

Spitronics ECU - Mercury3 vs Callisto - Platform Comparison Guide

Choosing the Right Platform

Overview

Mercury3 and Callisto share the same development philosophy and core engine management functionality. Both provide professional engine, transmission and electronic throttle control using the same proven firmware strategies and tuning concepts.

The difference is not what they can control, but **how they are packaged and where each product fits in the market.**

Mercury3 was designed as a universal platform with maximum flexibility.

Callisto was developed from Mercury3 to simplify installation, reduce harness complexity and lower the overall system cost for modern applications.

Product Philosophy

<u>Feature</u>	<u>Mercury3</u>	<u>Callisto</u>
Product Philosophy	Universal controller	Dedicated application controller
Typical Market	Professional installers, export, specialist projects	Modern installations, production systems, custom harnesses
Hardware	One hardware platform	Dedicated hardware variants
Future Direction	Mercury4 planned	Current production platform

Hardware Philosophy

Mercury3

One hardware platform can become:

- ECU
- TCU
- Electronic Throttle Controller (ETC)

Only the firmware and harnesses changes.

Certain applications require a few external resistors and diodes to be added to the wiring harness.

Advantages

- One stock item.
- Very flexible.
- Easy dealer inventory.
- Proven over many years.

Callisto

Callisto is assembled specifically for each application.

Available as:

- ECU
- TCU
- ETC

Each hardware version already contains the correct components required for that application.

Advantages

- Simpler wiring harness.
 - Lower component count.
 - Cleaner installation.
 - Better suited to production applications.
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Software

Mercury3

Originally developed on Hyperspace
Cosmos migration possible
Proven tuning system

Callisto

Developed on Cosmos
Native Cosmos platform
Latest tuning platform

Ignition Outputs

Mercury3

Basic ignition coils require external igniters.

Smart coils connect directly.

Advantages:

- High current remains outside the ECU.
- Flexible ignition options.

Callisto

Basic and smart coils can both be driven directly.

Advantages:

- No external igniters.
 - Lower installation cost.
 - Simpler wiring.
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Analogue Inputs

Mercury3

One additional analogue input.

Typically used for:

- Fuel Pressure
- Oil Pressure
- Custom sensor

Supports:

- Up to four trigger inputs.
- Suitable for engines requiring multiple cam position sensors.

Callisto

One less analogue input.

Normally:

- Fuel pressure is omitted.

Includes:

- Two additional outputs.

Supports:

- One crank trigger.
- One cam trigger.

Ideal for the majority of modern engines.

Altitude Compensation

Mercury3

External MAP sensor used for Barometric Compensation.

Advantages:

- Flexible sensor placement.
- Easy replacement.

Callisto

Internal Barometric sensor.

Advantages:

- No external sensor required.
- Reduced wiring.
- Cleaner installation.

Requires a protected vent if the enclosure is resin filled.

Enclosure

Mercury3

- Fully resin filled.
- Waterproof.
- Extremely rugged.
- External jumpers.

Excellent for harsh environments.

Callisto

Normally supplied without resin.

Advantages:

- Configuration jumpers accessible.
- Easier servicing.

Can also be resin filled if required.

Inventory

Mercury3

One hardware platform.

Dealer changes firmware and harness options.

Ideal when stocking many different products.

Callisto

Dedicated hardware variants.

Dealer stocks:

- ECU
- TCU
- ETC

Lower harness cost.

Cleaner production.

Product Evolution

Mercury3

Well proven.

Large installed customer base.

Mercury4 will eventually replace Mercury3 while maintaining harness compatibility where possible.

Mercury range has its own wiring pattern.

Callisto

Current development platform.

Latest software.

Latest hardware philosophy.

Preferred platform for new standard products.

Callisto follows the Orion2 wiring pattern.

Which Should I Choose?

Mercury3

Recommended if you require:

- Maximum flexibility.
- Additional sensor inputs.
- Multiple cam trigger capability.
- One universal hardware platform.
- Proven long-term reliability.

Callisto

Recommended if you require:

- Simpler wiring.
 - Direct basic coil drive.
 - Production-oriented installations.
 - Dedicated hardware.
 - Latest Cosmos software platform.
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EeziRider Recommendation

For most standard applications, **Callisto** is the preferred platform due to its simplified hardware and Cosmos software architecture.

For specialist developments or projects requiring maximum flexibility, additional sensor capability or future migration to custom hardware, **Mercury3** remains an excellent choice and can be migrated to the Cosmos software platform as part of an EeziRider Technology Partnership where appropriate.