Assembly Technology

- Surface Mount Technology (SMT)
- Flip chip/CSP capability
- Die attach technologies
- Wire bonding
- Die protection, encapsulation
The MST Group is a leading specialist in the development and manufacture of electronic modules for active implants but also for other applications requiring exceptional performance and the highest level of reliability.

In addition to interconnect and semiconductor packaging technologies, the group covers all major board assembly technologies.

Micro Systems Engineering GmbH, an MST company located in Berg, Germany, is the leading European manufacturer of complex LTCC substrates and offers a wide variety of advanced assembly and semiconductor packaging processes on both ceramic and organic substrates.

Micro Systems Engineering, Inc, an MST company located in Lake Oswego, USA, offers services in the design of complete electronic modules combined with state-of-the-art SMD assembly and test, fully MES controlled.

**CAPABILITIES AND SERVICES**

**SMT (Surface Mount Technology)**
- Automated SMD assembly lines with full MES control
- On any board material
- Various cleaning procedures available
- Flip chip/CSP (Chip Scale Package) capability

**SURFACE MOUNT TECHNOLOGY (SMT)**
- Gluing by epoxy printing, epoxy dispensing, pre-forms and stamping
- Soldering by solder printing, solder dispensing and pre-forms
- High precision die bonder can pick from wafers, waffle packs or gel-packs

**DIE ATTACH TECHNOLOGIES**
- Ultrasonic bonding for Al thin wires
- Thermosonic wedge/wedge bonding for Au thin and Au cold wires
- Thermosonic ball/wedge bonding for Au thin wires

**WIRE BONDING**
- Glop top (temperature or UV curing)
- Underfill
- Junction coating
- Transfer molding
- Soldering or gluing for covers and lids

**TEST SERVICES**
In addition to a fully automated test handling system, with MES integration, for all electrical tests a wide range of in-process and final inspection procedures, stress tests and other means of analysis is available to demonstrate the performance of the electronic modules.

**QUALITY**
The quality system of the MST Group derives from the stringent requirements of life-sustaining implants and assures 100% traceability of processes and materials.

**MICRO SYSTEMS TECHNOLOGIES**
Micro Systems Technologies Group (MST) consists of four technology companies that provide innovative products and services for medical devices and other high-reliability/high-performance industries. The offering includes HDI/microvia PCBs, ceramic substrates, assembly and semiconductor packaging processes, electronic module design and manufacturing, as well as batteries and battery packs for medical implants.