

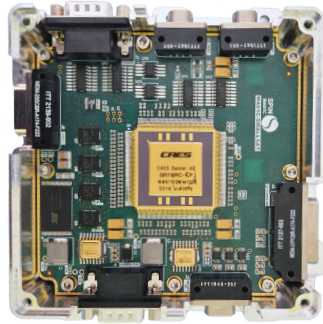
MA61C

SmallSat

Multipurpose
Adapter
Generic
Interface
Connector

SPiN
Simplify Space Manufacturing

MA61C SmallSat is an intelligent, plug-and-play Command and Data Handling (C&DH) system engineered to seamlessly integrate multiple satellite subsystems with onboard computers.



MA61C SmallSat 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.

MA61C is designed for ease of use, offering a database of pre-installed drivers that enable **plug-and-play functionalities. This simplifies hardware integration with:**

- **device recognition**
- **self configuration**
- **automatic driver installation**

By integrating with MA61C, users streamline the entire SmallSat 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

www.spinintech.com

ITALY GERMANY LUXEMBOURG UNITED KINGDOM UNITED STATES

info@spinintech.com



Key Benefits

Increase efficiency modular design
Reduces design and integration time by 50%
Lowers development costs up to 30%
Simplifies supply chain management



Processor

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



Port speed

- SpaceWire - Up to 200 Mbit/s, nominal 10Mbit/s
- CAN-bus - 1Mbit/s
- I2C interface - up to 0.4Mbit/s
- SPI interface - up to 20Mbit/s
- RS422/RS485 interfaces - up to 10Mbit/s
- Debug port - 1 Mbit/s



Interfaces on the board

- 2 x SpaceWire, micro-d 9 pins female
- 2 x CAN-bus, dsub9 male
- 1 x MIL-STD-1553B (RT/BC/MT), dsub9 male
- 5 x RS422 and 1 x RS485 mdm-25 female
- 9 x GPIO, 16 Analogues: mdm-37 male
- 1 x power and 1x JTAG: dsub-9
- 1 x I2C Master, 1 x SPI master, 6 x PWM: mdm-15 male



Power Supply

+5V to 24V



Onboard software

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



Physical Properties

- Operating Temperature: -40 deg C to +85 deg C
- Quality: ISO standard
- Size PCB: 105 mm x 105 mm (without casing)
- Size with casing: 131 mm x 131 mm x 30 mm
- Weight: 435 grams (approx.)



Onboard memory

- SRAM - 64 Mbit - 2 x 32 Mbit
- FLASH - 64 Mbit

What does the MA61C package include?

1 x MA61C (board and casing)
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.

www.spinintech.com

ITALY GERMANY LUXEMBOURG UNITED KINGDOM UNITED STATES

info@spinintech.com

