

SmallSat Bus Supporting Cislunar Operations for Advanced DoD, NASA and Commercial Missions

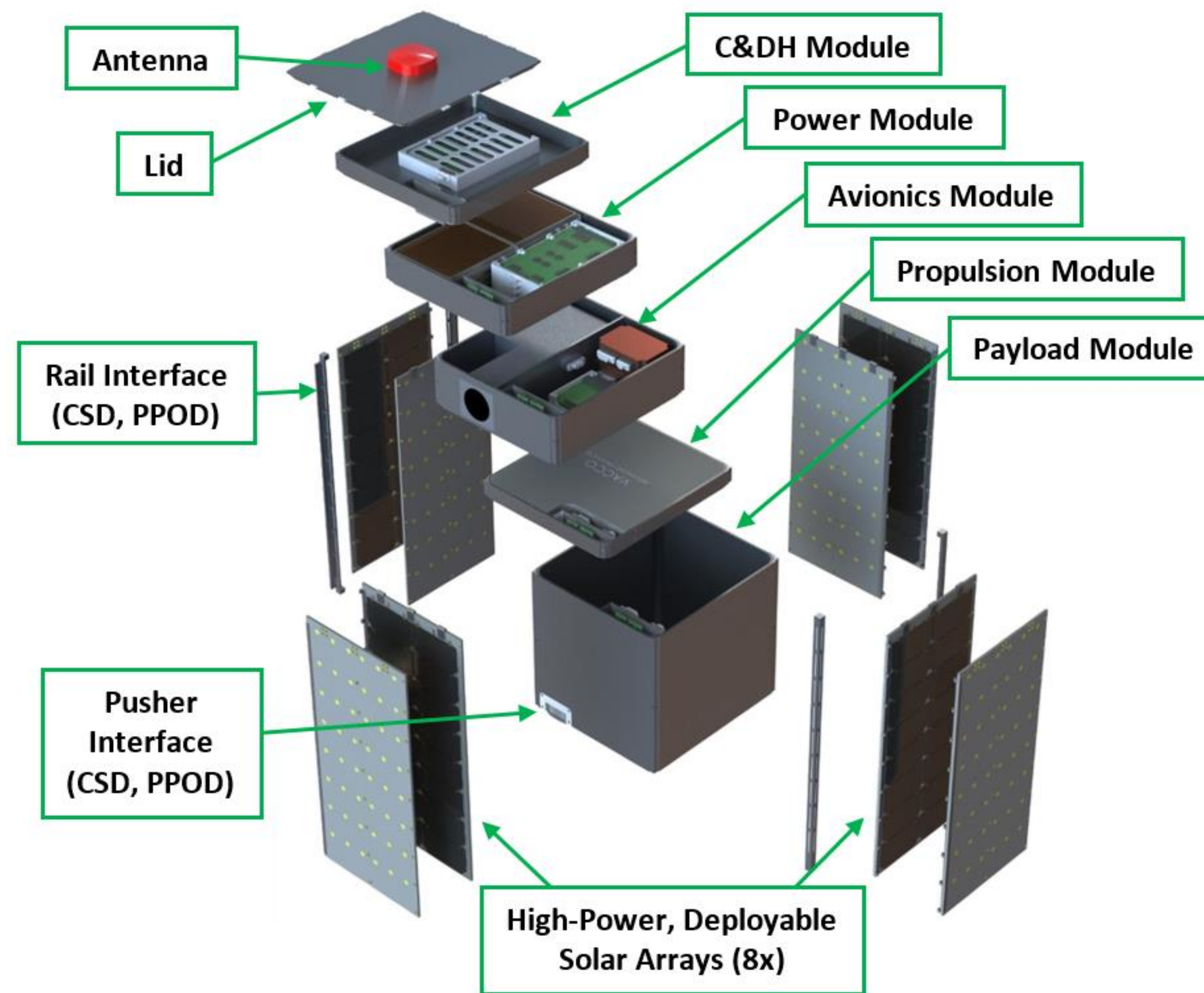
Chameleon Smart Bus 12U to ESPA

OPEN, MODULAR, SCALABLE, AND RECONFIGURABLE MICROSAT BUS

SIL has leveraged our experience and previously qualified Intelli-Avionics® aerospace hardware to fill a technology gap within the CubeSat class platform. The popular open-frame CubeSat design is difficult to space qualify and provides minimal benefits when compared to traditional satellite bus systems. The OMSR CubeSat bus addresses these issues by providing a standard ruggedized CubeSat solution designed to improve functionality, reliability, and efficiency, while simultaneously reducing development time and recurring cost.

The OMSR CubeSat bus is composed of order-independent, stackable subsystem modules. Modules can be independently designed, tested, and qualified to negate redesign costs. Individual modules of the OMSR bus can be custom designed, can be populated with COTS components, or can be obtained from SIL as fully populated COTS subsystems. Modules are vertically integrated and network via an internal power and data backplane system. The OMSR bus provides many protection features and enables utilization of the latest CubeSat technology making it the ideal platform for advanced, extended life missions.

