

# Reference manual

VC230 / VICT3 / QuestX

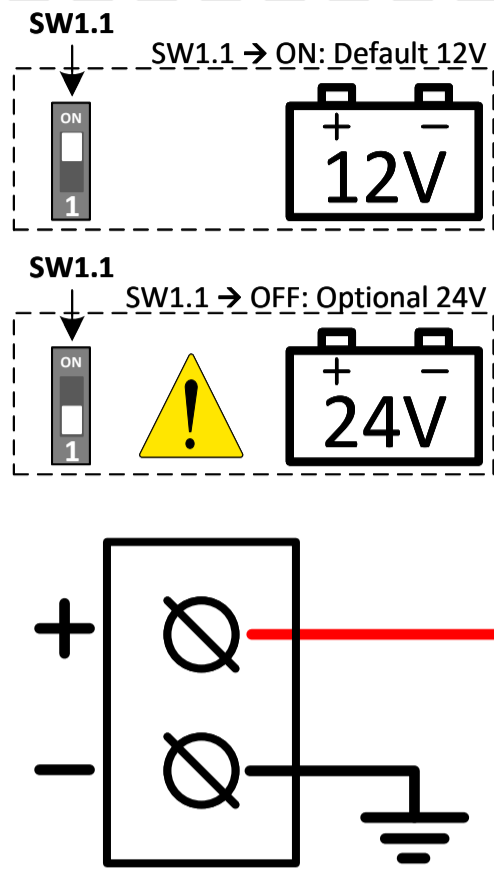


This manual contains schematics and diagrams for installing a VC230 / VICT3 / QuestX system in a vehicle. These systems all share the same hardware, therefore share the same manual.

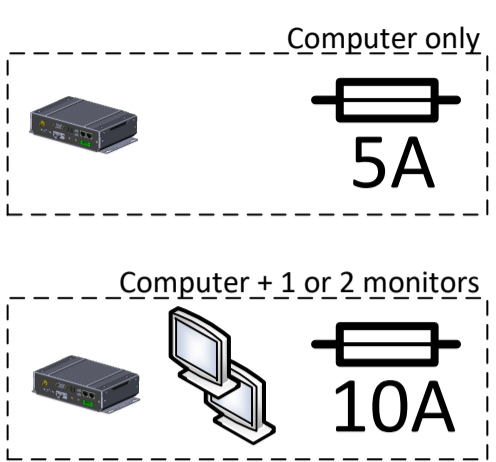
- **Always disconnect power before doing maintenance.**
- Basic knowledge of vehicle installations is required.
- Always make a star connection with one connector for easy (dis)connecting power to the whole system (including monitors, hubs, etc), and keep the computer and it's other components like monitors on one central fuse.
- Do not disconnect separate parts of the whole system (e.g. computer off and monitor on).
- Do not disconnect the monitor cable on the monitor side when powered, this will damage the computer.
- Always use strain relief for all cables.
- Keep separate wires stranded together with a cable tie to stay compatible with EMC guidelines.
- If a connector has locking screws, use these to lock the connector in place.

# Installation diagram

## Vehicle power



## Vehicle fusebox



## Computer installation site

**Always disconnect power before doing maintenance**

Interlocking 2 pole connectors  
Wiregauge  $\geq 4 \text{ mm}^2$  or  $\geq \text{AWG12}$   
Wiregauge  $\geq 1 \text{ mm}^2$  or  $\geq \text{AWG17}$

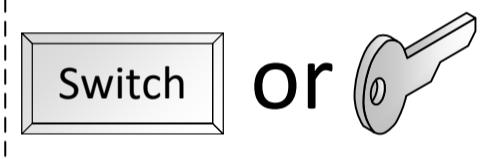
## Monitor(s) power (optional)

Barrelplug 5.5/2.1

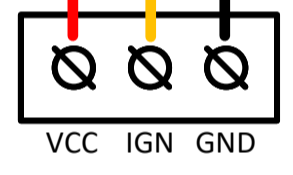
## Primary monitor DVI (optional)



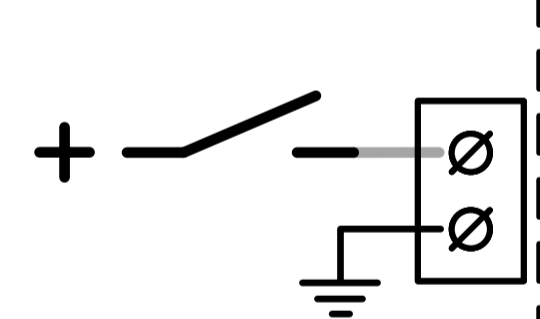
## Vehicle ignition sys.



