SDL is headquartered in an 11-building, 220,000 ft² research complex near the USU campus in Logan, Utah. As part of this complex, SDL houses full service fabrication facilities, including a comprehensive machine shop and laboratories for full optical, mechanical, and electrical system design and assembly. The research complex also includes offices, conference space, computing facilities, ISO 5 clean rooms with full contamination control services, high-bay integration areas, environmental test facilities, calibration and characterization facilities, and a mission control center.

Because SDL’s facilities include on-site precision fabrication capabilities and equipment, our customers receive the following benefits:

- Shorter turn-around time
- Lower cost
- Increased collaboration between engineers, designers, and fabrication and AI&T specialists resulting in higher risk mitigation

MECHANICAL FABRICATION
SDL’s in house machine shop offers 6,000 ft² of modern fabrication equipment. All hardware not procured from selected vendors is fabricated on site.

FEATURES:
- Computer numeric control (CNC) machine capability
- Computer-aided precision machining (CAM)
- State-of-the-art 3D milling machines
- 5th axis rotary table
- Electrical discharge machining (EDM)
- Vast in-house materials inventory to meet immediate requests
- Two coordinate measuring machines (CMM) for precision measurements in three dimensions of mechanical and optical assemblies (one housed in a ISO 5 [class 100] clean room)
3D PRINTING

3D printing is an additive manufacturing process in which layers of plastic resin are deposited on a precision-driven tray. SDL uses 3D printing for conceptualization, prototyping, and end-item products.

FEATURES:

- Lower cost and no material waste; an economical alternative to subtractive manufacturing for expensive or complex parts
- Faster than subtractive processing
  - Less setup time
  - Parts can be constructed unattended
- Creates parts in ABS plastic
- Resolution (=finish) and density (=strength) can be optimized for each application
- Multiple material colors available
- ABS parts can be sanded and painted to enhance presentation quality
- Creates parts that fit within a 10x10x12 cube (parts larger than this size can be divided into portions that fit within the cube and then bonded together)
- Expands design possibilities; access for cutting tools is no longer a limitation