

# Streamlined for customer success

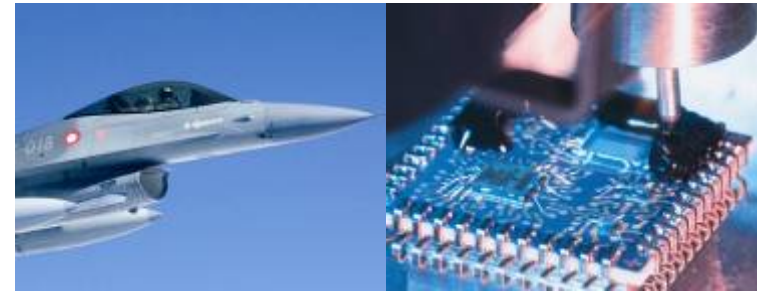
A presentation of Kitron

Our solutions deliver success!



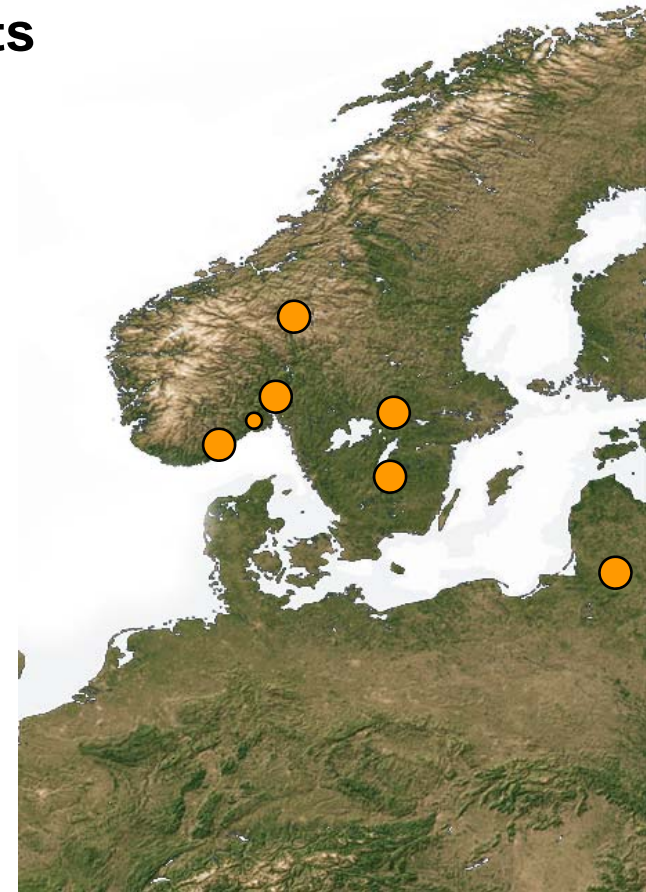
# Improving customers' competitive edge

- **A leading Scandinavian supplier of electronic manufacturing services – providing the entire value chain**
- **Serving professional customers mainly with high complexity and low volume manufacturing**
- **Focusing on data/telecom, defence/marine, medical equipment and Industry segments**

