









2023 Tiffin RED 340



RED 340 RED 340 RED

4 Module Locations	12 M1 Breaker Card 2
5 Module Locations (Continued)	13 Lighting
6 G12 Pinout	14 Slides
7 G12 Pinout (Continued)	15 MaxxFans
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10 M1 HC Half Bridge Card	18 Tank Sensing
11 M1 Breaker Card 1	









Schematic Connections Legend

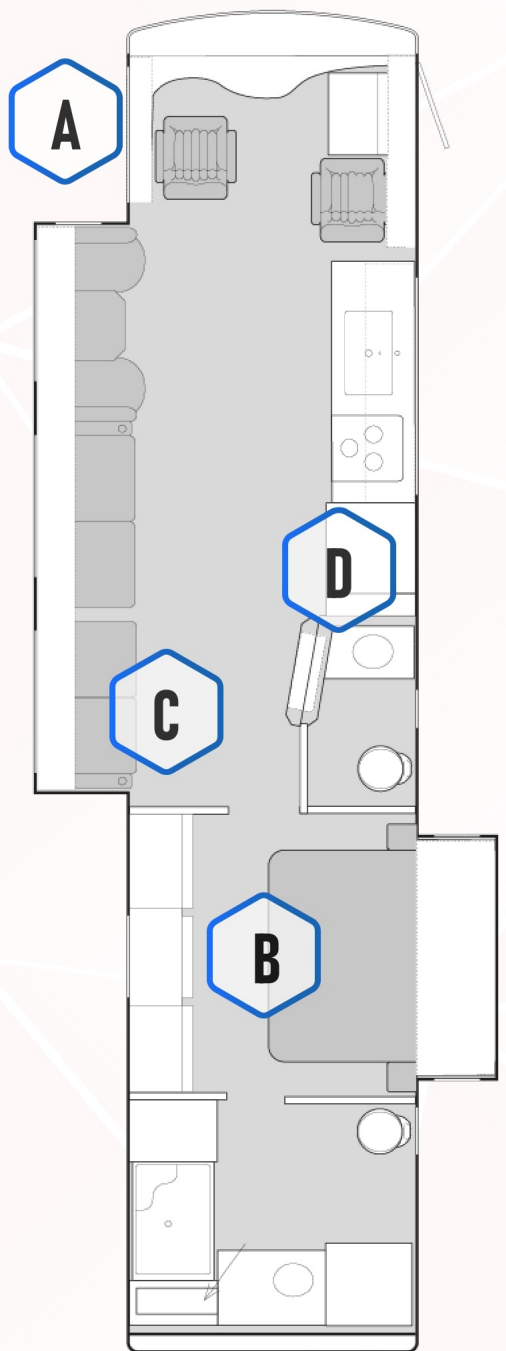
-  Constant Ground
-  Constant 12V+
-  Switched Ground
-  Switched 12V+
-  Reverse Polarity
-  Signal
-  120V AC Line
-  Network

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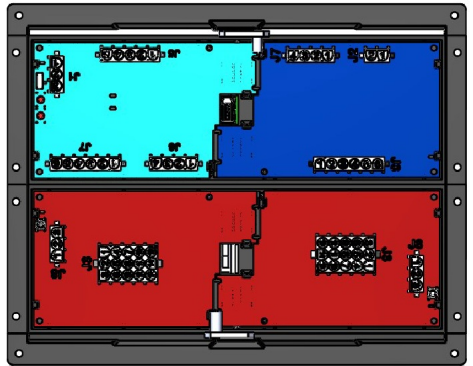
Schematic Connections Legend

-  Constant Ground
-  Constant 12V+
-  Switched Ground
-  Switched 12V+
-  Reverse Polarity
-  Signal
-  120V AC Line
-  Network



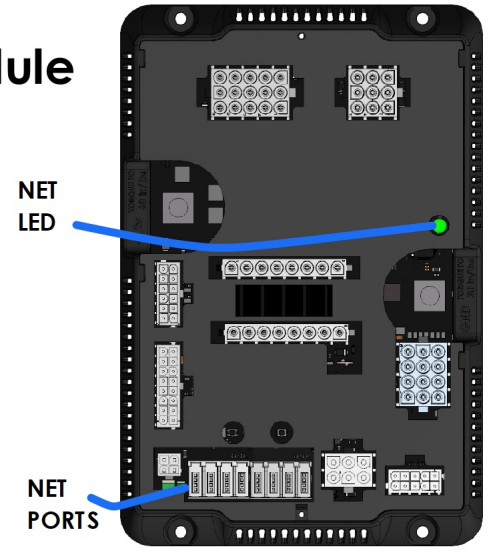
A M1 Front Panel

i
Spyder Part #
 BENCZM2DS
Tiffin Part #
 5126983
Dimensions
 10" X 7.8"



B G12 Module

i
Spyder Part #
 BMODZU2VU
Tiffin Part #
 5126984
Dimensions
 9" X 6"



C DCD Panel

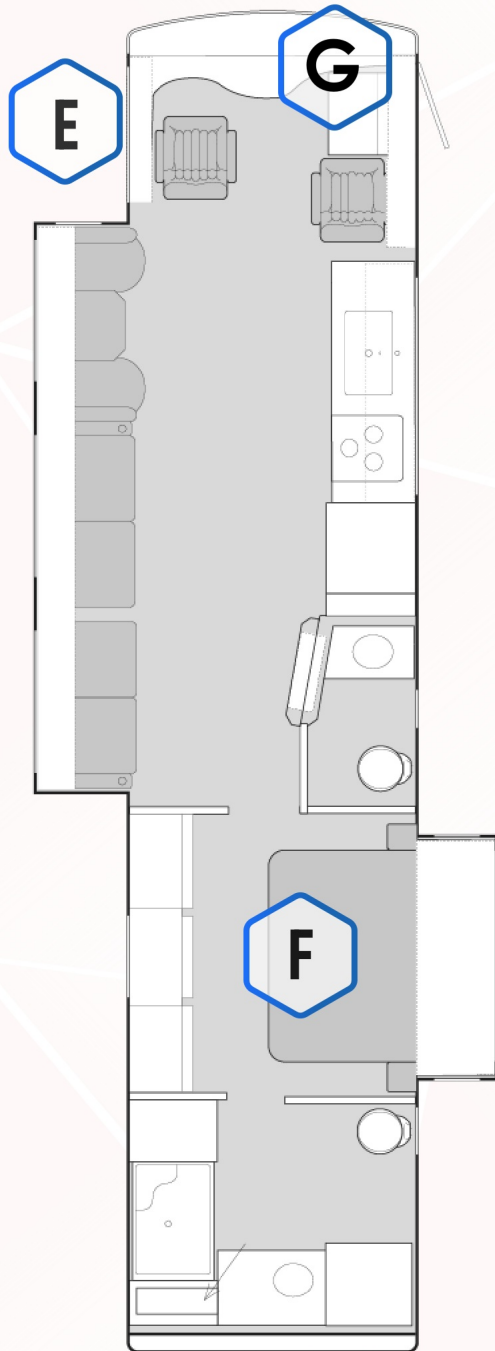
i
Spyder Part #
 BENCZ38DN
Tiffin Part #
 5114014
Dimensions
 10" X 4"



D 5" Color LCD

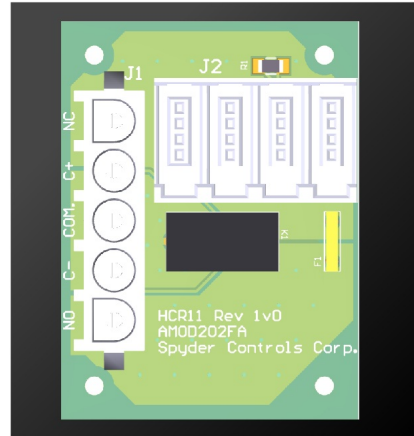
i
Spyder Part #
 BSSPZZREK
Tiffin Part #
 5127269
Dimensions
 5.7" X 3.6"





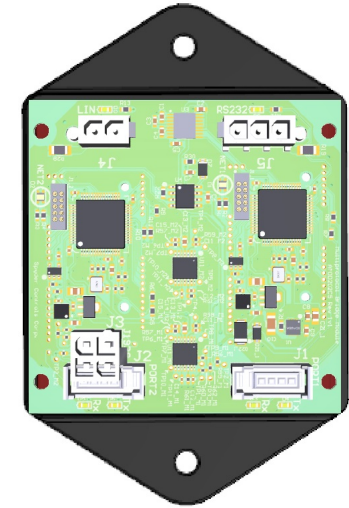
E HCR-11 (Terminator)

i
Spyder Part #
 BMODZGAN6
Tiffin Part #
 5105426
Dimensions
 2.5" X 2"



F Bridge Module

i
Spyder Part #
 BMODZTCT0
Tiffin Part #
 5127271
Dimensions
 2.7" X 2.7"



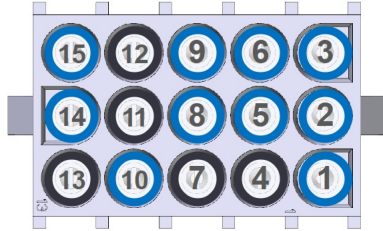
G Mira Module

i
Spyder Part #
 BMODZ56VF
Tiffin Part #
 5114034
Dimensions
 4" X 2.5"



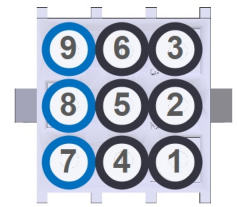
i
Note
 The G12 Module and Bridge Module may be located in the rear bath. Location will change depending on floor plan.

J4



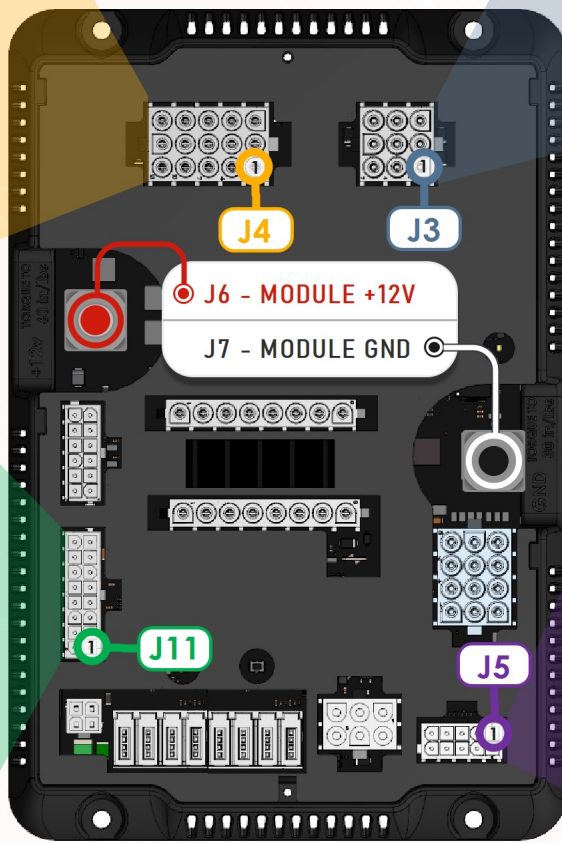
1 P/S Slide Lt (CH30)	9 Rear Bath Lt (CH38)
2 D/S Slide Lt (CH31)	10 Mid Bath Ceiling Lts (CH39)
3 Main OH/Liv Rm Lt (CH32)	11 Spare
4 Spare	12 Spare
5 Entry Lt (CH34)	13 Spare
6 Task Lt (CH35)	14 Galley Accent (CH43)
7 Spare	15 Galley (CH44)
8 Bedroom Ceiling Lt (CH37)	

J3

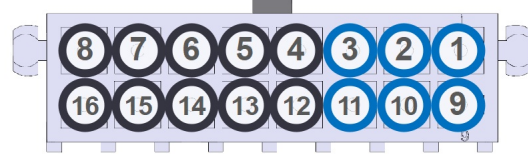


1 Spare	6 Spare
2 Spare	7 Galley Fan (CH27)
3 Spare	8 Mid Bath Fan (CH28)
4 Spare	9 Rear Bath Fan (CH29)
5 Spare	

G12 Module @ Under Bed

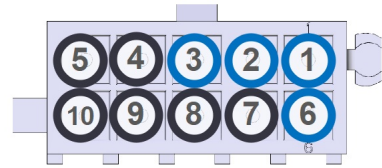


J11



1 Fresh Tank Sensor Input	9 Tank Sensor GND
2 Grey Tank Sensor Input	10 Tank Sensor GND
3 Black Tank Sensor Input	11 Tank Sensor GND
4 N/A	12 N/A
5 N/A	13 N/A
6 Spare	14 Spare
7 Spare	15 Spare
8 Spare	16 Spare

