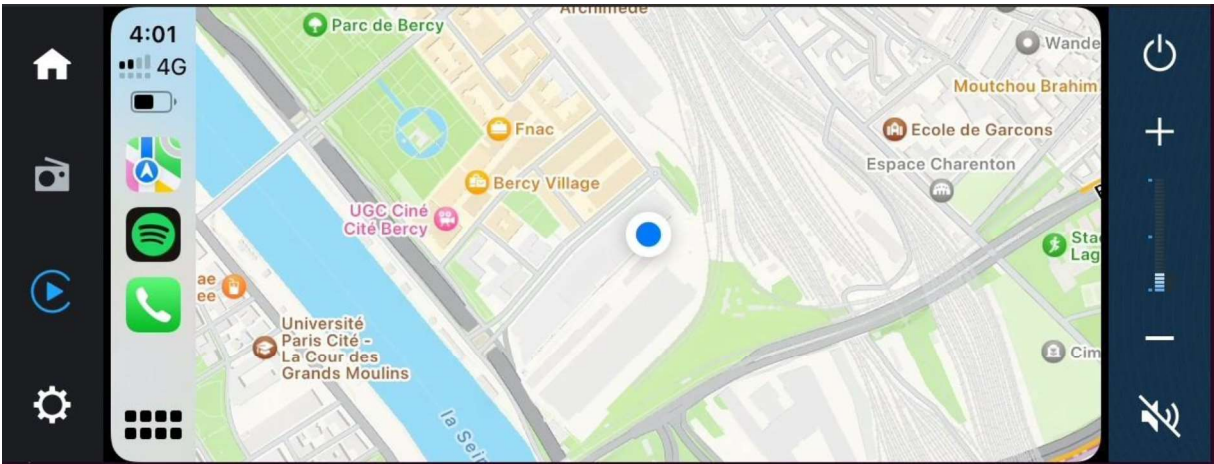
- Carplay home (once iPhone connected)



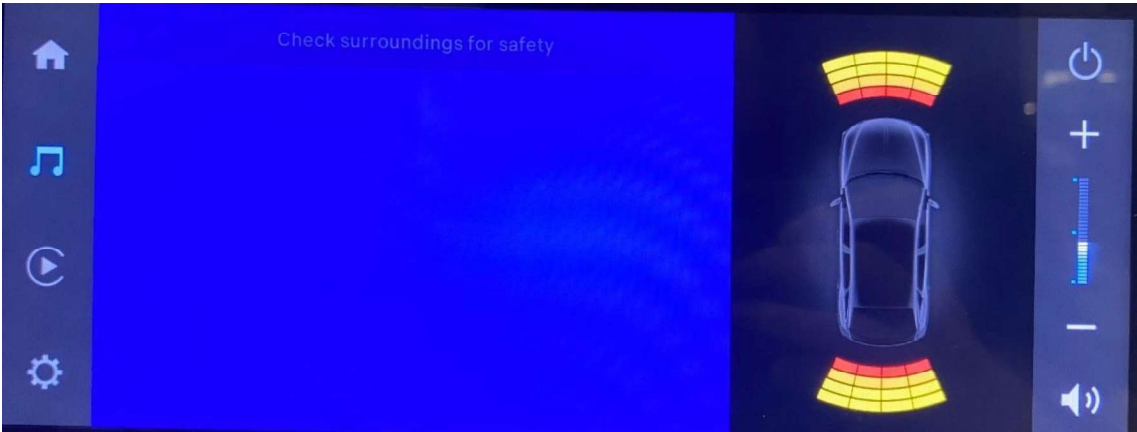


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- Carplay map



- RVC screen (when rear gear activated)



|                                 |                            |                                           |                   |
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## 3 FEATURE CHARACTERISTICS

### 3.1 DISPLAY

| Item               | Specification                                                                                                |
|--------------------|--------------------------------------------------------------------------------------------------------------|
| Touch screen type  | OGS capacitive touch panel                                                                                   |
| Display type       | Color TFT, 16M depth                                                                                         |
| Display size       | 10.25"                                                                                                       |
| Display resolution | 1280 x 480                                                                                                   |
| Display mode       | Normally Black                                                                                               |
| Contrast Ratio     | 900:1 min @25°C (perpendicular)                                                                              |
| Brightness         | <=1000cd/m <sup>2</sup> min @25°C (perpendicular)                                                            |
| Style              | Soda-lime glass (2 side strengthened)<br>12% SCI reflection<br>No AG<br>Hardness: 3H 500gf<br>AF film on top |
| Response time      | 28 ms (typ.), 56 ms(max.)                                                                                    |
| Bonding            | Air gap                                                                                                      |
| Grade              | Industrial, ROHS and REACH compliant                                                                         |

### 3.2 WIFI

| Item       | Specification                                                                                                                                                                                                         |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard   | IEEE 802.11ac                                                                                                                                                                                                         |
| Channels   | Channel 151 : 5735 - 5775 (40MHz)<br>Channel 140: 5735 - 5755 (20MHz)<br>Channel 153: 5755 – 5775 (20MHz)<br>Channel 157: 5775 – 5795 (20MHz)<br>Channel 159: 5775 – 5815 (40MHz)<br>Channel 161: 5795 – 5815 (20MHz) |
| EIRP       | VHT20<br>Antenna assembly gain : 1.7 dBi<br>Antenna support : 1 TX<br>At 25°C, Vnor mode, 3,3V, frequency 5700MHz:<br>EIRP = 14,52 dBm                                                                                |
|            | - Support WPA2 security mechanisms with AES-CCMP and PSK<br>- Support WPA3 security mechanisms                                                                                                                        |
| Power used | SRD => 25mW                                                                                                                                                                                                           |

|                                 |                            |                                           |                   |
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### 3.3 BLUETOOTH

| Item                 | Specification                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------|
| RF Frequency range   | 2.402 – 2.480 MHz                                                                                    |
| Supported modes      | Bluetooth v5.0<br>Support BR/EDR mode                                                                |
| Number of channels   | 79                                                                                                   |
| Modulation           | 1 Mbps: GFSK (BDR)<br>2 Mbps: $\pi/4$ DQPSK (EDR)<br>3 Mbps: 8DQPSK (EDR)                            |
|                      | For GFSK (BR-1M) with antenna assembly gain 1 dBi<br>At 25°C, 3,3V, freq hopping:<br>EIRP = 4,46 dBm |
| Receiver Sensitivity | PER: -51dBm<br>EDR: -77 dBm<br>BLE: -95 dBm                                                          |