## Computer power

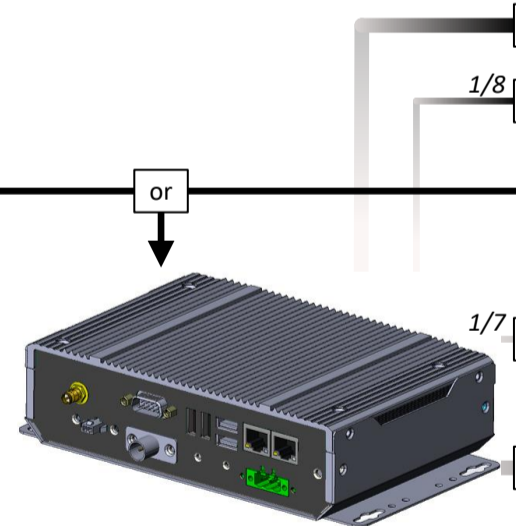


## External switch

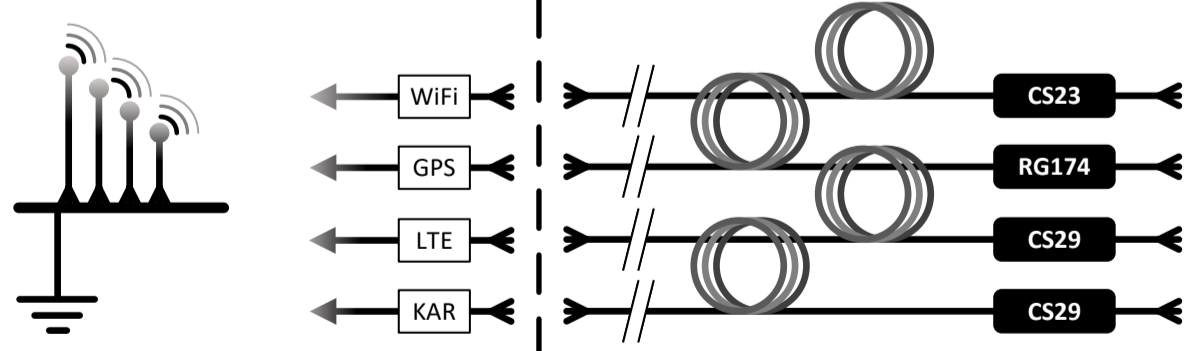


See page 3, 4 or 5 for additional diagrams

## Computer



## Antenna system



## I/O

See page 5

## Hub (opt.)

Microfit 2 pole

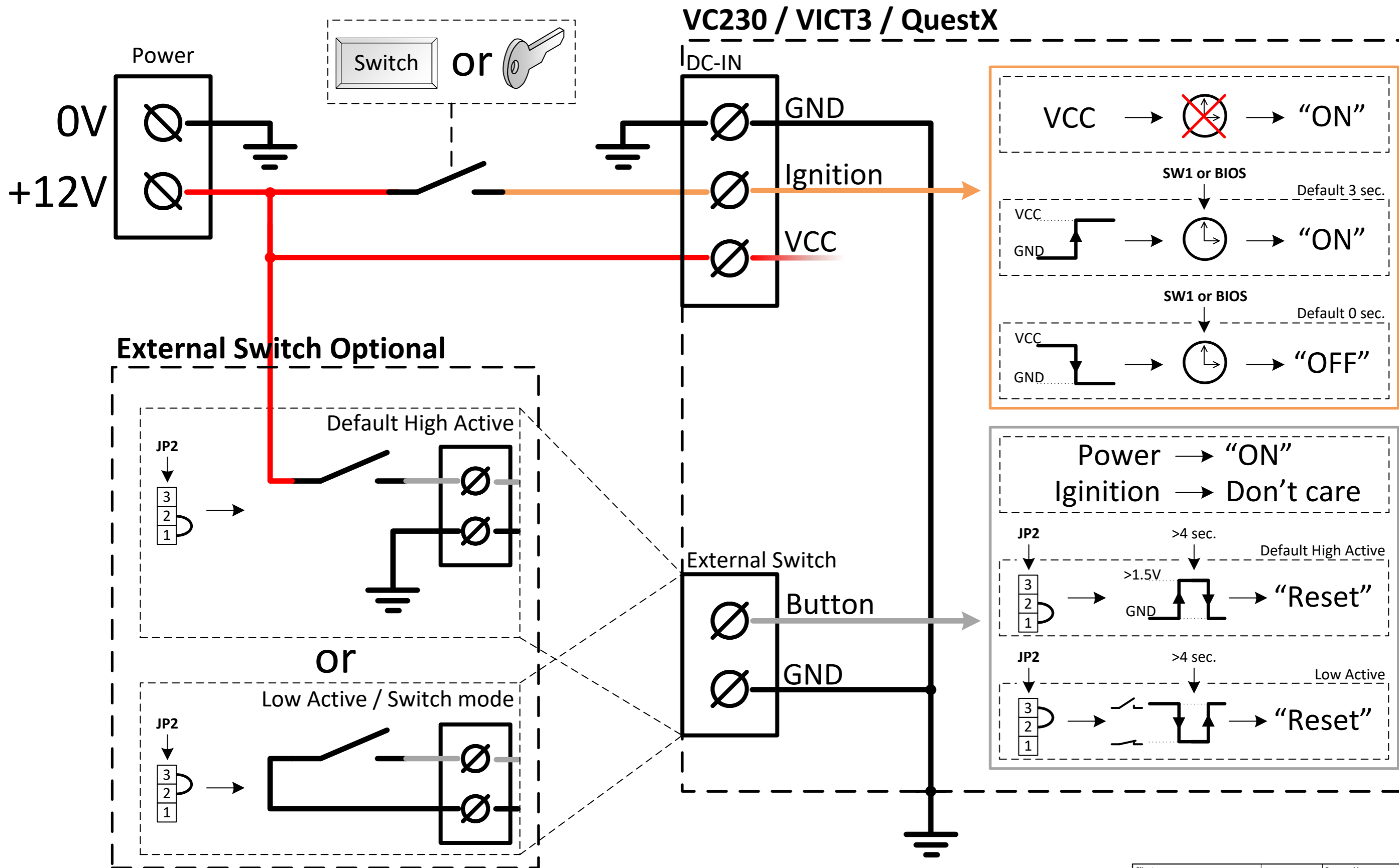
## Secondary monitor HDMI (optional)



- Optional vehicle connection (DE9)
- Optional serial connection (DE9)
- Optional USB accessories (USB)
- Optional USB accessories (USB)
- Optional Ethernet connection (RJ45)
- Optional Ethernet connection (RJ45)
- Speaker Left (L+R)
- Speaker Right (L+R)

# Connection diagram VC230 – Simplified schematic

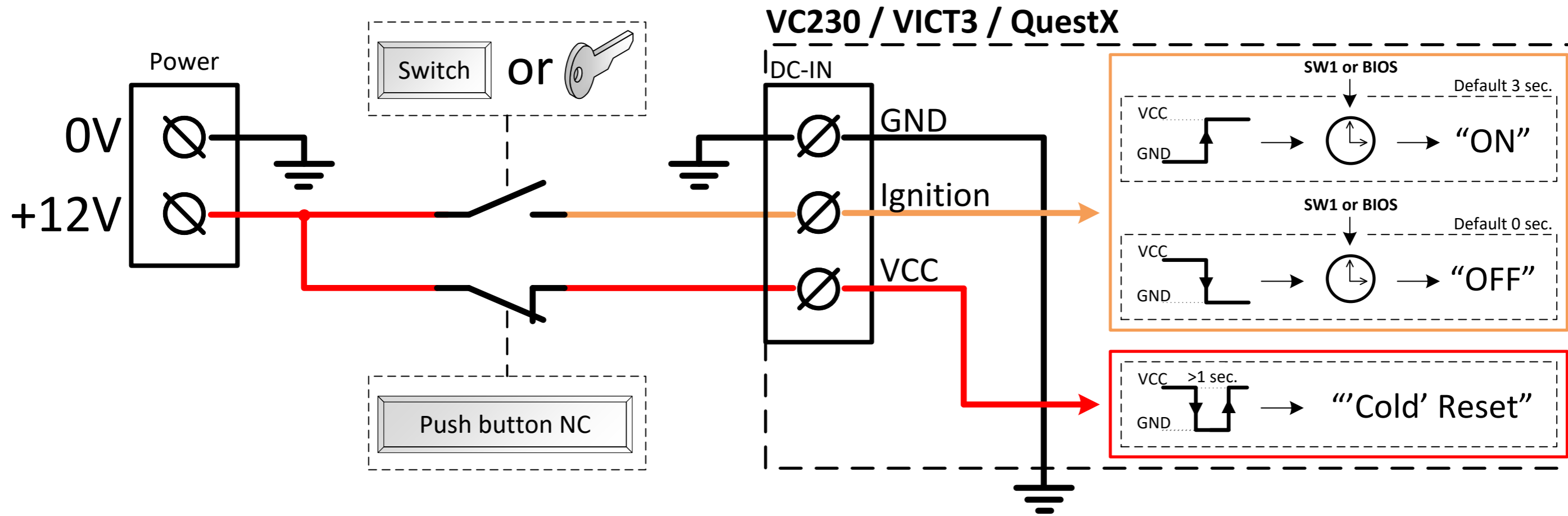
Ignition and external switch input circuit



