

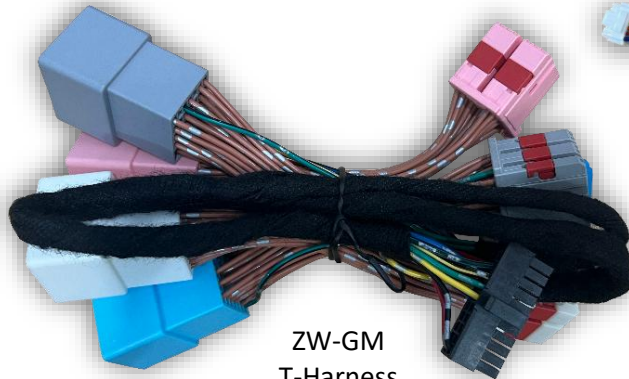
## Overview

The ZW-GM is an advanced Plug & Play module integration designed for specific GM vehicles for flashing OEM lights in 'wig-wag' similar method with a simple press of a button. This unit comes pre-programmed with various light patterns and has on-board options for disabling specific lights.

## Kit Content



ZW-GM Module

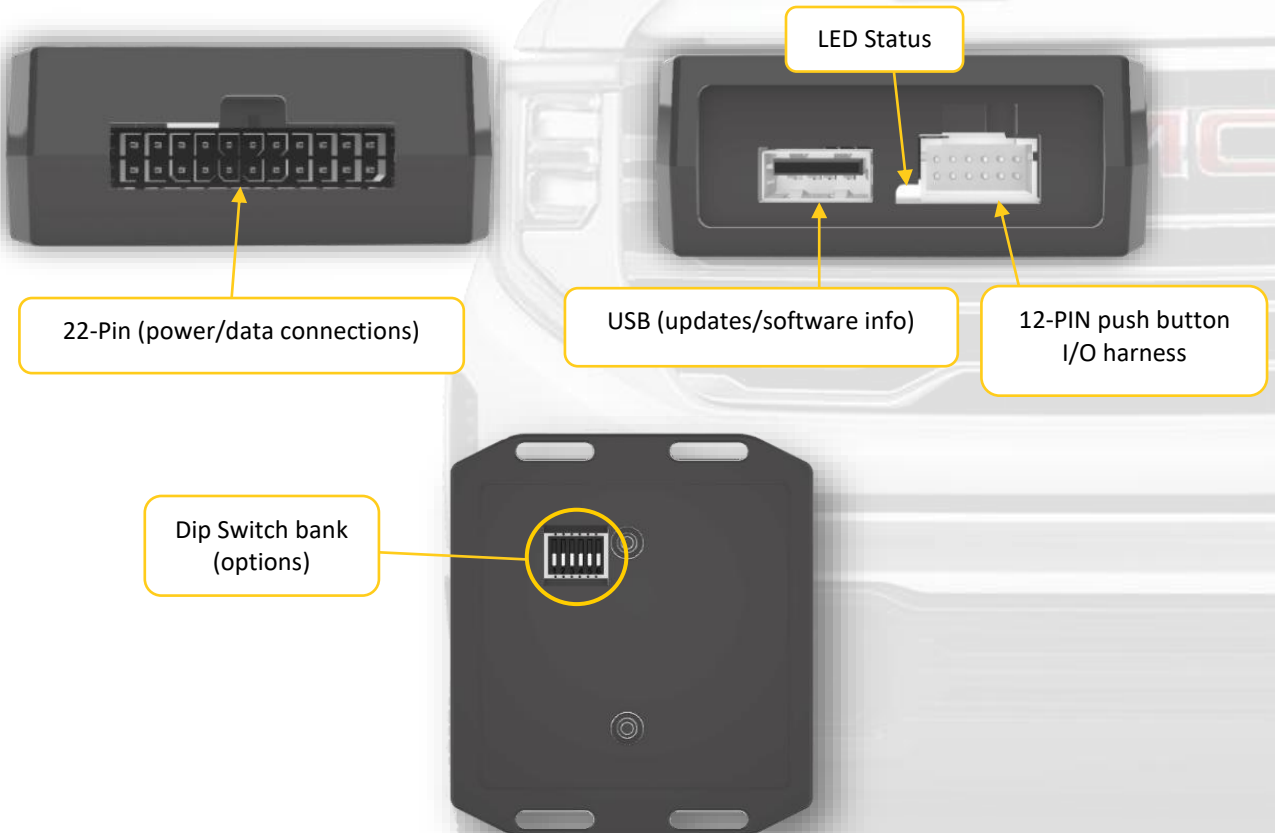


ZW-GM  
T-Harness



Activation Switch  
and I/O Harness

## Module Connections

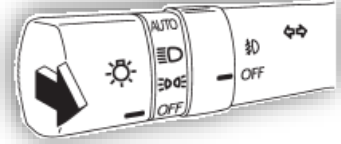


## ZW-GM Operation

### ZW-GM Operation:

1. Install the Z-WAGZ unit to the OE BCM unit. Follow instructions on page 3 for all vehicles.
2. Turn Ignition ON (Ignition must be on for proper operation). Leave vehicle in Park.
3. **To activate Z-WAGZ:**

