HARRIS APPSTAR™

RECONFIGURABLE PAYLOADS FOR YOUR MISSION NEEDS

AppSTAR™ helps satellite and payload owners reduce costs and improve the timeliness of their space-based missions through game-changing software-defined architecture designed to meet the needs of today's multimission payloads.

ADAPT TO NEW TASKS—NO ADDITIONAL SPACE INVESTMENT NEEDED

BENEFITS

Maximizes the value of smallsats and hosted payloads via a flexible, software-defined architecture

Enables response to changing missions with the ability to be reconfigured, even after deployment

Enables autonomous control and switching of mission applications in seconds

Supports user-developed mission apps with a software development environment and module library

Supports multiple simultaneous mission applications from a single payload

SUPPORTING DIVERSE PAYLOAD MISSIONS

AppSTAR™ leverages existing hardware designs and software module libraries to create a platform capable of supporting simultaneous diverse payload missions, including multiband communications, earth observation, and SIGINT.

With AppSTAR™, operators can quickly add new capabilities and adjust to changing missions—even after deployment. Based on open industry standards, AppSTAR™ easily supports third-party programmability. Ground mission planners can reconfigure and change the functionality of their payload during a mission simply by uploading or modifying software, similar to the way mobile phone users add applications to their device.

AppSTAR™ also provides a cognitive processing engine that controls and changes the mission applications based on customer constraints, reducing mission operation support.

By utilizing AppSTAR™'s proven designs and associated documentation, owners can keep pace with marketplace changes, support multiple customer missions in a single physical payload, and accelerate the pace of space business opportunities.

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

Harris develops innovative end-to-end engineering and planning solutions for commercial and government space missions that reduce time, cost, and risk.

Harris is the world's largest provider of hosted payloads.

Harris unfurlable and fixed mesh reflector space antennas are defining industry standards for high throughput communications.

Harris provides high-end optics, structures, and high-resolution imaging payloads that have provided some of the most trusted eyes from space.

Harris has the expertise and knowledge to take your payload into space, deliver your data back to earth, and create products that bring high value to you and your stakeholders.

About Harris Corporation
Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world. Learn more at harris.com.

RESPONSIVE SPACE SOLUTIONS

AppSTAR™ can be deployed on small, low-cost bus platforms for an operationally responsive space solution, or it can be hosted on commercial satellites with extra capacity to support secondary missions.

A PROVEN SOLUTION

AppSTAR™ is the technology base for the over 220 hosted payloads on the Iridium NEXT constellation of Earth-orbiting satellites. This includes 81 ADS-B receiver payloads that provide Aireon's real-time air traffic surveillance system that will optimize air traffic management around the world.

AppSTAR™ Features

- Space Telecommunications Radio System (STRS) compatible software operating environment that promotes waveform and application portability and reuse

- Third-party programmability that provides flexibility for customers to develop and maintain platform mission applications with a mission developers kit

- Third-party development resources that include a mission developers kit, remote developer system, and multimission test bed

- A remote developer system that provides third-party developers with secure network access to the fully instrumented AppSTAR™ multimission test bed

- Standard processing engines, such as FPGAs, DSPs, and power PC CPUs, that enable use of standard development tools and libraries

- Compact PCI and VPX standards-based hardware that support reuse

- Configurable portfolio of space-proven digital, RF, and power supply reference designs that optimize responsiveness
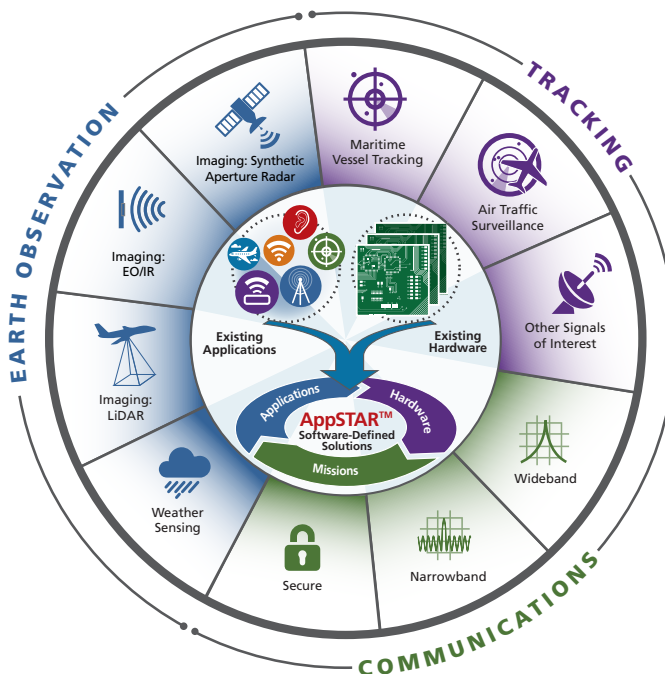
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