**⚠ Fuses and accessories are intentionally omitted ⚠**

# Ignition & Reset option VC230 – Simplified schematic

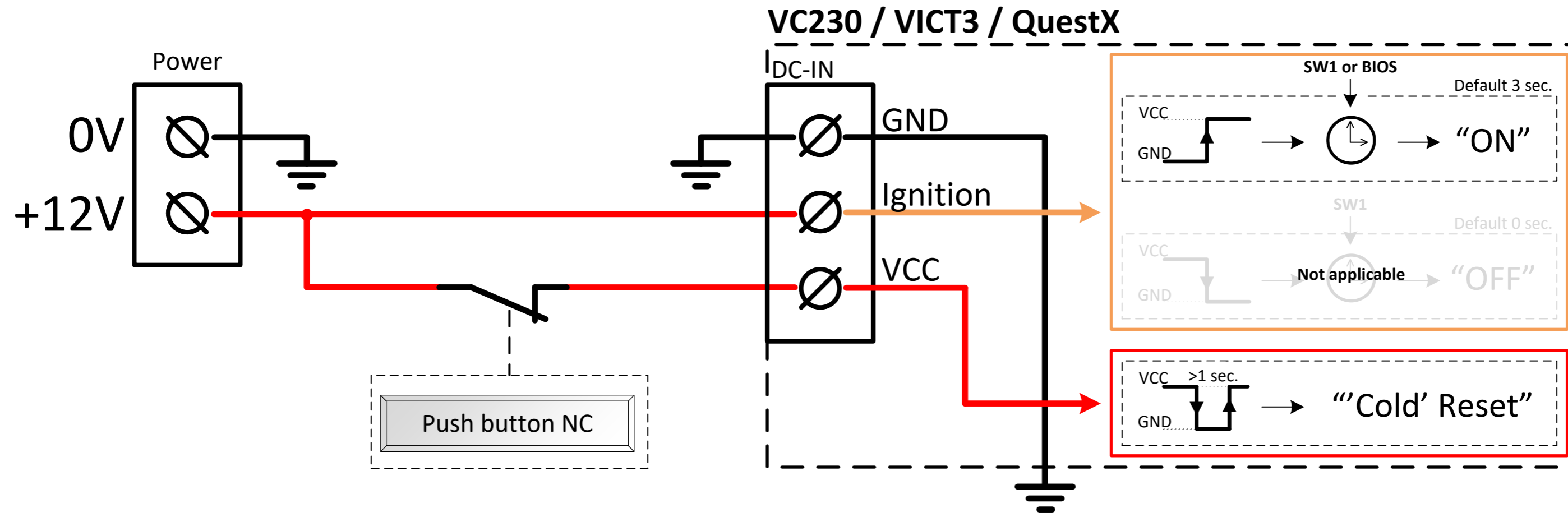
Ignition and external switch input circuit



**⚠ Fuses and accessories are intentionally omitted ⚠**

# Always on & Reset option VC230 – Simplified schematic

Always on system, when vehicle is connected to external power when parked

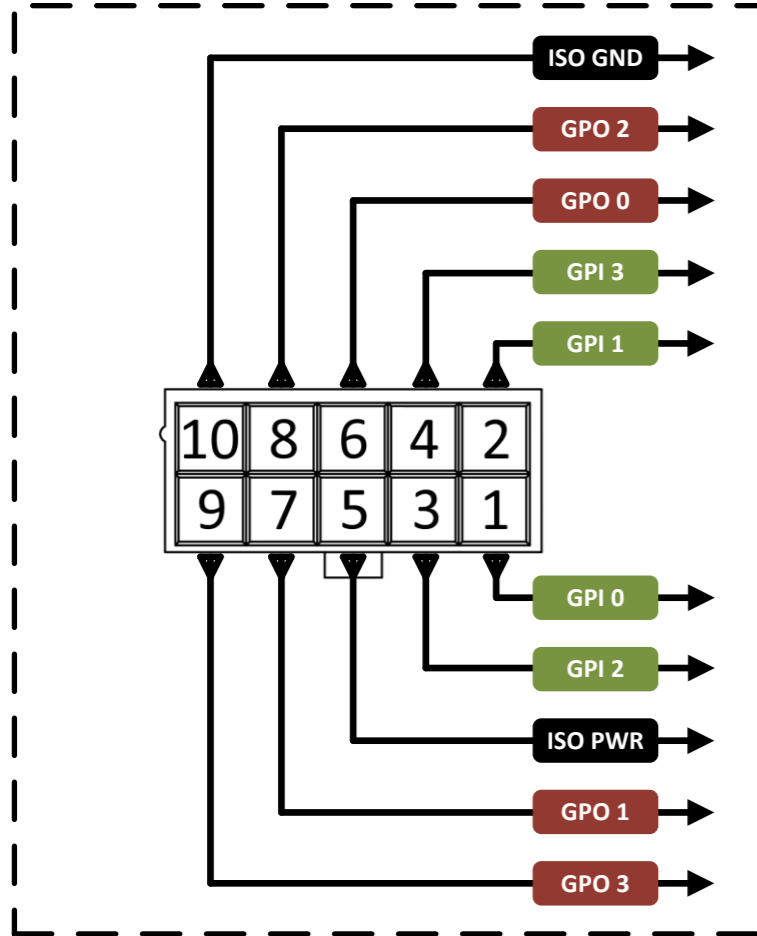


**⚠ Fuses and accessories are intentionally omitted ⚠**

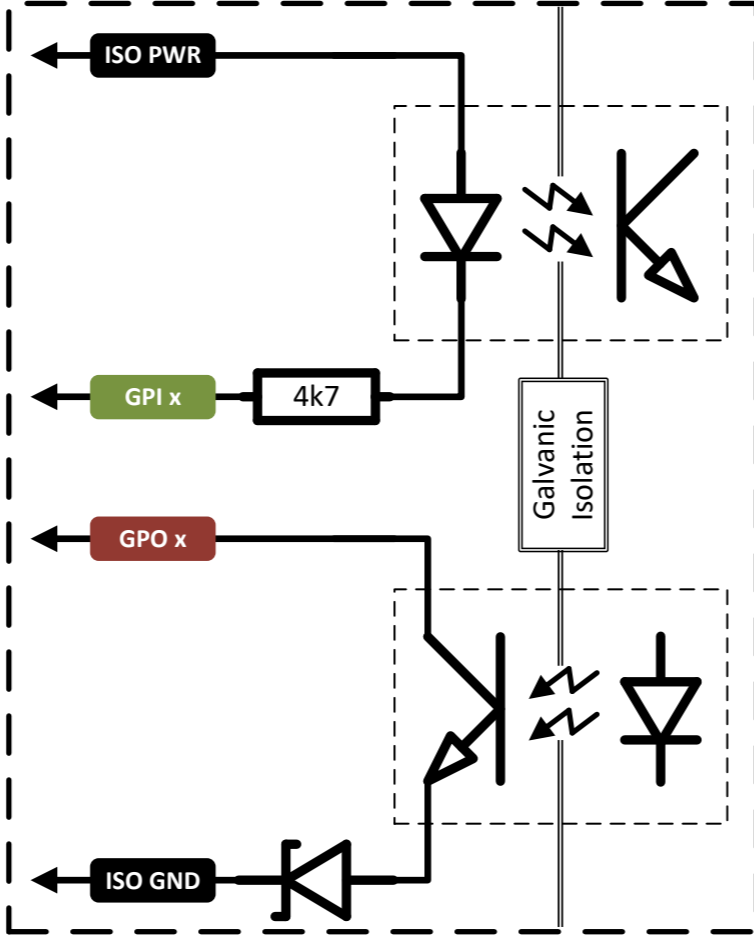
Client Intemo Special Products	Page 5 of 10	Prepared by Antoine van de Cruyssen	Date 23-11-2021
Process VC230 / VICT3 / QuestX		Approved by Antoine van de Cruyssen	Date 22-2-2022