### 3.4 AM/FM

| Item                      | Specification                                                                            |
|---------------------------|------------------------------------------------------------------------------------------|
| Frequency Range           | AM LW band: 153 – 279 kHz<br>AM: 520 – 1710 kHz<br>FM: 76 – 108 MHz                      |
| Frequency Step Resolution | AM LW band: 3kHz (Auto), 1kHz (Manual)<br>AM: 10kHz<br>FM: 100kHz (Auto), 50kHz (Manual) |
| Auto seek                 | Yes                                                                                      |
| FM : S/N Ratio            | $\geq 60$ dB                                                                             |
| FM : Sensitivity          | $\leq 15$ dB $\mu$ V                                                                     |
| FM : Stereo Separation    | $\geq 23$ dB                                                                             |
| AM : S/N Ratio            | $\geq 60$ dB                                                                             |
| AM : Sensitivity          | $\leq 30$ dB $\mu$ V                                                                     |
| AM : Frequency Response   | -6dB                                                                                     |
| Digital I/O Power supply  | 1.8V to 3.3V                                                                             |
| Analog Power supply       | 3.3V                                                                                     |
| Host Interface            | SPI                                                                                      |

|                                 |                            |                                           |                   |
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### 3.5 DAB

| Item            | Specification                   |
|-----------------|---------------------------------|
| Frequency range | Band III: 174.928 – 239.200 MHz |
| Feature         | DAB to FM seamless switch       |

### 3.6 GNSS

| item                                       | Specification                 |
|--------------------------------------------|-------------------------------|
| Supported constellation                    | GPS, Glonass, Galileo, Beidou |
| GNSS C/N0 ratio<br>(monosatellite, no LNA) | 40 dBHz                       |

### 3.7 MEDIA USB

- Media USB will be connected to Docking station Via USB Cable (In Customer's Scope).
- Connector is provided on Silver Box (FCE scope)

| Feature      | Specification                         |
|--------------|---------------------------------------|
| Type         | USB2.0                                |
| Input/Output | VBAT_SW / 5V                          |
| Support      | Media & charging                      |
| Charging     | BC1.2 Charging protocol compliance 3A |

### 3.8 REAR USB

| Feature                 | Specification |
|-------------------------|---------------|
| IVI Compatibility       | USB 2.0       |
| Input / Output Voltage: | 5V / 5V       |
| Current                 | 100mA         |

### 3.9 AUDIO

THD : <1% @(4x15W RMS @ 20Hz -20KHZ(full audio band)) -Supply voltage: 14V;  
 Efficiency : >90% @(4x15W RMS @20Hz -20KHZ(full audio band)) -Supply voltage: 14V;  
 SNR : 80dB @(4x15W RMS @ 20Hz -20KHZ(full audio band)) -Supply voltage: 14V.

#### 3.9.1 SPEAKERS

|                                 |                            |                                           |                   |
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| Speaker details                            | Qty | Part Number   |
|--------------------------------------------|-----|---------------|
| 1. Front Speaker                           | 2   | 9818747880    |
| 2. Tweeter (connected with front speakers) | 2   | 9809351180    |
| 3. Rear Speaker                            | 2   | 9809320280-00 |

| Item                           | Specification                           |
|--------------------------------|-----------------------------------------|
| Type of speakers               | Full Range                              |
| Size                           | 6.1 inch                                |
| Rated power                    | 20 Watts                                |
| Peak power                     | 40 Watts                                |
| Frequency Response             | 70 - 15KHz                              |
| Resonance Frequency            | 70± 14 Hz                               |
| THD                            | 4% at 5 Watt                            |
| Speaker Impedance              | 4.0 $\Omega$ ± 0.6 $\Omega$ at (400 Hz) |
| Sound Pressure level           | 86 dB ± 2 dB (@ 300,400,500,600 Hz)     |
| Frequency Range                | 20 Hz to 20 KHz                         |
| Average Sensitivity            | 89 +/- 2 dB                             |
| D. C Resistance                | 3.52                                    |
| Equivalent volume of air (Vas) | 8.38                                    |
| Mechanical Q (Qms)             | 3.28                                    |
| Total (Qts)                    | 0.85                                    |
| Electrical Q (Qes)             | 1.15                                    |
| Buzz and Rattle test voltage   | 10V                                     |

### 3.9.2 AUDIO AMPLIFIER

| Item                  | Specification                               |
|-----------------------|---------------------------------------------|
| Output Power capacity | 4 x 26 W / 4 $\Omega$ @ 14.4 V, 1 kHz, 10 % |
| Class                 | D class                                     |
| Output Noise          | =<100 $\mu$ V for BW = 20 Hz to 20 kHz      |

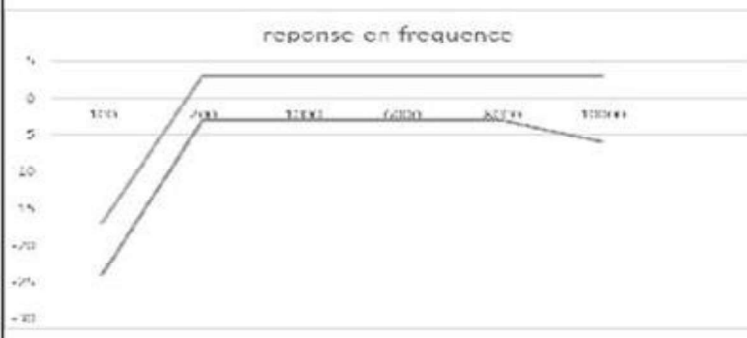
### 3.9.3 MICROPHONE

| Item                | Specification                                                         |
|---------------------|-----------------------------------------------------------------------|
| Type of Microphone  | Active microphone                                                     |
| operating Voltage   | 8 V±10 %                                                              |
| current consumption | 4.5 mA (Min), 6 mA (Typ), 13 mA (Max) at 8 V<br>1.95 mA (Typ) at 5 V. |