- Press and HOLD the **high beam** lever (5 sec) OR
- Press and HOLD the provided push button (3 sec) OR
- Send a latched 12v (+) signal to the **blue wire** (designed to be extended for OE up-fitter switches) **NOTE: if using this method to activate, then the only way to deactivate is removing power from the input (or shutting truck down fully)**



Pattern 1 will begin to flash. Once pattern 1 begins, the hazards in the gauge cluster will blink 1 time, indicating Pattern 1 has been selected and the LED on the unit will blink **BLUE**. See chart for remaining pattern color indication.

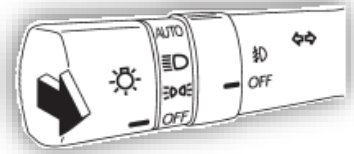
4. **To switch to Pattern 2:** (Pattern 1 must be currently active)

- Engage either turn signal, then press and HOLD the **high beam** lever once more (5 sec). OR
- Press & release the provided push button

The hazards will blink twice indicating Pattern 2 has been selected. Repeat this process to switch to the next pattern.

5. **To deactivate Z-WAGZ:**

- Press and HOLD the **high beam** lever OR
- Press and HOLD the provided push button OR
- Release 12v (+) signal to the **blue wire** (if connected this way)



**PLOW MODE** will slow the currently selected pattern down, and fully disable High and Low beams from flashing. When **INPUT 2 (violet)** receives 12v (+) before activating the flasher, PLOW MODE is enabled.

## General Z-WAGZ Notes

- Vehicles equipped with LED lights should use LED patterns. Vehicles equipped with standard bulbs should use bulb patterns.
- Not all lights on the vehicle are necessarily used, some lights are not controllable via BCM CAN data.
- Z-WAGZ will retain the last used pattern, even after being disconnected from the BCM (if ever).
- When flashing is active: *turn signals, headlights & reverse lights* will override pattern flashing, until turned off again.
- When on some patterns, in some vehicles, the reverse camera image may show up/flash on the OE screen (if equipped). This is a factory limitation and is normal. If you want to avoid this, keep DIP (3) OFF.
- For GM trucks, OE fog lights are typically wired together (and therefore only flash together)
- If vehicle is equipped with physical actuators that activate for high beams/low beams, Z22 highly suggests disabling that beam from flashing (otherwise mechanical failure may occur quickly)
- 'Plow Mode', when active (INPUT 2), disables High & Low beam flashing and slows the pattern down so that the relay box (plow module) can keep up with the flashing (prevents overheating).

## ZW-GM Installation

1. Locate the BCM unit. The chart below indicates the BCM location in various vehicles.
2. **With the vehicle OFF, driver door open (5 mins):** disconnect the (4) highlighted plugs shown. Connect the male side of each T-Harness to the BCM and the (removed) plugs into the female side of the Z-WAGZ BCM harnessing. These connectors can only fit in one place and are color matched to the OE plugs.
3. Connect the ZW-GM module LAST to the 22-pin connector, tie-wrap the unit to another harness if desired.
4. Return to page (2) for operation instructions.