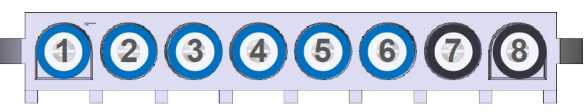
J5



1 Park Brake (GND)	6 IGN Input (+12V)
2 Water Pump SW (GND)	7 Spare (+12V)
3 Merge Status (GND)	8 Spare (+12V)
4 Spare (GND)	9 Spare (+12V)
5 Spare (GND)	10 Spare (+12V)

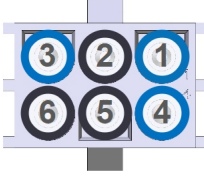
G12 Module @ Under Bed

J8

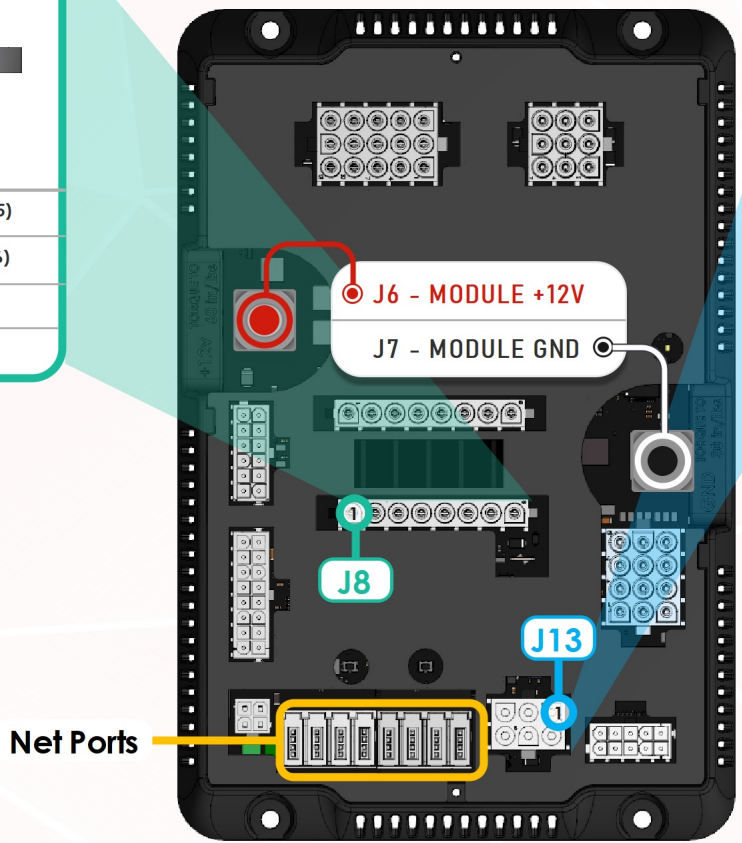


1 Galley Fan Lid Up (CH1)	5 Rear Bath Fan Lid Up (CH5)
2 Galley Fan Lid Dn (CH2)	6 Rear Bath Fan Lid Dn (CH6)
3 Mid Bath Fan Lid Up(CH3)	7 Spare
4 Mid Bath Fan Lid Dn(CH4)	8 Spare

J13

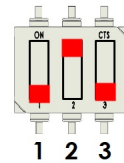


1 LPG Signal	4 LPG GND
2 Spare	5 Spare
3 Chassis Voltage	6 Spare



M1 Slide Card

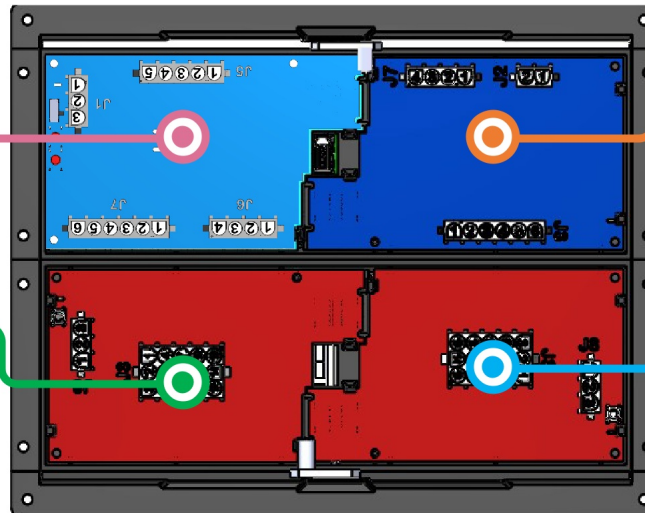
- Ignition (12V)
- Park Brake (GND)
- P/S FR Slide EXT
- P/S FR Slide RET
- D/S FR Slide EXT
- D/S FR Slide RET
- P/S RR Slide EXT
- P/S RR Slide RET
- D/S RR Slide EXT
- D/S RR Slide RET
- Hydraulic Pump



Dip Switch Settings

- | | |
|---|------------|
| 1 | OFF (Down) |
| 2 | ON (Up) |
| 3 | OFF (Down) |

Front M1 Panel



M1 HC Half Bridge

- Door/Assist Handle
- Water Pump
- Porch
- Door Awning EXT
- Door Awning RET

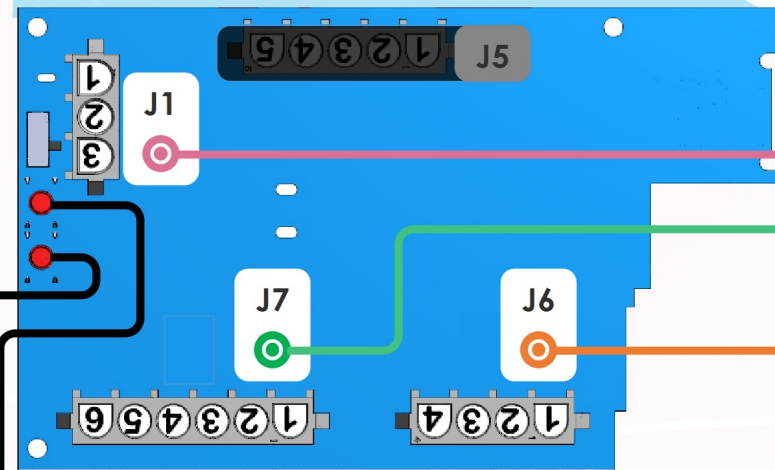
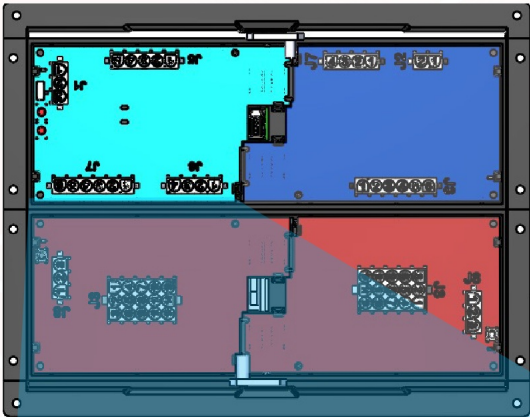
M1 Breaker (Card 3)

- Camera/Radio IGN
- Jack Buzzer IGN
- CB/Satellite
- Panel Lamp/ Head Light IGN
- Front Furnace
- Rear Furnace
- Relay to RF Dongle
- Entry Step (IGN)
- HVAC Denso
- 12V Outlet 1/USB PWR
- Entry Step SW
- Slide #1/Slide #2
- IGN (+12V)

M1 Breaker (Card 4)

- 12V Outlet 2/ USB PWR
- Closet Light
- Sat/IR/HD ANT/HDMI
- Power Window (IGN)
- D/S Mirror PWR (IGN)
- P/S Mirror PWR (IGN)
- A/C Thermostat
- Bed Slide 12V
- Passenger Console
- Map Lt/Fans/Radio
- Truma
- Awning PWR
- IGN (12V)

Front M1 Panel



M1 Slide Card

OVERRIDE RET

OVERRIDE EXT

i **Emergency Override**
For more information on the slide overrides please see Page 14

J1



- | | |
|--------------------|-------|
| ① Ignition (+12V) | ③ N/A |
| ② Park Brake (GND) | |

J7



- | | |
|--------------------|--------------------|
| ① P/S RR Slide Ext | ④ D/S RR Slide Ret |
| ② P/S RR Slide Ret | ⑤ Hydraulic Pump |
| ③ D/S RR Slide Ext | ⑥ Spare |

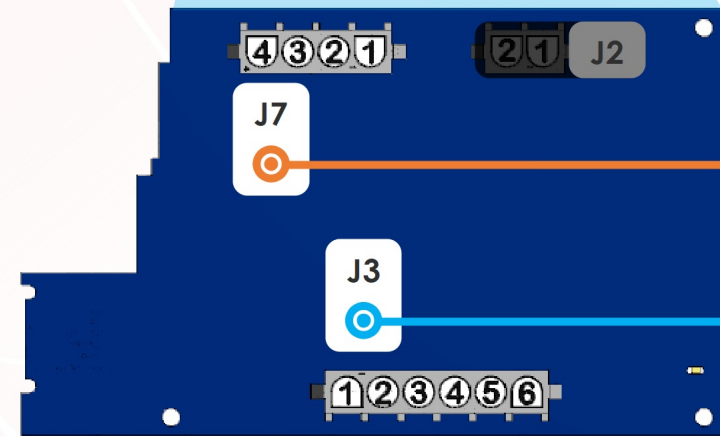
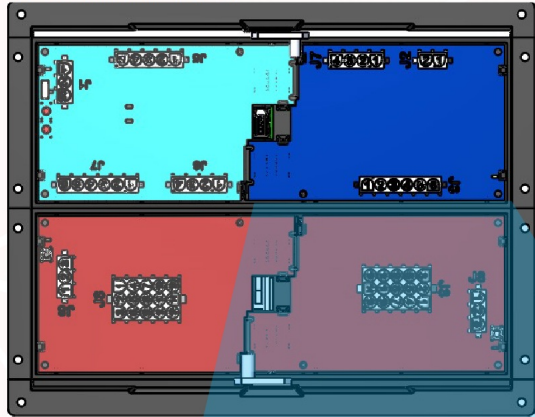
J6



- | | |
|--------------------|--------------------|
| ① P/S FR Slide Ext | ③ D/S FR Slide Ext |
| ② P/S FR Slide Ret | ④ D/S FR Slide Ret |

M1 High Current (Card 2)

Front M1 Panel



M1 High Current

J7



- | | |
|-------------------|---------|
| ① Door Awning EXT | ③ Spare |
| ② Door Awning RET | ④ Spare |

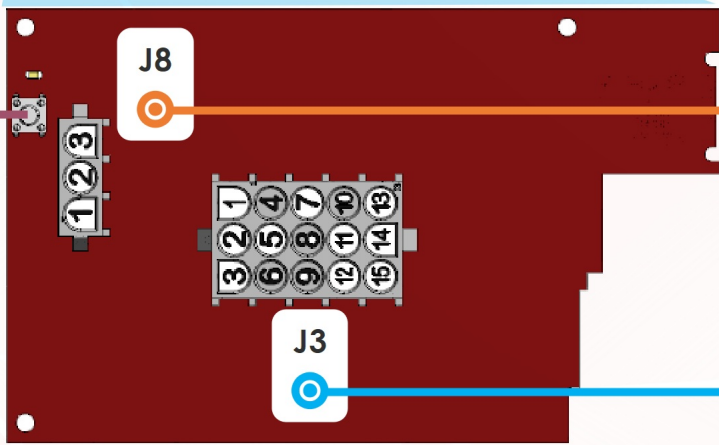
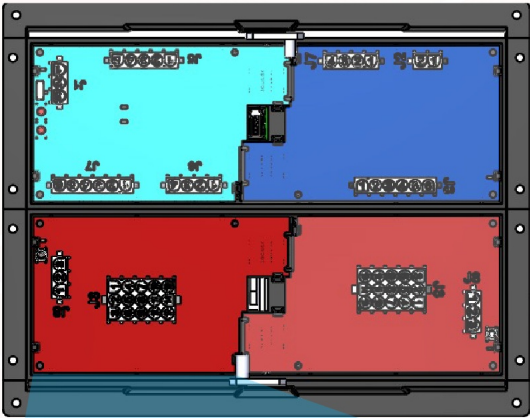
J3