# GPIO connections

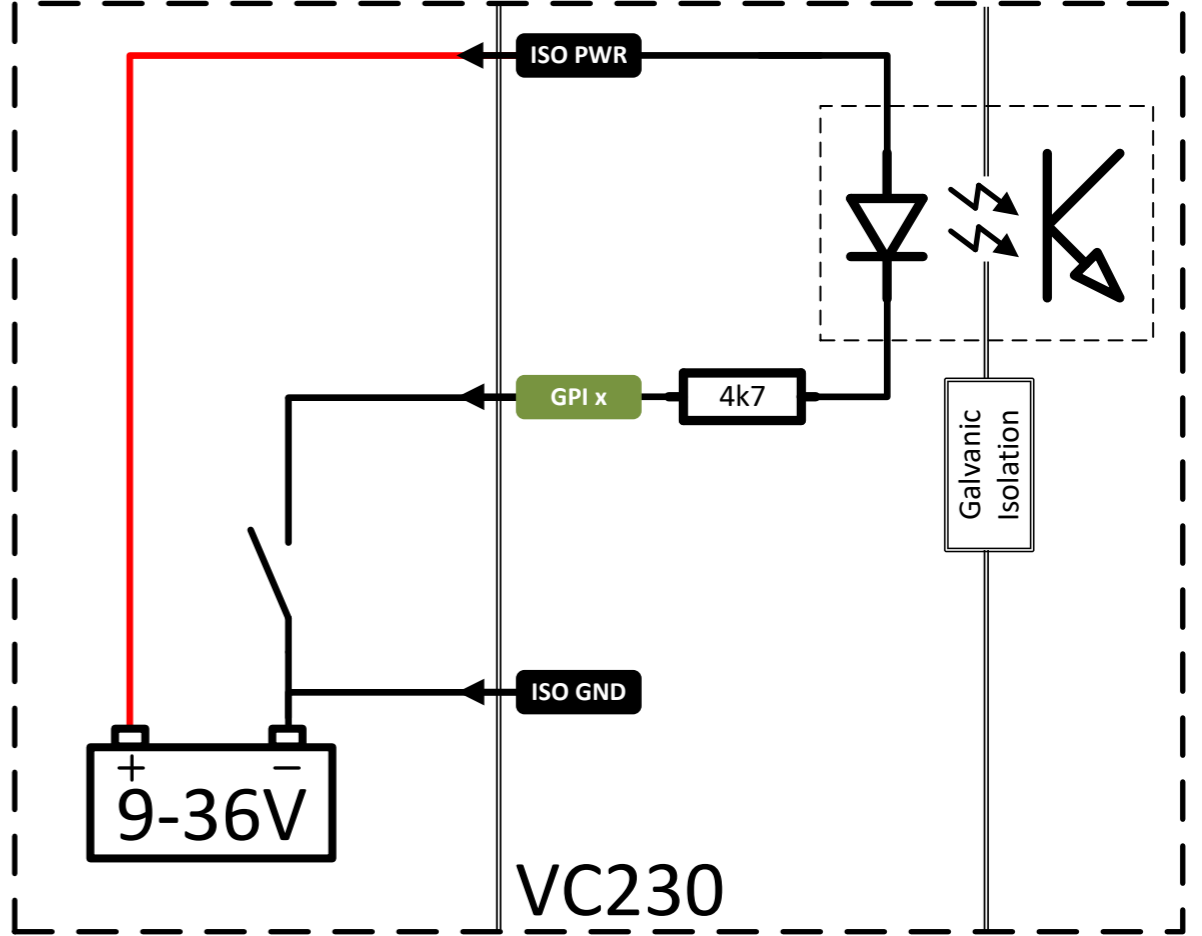
## GPIO pinout



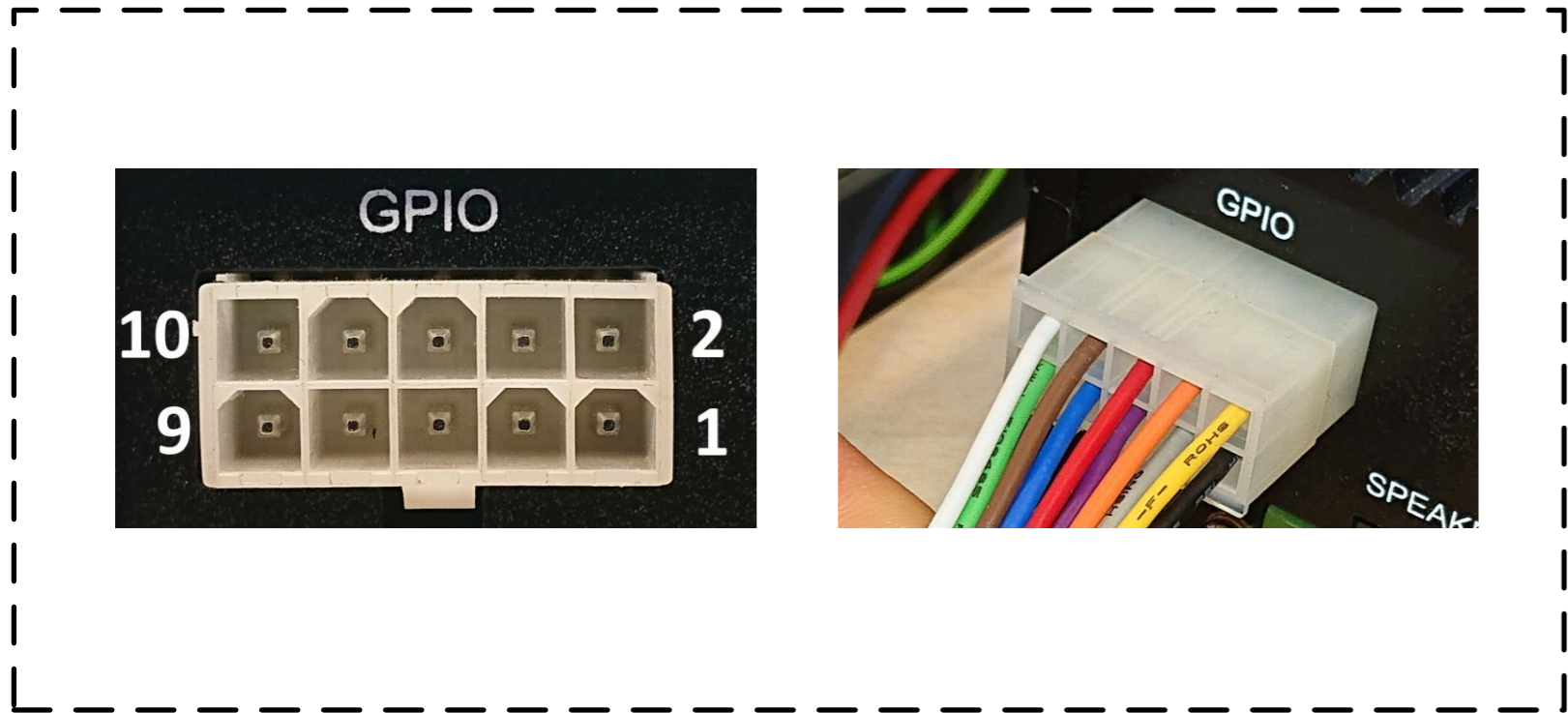
## Simplified schematic



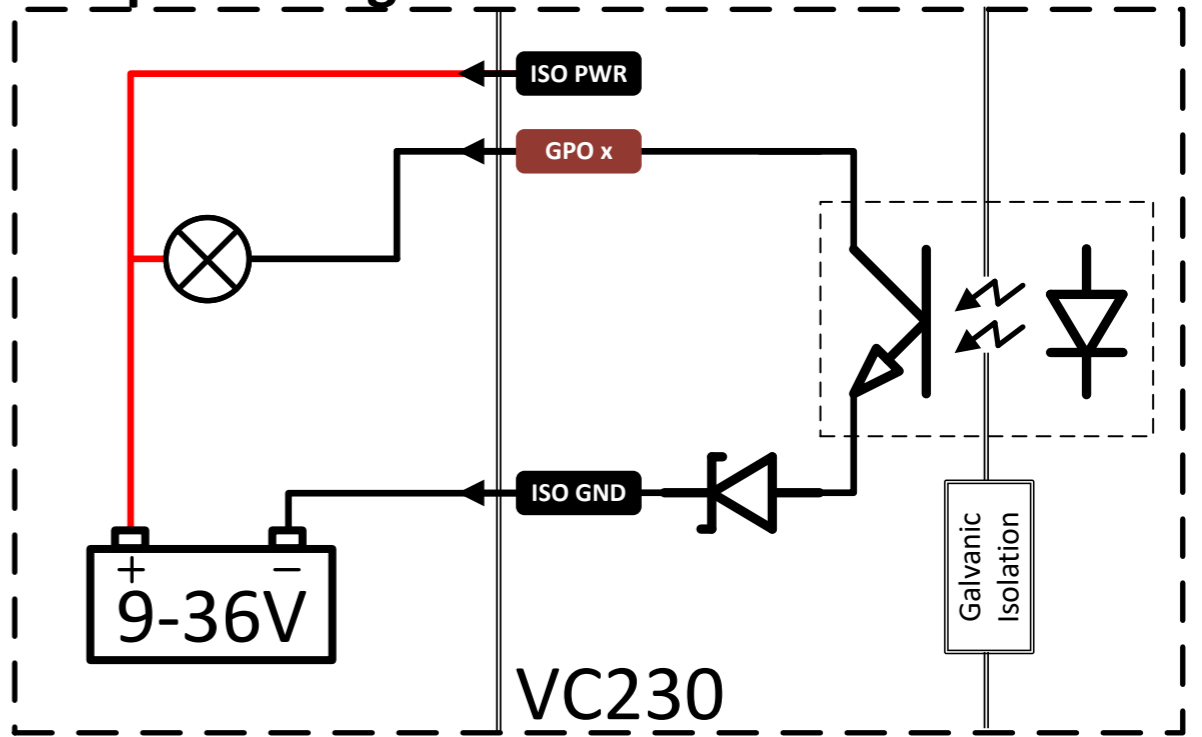
## Input wiring



## GPIO connector



## Output wiring

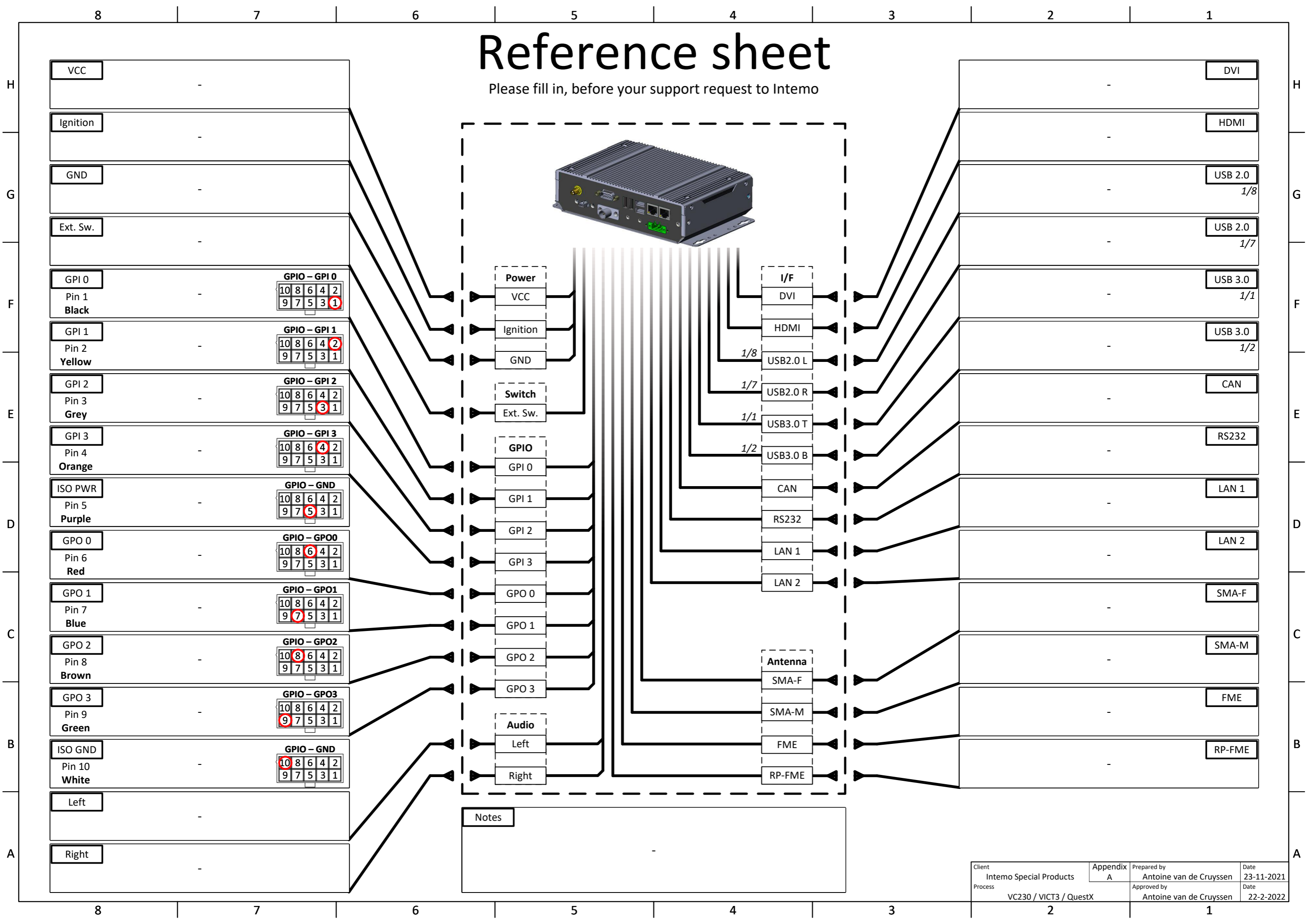


⚠ Simplified schematic ⚠



# Reference sheet

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VCC	-
Ignition	-
GND	-
Ext. Sw.	-
GPI 0	<b>GPIO - GPI 0</b> 10 8 6 4 2 9 7 5 3 1
