

Solar LTO Sensor Node – Mechanical Connections

Source	Target	Joint	Delta	Description
octahedron_top_shell	octahedron_bottom_shell	M3 Shell Assembly Screws into Heat-Set Inserts	(0, -90, 0)	Octahedron Top Enclosure Shell â†” Octahedron Bottom Enclosure Shell â€” M3 Shell Assembly Screws into Heat-Set Inserts; Octahedron Bottom Enclosure Shell sits 90mm down from Octahedron Top Enclosure Shell
silicone_gasket_cord	octahedron_bottom_shell	Pressed into groove	(0, -45, 0)	Weatherproof Sealing Gasket â†” Octahedron Bottom Enclosure Shell â€” Pressed into groove; Octahedron Bottom Enclosure Shell sits 45mm down from Weatherproof Sealing Gasket
brass_threaded_inserts	octahedron_bottom_shell	Heat-set installation	(0, -43, 0)	M3 Heat-Set Threaded Inserts â†” Octahedron Bottom Enclosure Shell â€” Heat-set installation; Octahedron Bottom Enclosure Shell sits 43mm down from M3 Heat-Set Threaded Inserts
shell_fastening_screws	octahedron_top_shell	Thru-hole clearance	(0, 0, 0)	M3 Shell Assembly Screws â†” Octahedron Top Enclosure Shell â€” Thru-hole clearance; Octahedron Top Enclosure Shell centered on M3 Shell Assembly Screws
gore_vent	octahedron_bottom_shell	Threaded install with O-ring	(0, -40, 0)	Pressure Equalizing Vent â†” Octahedron Bottom Enclosure Shell â€” Threaded install with O-ring; Octahedron Bottom Enclosure Shell sits 40mm down from Pressure Equalizing Vent
internal_electronics_sled	octahedron_bottom_shell	M3 bolts to molded bosses	(0, -67.5, 0)	Internal Electronics Sled â†” Octahedron Bottom Enclosure Shell â€” M3 bolts to molded bosses; Octahedron Bottom Enclosure Shell sits 67.5mm down from Internal Electronics Sled
lora_mcu_mount	internal_electronics_sled	Integrated snap-fit	(0, -28.5, 0)	LoRaWAN Microcontroller Mount â†” Internal Electronics Sled â€” Integrated snap-fit; Internal Electronics Sled sits 28.5mm down from LoRaWAN Microcontroller Mount
relay_module_mount	internal_electronics_sled	M2.5 screws	(0, -32.5, 0)	Low-Power Relay Module Mount â†” Internal Electronics Sled â€” M2.5 screws; Internal Electronics Sled sits 32.5mm down from Low-Power Relay Module Mount
board_mounting_screws	internal_electronics_sled	Threaded into sled brass inserts	(0, -25.5, 0)	M2.5 PCB Standoff Screws â†” Internal Electronics Sled â€” Threaded into sled brass inserts; Internal Electronics Sled sits 25.5mm down from M2.5 PCB Standoff Screws

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lto_battery_cradle	internal_electronics_sled	M3 bolts	(0, 0, 0)	LTO Battery Isolation Holder â†” Internal Electronics Sled â€” M3 bolts; Internal Electronics Sled centered on LTO Battery Isolation Holder
patch_antenna_bracket	octahedron_top_shell	Slid into molded guide slots	(0, 0, 0)	Internal Patch Antenna Mount â†” Octahedron Top Enclosure Shell â€” Slid into molded guide slots; Octahedron Top Enclosure Shell centered on Internal Patch Antenna Mount
octahedron_top_shell	solar_panel	mount	(0, 46.5, 0)	Octahedron Top Enclosure Shell â†” Top Face Solar Panel â€” mount; Top Face Solar Panel sits 46.5mm up from Octahedron Top Enclosure Shell
internal_electronics_sled	base_board	mount	(0, -27.5, 0)	Internal Electronics Sled â†” WisBlock Base Board â€” mount; WisBlock Base Board sits 27.5mm down from Internal Electronics Sled
lto_battery_cradle	lto_battery	mount	(0, 0, 0)	LTO Battery Isolation Holder â†” LTO Buffer Battery â€” mount; LTO Buffer Battery centered on LTO Battery Isolation Holder
patch_antenna_bracket	internal_antenna	mount	(0, 0, 0)	Internal Patch Antenna Mount â†” Internal PCB Patch Antenna â€” mount; Internal PCB Patch Antenna centered on Internal Patch Antenna Mount
lora_mcu_mount	lora_mcu	mount	(0, 0, 0)	LoRaWAN Microcontroller Mount â†” LoRaWAN Microcontroller â€” mount; LoRaWAN Microcontroller centered on LoRaWAN Microcontroller Mount
relay_module_mount	relay_module	mount	(0, 0, 0)	Low-Power Relay Module Mount â†” Low-Power Relay Module â€” mount; Low-Power Relay Module centered on Low-Power Relay Module Mount
silicone_gasket_cord	mppt_charger	attached	(0, 0, 0)	Weatherproof Sealing Gasket â†” LTO Solar MPPT Charger â€” attached; LTO Solar MPPT Charger centered on Weatherproof Sealing Gasket
bme680_sensor_mount	internal_electronics_sled	M2.5 screws	(0, -15, 0)	BME680 Sensor Mount â†” Internal Electronics Sled â€” M2.5 screws; Internal Electronics Sled sits 15mm down from BME680 Sensor Mount
bme680_sensor_mount	bme680_sensor	M2 screws	(0, 5, 0)	BME680 Sensor Mount â†” BME680 Environmental Sensor â€” M2 screws; BME680 Environmental Sensor sits 5mm up from BME680 Sensor Mount