

MA61C Mult Gene CPCI

Multipurpose Adapter Generic Interface Connector

MA61C cPCI is an intelligent, plug-and-play Command and Data Handling (C&DH) I/O board system engineered to seamlessly integrate multiple satellite subsystems with a cPCI serial space processing unit.



MA61C cPCI seamlessly integrates multiple satellite subsystems with onboard computers. It interfaces with essential subsystems such as AOCS sensors and actuators, communication, power, payload, and more.

The system scans connections, detects incoming data, routes and converts it between interfaces, and monitors bus data, sending information to connected units.

The MA61C is designed for ease of use, offering a **database of pre-installed drivers** that enable **plug-and-play functionalities**, simplifying the connection of new hardware:

device recognition self configuration automatic driver installation

The MA61C cPCI is a pioneering CompactPCI (cPCI) satellite technology. cPCI will play a critical role in all future EU Copernicus missions. MA61C cPCI offers a commercial, reliable, ready-to-deploy solution for future missions. Its advanced design enables seamless scalability, driving efficiency in satellite manufacturing and supporting the next generation of space missions.

By integrating with MA61C, users streamline the entire spacecraft lifecycle—from design and supply chain management to system integration—accelerating time to space.

Key Features	Powered by the GR712RC LEON3-FT SPARC V8 processor Supports multiple I/O interfaces at the same time 80Mbit of SRAM and 64Mbit of FLASH memory for software and data storage. Built-in timer driven by an onboard oscillator, ensuring precision in its operations. API and a Windows-based GUI for easy subsystem monitoring and control
	monitoring and control

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Key Benefits

Enable High-efficiency modular design Reduces design and integration time by 50% Lowers development costs up to 30% Simplifies supply chain management Increase scalability potential for missions





Processor

GR712RC dual-core 32-bit LEON3 fault-tolerant SPARC V8 processor 50 MHz clock frequencies



Onboard memory

- SRAM 80 Mbit 5 x 16 Mbit
- FLASH 64 Mbit

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Onboard software

- Plug and play
- Embedded driver database
- Routing and converting
- Data Buffering

심☆ Interfaces on the board

- 2 x CAN-bus (backplane)
- RS422 and RS232 mdm-25 female
- 1 x I2C Master (Backplane)
- 4 x GPIO (mdm-25 female) and 10x GPIO backplane
- 4 x SpaceWire, 2 front panel (micro-d 9 female) and 2 backplane

What does the MA61C package include?

1 x MA61C (board) 1 x Debug cable 1 x USB with Windows API and GUI Manuals

Space Products and Innovation spins technology into the space industry to simplify manufacturing. SPiN enables rapid, flexible, and cost-effective satellite designs through modularity, enabled by the combination of MA61C, its plug-and-play intelligent data node, with system engineering. SPiN democratizes access to space, empowering manufacturers to unlock new ventures.

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Power Supply

12V



Physical Properties

- Operating Temperature: -40 deg C to +85 deg C
- Quality: ISO standard
- Size: 160 mm x 100 mm
- Weight: 300 grams
- cPCI serial space backplane compatible

상 Port speed

- SpaceWire Up to 200 Mbit/s, nominal 10 Mbit/s
- CAN-bus 1Mbit/s
- I2C interface up to 0.4Mbit/s
- RS232 interfaces up to 250 Mbit/s
- RS422 interfaces up to 20 Mbit/s
- Debug port 1 Mbit/s