AVIONICS_

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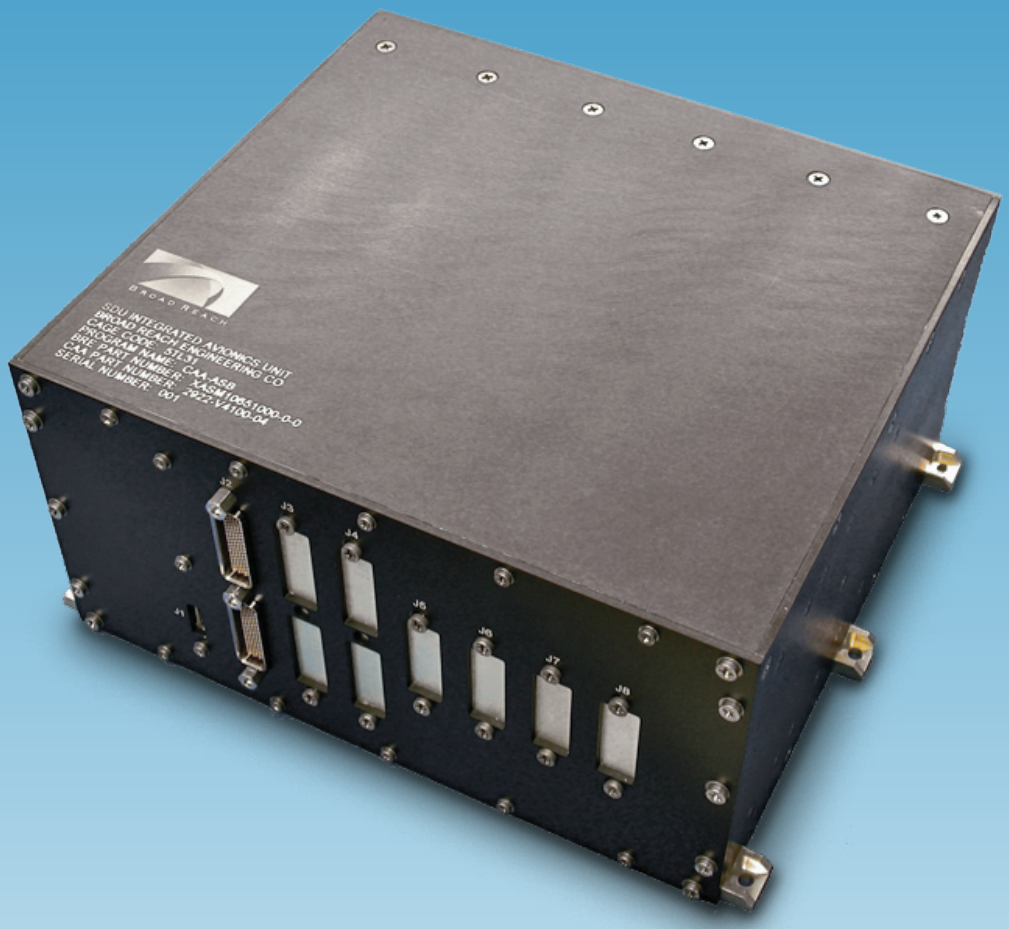
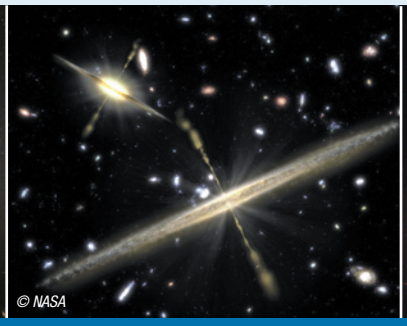


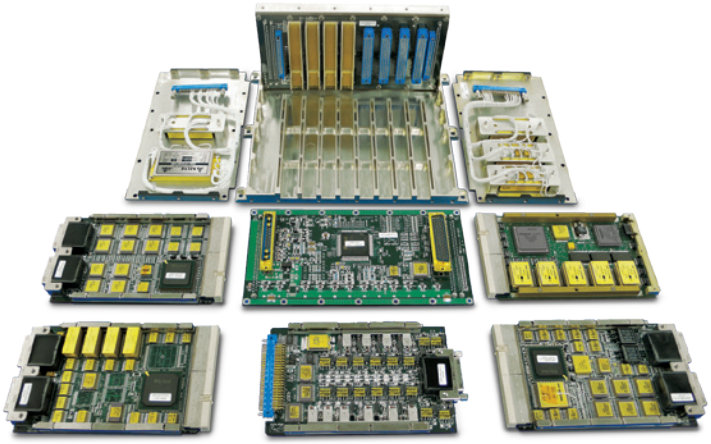
Integrated Avionics Unit

Moog Broad Reach designs 3U-based advanced avionics systems for spacecraft and payload applications. We offer solutions for C&DH, EPS, integrated C&DH & EPS, and payload applications. Design options include single string and redundant systems. All avionics leverage heritage systems with tailoring and/or new designs as needed to meet mission requirements. All Avionics designs adhere to the highest standards in space flight hardware design. Moog Broad Reach hardware uses all space qualified parts (unless special requirements dictate otherwise) and design methods tailored specifically to space flight environmental and functional requirements.



Integrated Avionics Unit

Key Capabilities
BRE440 Based Processor Board
CPU Board has 512 Mbytes DDRRAM, 512 kB EEPROM
Solid State Recorder Boards with 6 GBytes of Shared SDRAM
16 MBytes Flash Memory with TMR
3U Form Factor, 33/66 MHz, 32/64bit PCI Bus I/F
24 RS-422 Receiver – Transmitter I/Fs
2x 640 Mbps LVDS I/F
32 Digital, 8 High Voltage Discrete Inputs
24 Digital Discrete Outputs
Autonomous SOH Data Acquisition 64 Analog Channels
12-Bit A/D Converter
Uplink H/W Command Decode
Variable Downlink Rates, CCSDS, SGLS & Other Formats
EPS Supports 48x 5 Amp and 9x 25A 28V Switches
Total Current Supported max 30A
Battery Charge Management, Current Set Points, VT Option
Solar Array Interface for 8 Segments ~300 W
All Parts SEL Immune
SEU Mitigated Design
Al, Magnesium, or Composite Chassis
100 kRad Option
Typical Integrated Avionics Unit
<5 kg
<32 W @ 28V
750 W Solar Array Input
90 Power Switches
32-Ch RS-422
MIL-STD-1553 BC/RT
High-Speed LVDS I/O
12-Bit A/D
112 Analog Inputs
16 MB NVRAM
512 MB SDRAM
512 MB DDR RAM
>266 MIPS/266 MFLOPS CPU
CCSDS Cmd/Tlm Support
Typical C&DH Avionics Unit
<3 kg
<25 W @ 28 V
24-Ch RS-422
CCSDS or SGLS Support
MIL-STD-1553 BC & RT Support
12-Bit A/D
64 Analog Inputs
16 MB TMR FLASH
512 MB DDR RAM
>266 MIPS BRE440 SoC
30 kRad (100 kRad Option) - SEL Immune



Exploded view of a typical 1kW Integrated Avionics Unit including a BAE RAD750 processor board

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