

***Communications,
Navigation and
Identification (CNI)
Avionics for the
F-35 Lightning II***

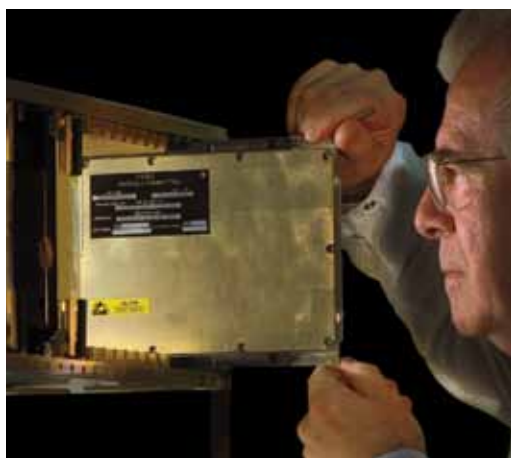
*New dimensions for the warfighter
in digital battlespace*

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

The F-35 Lightning II (Joint Strike Fighter) is a supersonic, multirole, fifth-generation stealth fighter equipped with sophisticated avionics to support a wide array of combat missions for dominating the tactical environment.

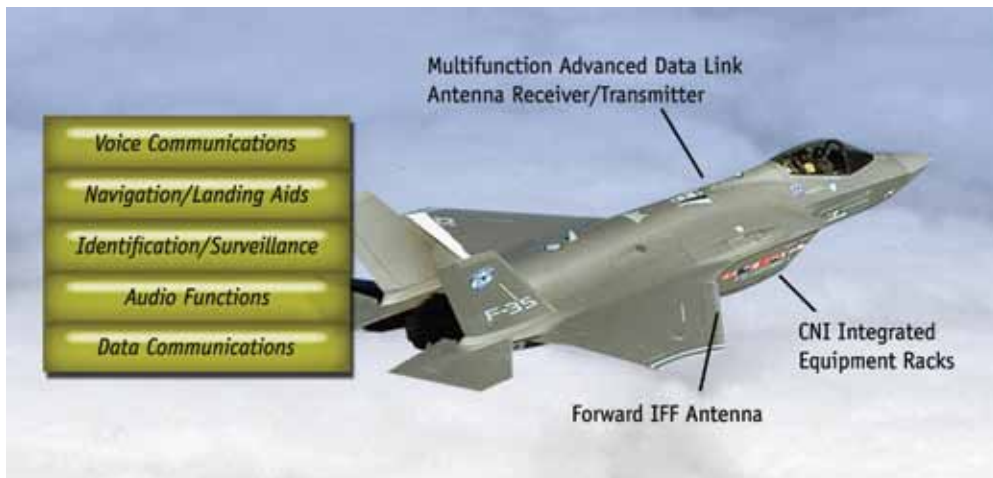
The Communications, Navigation and Identification (CNI) system, designed and developed exclusively by Northrop Grumman for the Lockheed Martin F-35, is the most advanced integrated avionics system ever engineered.



F-35 CNI system.

Software-Defined Radio Technology

CNI has evolved through a 30-year collaboration between Northrop Grumman and the government — an unprecedented course of development of software-defined radio (SDR) technology. SDR uses reconfigurable RF hardware and computer processors to run software that produces a desired waveform. By sharing common power, RF hardware and computer processors, the avionics system becomes “integrated” CNI. SDR arms the F-35 pilot with multiple-mission capabilities engineered for



F-35 CNI/antenna locations.

seamless low-latency transition from one mission phase to the next. The current configuration consists of 10 channels with more than 40 waveforms and 30 conformal antennas, supports multilevel security and is JTRS-compatible.

Combat-Ready on Command

Northrop Grumman’s fully integrated, simultaneous CNI avionics suite includes such advanced capabilities as Ultra High Frequency (UHF)/Very High Frequency (VHF) transmit and receive, Identification Friend-or-Foe (IFF) transponder, Link 16, Joint Precision and Approach Landing System (JPALS), wireless communications and the cutting-edge Multifunction Advanced Data Link (MADL) for low-observable platforms.

Are You Ready for F-35?

As the Lightning II comes on line as the premier fifth-generation fighter, proliferation of the platform will present interoperability challenges to existing forces worldwide. The integrated SDR-based CNI avionics system can accommodate reusable technology. Software-driven with a slice-based, modular architecture, CNI has the potential to replace one or multiple legacy systems

or functions with the latest advanced capabilities for interoperability.

Key Functions

- AM, VHF, UHF AM
 - UHF FM, HAVEQUICK
 - SINGARS, VMF (220D)
- GUARD, Survival Radio
- IFF Interrogate/Transponder
- TADIL-J, JVMF/VMF (K-SERIES)
- RAD ALT, ILS, TACAN
- ICLS, JPALS
- LINK 16, MADL
- Voice Messaging, Voice Recognition
- Maintenance Intercom, Voice Synthesis

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