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## Frequency Response

### Frequency response

| N°Requirement                                                                                                    | Content of the Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-----|-----|-----|-----|---|----|------|---|----|------|---|----|------|---|----|-------|---|----|
| REQ-0507977 A<br>GEN-2023-MICROPHONE-CD-<br>PERF-0001(0)<br>Owner : e489507<br>Grade:<br>Flexibility : Mandatory | <p>The microphone frequency response shall respect ITU P1110 and shall be in the template below:</p> <div><p>response on frequency</p></div> <p>The limits for intermediate frequencies lie on a straight line drawn between the given values on a linear (dB) logarithmic (Hz) scale. All sensitivity values are expressed in dB on an arbitrary scale.</p> <table><tr><th>frequency</th><th>upper limit</th><th>lower limit</th></tr><tr><td>100</td><td>-17</td><td>-24</td></tr><tr><td>200</td><td>3</td><td>-3</td></tr><tr><td>1000</td><td>3</td><td>-3</td></tr><tr><td>2000</td><td>3</td><td>-3</td></tr><tr><td>5000</td><td>3</td><td>-3</td></tr><tr><td>10000</td><td>3</td><td>-6</td></tr></table> <p>Measurements are made in accordance with the standards CEI 60268-1 [R2], CEI 60268-4 [R3], ITU1110 [R4]</p> | frequency   | upper limit | lower limit | 100 | -17 | -24 | 200 | 3 | -3 | 1000 | 3 | -3 | 2000 | 3 | -3 | 5000 | 3 | -3 | 10000 | 3 | -6 |
| frequency                                                                                                        | upper limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | lower limit |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 100                                                                                                              | -17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -24         |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 200                                                                                                              | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -3          |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 1000                                                                                                             | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -3          |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 2000                                                                                                             | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -3          |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 5000                                                                                                             | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -3          |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |
| 10000                                                                                                            | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -6          |             |             |     |     |     |     |   |    |      |   |    |      |   |    |      |   |    |       |   |    |

|                           |                                                                                              |
|---------------------------|----------------------------------------------------------------------------------------------|
| Directionality of Array   | Omni-Directional                                                                             |
| Sensitivity               | -10.45±3 dB (at 1 kHz 94 dBSPL)                                                              |
| Signal to Noise ratio     | 65 dB (Min) at 1 kHz<br>8 V, TmoyEF, TmaxEF, TminEF                                          |
| Total Harmonic Distortion | 3 % (Max) at 110 dBSPL<br>300 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz<br>8 V, TmoyEF, TmaxEF, TminEF |
|                           | 1 % (Max) at 106 dBSPL<br>300 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz<br>8 V, TmoyEF, TmaxEF, TminEF |

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|             |                                                                                              |
|-------------|----------------------------------------------------------------------------------------------|
|             | 3 % (Max) at 100 dBSPL<br>300 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz<br>5 V, TmoyEF, TmaxEF, TminEF |
| Impedance   | 130Ω (Maximum)                                                                               |
| Directivity | Omni-Directional                                                                             |
| Self-Noise  | -72 dB (Max)<br>8 V, TmoyEF, TmaxEF, TminEF                                                  |

