RAPID PROTOTYPING
Engineering
• Computer Aided Design
  • Solid Modeling
    • Molds
    • Harnesses
• 3D Printing
• Model Shop
• Mock-ups
  • Digital
  • Physical
DEDICATED PROTOTYPE TEAM & FACILITIES

Technicians:
• Experience: 30 years (Avg.)
• IPC-620, Certified
• J-STD-001, Certified

Quality Assurance:
• IPC-620, Certified
• IPC-610, Certified
• J-STD-001, Certified

Materials:
• Qualified Vendor Base

Resources:
• Dedicated Area (1200+ Sq. Ft)

Information Security:
• NIST/CUI Protocols
• ITAR – EAR Registered

Configuration Management:
• Oracle-Agile ERP System
• Document Control
• History Logging-Including Redlines
STATE-OF-THE-ART TECHNOLOGY - MACHINERY

Automated Cut, Strip, and Crimp
- Analysis
- Validation

Machine Braiding
- 16, 32, 64 Bobbin
- Vertical
- Horizontal

Laser Wire Stripping

Resistance Soldering
- 36 AWG - 777 MCM

Ultrasonic Welding
- Shield Termination
- Splicing
- Wire Termination

Additive Manufacturing
- Prototype Molds
- AS9102 Inspection Fixtures
- Component Production
3D Printing - Additive Manufacturing

- ABS-M30 (6 available colors)
- ABS-M30i (medical and pharmaceutical rated)
- ABS-ESD7 (ESD Rated ABS)
- ASA – UV Stabilized ABS (10 available colors)
- Antero 800NA (PEKK)
- Antero 840CN-ESD (Material Beta Test Site)
- FDM Nylon 12, 12CF-Carbon Fiber (black)
- Polycarbonate (White)
- ULTEM 1010
- ULTEM 9085
- Build Envelope: 14” x 12” x 12”. (2016 cu/in)
- Accuracy: ±.005 in. overall , or ±.0015 in/in
- Layer Thickness options: .005”, .007”, .010”, .013”
- Vero (Acrylic Like) (6 colors)
- Polypropylene-like
- Tango (Rubber-like ) (3-durometers)
- High- Temp RGD525 (175°F)
- Hardness to Shore D-86

Design and Reverse Engineering Software

- SolidWorks Premium
- AutoCAD LT2019
- Artec Studio
- Artec EVA and Spider 3D Scanners
- Geomagic for SolidWorks
Crimp Analysis (sectional)
Mechanical Strength Pull Testing
Environmental Testing
Particle Contamination Testing
Thermal Cycle Testing
Mechanical Cycle/Testing
3D Modeling Mechanical Failure Analysis
Over Molding and Encapsulation:
- Transfer Presses
- EFD Units
- Autoclave
- Quick Turn Molds
  - 3-D Printed, High-Temp Polymers
  - Steel
  - Aluminum
STATE-OF-THE-ART TECHNOLOGY - UNIQUE PROCESSES

Machine Braiding:
- 6, 32, 64 Bobbin
- Vertical
- Horizontal

Laser Wire Stripping

Resistance Soldering

Ultrasonic Welding/Wire Termination
EXPERIENCE HIGHLIGHTS

MRAP Development Project
• 26,000 MRAP Assemblies Shipped
• 28,000 Total Assemblies Shipped during a 9 Month Period 5,300 Assemblies Shipped in 1 Month
• 39 Top Level Assembly P/N’s
• 1,200 Engineering Hours In First Month
• Incorporated Red Lines in Configuration,
• Changes w/o Delivery Interruption
• Processed 332 ECO’s In 9 Months

MISSILE Development Projects
• AGM-114- Hellfire
• BRIMSTONE
• RIM-161 – Standard Missile 3 (SM-3)
• ATCM(s) – Missile System
• AGM-65 – Maverick
• AGM-176 – Griffin Missile System
• AIM-9X/Sidewinder
• AI3 - Accelerated Improved Interceptor Initiative
• AIM-120 – AMRAAM
• M220-TOW – Anti-Tank Guided Missile System FGM-148
• Javelin – Anti-Tank Missile
• JAGM – Joint Air-to-Ground Missile
• JCM – Joint Common Missile
• NLOS -Non-Line of Sight Missile System PAVEWAY – Laser Guided Missile
• TRIDENT – Submarine Launched Ballistic Missile

TORPEDO Development Projects
• Mk-48 ADCAP Torpedo
• Mk-46 Lightweight Torpedo
• Mk-50 Lightweight Torpedo
• Mk-54 Lightweight Torpedo
• Trident II Missile System