

Semantic Driver Assistant – Mechanical Connections

Source	Target	Joint	Delta	Description
main_enclosure_lid	main_enclosure_base	M3 Enclosure Assembly Screws into M3 Brass Heat-Set Inserts	(0, -25, 0)	Main Enclosure Ventilated Lid â” Main Enclosure Base Plate â€” M3 Enclosure Assembly Screws into M3 Brass Heat-Set Inserts; Main Enclosure Base Plate sits 25mm down from Main Enclosure Ventilated Lid
m3_threaded_inserts	main_enclosure_base	Heat-set press fit	(0, 0, 0)	M3 Brass Heat-Set Inserts â” Main Enclosure Base Plate â€” Heat-set press fit; Main Enclosure Base Plate centered on M3 Brass Heat-Set Inserts
m3_assembly_screws	main_enclosure_lid	Through-hole clearance fit	(0, 0, 0)	M3 Enclosure Assembly Screws â” Main Enclosure Ventilated Lid â€” Through-hole clearance fit; Main Enclosure Ventilated Lid centered on M3 Enclosure Assembly Screws
buck_converter_heatsink_clamp	main_enclosure_base	M3 bolts into heat-set inserts	(40, -15, 0)	Power Regulator Mounting Clamp â” Main Enclosure Base Plate â€” M3 bolts into heat-set inserts; Main Enclosure Base Plate sits 40mm right, 15mm down from Power Regulator Mounting Clamp
cellular_gps_telemetry_mount	main_enclosure_base	M3 bolts into heat-set inserts	(-40, -13.5, 0)	LTE & GPS Telemetry Module Mount â” Main Enclosure Base Plate â€” M3 bolts into heat-set inserts; Main Enclosure Base Plate sits 40mm left, 13.5mm down from LTE & GPS Telemetry Module Mount
front_camera_windshield_mount	adhesive_mounting_pads	VHB Double-Sided Adhesive Tape	(0, -18, 0)	Front Camera Windshield Mount â” VHB Double-Sided Adhesive Tape Pads â€” VHB Double-Sided Adhesive Tape; VHB Double-Sided Adhesive Tape Pads sits 18mm down from Front Camera Windshield Mount
rear_camera_glass_mount	adhesive_mounting_pads	VHB Double-Sided Adhesive Tape	(0, -18, 0)	Rear Camera Glass Mount â” VHB Double-Sided Adhesive Tape Pads â€” VHB Double-Sided Adhesive Tape; VHB Double-Sided Adhesive Tape Pads sits 18mm down from Rear Camera Glass Mount

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obd_transceiver_mount_clip	obd2_cable_adapter_mount	Snap-fit interlocking joint	(0, -16, 0)	OBD-II Transceiver Snap Bracket â†” OBD-II to Bare Wire Cable Mount â€” Snap-fit interlocking joint; OBD-II to Bare Wire Cable Mount sits 16mm down from OBD-II Transceiver Snap Bracket
obd2_cable_adapter_mount	chassis_zip_ties	Secured to vehicle under-dash frame	(0, -6.6, 0)	OBD-II to Bare Wire Cable Mount â†” Automotive Grade Cable Ties â€” Secured to vehicle under-dash frame; Automotive Grade Cable Ties sits 6.6mm down from OBD-II to Bare Wire Cable Mount
main_enclosure_base	chassis_zip_ties	Secured to vehicle under-dash structure	(0, -8.1, 0)	Main Enclosure Base Plate â†” Automotive Grade Cable Ties â€” Secured to vehicle under-dash structure; Automotive Grade Cable Ties sits 8.1mm down from Main Enclosure Base Plate
main_enclosure_base	edge_compute_module	mount	(0, 18, 0)	Main Enclosure Base Plate â†” Edge AI Processing Unit â€” mount; Edge AI Processing Unit sits 18mm up from Main Enclosure Base Plate
front_camera_windshield_mount	front_camera_module	mount	(0, 0, 0)	Front Camera Windshield Mount â†” Front ADAS Camera â€” mount; Front ADAS Camera centered on Front Camera Windshield Mount
rear_camera_glass_mount	rear_camera_module	mount	(0, 0, 0)	Rear Camera Glass Mount â†” Rear ADAS Camera â€” mount; Rear ADAS Camera centered on Rear Camera Glass Mount
obd_transceiver_mount_clip	obd2_can_transceiver	mount	(0, 0, 0)	OBD-II Transceiver Snap Bracket â†” OBD-II CAN Controller Interface â€” mount; OBD-II CAN Controller Interface centered on OBD-II Transceiver Snap Bracket
buck_converter_heatsink_clamp	power_supply_regulator	mount	(0, 0, 0)	Power Regulator Mounting Clamp â†” Automotive DC-DC Buck Converter â€” mount; Automotive DC-DC Buck Converter centered on Power Regulator Mounting Clamp
obd2_cable_adapter_mount	obd2_cable_adapter	mount	(0, 0, 0)	OBD-II to Bare Wire Cable Mount â†” OBD-II to Bare Wire Cable â€” mount; OBD-II to Bare Wire Cable centered on OBD-II to Bare Wire Cable Mount
cellular_gps_telemetry_mount	cellular_gps_telemetry	mount	(0, 13, 0)	LTE & GPS Telemetry Module Mount â†” LTE & GPS Telemetry Module â€” mount; LTE &

Source	Target	Joint	Delta	Description
				GPS Telemetry Module sits 13mm up from LTE & GPS Telemetry Module Mount
adhesive_mounting_pads	main_enclosure_lid	attached	(0, 18, 0)	VHB Double-Sided Adhesive Tape Pads are attached; Main Enclosure Ventilated Lid sits 18mm up from VHB Double-Sided Adhesive Tape Pads
adhesive_mounting_pads	obd_transceiver_mount_clip	attached	(0, -10.5, 0)	VHB Double-Sided Adhesive Tape Pads are attached; OBD-II Transceiver Snap Bracket sits 10.5mm down from VHB Double-Sided Adhesive Tape Pads