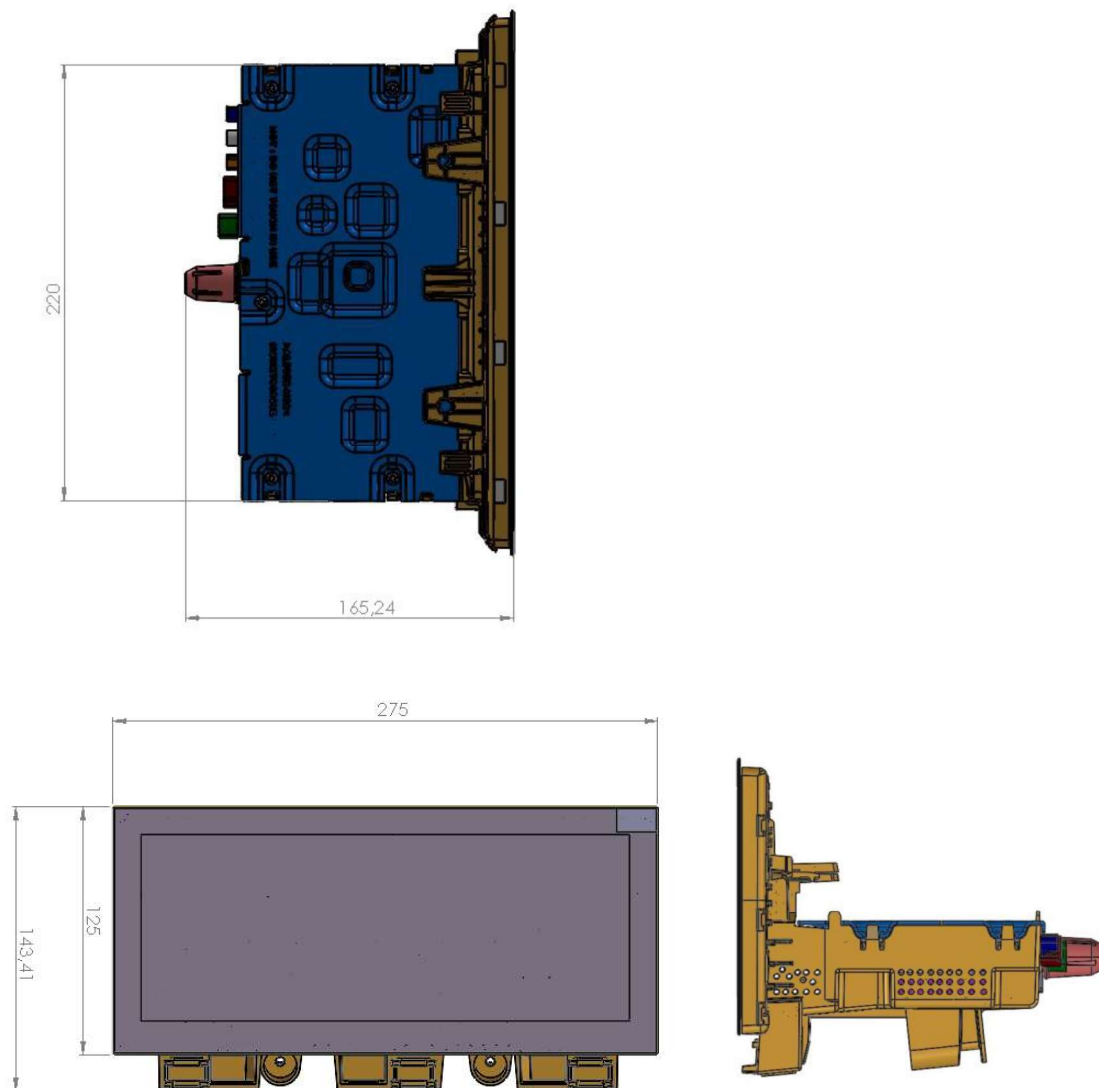
3.10 RVC

| Item                                                                     | Specifications     |
|--------------------------------------------------------------------------|--------------------|
| Optical format                                                           | 1/5 inch           |
| Pixel Size                                                               | 3.7um              |
| Active Array (Resolution)                                                | VGA (720H*480V)    |
| Input Voltage                                                            | Typ DC 12V         |
| Current                                                                  | 33±3 mA @ 12V      |
| Video Out                                                                | NTSC               |
| Static Overlay                                                           | Supported          |
| Image Start-up Time                                                      | <500 ms            |
| Video Signal transmitted from camera                                     | Analog CVBS signal |
| RVC is VGA camera, its analog signal with 1.0Vpp composite video at 75Ω. |                    |

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

## 4 MECHANICAL

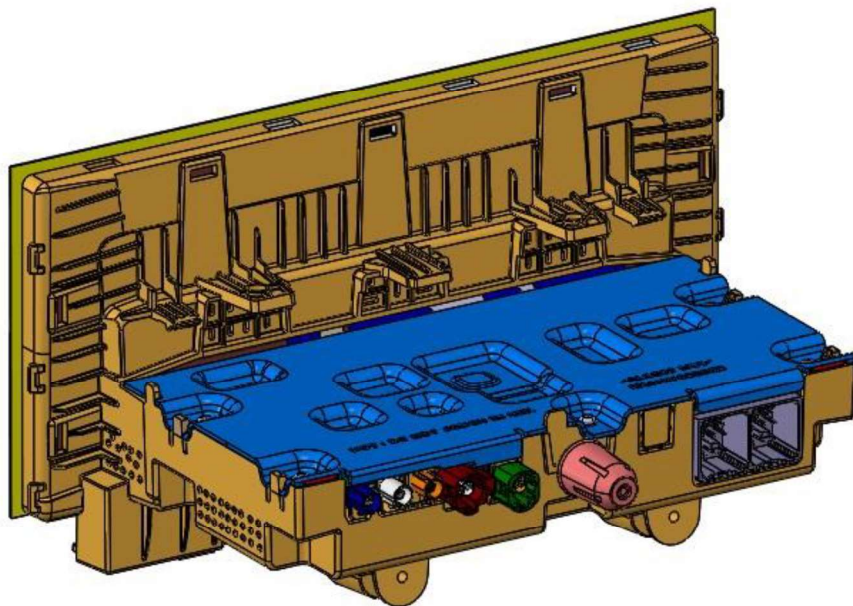
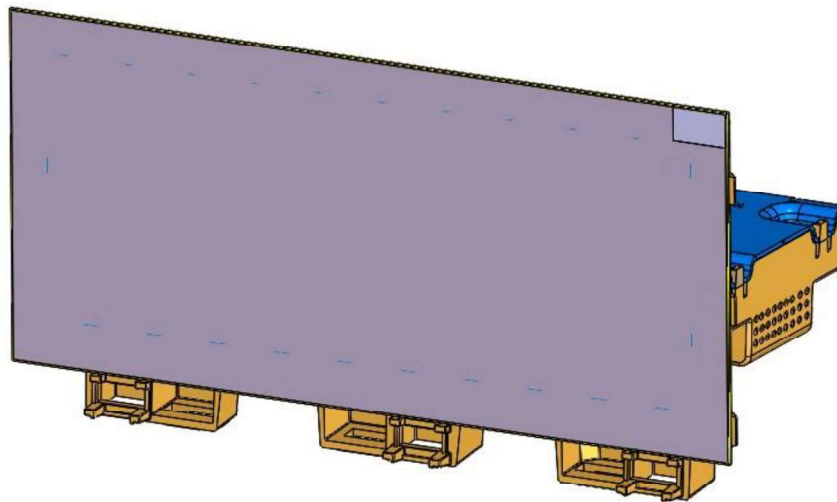
### 4.1 OVERALL DIMENSIONS