- | | |
|----------------------|---------|
| ① Door/Assist Handle | ④ Spare |
| ② Water Pump | ⑤ Porch |
| ③ Spare | ⑥ Spare |

M1 Breaker (Card 3)

Front M1 Panel



M1 Breaker Card

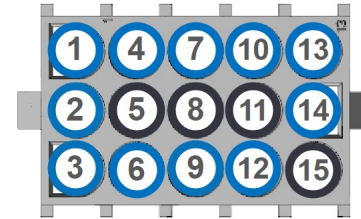
Breaker Reset

J8



- ① IGN (+12V)
- ② N/A
- ③ N/A

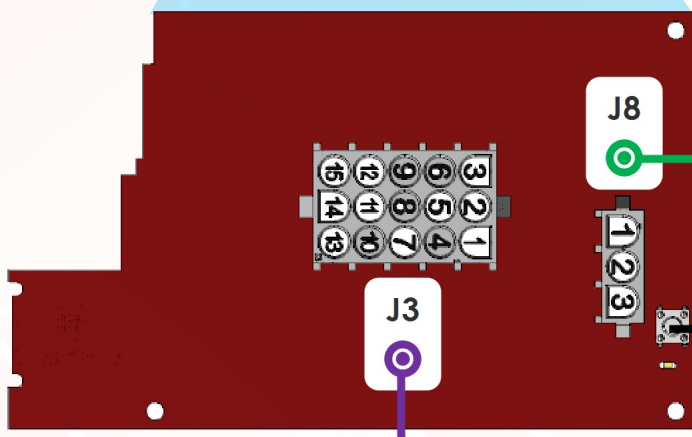
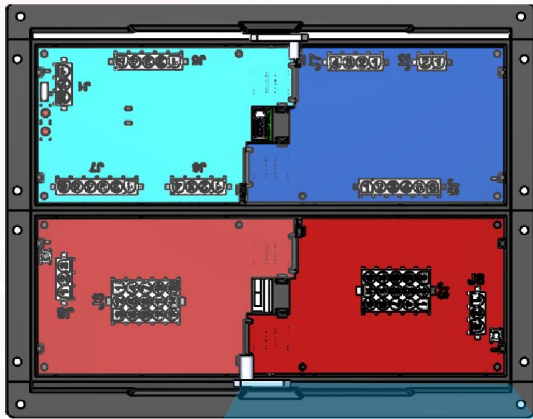
J3



- ① Slide #1/ Slide #2
- ② Camera/Radio (IGN)
- ③ Jack Buzzer (IGN)
- ④ Entry Step SW
- ⑤ N/A
- ⑥ CB/Satellite
- ⑦ 12V Outlet 1/USB PWR
- ⑧ N/A
- ⑨ Panel Lamp/Head Lt (IGN)
- ⑩ HVAC Denso (IGN)
- ⑪ N/A
- ⑫ Front Furnace
- ⑬ Spare
- ⑭ Relay to RF Dongle
- ⑮ Rear Furnace

M1 Breaker (Card 4)

M1 Front Panel



M1 Breaker Card

J8

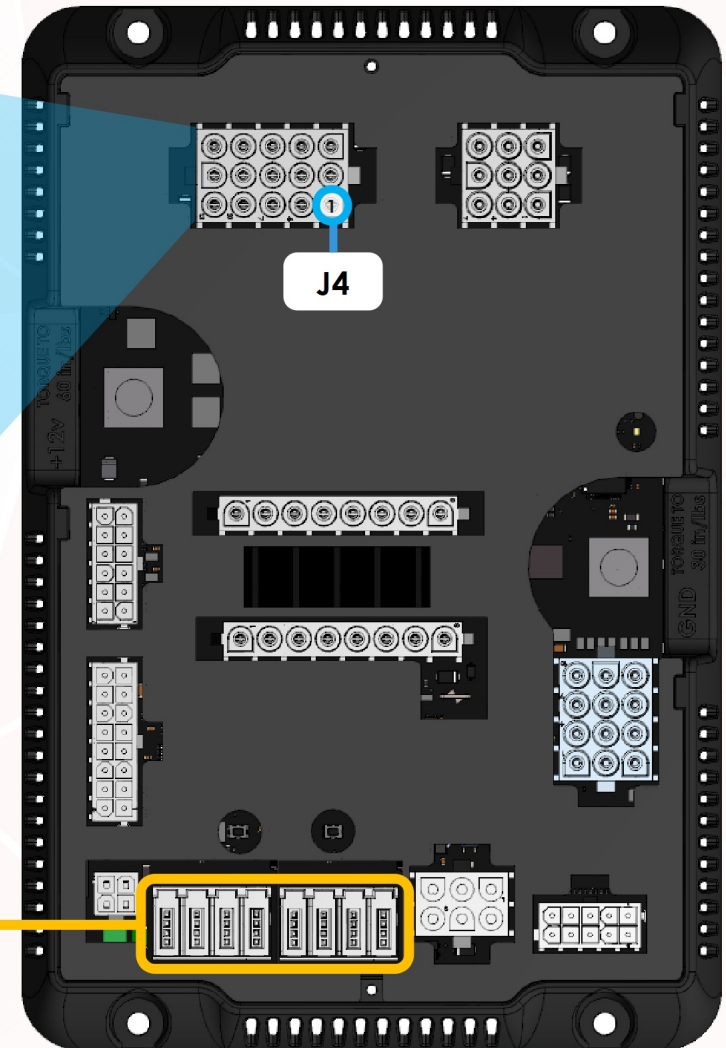
① IGN (+12V)	② N/A
③ N/A	

J3

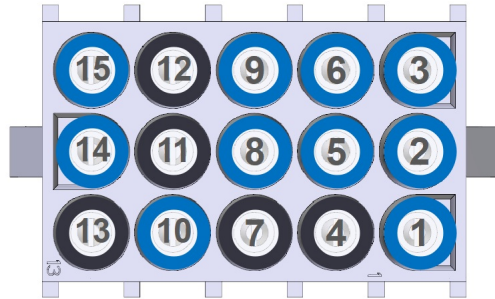
① Awning PWR	⑨ PWR Window (IGN)
② 12V Outlet 2/USB PWR	⑩ Passenger Console
③ Closet Light	⑪ N/A
④ Truma	⑫ D/S Mirror PWR (IGN)
⑤ N/A	⑬ Bed Slide 12V
⑥ Sat/IR/HD Ant/HDMI	⑭ A/C Thermostat
⑦ Map Lt/Fans/Radio	⑮ P/S Mirror PWR (IGN)
⑧ N/A	

Breaker Reset

G12 Module @ Under Bed



J4

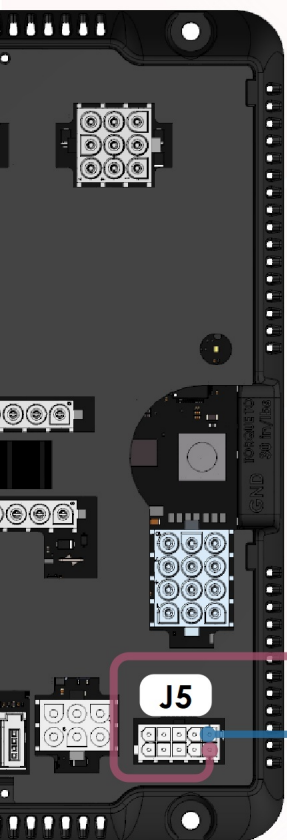


① P/S Slide Lt (CH30)	⑨ Rear Bath Lt (CH38)
② D/S Slide Lt (CH31)	⑩ Mid Bath Ceiling Lts (CH39)
③ Main OH/Liv Rm Lt (CH32)	⑪ Spare
④ Spare	⑫ Spare
⑤ Entry Lt (CH34)	⑬ Spare
⑥ Task Lt (CH35)	⑭ Galley Accent (CH43)
⑦ Spare	⑮ Galley (CH44)
⑧ Bedroom Ceiling Lt (CH37)	

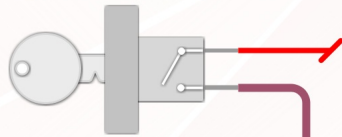
* All Lights Listed Can Dim

* All lights are grounded outside of the Spyder System. The G12 only provides 12V+