Pin 1 Black	
GPI 1	<b>GPIO - GPI 1</b> 10 8 6 4 2 9 7 5 3 1
Pin 2 Yellow	
GPI 2	<b>GPIO - GPI 2</b> 10 8 6 4 2 9 7 5 3 1
Pin 3 Grey	
GPI 3	<b>GPIO - GPI 3</b> 10 8 6 4 2 9 7 5 3 1
Pin 4 Orange	
ISO PWR	<b>GPIO - GND</b> 10 8 6 4 2 9 7 5 3 1
Pin 5 Purple	
GPO 0	<b>GPIO - GPO0</b> 10 8 6 4 2 9 7 5 3 1
Pin 6 Red	
GPO 1	<b>GPIO - GPO1</b> 10 8 6 4 2 9 7 5 3 1
Pin 7 Blue	
GPO 2	<b>GPIO - GPO2</b> 10 8 6 4 2 9 7 5 3 1
Pin 8 Brown	
GPO 3	<b>GPIO - GPO3</b> 10 8 6 4 2 9 7 5 3 1
Pin 9 Green	
ISO GND	<b>GPIO - GND</b> 10 8 6 4 2 9 7 5 3 1
Pin 10 White	
Left	-
Right	-

<b>Power</b>
VCC
Ignition
GND
<b>Switch</b>
Ext. Sw.
<b>GPIO</b>
GPI 0
GPI 1
GPI 2
GPI 3
GPO 0
GPO 1
GPO 2
GPO 3
<b>Audio</b>
Left
Right

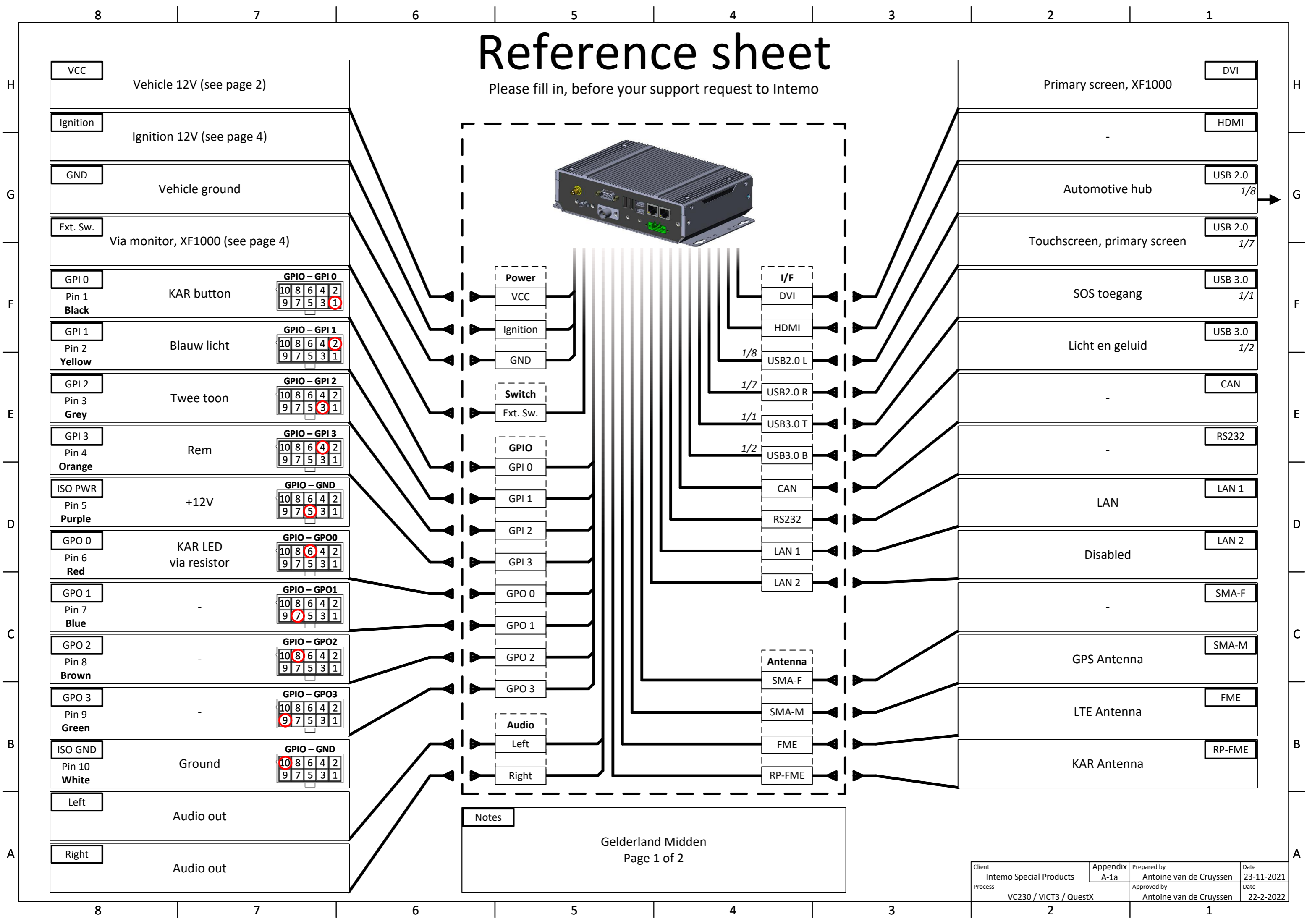
<b>I/F</b>
DVI
HDMI
1/8 USB2.0 L
1/7 USB2.0 R
1/1 USB3.0 T
1/2 USB3.0 B
CAN
RS232
LAN 1
LAN 2
<b>Antenna</b>
SMA-F
SMA-M
FME
RP-FME