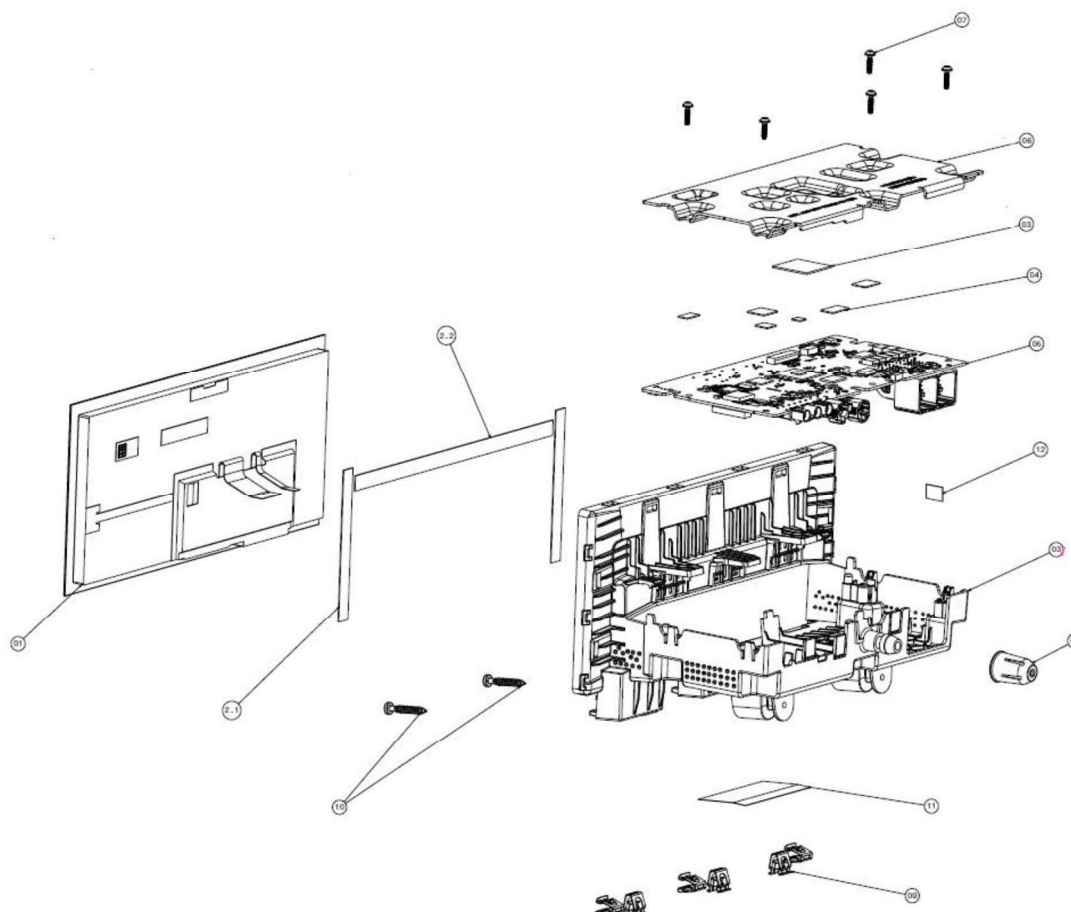
|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

## 4.2 3D VIEWS



|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
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| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

### 4.3 EXPLODED VIEW



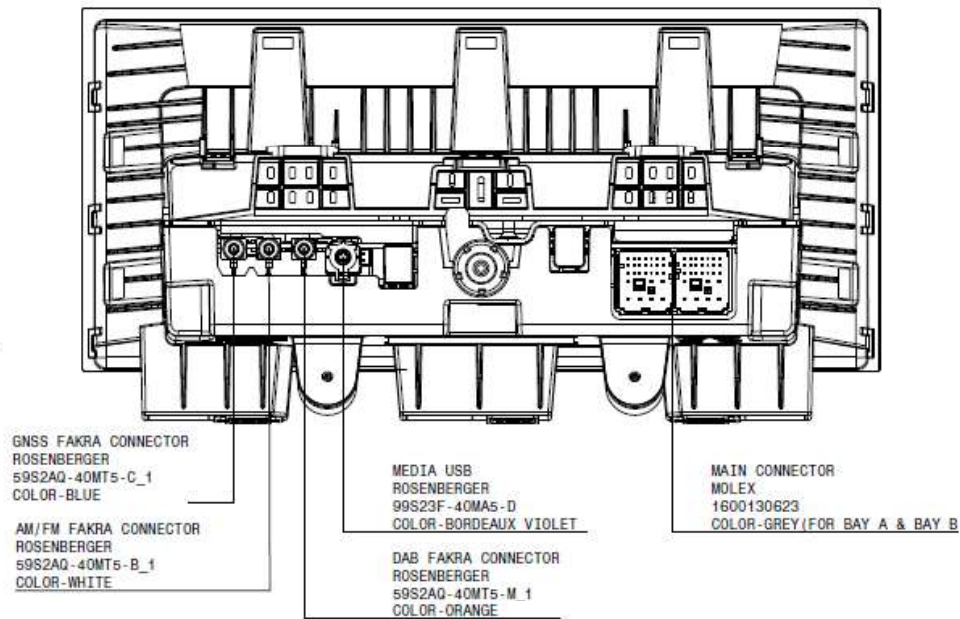
|     |                                 |                        |
|-----|---------------------------------|------------------------|
| 1   | Crony 10,25" display and touch  |                        |
| 2.1 | Display DSAT short 10x100mm     | 3M GPH060              |
| 2.2 | Display DSAT long 10x213,8mm    | 3M GPH060              |
| 3   | Crony plastic housing           | PBT GF20, Crastin 9320 |
| 4   | Crony TIM interface             | TG 6060 Putty          |
| 5   | PCBA                            | FR4                    |
| 6   | Crony Top cover heatsink        | AL5052 H32             |
| 7   | Screw EJOT 4220586801           | steel                  |
| 8   | Crony Locating pin              | Sarlink TPV 3160B      |
| 9   | Metal clip Araymond 233496-0-04 | C67S-A steel           |
| 10  | Bottom Screw EJOT 4015030801    | steel                  |
| 11  | Crony sticker label             | PE + adhesive          |
| 12  | Traceability label              | PE + adhesive          |
| 13  | Hybrid sheet                    | Silicone free          |

