

Avionics Architecture Design Engineer Job Description

SUMMARY

Avionics Architecture Design Engineers are responsible for the design and development, installation, repair, maintenance and operation of a wide variety of aircraft avionics, wiring harnesses, test instrumentation, electronic equipment and systems.

ESSENTIAL FUNCTIONS:

Operate computer-aided drafting and design applications to design avionics system modifications.

Lay out installation of aircraft assemblies and systems, following documentation such as blueprints, manuals, and wiring diagrams.

Trouble-shoot malfunctions, diagnose problems and perform maintenance on aircraft avionics, test instrumentation, electronic equipment and systems and other electronic equipment utilized in research, diagnostic, and communications purposes.

Make recommendations to replace equipment if expected cost to repair exceeds possible replacement cost. Minor installation decisions may be made if incumbent determines more efficient service could be provided. Maintains required job worksheets detailing nature of assignment, parts utilized, time expended and type of work performed. Collect data for reports as directed.

Service, repair, calibrate, regulate, fine-tune, or test aircraft avionic, electrical and data acquisition systems

Assemble prototypes or models of circuits, instruments, and systems for use in testing.

Assemble components such as switches, electrical controls, and junction boxes, using hand tools or soldering irons.

Fabricate parts and test aids as required.

Set up and operate ground support and test equipment to perform functional flight tests of electrical and electronic systems.

Coordinate work with that of engineers, technicians, and other aircraft maintenance personnel

EXPERIENCE

MSEE with 7 to 10 years relevant and recent experience in avionics systems design, integration and testing for civil aircraft.

Knowledge of FAA certification requirements for avionic systems (SW/HW)

Knowledge of avionics databus standards, applications, integration and testing.

Knowledge of hardware/software development qualification standards (RTCA DO-178, DO-256)

Knowledge of application of ARP 4756 and ARP 4761