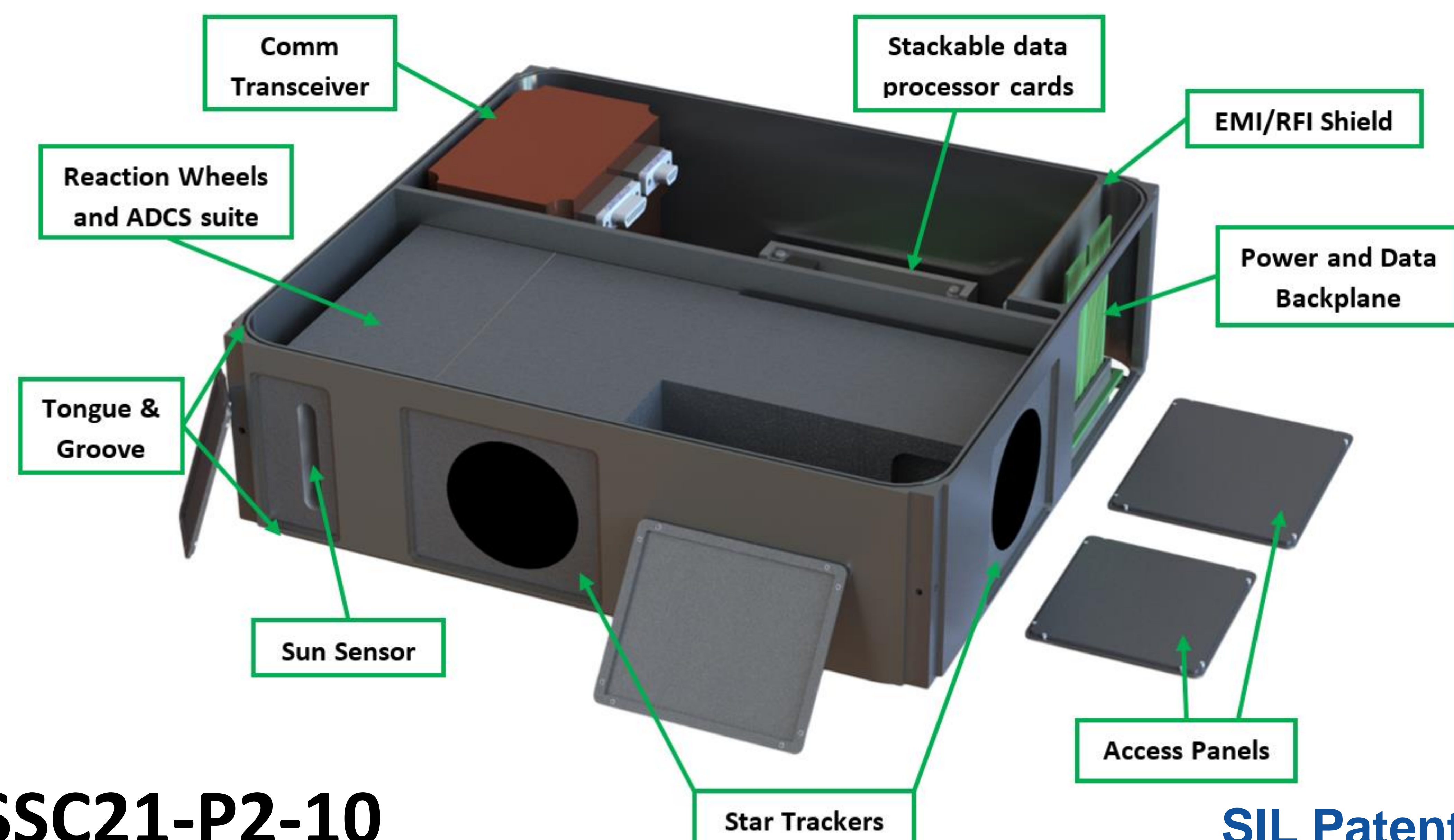
EXPLODED BUS VIEW



FEATURES

- Modular, scalable, and adaptable CubeSat bus enables longer life, advanced CubeSat missions
- Custom or COTS subsystems plug-n-play modules balance design flexibility with economical solutions
- EMI/RFI chambers within modules provide improved protection and increased reliability
- Scalable propulsion module (~50-200 m/s) supports distributed aperture systems, station keeping, attitude maneuvers, etc.
- Capable of high accuracy attitude determination and pointing (0.003°) with reaction-wheel/star tracker systems
- High capacity (200Wh/Kg) Li-Ion Polymer EPS with advanced BMS enables high power CubeSat operations
- Increased radiation shielding enables long duration missions
- Compatible with P-Pod and CSD deployment platforms
- Bus derived from SIL designed, qualified, and flight heritage Intelli-Avionics® technology and hardware
- Modularized plug-n-play design with individual test & qual capability reduces development time and recurring cost

INTERNAL MODULE VIEW



DISAGGREGATION ARCHITECTURE