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

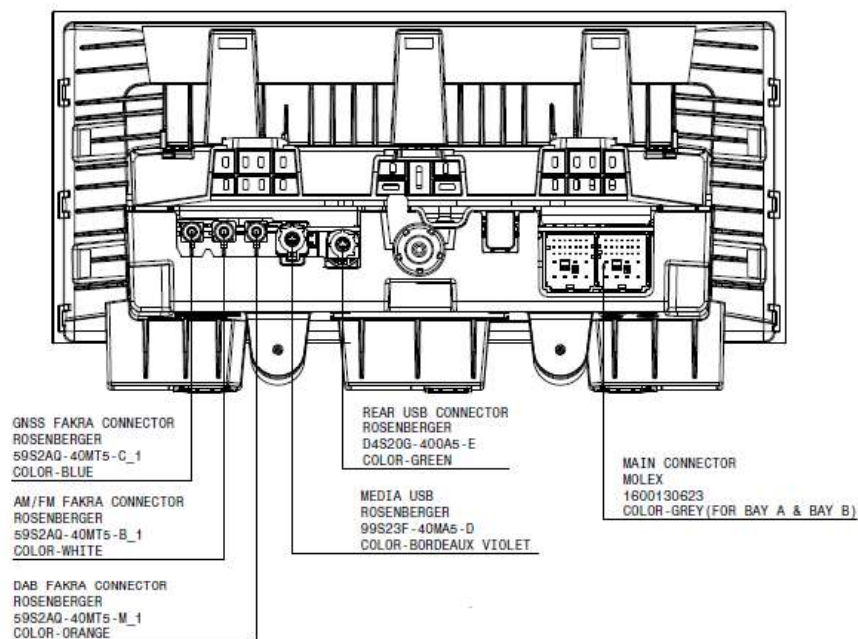
## 5 CONNECTORS AND INTERFACES

### 5.1 OVERVIEW VARIANT WISE

VAR 1.IVI PREMIUM\_DAB\_AACP\_NO\_NAV\_ATB

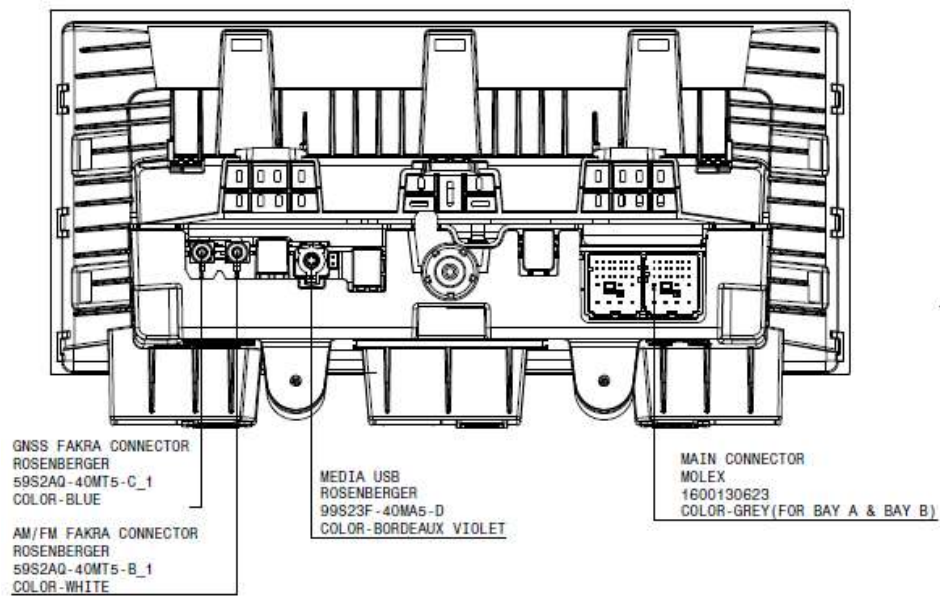


VAR 2.IVI PREMIUM\_DAB\_AACP\_NAV\_ATB

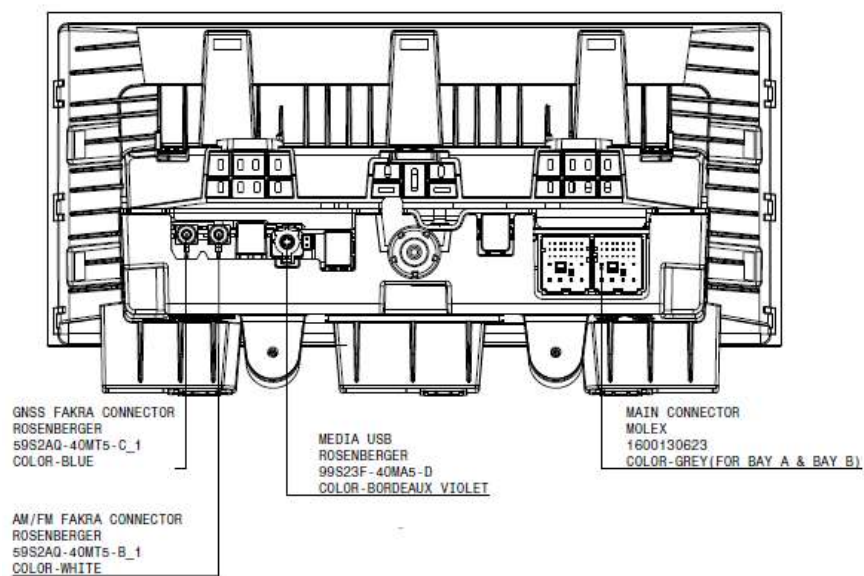


|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

VAR 3.IVI PREMIUM\_NO DAB\_AACP\_NO NAV\_NO ATB



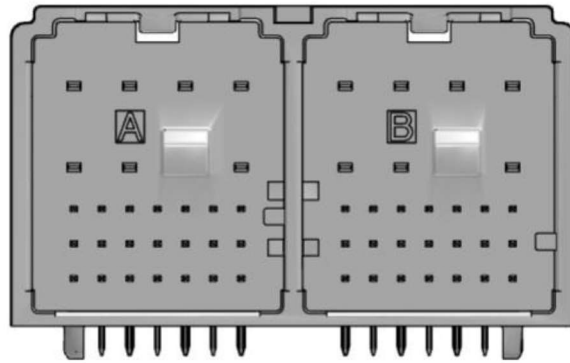
VAR 4.IVI PREMIUM\_NO DAB\_AACP\_NAV\_NO ATB



|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

## 5.2 CONNECTORS PINOUT

### 5.2.1 MAIN CONNECTOR



Molex 160013-0623

stAK50h 2 Bay Hybrid Header, 56 Circuits, Bay A 28 Circuit Header, Key 2; Bay B 28 Circuit Header, Key 3, Gray