DVI
HDMI
1/8 USB 2.0
1/7 USB 2.0
1/1 USB 3.0
1/2 USB 3.0
CAN
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SMA-F
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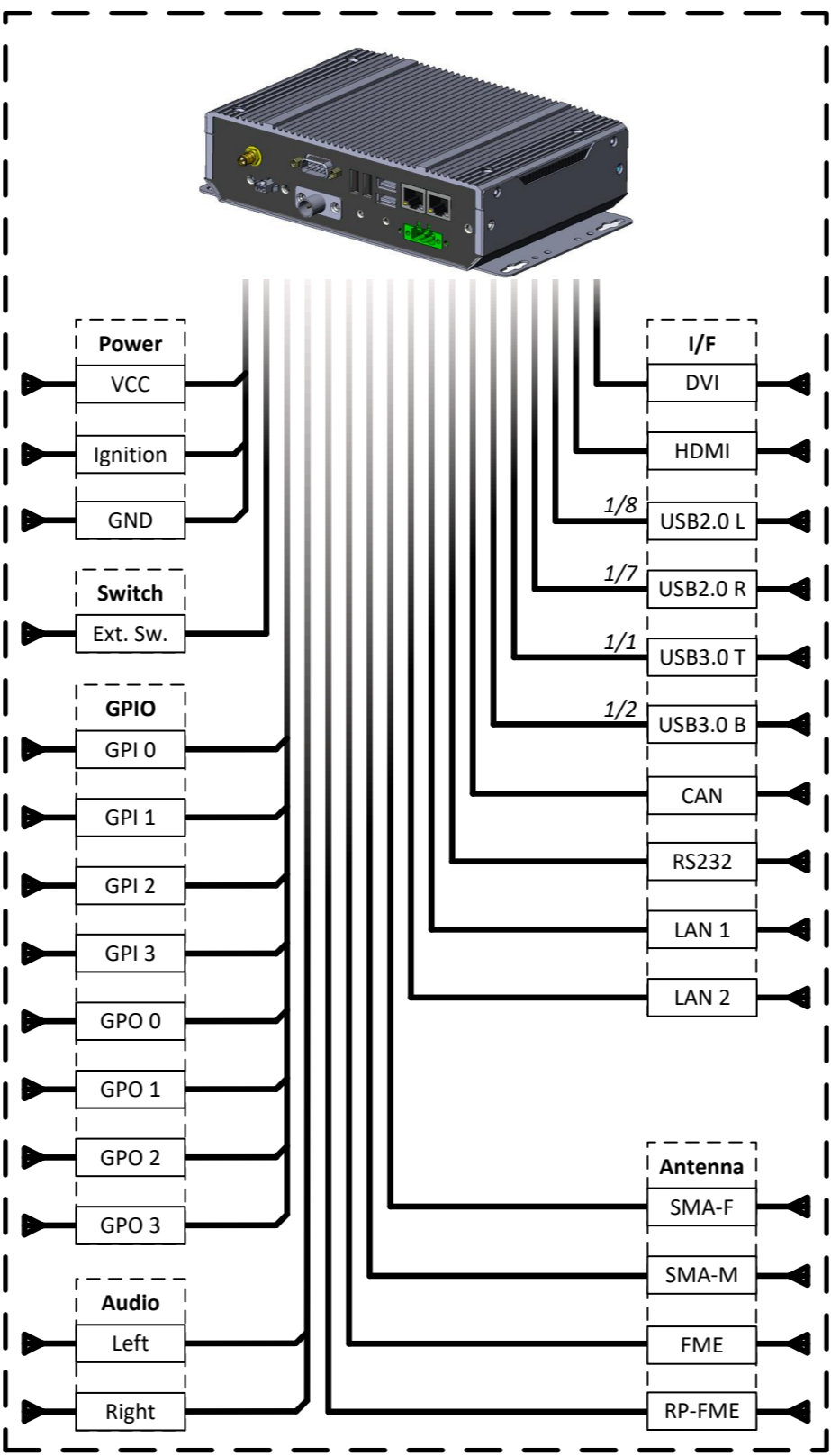
Notes

# Reference sheet

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VCC	Vehicle 12V (see page 2)
Ignition	Ignition 12V (see page 4)
GND	Vehicle ground
Ext. Sw.	Via monitor, XF1000 (see page 4)
GPI 0 Pin 1 Black	KAR button GPIO - GPI 0 10 8 6 4 2 9 7 5 3 1
GPI 1 Pin 2 Yellow	Blauw licht GPIO - GPI 1 10 8 6 4 2 9 7 5 3 1
GPI 2 Pin 3 Grey	Twee toon GPIO - GPI 2 10 8 6 4 2 9 7 5 3 1
GPI 3 Pin 4 Orange	Rem GPIO - GPI 3 10 8 6 4 2 9 7 5 3 1
ISO PWR Pin 5 Purple	+12V GPIO - GND 10 8 6 4 2 9 7 5 3 1
GPO 0 Pin 6 Red	KAR LED via resistor GPIO - GPO0 10 8 6 4 2 9 7 5 3 1
GPO 1 Pin 7 Blue	- GPIO - GPO1 10 8 6 4 2 9 7 5 3 1
GPO 2 Pin 8 Brown	- GPIO - GPO2 10 8 6 4 2 9 7 5 3 1
GPO 3 Pin 9 Green	- GPIO - GPO3 10 8 6 4 2 9 7 5 3 1
ISO GND Pin 10 White	Ground GPIO - GND 10 8 6 4 2 9 7 5 3 1
Left	Audio out
Right	Audio out



Primary screen, XF1000	DVI
-	HDMI
Automotive hub	USB 2.0 1/8
Touchscreen, primary screen	USB 2.0 1/7
SOS toegang	USB 3.0 1/1
Licht en geluid	USB 3.0 1/2
-	CAN
-	RS232
LAN	LAN 1
Disabled	LAN 2
-	SMA-F
GPS Antenna	SMA-M
LTE Antenna	FME
KAR Antenna	RP-FME

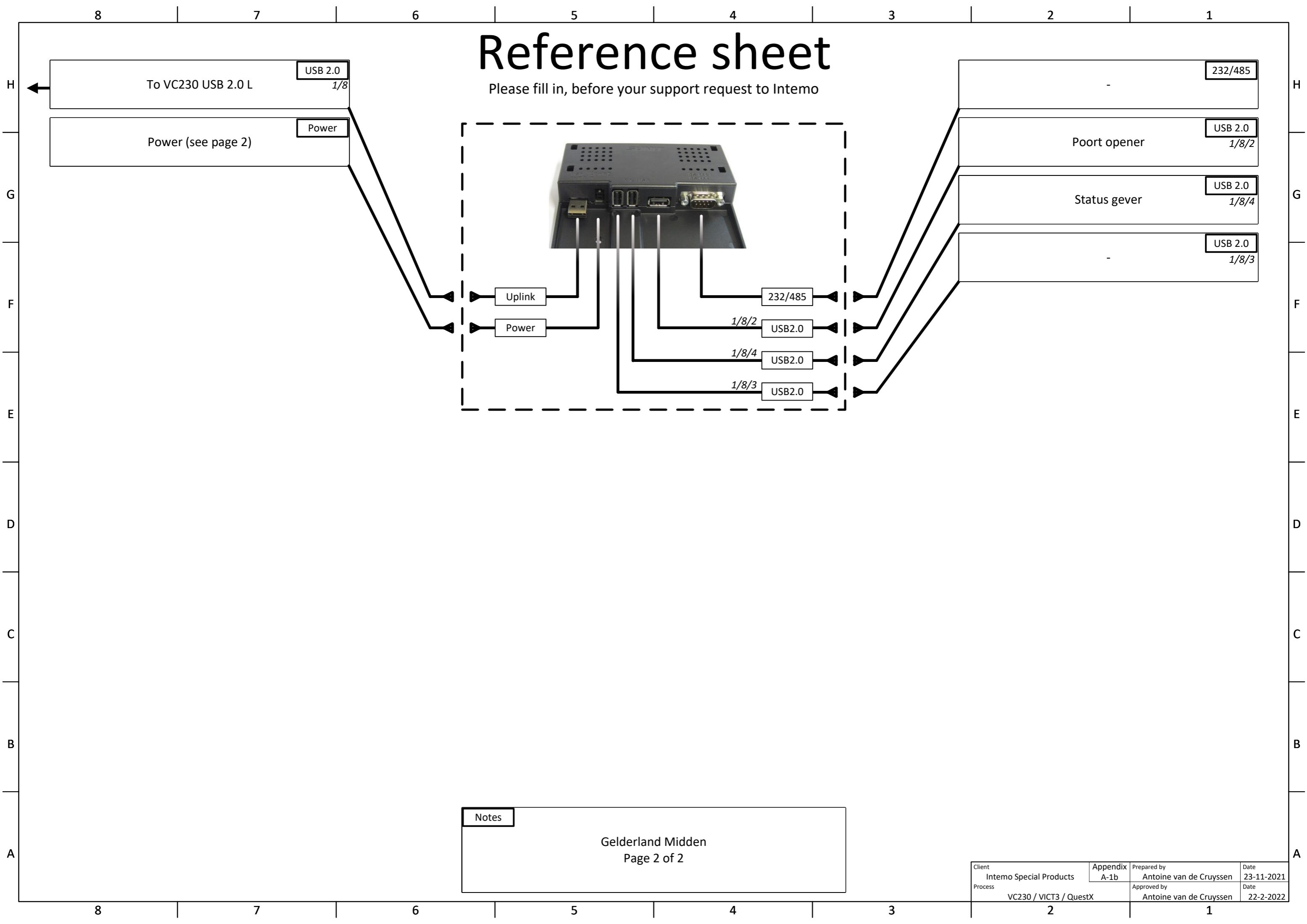
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# Reference sheet