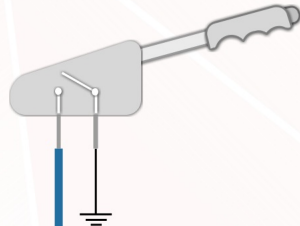
Network Ports



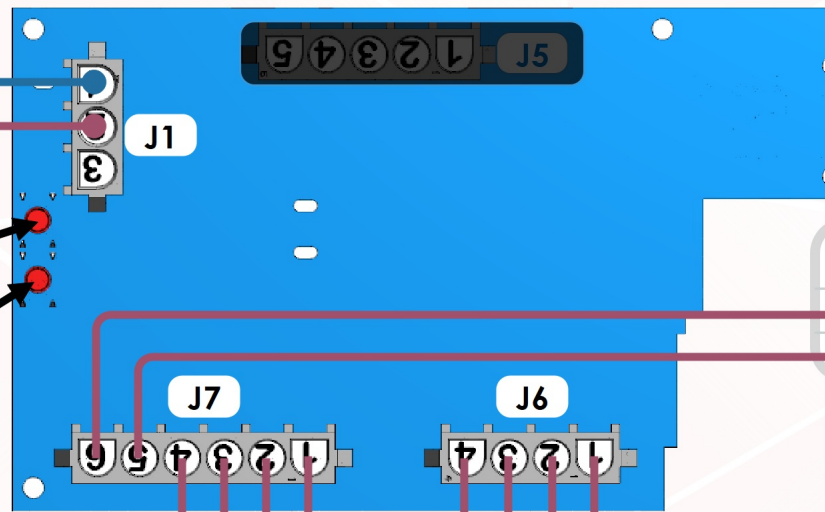
Ignition Switch



Park Brake Switch



M1 Slide Card



OVERRIDE RET

OVERRIDE EXT

Hydraulic Pumps

- ⑥ Spare
- ⑤ Hydraulic Pump

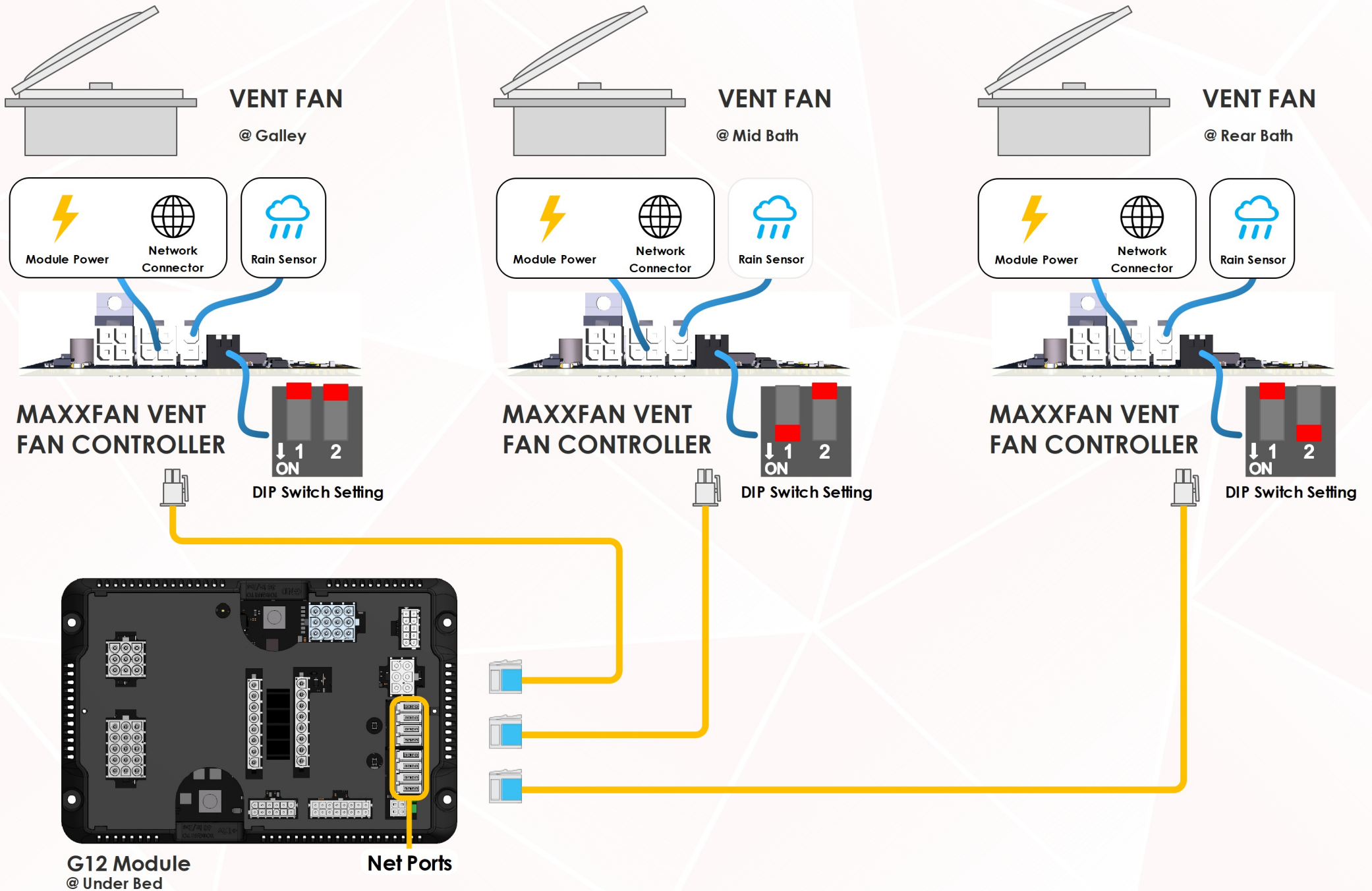
Rear Slide Outputs

D/S RR Slide RET	④
D/S RR Slide EXT	③
P/S RR Slide RET	②
P/S RR Slide EXT	①

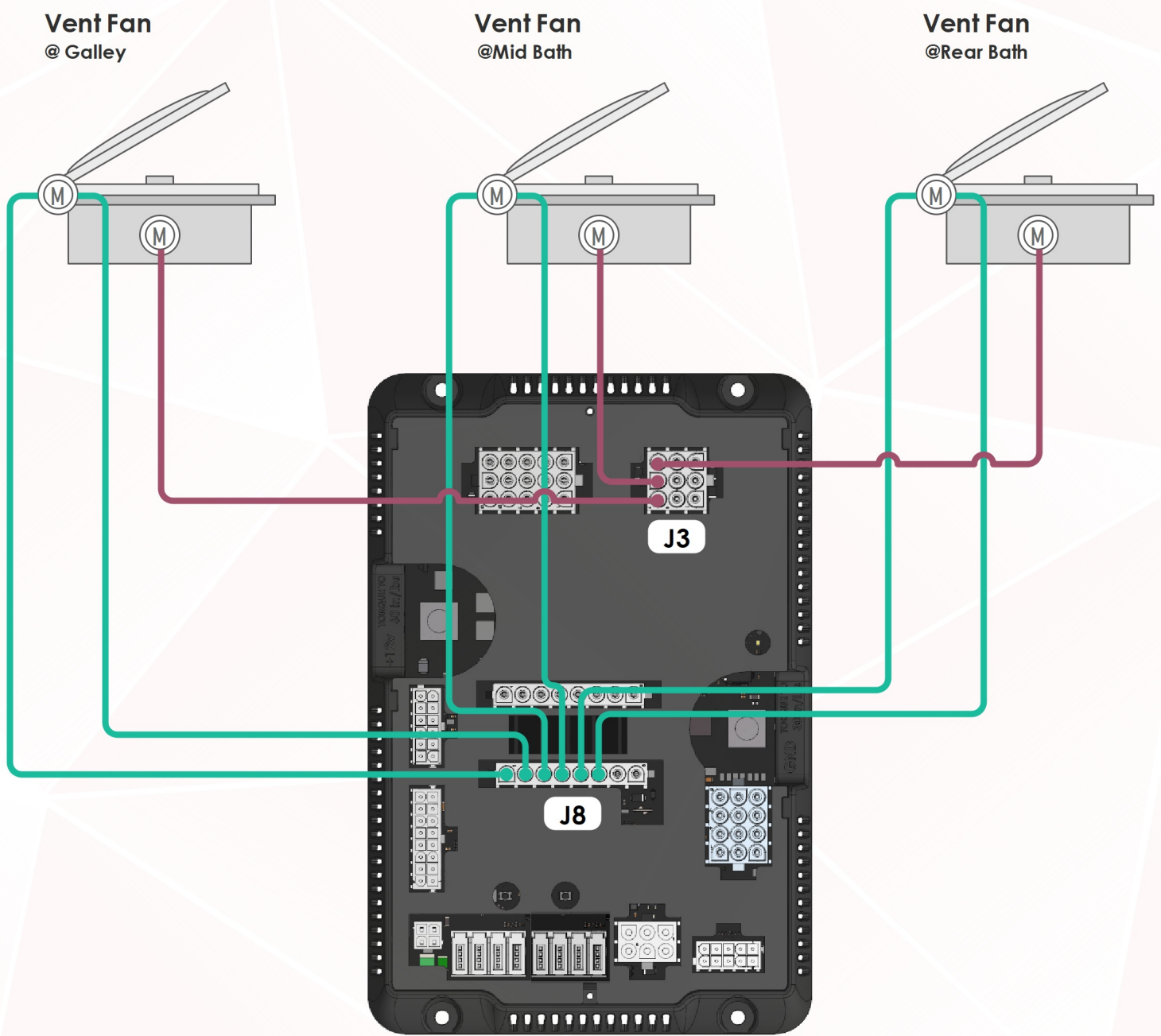
Front Slide Outputs

①	P/S FR Slide EXT
②	P/S FR Slide RET
③	D/S FR Slide EXT
④	D/S FR Slide RET

i **Emergency Override**
 Park brake and ignition must be on for slides to operate.
 In case of a system failure, use manual overrides on the slide card to operate slides. Engage overrides using a pen or other pointed object.



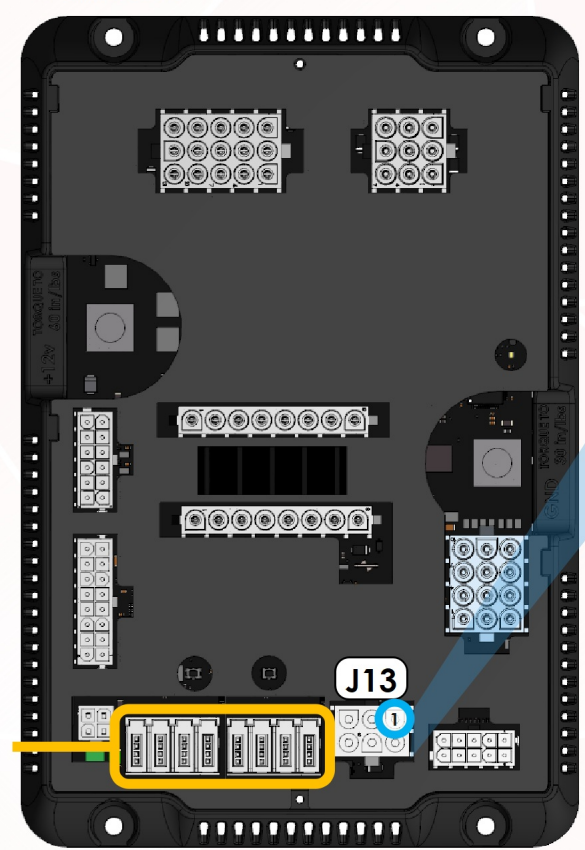
Vent Fans (Non Maxxfan)