#### BAY A:

| Signal name        | Pin No. | Description                     | I/O | Voltage (V) | Current (A) | Power (W) |
|--------------------|---------|---------------------------------|-----|-------------|-------------|-----------|
| SPKR_FRONT_RIGHT1+ | 1       | Current through Speaker Right1+ | O   | 12          | 2.7         | 32.4      |
| SPKR_FRONT_RIGHT1- | 2       | Current through Speaker Right1- | O   | 12          | 2.7         | 32.4      |
| SPKR_REAR_RIGHT2+  | 3       | Current through Speaker Right2+ | O   | 12          | 2.7         | 32.4      |
| SPKR_REAR_RIGHT2-  | 4       | Current through Speaker Right2- | O   | 12          | 2.7         | 32.4      |
| SPKR_FRONT_LEFT1+  | 5       | Current through Speaker Left1+  | O   | 12          | 2.7         | 32.4      |
| SPKR_FRONT_LEFT1-  | 6       | Current through Speaker Left1-  | O   | 12          | 2.7         | 32.4      |
| -                  | 7       | TAB                             | -   | -           | -           | -         |
| NC                 | 8       | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 9       | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 10      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 11      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 12      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 13      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 14      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 15      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 16      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 17      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 18      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 19      | Not Connected                   | NC  | -           | -           | -         |
| MIC_IN+            | 20      | Current through MIC_IN+         | I   | 8           | 0.014       | 0.112     |
| NC                 | 21      | Not Connected                   | NC  | -           | -           | 0         |
| MIC_IN-            | 22      | Current through MIC_IN-         | I   | 8           | 0.014       | 0.112     |
| NC                 | 23      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 24      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 25      | Not Connected                   | NC  | -           | -           | -         |
| NC                 | 26      | Not Connected                   | NC  | -           | -           | -         |
| GND                | 27      | SW DEBUG Interface              | PWR | -           | -           | -         |
| NC                 | 28      | SW DEBUG Interface              | NC  | -           | -           | -         |
| NC                 | 29      | SW DEBUG Interface              | NC  | -           | -           | -         |

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

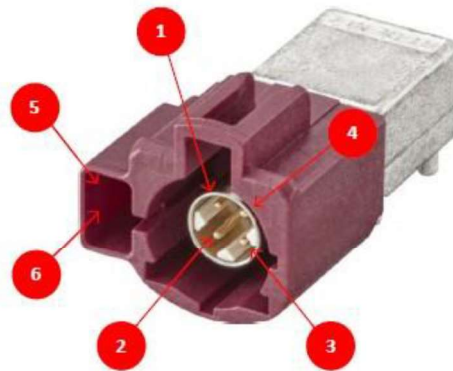
## BAY B:

| Signal name      | Pin No. | Description                       | I/O | Voltage (V) | Current (A) | Power (W) | Comments                |
|------------------|---------|-----------------------------------|-----|-------------|-------------|-----------|-------------------------|
| SPKR_REAR_LEFT2+ | 1       | Current through Speaker Left2+    | O   | 12          | 2.7         | 32.4      |                         |
| SPKR_REAR_LEFT2- | 2       | Current through Speaker Left2-    | O   | 12          | 2.7         | 32.4      |                         |
| NC               | 3       | Not Connected                     | NC  |             |             |           |                         |
| VBAT             | 4       | Battery Input                     | PWR | 9           | 7           | 63        | Vehicle Battery +       |
| GND              | 5       | Battery GND                       | PWR | 9           | 7           | 63        | Vehicle Battery -       |
| GND              | 6       | Battery GND                       | PWR | 9           | 7           | 63        | Vehicle Battery -       |
| -                | 7       | TAB                               | -   | -           | -           | -         | No Pin connection       |
| VBAT             | 8       | Battery Input                     | PWR | 9           | 7           | 63        | Vehicle Battery +       |
| NC               | 9       | SOC Debug interface               | I/O | 3.42        | 0.03        | 0.102     | Only for Debug          |
| NC               | 10      | SOC Debug interface               | I/O | 3.42        | 0.03        | 0.102     | Only for Debug          |
| NC               | 11      | Not Connected                     | NC  |             |             | 0         |                         |
| NC               | 12      | Not Connected                     | NC  |             |             | 0         |                         |
| NC               | 13      | External Wakeup Signal+ Park Lamp | I   | 16          | 0.000332    | 0.0053    | HW Provision for Future |
| NC               | 14      | Not Connected                     | NC  | -           | -           | -         |                         |
| NC               | 15      | External Wakeup Signal+ Park Lamp | I   | 16          | 0.000332    | 0.0053    | HW Provision for Future |
| NC               | 16      | SW DEBUG Interface                | I   |             |             | 0         |                         |
| GND              | 17      | SW DEBUG Interface                | PWR |             |             | 0         |                         |
| CAN H            | 18      | Vehicle Communication Interface   | I/O | 3.3         | 0.1         | 0.33      |                         |
| CAN L            | 19      | Vehicle Communication Interface   | I/O | 3.3         | 0.1         | 0.33      |                         |
| NC               | 20      | Not Connected                     | NC  | -           | -           | -         |                         |
| NC               | 21      | Not Connected                     | NC  | -           | -           | -         |                         |
| NC               | 22      | Not Connected                     | NC  | -           | -           | -         |                         |
| SWS_TOGGLE       | 23      | SWC                               | I/O | 5           | 0.005       | 0.025     |                         |
| SWS_ROCKER       | 24      | SWC                               | I/O | 5           | 0.005       | 0.025     |                         |
| SWS_GND          | 25      | SW DEBUG Interface                | PWR | -           | -           | -         |                         |
| GND              | 26      | SW DEBUG Interface                | PWR | -           | -           | -         |                         |
| RVC_IN+          | 27      | RVC                               | I/O | 1           | -           | -         |                         |
| RVC_GND          | 28      | RVC                               | I/O | 1           | -           | -         |                         |
| RVC_SHLD_GND     | 29      | RVC                               | I/O | -           | -           | -         | Shield for RVC          |



|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
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| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