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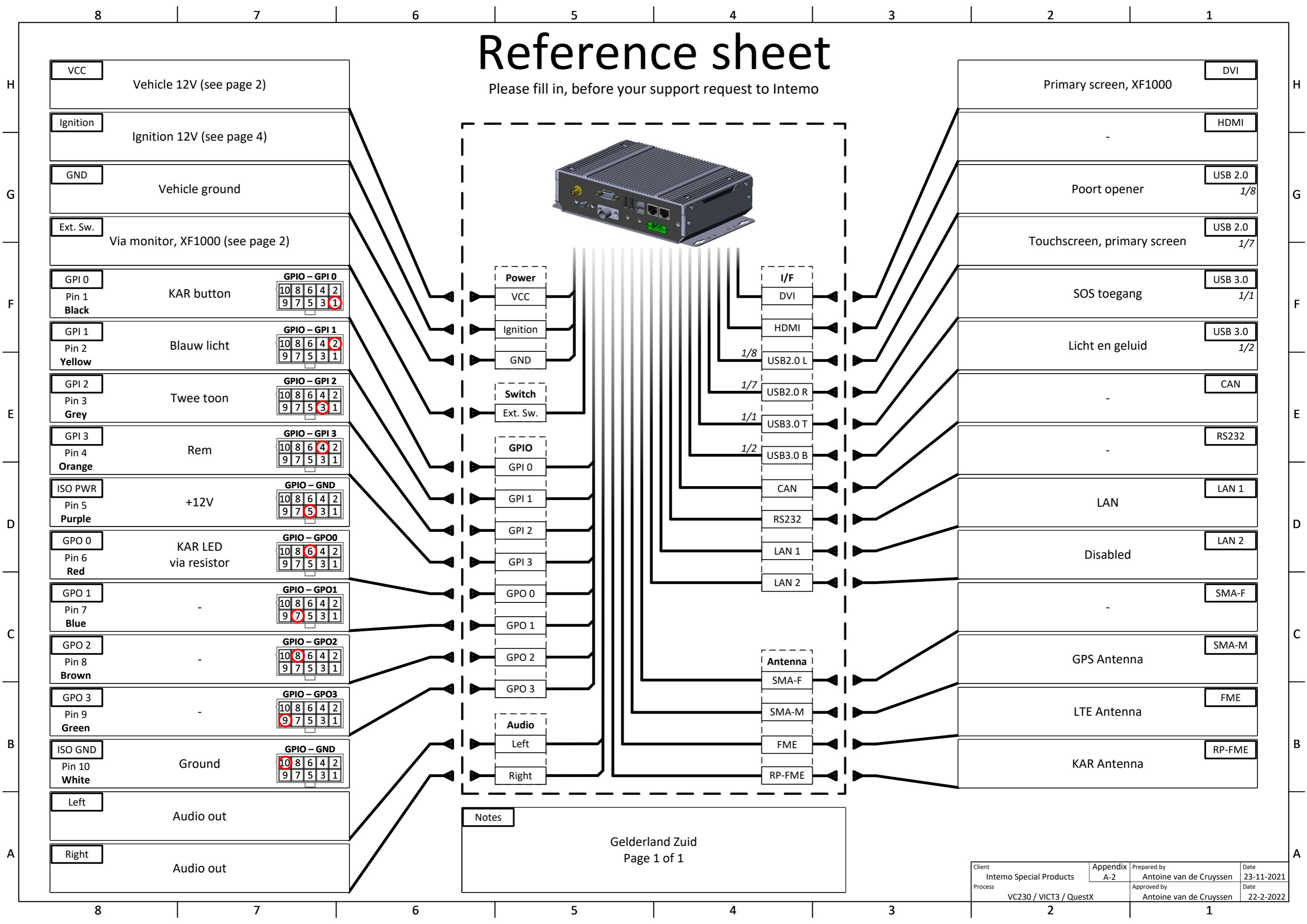
Notes

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Client	Intemo Special Products	Appendix	A-1b	Prepared by	Antoine van de Cruyssen	Date	23-11-2021
Process	VC230 / VICT3 / QuestX	Approved by	Antoine van de Cruyssen	Date	22-2-2022		

# Reference sheet

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VCC	Vehicle 12V (see page 2)
Ignition	Ignition 12V (see page 4)
GND	Vehicle ground
Ext. Sw.	Via monitor, XF1000 (see page 2)
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ISO PWR Pin 5 Purple	+12V GPIO - GND 10 8 6 4 2 9 7 5 3 1
GPO 0 Pin 6 Red	KAR LED via resistor GPIO - GPO0 10 8 6 4 2 9 7 5 3 1
GPO 1 Pin 7 Blue	- GPIO - GPO1 10 8 6 4 2 9 7 5 3 1
GPO 2 Pin 8 Brown	- GPIO - GPO2 10 8 6 4 2 9 7 5 3 1
GPO 3 Pin 9 Green	- GPIO - GPO3 10 8 6 4 2 9 7 5 3 1
ISO GND Pin 10 White	Ground GPIO - GND 10 8 6 4 2 9 7 5 3 1
Left	Audio out
Right	Audio out

<b>Power</b>	VCC
Ignition	
GND	
<b>Switch</b>	Ext. Sw.
<b>GPIO</b>	GPI 0
GPI 1	
GPI 2	
GPI 3	
GPO 0	
GPO 1	
GPO 2	
GPO 3	
<b>Audio</b>	Left
Right	

<b>I/F</b>	DVI
HDMI	
1/8 USB2.0 L	
1/7 USB2.0 R	
1/1 USB3.0 T	
1/2 USB3.0 B	
CAN	
RS232	
LAN 1	
LAN 2	
<b>Antenna</b>	SMA-F
SMA-M	
FME	
RP-FME	

Primary screen, XF1000	DVI
-	HDMI
Poort opener	USB 2.0 1/8
Touchscreen, primary screen	USB 2.0 1/7
SOS toegang	USB 3.0 1/1
Licht en geluid	USB 3.0 1/2
-	CAN
-	RS232
LAN	LAN 1
Disabled	LAN 2
-	SMA-F
GPS Antenna	SMA-M
LTE Antenna	FME
KAR Antenna	RP-FME

Notes

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Client Intemo Special Products	Appendix A-2	Prepared by Antoine van de Cruyssen	Date 23-11-2021
Process VC230 / VICT3 / QuestX		Approved by Antoine van de Cruyssen	Date 22-2-2022