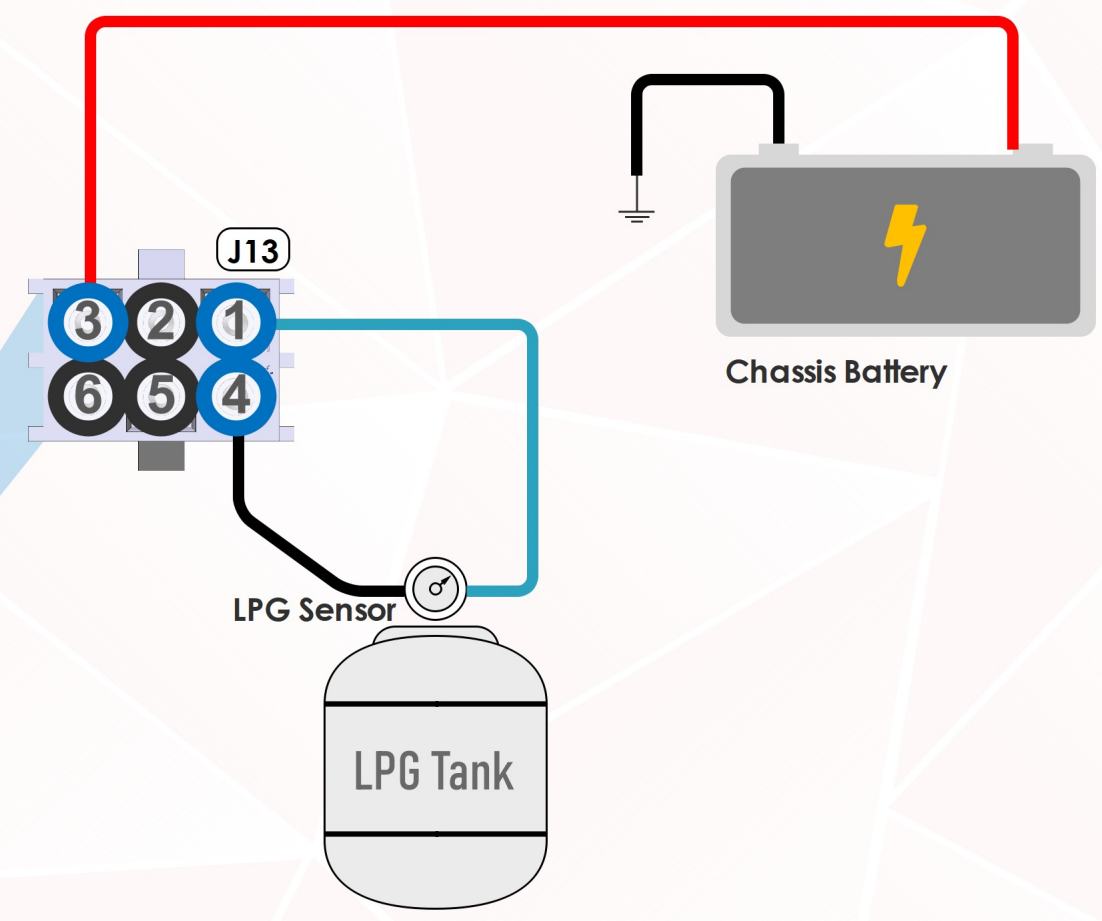
G12 Module
@ Under Bed

LPG + Chassis Voltage

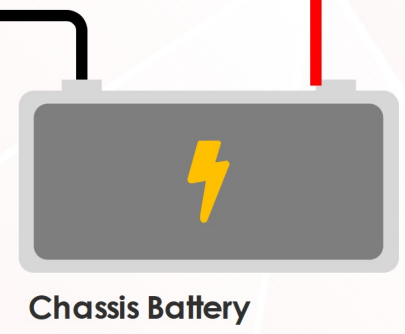
G12 Module
@ Under Bed



Network Ports



J13

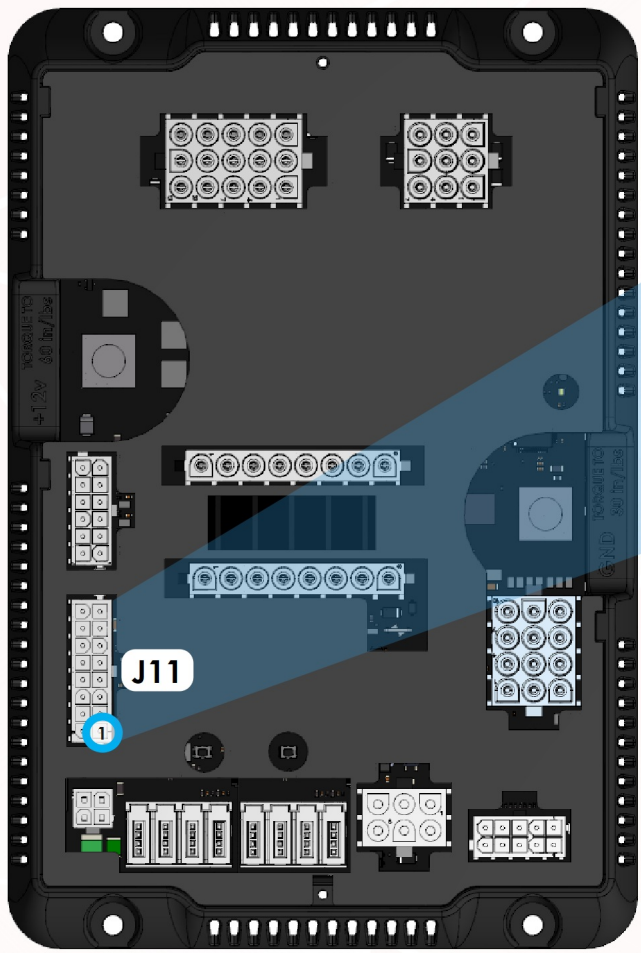


LPG Sensor

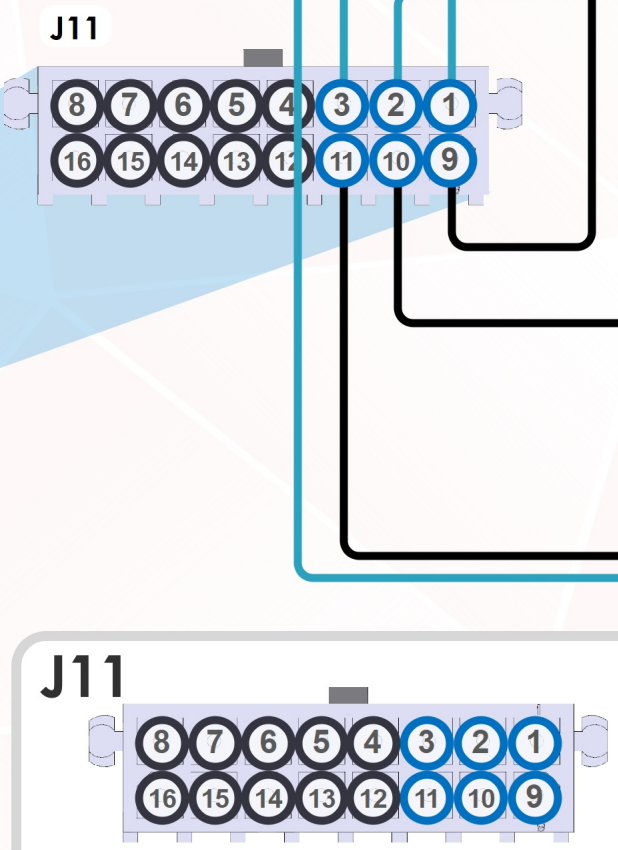
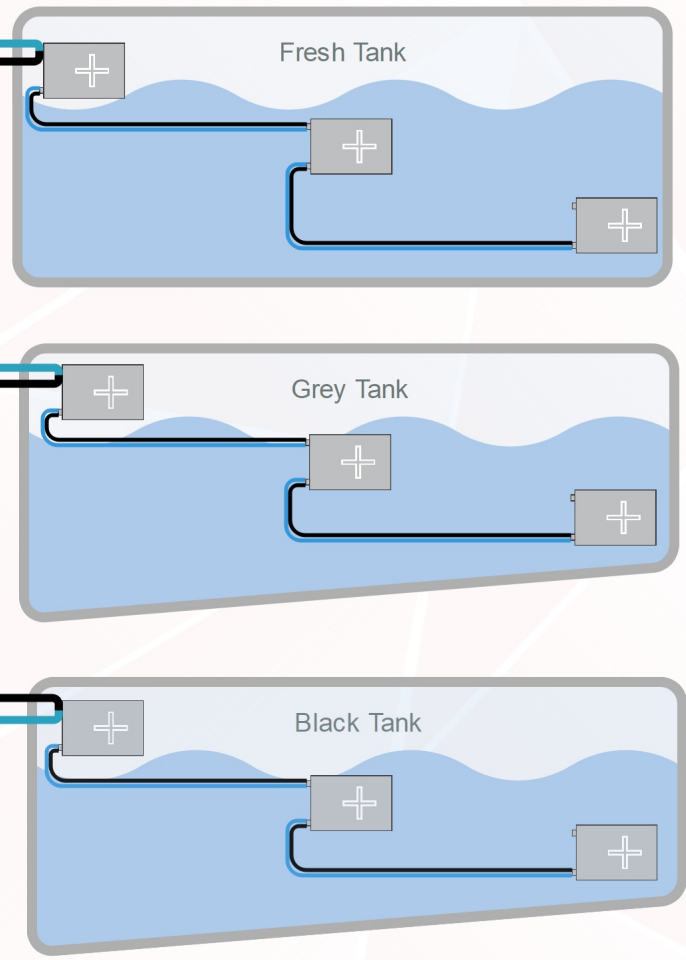


Tank Sensing

G12 Module




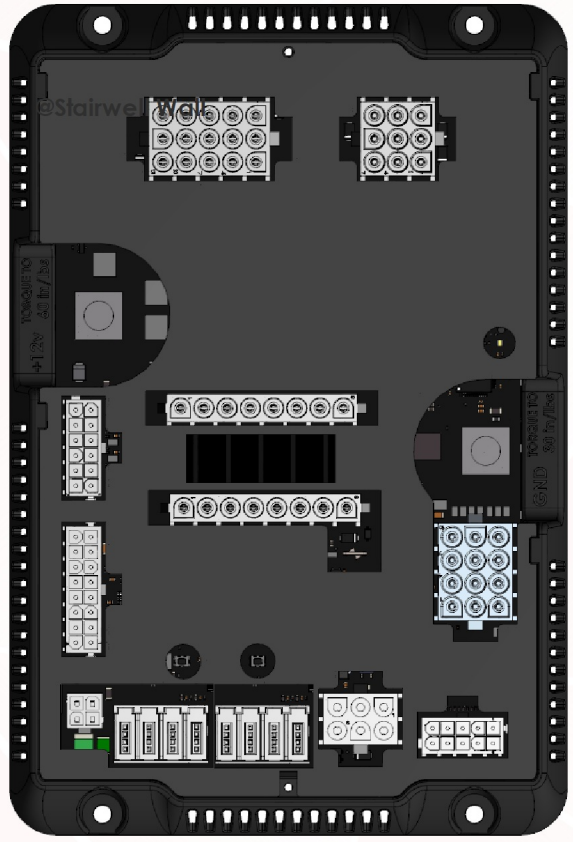
3 Level Tank Sensor System



1	Fresh Tank Sensor Input	9	Tank Sensor GND
2	Grey Tank Sensor Input	10	Tank Sensor GND
3	Black Tank Sensor Input	11	Tank Sensor GND

Switch Panels

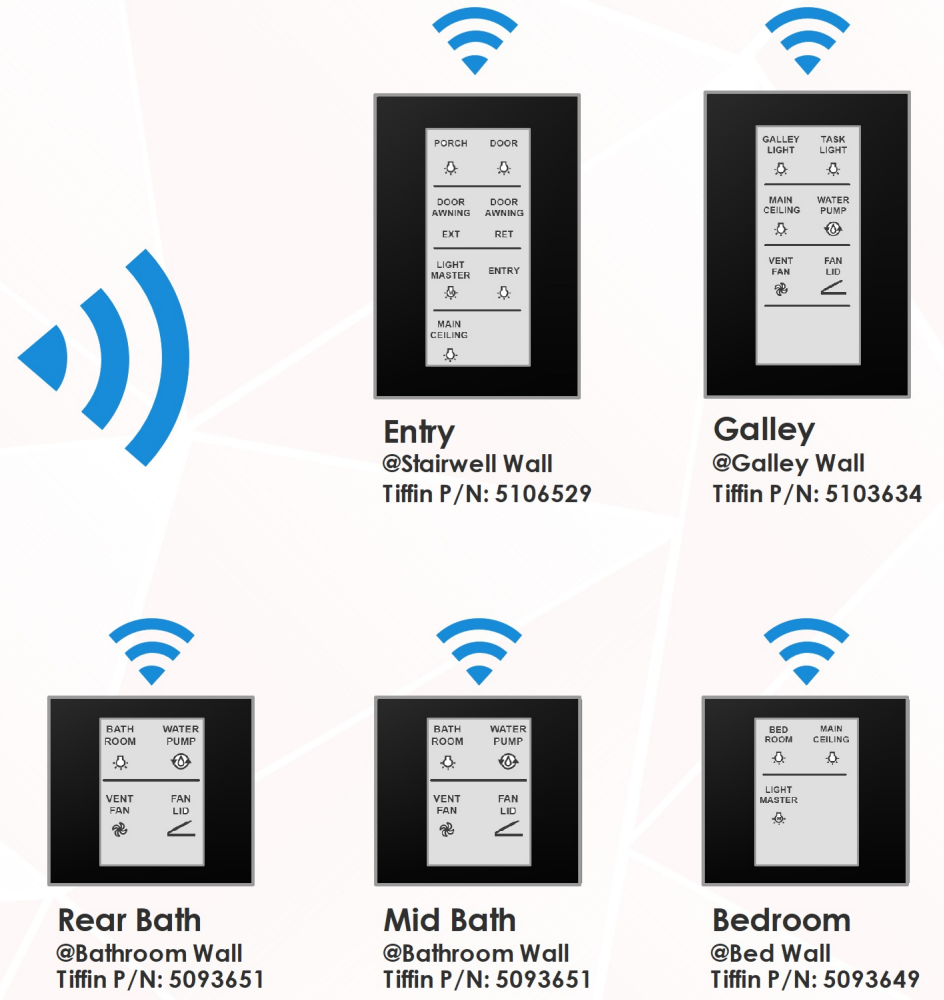
If a switch has the  symbol nearby, it means the switch or module communicates via RF.