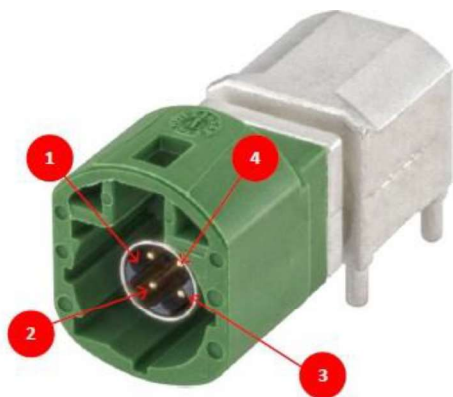
### 5.2.2 MEDIA USB



HSD+2 Right Angle Plug PCB, 6 Circuits, D Bordeaux  
ROSENBERGER 99S23F-40MA5-D

| Signal name      | Pin No. | Description                | I/O |
|------------------|---------|----------------------------|-----|
| MEDIA_USB_IN_DP  | 1       | MEDIA Interface            | I/O |
| MEDIA_USB_IN_CC1 | 2       | MEDIA Interface            | I   |
| MEDIA_USB_IN_DM  | 3       | MEDIA Interface            | I/O |
| MEDIA_USB_IN_CC2 | 4       | MEDIA Interface            | I   |
| MEDIA_USB_OUT_5V | 5       | 5V USB_MEDIA output signal | PWR |
| GND              | 6       | Supply Ground              | PWR |
| GND              | M1      | Supply Ground              | PWR |
| GND              | M2      | Supply Ground              | PWR |
| GND              | M3      | Supply Ground              | PWR |
| GND              | M4      | Supply Ground              | PWR |

### 5.2.3 REAR USB



HSD Right Angle Plug PCB, 4 Circuits, E Green  
ROSENBERGER D4S20G-400A5-E

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

| Signal name   | Pin number | Description           | I/O |
|---------------|------------|-----------------------|-----|
| REAR_USB_DP   | 1          | Rear USB input signal | I   |
| REAR_USB_VBUS | 2          | Ground                | PWR |
| Rear_USB_DN   | 3          | Ground                | PWR |
| GND           | 4          | Ground                | PWR |
| GND           | M1         | Ground                | PWR |
| GND           | M2         | Ground                | PWR |
| GND           | M3         | Ground                | PWR |
| GND           | M4         | Ground                | PWR |

#### 5.2.4 AM/FM FAKRA



FAKRA-HF Right Angle Plug PCB, 1 Circuits, B White  
ROSENBERGER 59S2AQ-40MT5-B\_1

| Signal name | Pin No. | Description      | I/O |
|-------------|---------|------------------|-----|
| AM/FM_IN    | 1       | RF_INPUT_ signal | I   |
| GND         | M1      | Supply Ground    | PWR |
| GND         | M2      | Supply Ground    | PWR |
| GND         | M3      | Supply Ground    | PWR |
| GND         | M4      | Supply Ground    | PWR |

#### 5.2.5 DAB FAKRA





|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

### FAKRA-HF Right Angle Plug PCB, 1 Circuits, MPastel Orange ROSENBERGER 59S2AQ-40MT5-M\_1

| Signal name | Pin no. | Description        | I/O |
|-------------|---------|--------------------|-----|
| DAB_IN      | 1       | Tuner_INPUT_signal | I   |
| GND         | M1      | Supply Ground      | PWR |
| GND         | M2      | Supply Ground      | PWR |
| GND         | M3      | Supply Ground      | PWR |
| GND         | M4      | Supply Ground      | PWR |

#### 5.2.6 GNSS FAKRA



### FAKRA-HF Right Angle Plug PCB, 1 Circuits, C Blue ROSENBERGER 59S2AQ-40MT5-C\_1

| Signal name | Pin No. | Description     | I/O |
|-------------|---------|-----------------|-----|
| GNSS_IN     | 1       | RF_INPUT_signal | I   |
| GND         | M1      | Supply Ground   | PWR |
| GND         | M2      | Supply Ground   | PWR |
| GND         | M3      | Supply Ground   | PWR |
| GND         | M4      | Supply Ground   | PWR |

## 6 CERTIFICATIONS AND REGULATIONS

| Certification                                     | Authentication                                            |
|---------------------------------------------------|-----------------------------------------------------------|
| Android Auto & Car Play                           | Google / Apple                                            |
| Bluetooth                                         | Bluetooth Sig                                             |
| USB                                               | USB if                                                    |
| Wifi Interoperability                             | Wifi alliance                                             |
| Market access certification (FCC-USA, RED-Europe) | All radio feature will be included, navigation, FM/AM/DAB |

| Regulation                         | Regulation Number | Compliance |
|------------------------------------|-------------------|------------|
| Restrictive use of Heavy materials | Directive 2000/53 | Yes        |

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

|                                                                                   |                                                                            |                           |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------|
| Recyclability                                                                     | ECE R133                                                                   | Yes                       |
| RF use and RF Certification                                                       | RED directive 2014/53/EU and Regulation applicable in respective countries | Yes                       |
| Electromagnetic compatibility                                                     | ECE R10.06                                                                 | Component level E-marking |
| Interior fittings                                                                 | ECE R21.02                                                                 | Yes                       |
| Devices for indirect vision                                                       | ECE R46.06                                                                 | NA                        |
| Identification of controls, tell-tales and indicators (01 series)                 | ECE R121.02                                                                | NA (QM level)             |
| Recyclability of motor vehicles                                                   | ECE R133                                                                   | Yes                       |
| European Information System on Electromagnetic Fields Exposure and Health Impacts | 1999/519/CE European recommendation and no. 2002-775 decree of 03 May 2002 | Yes                       |
| DAB                                                                               | European electronics commission code                                       | Yes                       |
| GDPR                                                                              | EU 2016/679                                                                | Yes                       |
| General requirements to be followed for all electrical devices                    | Directive 2014/35/EU                                                       | Yes                       |
| CE Marking                                                                        | EC no. 765/2008                                                            | Yes                       |

## FCC compliance statments

This device complies with art 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

15.21. Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

|                                 |                            |                                           |                   |
|---------------------------------|----------------------------|-------------------------------------------|-------------------|
| Created by :<br>BHATT Komal     | Reference<br>FCE-2021-0322 | Title<br>PSA IVI Crony2 Product Datasheet |                   |
| Revised by :<br>PIREYRE Camille | Date<br>2024-01-04         | Revision :<br>3.3                         | Status<br>IN WORK |

6.1 LABEL

Product name : Crony 2

Trademark : Forvia

