

# A+ Services

Full design and manufacturing services for module plus carrier or full custom from one source

## Project Management

ADLINK prepares the development schedule  
Schedules resources  
Provides Risk Management

## Requirements & final specification

Co-develop detailed specifications and requirements  
Optimize solutions based on knowledge and experience

## Component and supplier selection

Selection of components with longevity support  
Supplier management

## Certification

Validation tests  
Plan and organize certification tests



## Features

- From concept to production in less than 6 months
- Technology Services and Compliance Tests, e.g. design verification and validation, schematic review etc.
- Product Life Cycle Management Services
- Extensive Software support
- Signal Integrity and Power Integrity Simulations



## Specifications

### Overview

Services Carrier Board Design for SMARC, QSeven, COM Express and ETX  
Full-Custom Designs  
Software and System integration

### Scope of Services

Technology Services & Compliance Design verification & validation  
Usage of proven building blocks  
Schematic Design and Review  
PCB Layout Design and Review  
Power Integrity Simulation and Verification  
Signal Integrity Simulation and Verification  
Compliance Tests  
Mechanical 3D Design for System Integration  
Thermal Analysis

Life cycle management EOL & Obsolescence  
Re-design  
Last-Time-Buy (LTB)

Manufacturing Services Printed Circuit Board Assembly  
System & Software integration  
Customer specific logistics

### Compliance Tests

EMC Compliance Test EMI Testing/Debug  
EMS Testing/Debug  
Regulatory Consulting

Environmental Compliance Test Temperature Testing (IEC-60068-2-1 and IEC-60068-2-2)  
Humidity Testing (5-90% RH operating, non-condensing, 5-95% RH storage and operating with conformal coating)  
Shock and Vibration (IEC 60068-2-64 and IEC-60068-2-27, MIL-STD-202F, Method 213B, Table 213-1, Condition A and Method 214A, Table 214-1, Condition D)  
Packing & Transportation Testing  
Highly Accelerated Life Test (HALT) (Thermal Stress, Vibration Stress, Thermal Shock and Combined Test)

### Simulations

Signal Integrity Crosstalk  
Memory Topology  
Serpentine Trace  
Cross-moat  
Eye-Diagram

Timing Simulation Common Clock  
Source Synchronicity

Thermal Simulation Thermal Simulation by FloTherm

Power Integrity Simulation Power DC Analysis  
IR drop (voltage) and current distribution

Mechanical Simulation 3D models  
PCBA Stress & Strain Analysis

## Product Life Cycle Management Services

Component Management Second Source  
Critical Part  
EOL  
Cost Reduction

Revision Control Agile PLM  
BOM Lock  
ECN/PCN Notification

After Services DOA  
RMA  
Extended Warranty

Sustaining Engineering Redesign Service  
Root Cause Analysis

## Software Support

Embedded Operating Systems VxWorks 6.x/7.x  
QNX 6.x  
Windows Embedded Compact  
Windows Embedded Standard  
Linux (Yocto, Ubuntu, Fedora, Red Hat Enterprise Linux, CentOS, etc.)

Customization of BSPs Application and driver development and porting  
Integration of third party software stacks  
Development of custom tools for testing, validation and benchmarking

## Bios

Firmware AMI Bios UEFI and Legacy  
uBoot Loader

## A+ Services Software Tools

High Speed Signal Integrity Simulation Keysight ADS 2015.01  
Power Integrity / DC-DROP Mentor HyperLynx 8.1, Cadence Allegro Sigrity PowerDC 16.6  
Thermal Simulation Mentor FloTherm 10.1  
Mechanical Simulation SolidWorks 2015

## Customer Source Files

High Speed Signal Integrity Simulation Gerber data, ODB++ Additional necessary information: PCB layer stack, IBIS models  
Power Integrity / DC-DROP Spectra DSN Files, Accel EDA Files, Cadence Allegro Files, Mentor Board Station Files, Visula Files, Zuken CR-3000, CR-5000 Files, ODB Gateway Files  
Thermal Simulation SolidWorks, DWG, IDF 3.0  
Mechanical Simulation STEP, IGES, DWG, IDF 3.0

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