On-Board Data Handling

AgilSpace

OBC-15
On-Board Computer

The OBC-15 series On-Board Computer is designed for mission critical and high performance applications in LEO satellite missions. Based on the proven and popular ERC32 processor chip, the OBC is capable of supporting flight software with up to 15 MIPS of processing power and floating point computation. With up to 3 million gates reconfigurable FPGA, the OBC can be reconfigured to support multiple missions.

The OBC also provides support for CAN bus and RS485 bus interface, allowing multiple subsystems and payloads to be connected in a scalable manner. It also have a high density backplane interface to allow for multiple point to point synchronous or asynchronous interconnection between several OBC or other extension cards. All I/O are DMA-enabled, freeing up the processor from the I/O processing loads.

Key Features

- **High performance ERC32 processor, with VxWorks and RTEMS support**
- **Reconfigurable FPGA to support mission requirements**
- **16 MB SRAM with EDAC support**
- **DMA Enabled I/O Processing**
- **Supports CAN, RS485, Asynchronous/Synchronous Serial interfaces**

OBC-15 On-Board Computer

Empowering thru' Innovation

ST Electronics
Satcom & Sensor Systems
A member of ST Engineering

OBC-15 On-Board Computer

Technical Specifications

Dimensions	350 mm (L) x 250 mm (W) x 30 mm (H)
Power	3.3V & 5V inputs 7.5 W power consumption
Mass	1.5 Kg Inclusive of mechanical chassis
Temperature	-20°C to +70°C operating -40°C to +85°C non-operating
CPU	TSC695FL (ERC32) Sparc V7 Architecture
Memory	16 MB SRAM 4 MB EEPROM memory 1 MB Boot ROM Option for IB, IS and MS grade memory
FPGA	ProAsic3L re-programmable FPGA Up to 3M gates
DMA	DMA enabled I/O processing
I/O	Dual CAN Bus Interface with built-in CAN protocol processing 4 X RS485/422 Interface 8 X Asynchronous/Synchronous Serial Interface, over high density connector
JTAG	JTAG Support for both ERC32 and FPGA

Note: All specifications are subject to change without notice.
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