G12 Module
@ Under Bed



5" Color LCD
Tiffin P/N: 5127269






PORCH	DOOR
DOOR AWNING	DOOR AWNING
EXT	RET
LIGHT MASTER	ENTRY
MAIN CEILING	

Entry
@Stairwell Wall
Tiffin P/N: 5106529




GALLEY LIGHT	TASK LIGHT
MAIN CEILING	WATER PUMP
VENT FAN	FAN LID

Galley
@Galley Wall
Tiffin P/N: 5103634




BATH ROOM	WATER PUMP
VENT FAN	FAN LID

Rear Bath
@Bathroom Wall
Tiffin P/N: 5093651



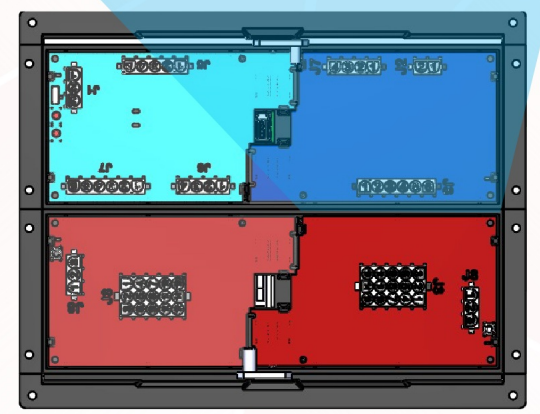
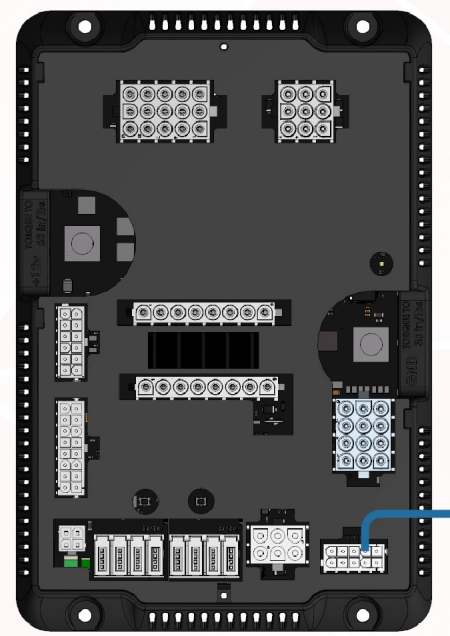
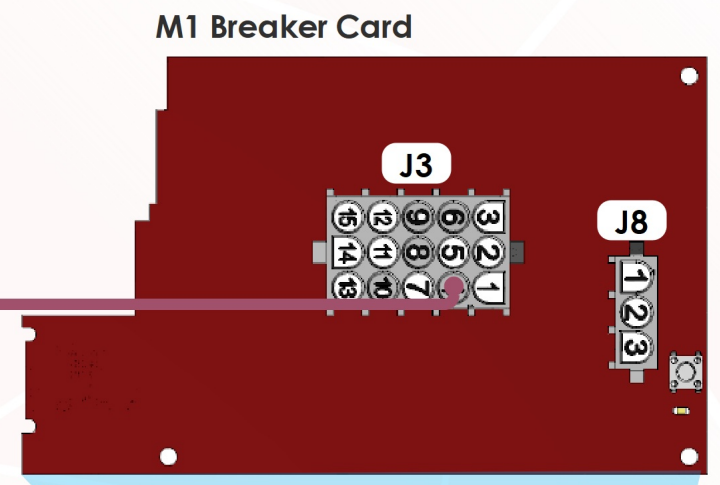
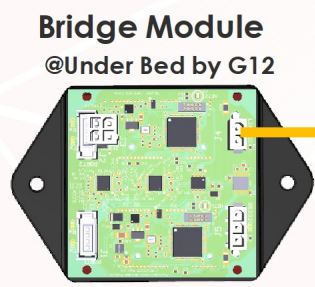
BATH ROOM	WATER PUMP
VENT FAN	FAN LID

Mid Bath
@Bathroom Wall
Tiffin P/N: 5093651



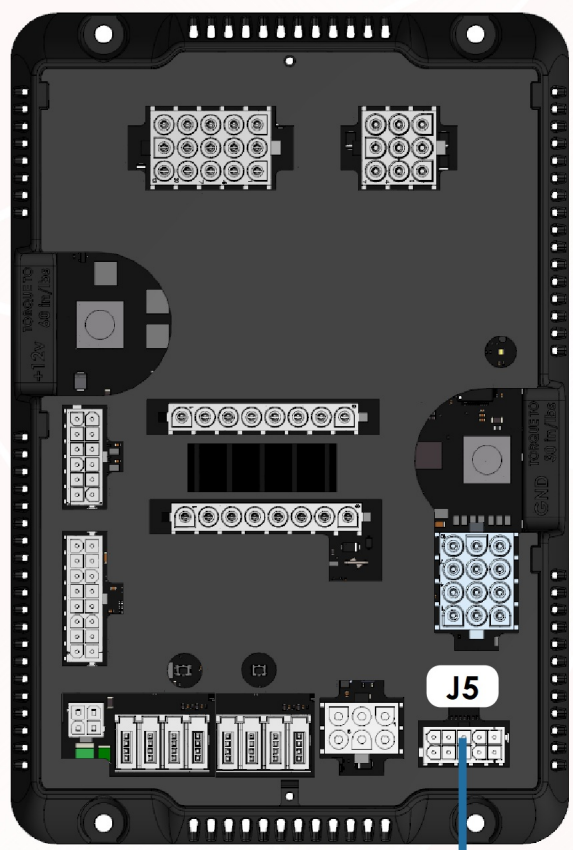
BED ROOM	MAIN CEILING
LIGHT MASTER	

Bedroom
@Bed Wall
Tiffin P/N: 5093649



G12 Module
@ Under Bed

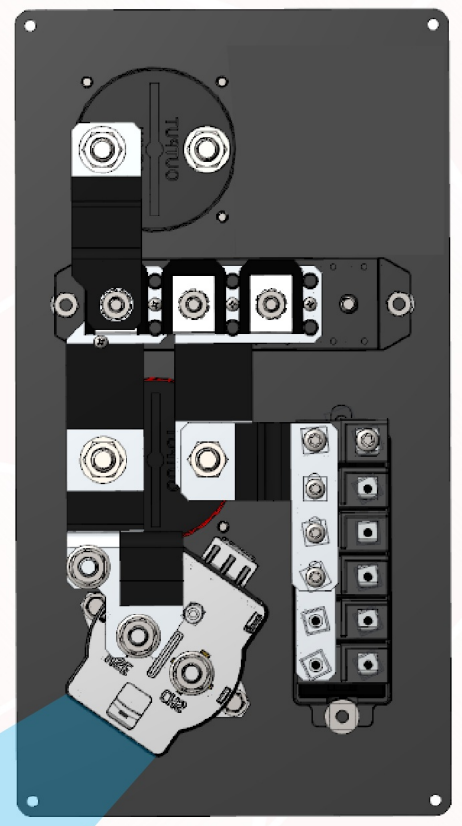
Front M1 Panel



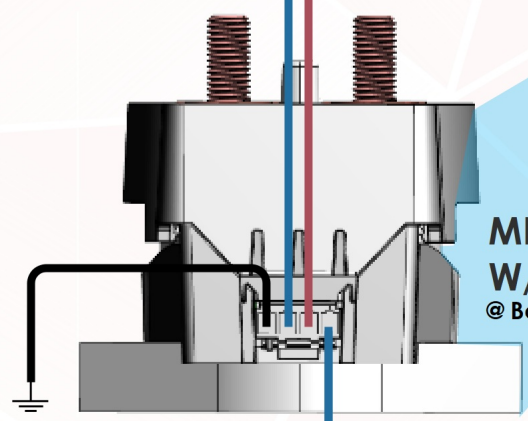
G12 Module
@ Under Bed

COACH RUNNING INPUT

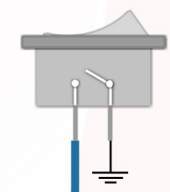
Depending on the chassis used in the coach the coach running input will either come from the engine (switched GND) or from the ignition (switched 12V+)

 A callout box with a white background and a grey border. It contains the title 'COACH RUNNING INPUT' in bold. Below the title is a paragraph explaining that the input can come from either the engine (switched GND) or the ignition (switched 12V+). At the bottom of the box are two green circular icons: one with a white engine symbol and one with a white key symbol.


DCD PANEL
@ Inverter Bay

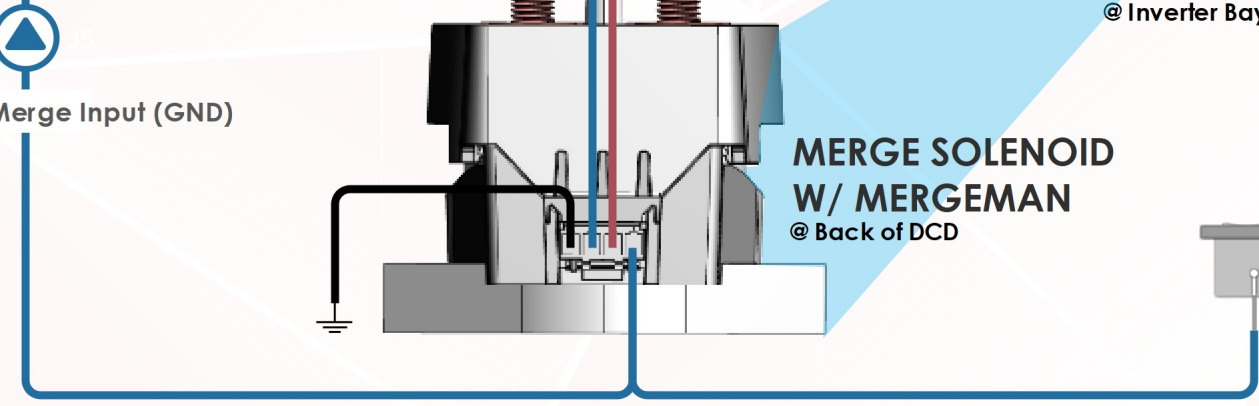


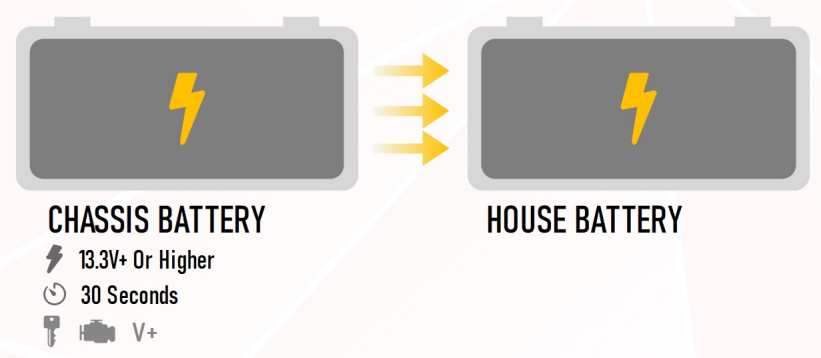
MERGE SOLENOID W/ MERGEMAN
@ Back of DCD



Manual Merge Override Switch
@ Dash

Auto / Manual Merge Input (GND)





MERGE LOGIC - CHASSIS CHARGING HOUSE

The merge solenoid will engage if the following conditions are present:

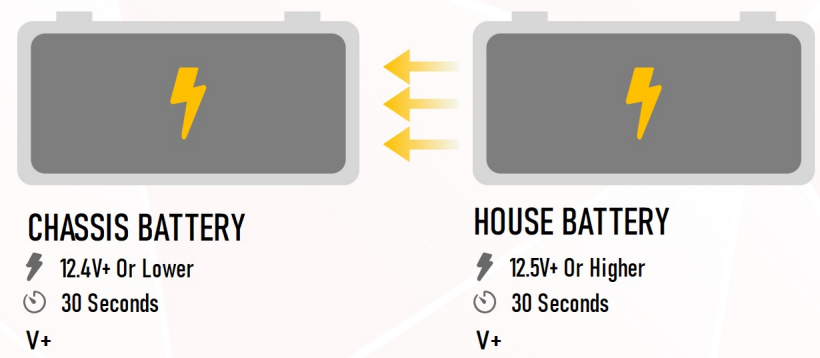
- Engine run or ignition signal is present and chassis voltage is above 13.3V (charging) for 30 seconds.

