

# MILITARY ELECTRONIC WARFARE MANUFACTURING

Elettronica GmbH provides **MANUFACTURING SERVICES** based on extensive expertise gained in more than 40 years of active presence in the defense industry. Our manufacturing includes the ESD protected production area and the small and medium series production. Our manufacturing guidelines are certified ISO 9001 / EN9100.

The process follows all the international guidelines:

- IPC-A 610 Acceptance criteria for electronic assemblies
- IPC/WHMA-A 620 Requirements and Acceptance for Cable and Wire Harness Assemblies
- IPC-7711/7721 Rework, Modification and Repair of Electronic Assemblies
- IPC-J-STD-001 Requirements for soldered electrical and electronic assemblies



The production includes more than 50 different items per year, with batches of over 3.000 elements and with a total of more than 250.000 individual components installed. The products have a complexity of 1 to 6 subassemblies and can contain up to 1,000 individual components. Our experience ranges from designing of the product to its final delivery.

## ELECTRICAL MECHANICAL ASSEMBLY

EMA modules (printed circuit boards and cable harnesses) are produced according to our own production methods and are tested according to the most modern measuring tools.

The EMA process includes:

- Cable Design
- Production of Cable Harnesses
- Wetec Cable Test System
- Module Assembly
- Mechanical Assembly
- Antenna Assembly
- Computer Test Bench
- Vibration Shaker System
- Climatic Chamber System
- Antenna Measuring Chamber



## IN-HOUSE SOLUTION BASED ON CUSTOMERS' NEEDS

### PRINTED CIRCUIT BOARDS ASSEMBLY

Elettronica provides assembly of printed circuit boards with following simulation of the functions in the designated areas, according to the international guidelines (IPC). The following manufacturing technologies are part of the PCBA process:

- PCB Design (Onelayer, Multilayer, Flex)
- Soldering Paste Printer
- Pick & Place
- Reflow Soldering Machine
- Automatic Optical Inspection
- Selective Soldering Machine
- Manual Soldering under Microscope
- Hybrid Rework System
- X-Ray Test Equipment
- Board Test System and component programming
- Cleaning and Conformal Coating

### REPAIR & RETROFIT

Post-production assistance is an essential factor to handle and promptly fix fault analyses. To perform the repair and retrofit process Elettronica applies the following checks to each step of the production process:

- Incoming goods inspection / visual inspection
- Mechanical and electronic fault analysis
- Support from EMA and PCBA sub-areas during the repair or retrofit process
- Checking of the functionality

Further on, to avoid obsolescence, a repair action always checks if an upgrade can be performed to enhance the service for the client.



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