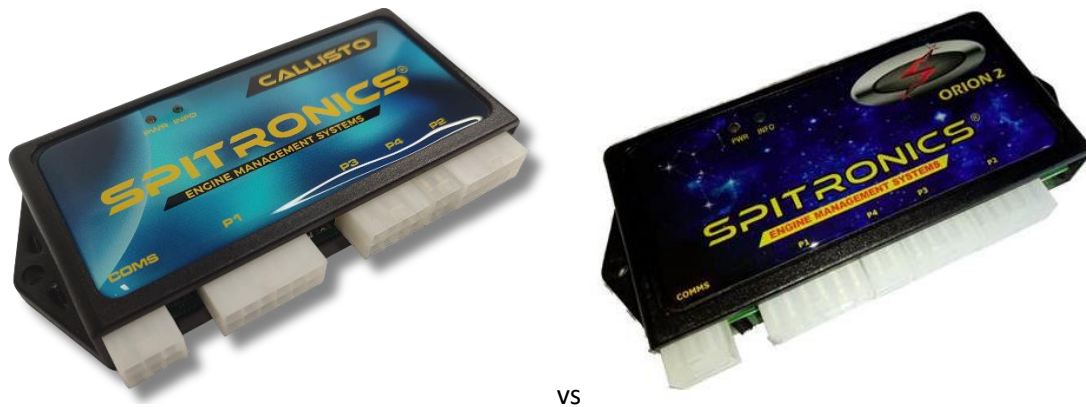


Callisto vs Orion2



Why the Change?

EeziRider Engine Management, the company behind the Spitronics brand, is continually evolving its products. The Orion2 has reached its hardware limits and was due for an upgrade to support a wider range of engines. Additionally, newer and more advanced components are now available that better suit today's applications.

Built on Orion2 Experience

Callisto was designed based on years of Orion2 feedback and field experience. While it introduces powerful new features, it remains familiar in layout and tuning, making the transition as smooth as possible.

It was also engineered to retain pin compatibility with Orion2 wherever possible, making upgrades or replacements straightforward. In most cases, the same harness can be reused with minor or no changes.

Callisto introduces a fourth connector with four additional outputs to support larger engines. The unit features completely revised software with a more streamlined layout, better aligned with modern tuning environments. It also supports many new features that have emerged in recent years.

Callisto uses the same processor as Mercury3, offering more resources and performance headroom for advanced functions. Unlike Orion2, it no longer requires complex driver shifting based on selected features, simplifying both setup and operation.

The harness design has been streamlined for easier manufacturing by dealers. Documentation has also moved online, giving users instant access via a web portal or the dedicated Android support app — putting help right at your fingertips.

Orion2 will be discontinued and fully replaced by Callisto.

Feature Comparison – What's New in Callisto

Hardware Enhancements

- **Processor Upgrade**
Callisto uses a 48-pin processor vs Orion2's 32-pin, offering more I/O and capability.
- **High Voltage Drivers**
Callisto has 12 HV negative IGBT drivers (400V / 42A) for coils and injectors.
Orion2 had 6 HV and 4 MV drivers.

- **Low Voltage Drivers for Smart Coils**

Callisto includes 6 LV positive drivers.
Orion2 had 4 MV drivers, limiting smart coil support.

- **No Loss of Inputs with 6 Coils**

POT and Dual Map inputs remain functional in Callisto, even when using 6 basic coils.
In Orion2, these inputs were lost under this configuration.

- **Split PCB Ground Plane**

Improves noise immunity by separating sensitive electronics from inductive interference.
Enhances reliability under wiring or engine component failure.

- **Built-in Solid-State Relay**

Replaces the one external relay needed in Orion2 for positive driver and logic supply.

- **Improved Power Filtering**

Advanced filtering and interference protection vs Orion2.

- **Full Sequential Injection**

Callisto supports full sequential injection for up to 8 cylinders.
Orion2 supports up to 4.

- **Basic Coil-On-Plug (COP)**

Callisto supports up to 8 COP outputs.
Orion2 supports up to 6.

- **Support for V12 Engines**

Callisto can control V12 configurations.
Orion2 cannot.

- **Expanded TCU Firmware Support**

More available drivers and features for TCU operation in Callisto.
Orion2 was limited in this area.