The merge solenoid will disengage under either of the following conditions

- Engine run or ignition signal is removed
- Chassis voltage drops below 12.6V for more than 30 seconds (unmerge until engine is started again)

i Merge Logic - Note

The voltages used in this spec are what are read directly at the MergeMan which is installed at the DCD panel and may vary from the voltages displayed on the LCD screens for general informational purposes



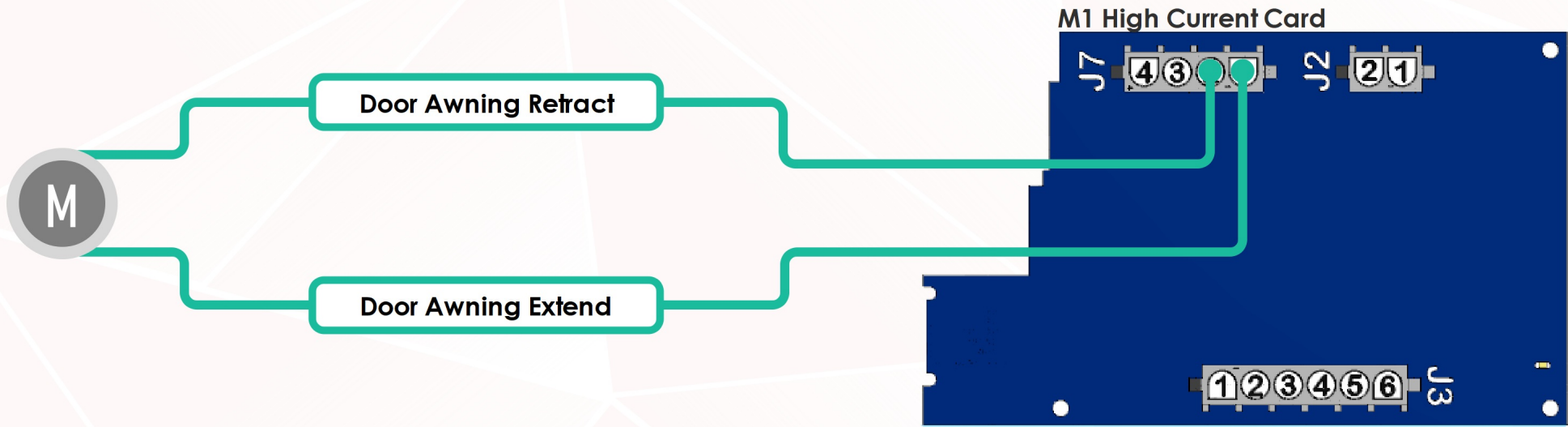
MERGE LOGIC - HOUSE CHARGING CHASSIS

The merge solenoid will engage if the following conditions are present:

- House voltage is above 12.5V (charging) and chassis voltage is below 12.4V (low battery voltage) for 30 seconds



The merge solenoid will disengage under either of the following conditions:

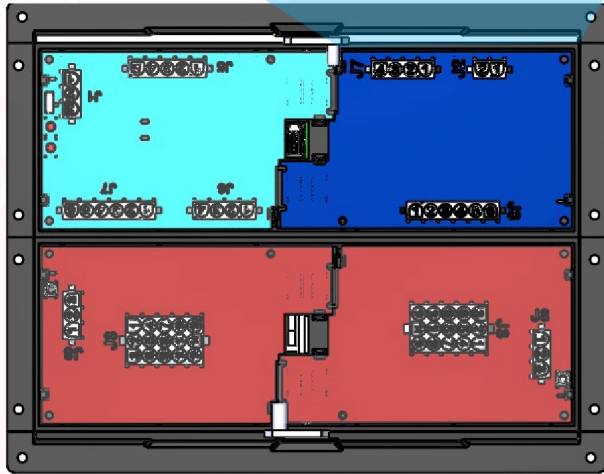
- House voltage drops below 12.2V for more than 30 seconds, OR
- 60 minutes timed battery merge period expires. Re-merge will occur again if the merge conditions are still present



i **Awning Run Requirements**

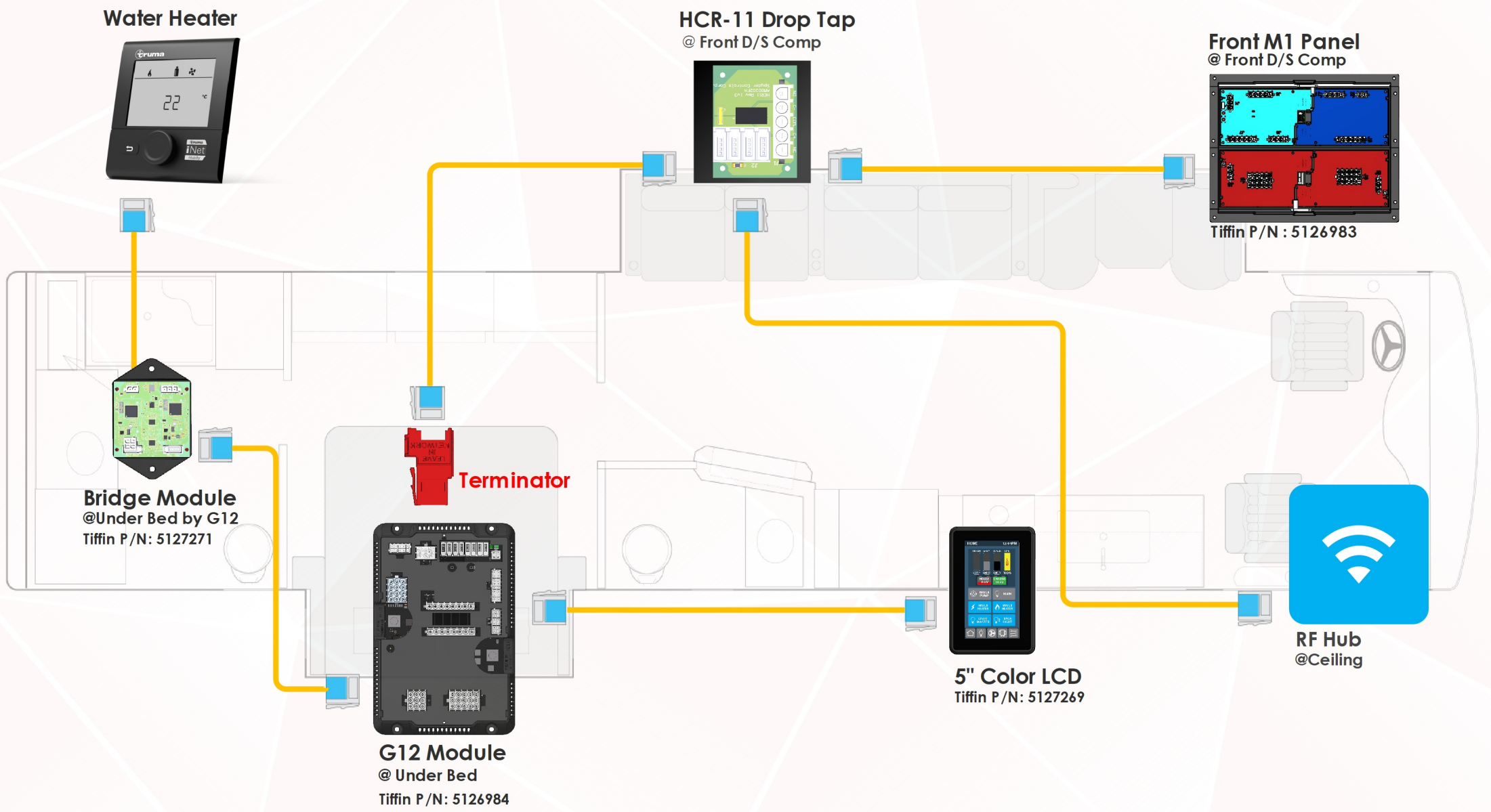
The park brake signal is required for the awning to run. If ignition is present the awning will not run.



Front M1 Panel

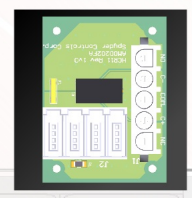
Network Overview



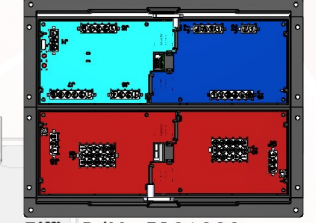
Water Heater



HCR-11 Drop Tap
@ Front D/S Comp



Front M1 Panel
@ Front D/S Comp

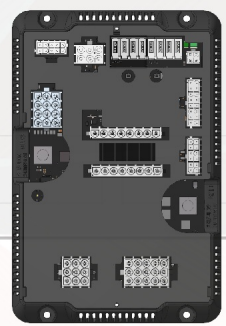


Tiffin P/N : 5126983

Bridge Module
@Under Bed by G12
Tiffin P/N: 5127271



Terminator



G12 Module
@ Under Bed
Tiffin P/N: 5126984

5" Color LCD
Tiffin P/N: 5127269



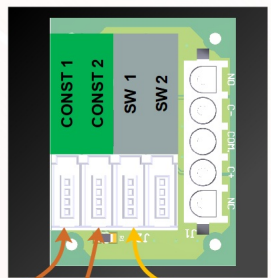
RF Hub
@Ceiling

Network (Always On)

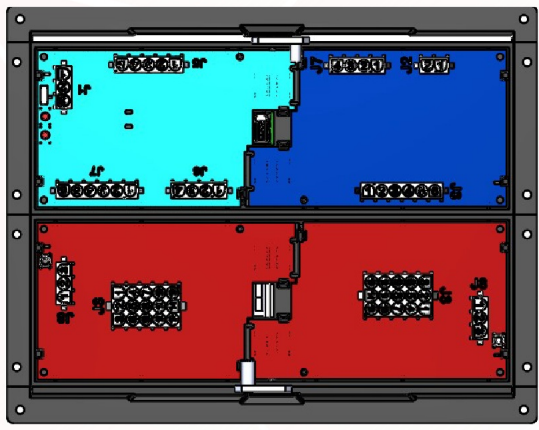
THE ORDER OF THE NETWORK CABLES AT THIS TAP IS IMPORTANT !

The RF Hub and M1 Panel **MUST** be plugged into the ports shown. The always on ports are powered when the house disconnect is off.

Terminator
HCR-11 Drop Tap
 @ Front D/S Comp



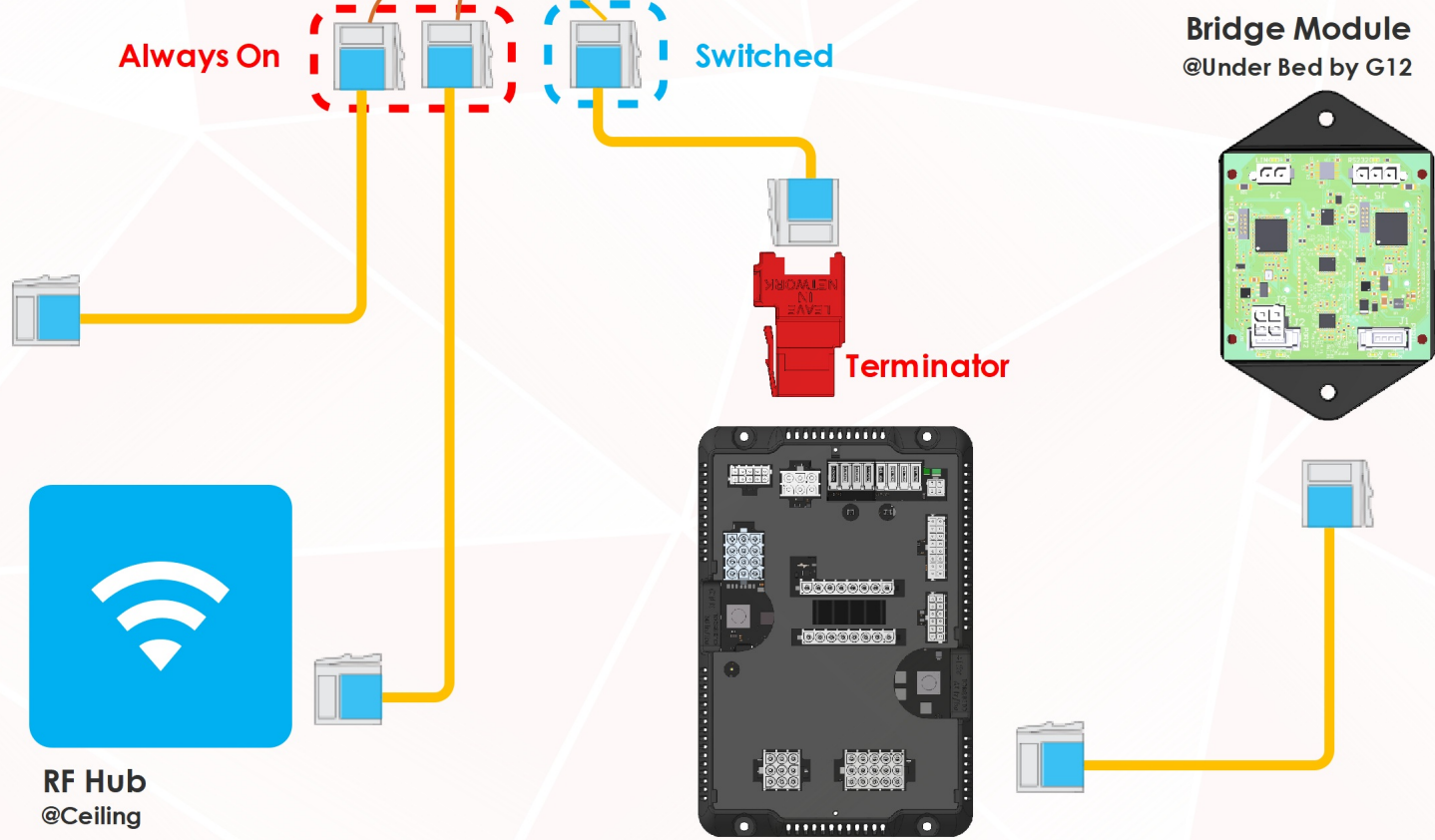
Front M1 Panel
 @Front D/S Comp



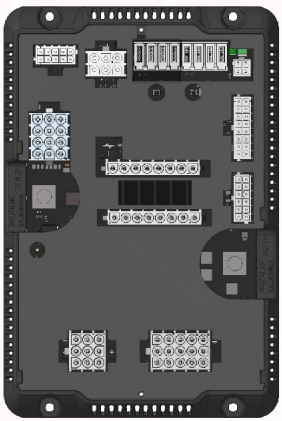
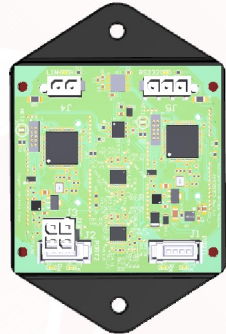
Tiffin P/N : 5126983

Always On

Switched



Tiffin P/N: 5127271
Bridge Module
 @Under Bed by G12



G12 Module
 @Under Bed
 Tiffin P/N: 5126984

i Always On Network

This network to remain powered while house disconnect is off.