OE GM Body Control Module

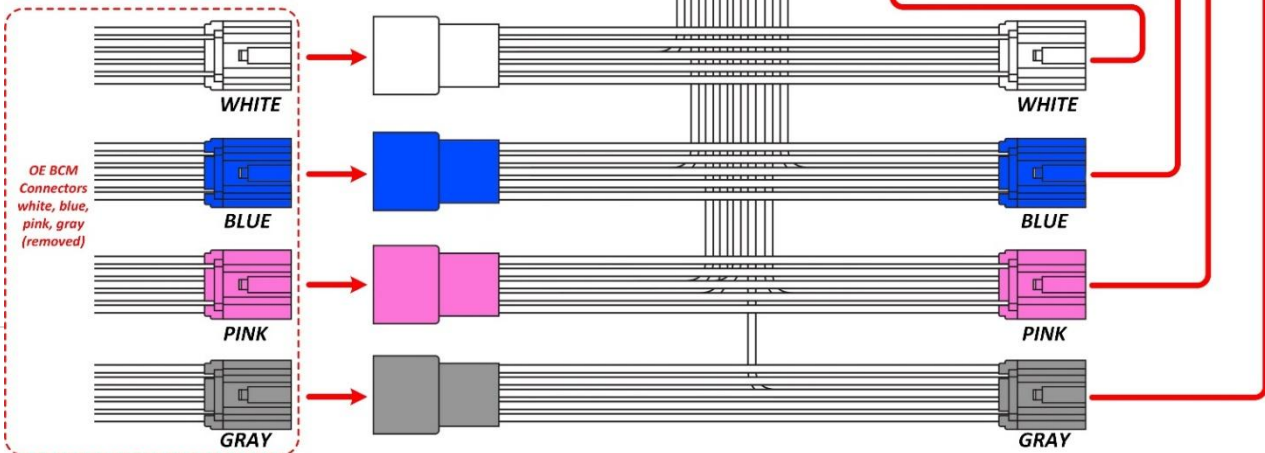
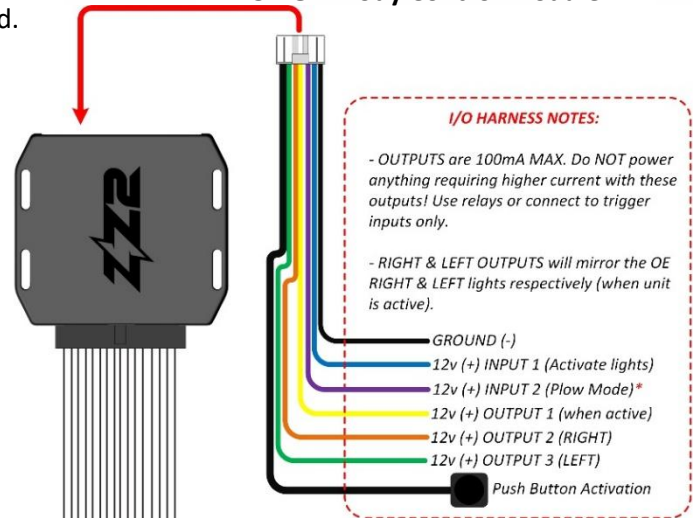
### GM BCM Locations

MODEL	LOCATION
Silverado/Sierra/Colorado	Underneath steering wheel / dash area

### Confirmed Vehicles

MAKE	MODEL	YEAR
GM	Silverado / Sierra	2014- 2022.5
	Colorado / Canyon	2018-2022.5
	Silverado Sierra 2500/3500 HD	2014-2022.5
	Tahoe/Suburban	2018-2020

\*'Plow Mode', when active (INPUT 2), disables High & Low beam flashing and slows the pattern down so that the relay box (plow module) can keep up with the flashing (prevents overheating). This should be enabled whenever a plow is connected.

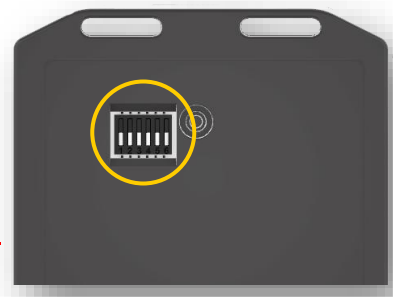


## DIP Switch Settings (software: v1.6)



Located on the back side of the unit is a bank of (6) dip switches – you will need a pick-tool to adjust.

*All dip switches are LIVE, do not unplug the module to adjust.*



DIP	1	2	3	4	5	6
<b>ON</b>	<i>Disable High Beam</i>	<i>Disable Low Beam</i>	<i>Enable Reverse Light (May cause reverse camera to show on screen while active)</i>	<i>For HALOGEN equipped (slower)</i>	<i>Disable STROBE Mode (Removes strobe every 3 seconds)</i>	<i>Heated seat issue only: TURN ON*</i>
<b>OFF</b>	<i>Enable High Beam</i>	<i>Enable Low Beam</i>	<i>Disable Reverse Light</i>	<i>For LED equipped (faster)</i>	<i>Enable STROBE Mode</i>	<i>TYPICALLY KEEP DEFAULT OFF</i>

### Software v1.6 NOTES:

- When turn off ACC the unit will deactivate (stop flashing)
- If reverse camera flashes/displays on radio screen when flashing is active, keep DIP 3 off (reverse will no longer flash)
- If starting the vehicle via remote start and then flasher unit is activated (before true ignition), the vehicle will shut down.
- High Beam Lever / External Button / INPUT 1 +12V trigger:
  - Some vehicles require the engine to be running to activate flashing (seen in a 2022 vehicle), others only require IGN ON to activate*
- Brake priority not supported on all vehicles
- *\*If heated seats do not function (while unit is active), try turning ON DIP 6. NOTE: in some vehicles, this will prevent normal function of the unit, if that's the case, leave DIP 6 OFF (this vehicle has a limitation for filtering certain commands at the BCM and making lights flash).*
- Strobe mode is disabled automatically if the vehicle has limitations with turn signal commands
- When using wire trigger to turn ON unit flashing, the unit cannot be deactivated by any other method, use wire trigger to turn off as well