Software Improvements

- **New Tuning Software: Cosmos**

Replaces Hyperspace. Modern, intuitive, and feature-rich.

- **Tree-Based Menu System**

Groups settings logically, making navigation easier and more efficient.

- **Built-in Quick Card Help**

Offers instant guidance and links to detailed documentation from inside the software.

- **Advanced Features Supported**

Includes spinning control, rapid-fire limiters, 8x8 and 16x16 matrix tuning, matrix graph editing, and more.

- **Future-Proof Development**

Cosmos is the active platform going forward. Hyperspace will not receive updates.

- **Expanded TCU Capability**

Reads two speed sensors and two temperature sensors.
Offers advanced graphs and tuning flexibility.

Firmware Evolution

- **New Firmware Already Running**

Callisto supports firmware that Orion2 cannot run.

- **Ongoing Firmware Development**

Future updates and features will be exclusive to Callisto, leveraging its greater memory and resources.

Harness & Wiring Updates

- **More Automotive-Grade Wires**

Callisto harnesses use more higher quality automotive wire for reliability and easier dealer assembly. Only crank and cam sensors require screened cables.

- **Industry-Aligned Crimping**

Uses modern crimping technology for consistent results.
Orion2 used hand-soldered pins.

Pin Layout Compatibility

Callisto was carefully designed to maintain pin compatibility with Orion2 where possible. Most core functions remain on the same pins, allowing reuse of existing harnesses. A fourth connector was added to accommodate additional outputs for larger or more advanced configurations.

Callisto

vs

Orion2

8Cyl 4BC 8Inj 6GP				8 Cyl			
Calisto ECU Layout				Orion2 ECU Layout			
P1 - 12 Way Input				P1 - 12 Way Input			
Water Temp	7	1	Air Temp	Water Temp	7	1	Air Temp
Lambda	8	2	TPS	Lambda	8	2	TPS
.+5 Volt Out	9	3	MAP	.+5 Volt Out	9	3	MAP
.+12 Volt Ign	10	4	GND	.+12 Volt Ign	10	4	GND
Cam Sensor	11	5	CAM Power	TDC Sensor	11	5	TDC Power
Crank Sensor	12	6	Crank Power	Crank Sensor	12	6	Crank Power
	Internal		1.15 Bar Alt Sensor		Internal		3Bar Alt Sensor
P2 - 10 Way Output				P2 - 10 Way Output			
HV Negative 1	6	1	HV Negative 2	Coil Negative 1	6	1	Coil Negative 2
HV Negative 3	7	2	HV Negative 4	Coil Negative 3	7	2	Coil Negative 4
HV Negative 5	8	3	HV Negative 6	Negative 2	8	3	Negative 1
LV Negative 2	9	4	LV Negative 1	Negative 4	9	4	Negative 3
HV Negative 7	10	5	HV Negative 8	Negative 6	10	5	Negative 5
P4 - 4 Way Serial				P3 - 8 Way Output			
HV Negative 9	3	1	HV Negative 10	Positive 1	5	1	Positive 2
LV Positive 5	4	2	LV Positive 6	Positive 3	6	2	Positive 4
P3 - 8 Way Output				.+12 Volt In	7	3	.+12 Volt In
LV Positive 1	5	1	LV Positive 2	Coil Negative 5	8	4	Coil Negative 6
LV Positive 3	6	2	LV Positive 4	P4 - 4 Way Serial			
.+12 Volt In	7	3	.+12 Volt In	SDA	3	1	SCL
HV Negative 11	8	4	HV Negative 12	.+5 Volt Out	4	2	GND
6 Way USB				6 Way USB			
Tuning Pot	4	1	Dual Map Sw	Tuning Pot	4	1	Dual Map Sw
Receive	5	2	Transmit	Receive	5	2	Transmit
.+5 Volt Out	6	3	GND	.+5 Volt Out	6	3	GND

Note: Connector P4 on Orion2 was never implemented in firmware and is not used.

Conclusion

Although Orion2 will be phased out, your **tuning knowledge**, **wiring skills**, and **software experience** remain fully relevant. Callisto builds on everything you already know — and makes the rest simpler, stronger, and more future-ready.