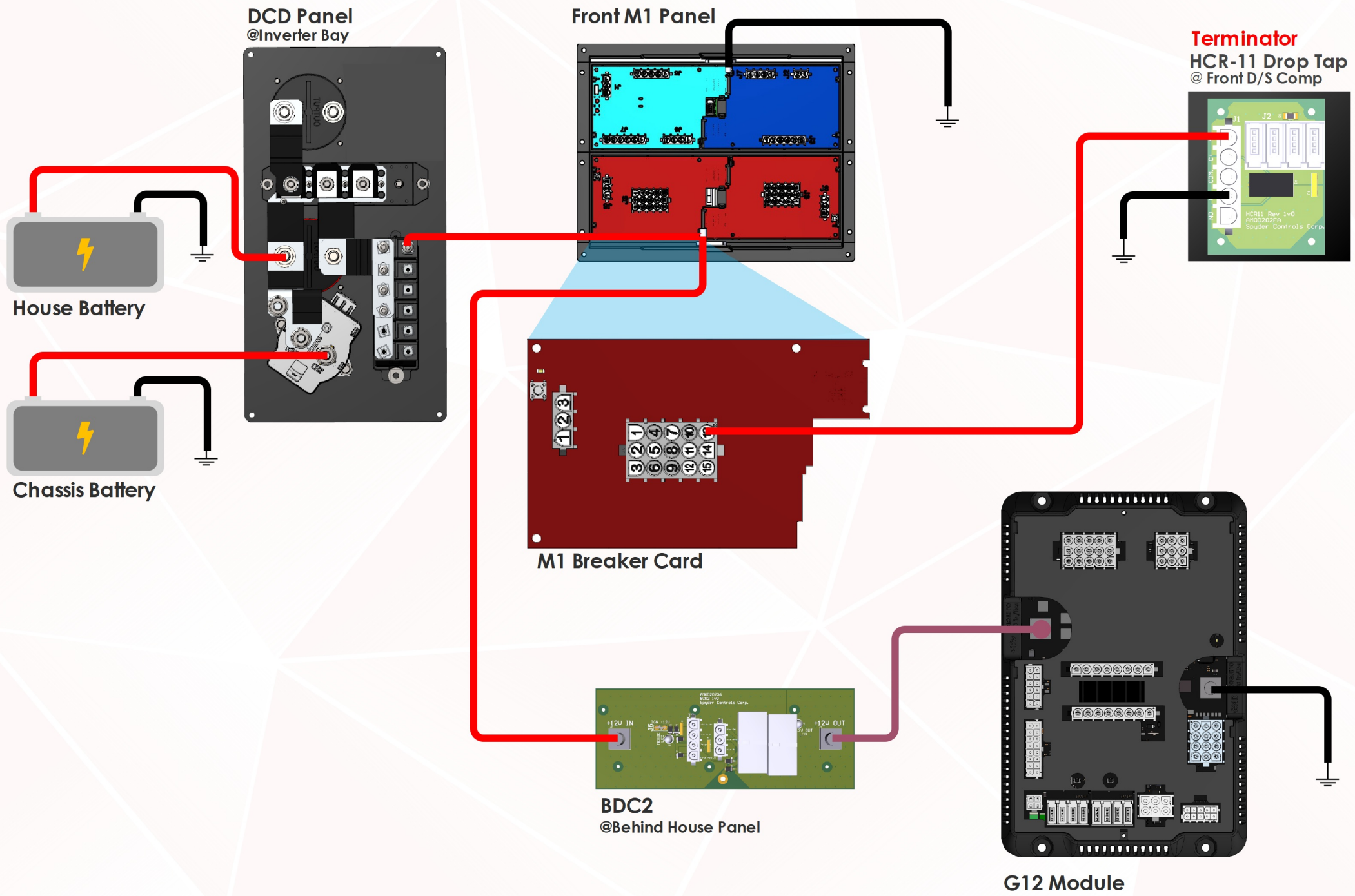
This network can be turned off using the battery disconnect on the DCD panel.

*(Ensure power does not transfer through the network cable to the G12, but does transfer to the RF Hub) ⚠



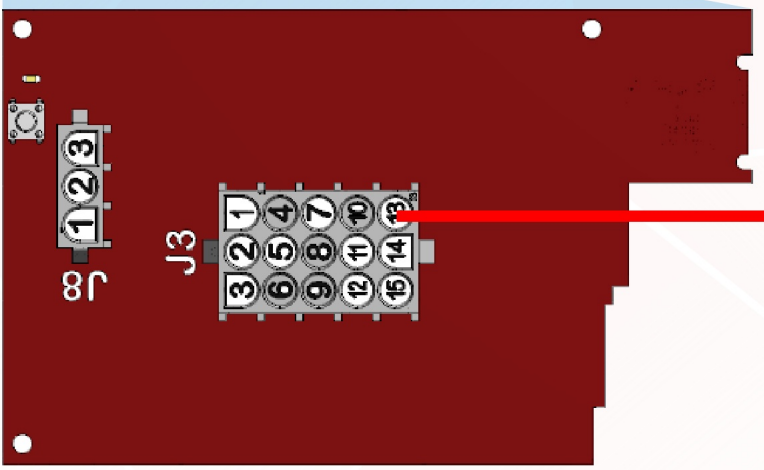
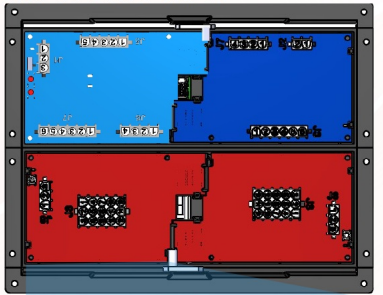
RF Hub
 @Ceiling

Power Diagram



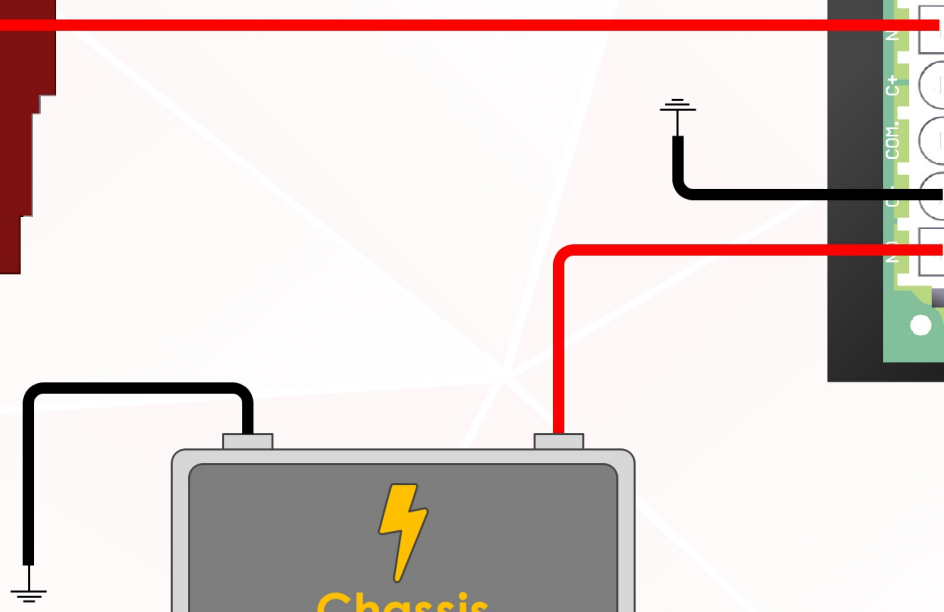
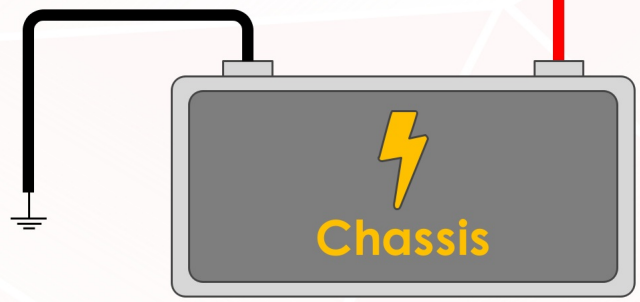
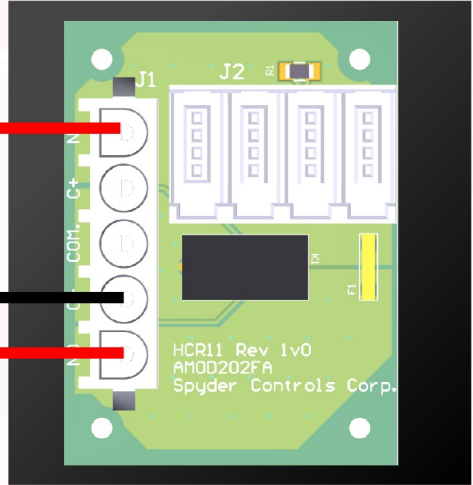
HCR-11 Pinout

M1 Front Panel



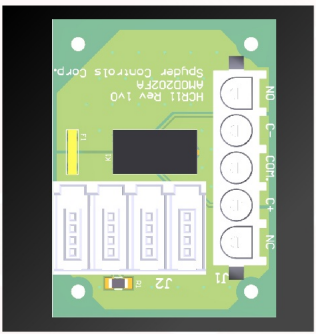
M1 Breaker Card

Terminator
HCR-11 Drop Tap
@ Front D/S Comp

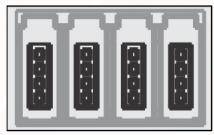


Network Connectors

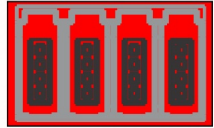
TERMINATOR
HCR-11
Tiffin P/N: 5105426



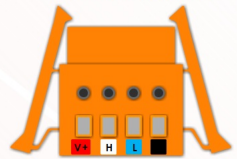
G4 Common Drop Tap
Tiffin P/N: 5016592



G4 Terminator Drop Tap
Tiffin P/N: 5051936



4 Pos Wago Connector
Tiffin P/N: 5015508



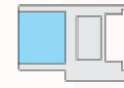
Wago Hook Tool
Wago P/N: 231-131



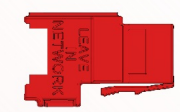
Mini-Clamp Plug
Tiffin P/N: 5066157
3M P/N: 37104-2165-000 FL 100



Mini-Clamp Socket
Tiffin P/N: 5066158
3M P/N: 37304-2165-000 FL 100



In-Line Terminator
Spyder P/N: BBCKZG700
Tiffin P/N: 5125008



Minifit Jr Pins
Digi-Key P/N: 0039000181

MiniFit Jr Connector
Digi-Key P/N: 0039012040