ZW-GM LED Status / Patterns [SW: v1.6]

START-UP INDICATION		
Description	LED Status	More Information
Initial Wake Up	Blinks <b>BLUE</b> (1 time)	Upon initial power connection
Unit recognizes CAN bus (car side ONLY)	Blinks <b>BLUE</b> (3 times)	Upon CAN data wake
Unit recognizes CAN bus (module side ONLY)	Blinks <b>GREEN</b> (3 times)	Upon CAN data wake
Unit recognizes CAN bus (properly)	Blinks <b>BLUE, GREEN</b> (x3)	Upon CAN data wake
Unit detects ACC info	Blinks <b>GREEN</b> (1 time)	Upon Turning Ignition ON
Unit detects GEAR info	Blinks <b>VIOLET</b> (1 time)	Upon switching gears
Unit detects HIGH BEAM pull OR External button press (for activation)	Solid <b>GREEN</b>	Upon pressing High Beam lever or provided push button
Unit receives negative response for light commands	Blinks <b>VIOLET</b> (x3)	--Contact ZZ2--
Unit not receiving confirmation for light commands	Blinks <b>RED</b> (x1)	--Contact ZZ2--
When unit goes to sleep	Blinks <b>WHITE</b> (x1)	--
CAN bus communication problem	Blinks <b>RED + GREEN</b>	While Z-WAGZ is activated
PATTERN INDICATION		
Description	LED Status	More Information
Pattern 1	Blinks <b>BLUE</b>	<b>BASE PATTERN</b>
Pattern 2	Blinks <b>GREEN</b>	<b>WATERFALL PATTERN</b>
Pattern 3	Blinks <b>RED</b>	<b>DOUBLE BLINK PATTERN (double back &amp; forth)</b>
Pattern 4	Blinks <b>LIGHT BLUE</b>	<b>SINGLE BLINK PATTERN (single back &amp; forth)</b>
Pattern 5	Blinks <b>VIOLET</b>	<b>SINGLE BLINK PATTERN (NO RED FLASH ON REAR)</b>
Pattern 6	Blinks <b>YELLOW</b>	<b>SINGLE BLINK PATTERN (NO CARGO LIGHT FLASH)</b>
POWER CONSUMPTION / ADDITIONAL SPECS		
Description	Specification	More Information
Current Draw Active:	100mA max	
Current Draw idle:	7mA max	
INPUT 1 Trigger wire act:	12V (+)	Hardwire activation trigger
OUTPUT 1: 12v (+)	100mA max	Outputs 12v (+) whenever unit is active
OUTPUT 2 (RIGHT): 12v (+)	100mA max	Mimics RIGHT turn signal pattern
OUTPUT 3 (LEFT): 12v (+)	100mA max	Mimics LEFT turn signal pattern
Trigger wire idle:	3.3V	
Current limit:	10mA	

ZW-GM Supported Lights\*

<b>FRONT LIGHTS</b>		
<i>SUPPORTED LIGHTS</i>	<i>DIP PARAMETER</i>	<i>NOTES</i>
Low Beams	Dip Adjustable	--
Front Turn Signals	N/A	--
High Beams	Dip Adjustable	--
Fog Lights	N/A	--
Driver Running Lights (DRL)	N/A	--
Mirror Turn Signal Lights	N/A	--
Mirror Task Lights	N/A	Model-dependent
<i>Cab Lights (read notes)</i>	N/A	Not supported – the signal for these is not driven by the BCM/LCM, it's directly powered from the switch.
<b>REAR LIGHTS</b>		
<i>SUPPORTED LIGHTS</i>	<i>DIP PARAMETER</i>	<i>NOTES</i>
3 <sup>rd</sup> Brake Light	N/A	Center High-Mounted
Brake Lights	N/A	--
Rear DRLs	N/A	--
Rear Turn Signals	N/A	--
Reverse Lights	Dip Adjustable	--
Bed Lights (cargo)	N/A	Solid ON when pattern 6 is used
License Plate Lights	N/A	--
Left/Right <i>Trailer Turn signals</i>	N/A	Not supported in all models
Flood Lights	N/A	

\*NOTE: As new variants of vehicles are released over time, some lights may not flash due to manufacturer design changes (software or the wiring to the housings themselves). The chart above is accurate for vehicles the ZW-GM was tested on.