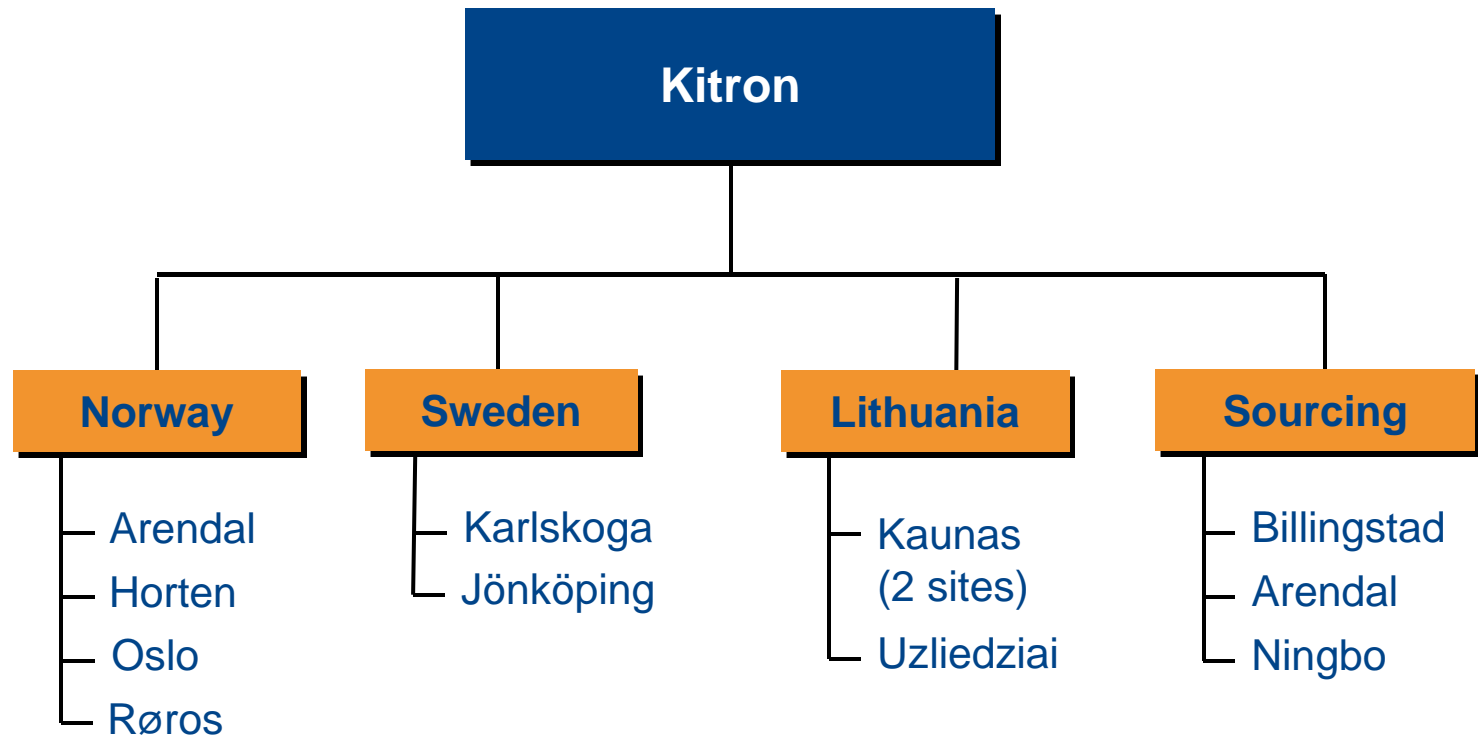


# Kitron group

- **Operations in Norway, Lithuania, Sweden, and China**
- **Manufacturing of high complexity products**
- **Approx. 1 400 employees**
  - >100 development engineers
- **Revenue 2007: EUR 243 million**
- **Listed on Oslo Stock Exchange, 3 100 shareholders**
- **Main shareholders:**
  - Hermis Capital (LT ~ 40%)
  - Kongsberg Group (NO ~ 19%)
  - Amber Trust II (Int'l ~ 14%)

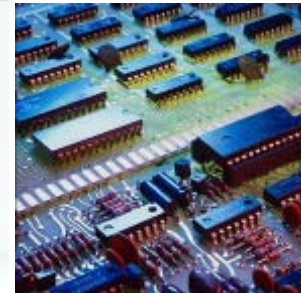


# Group structure



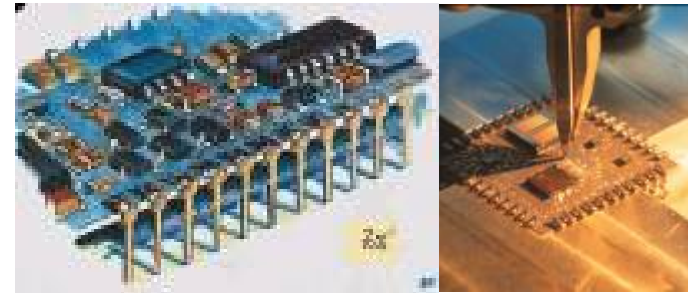
# Financials 2007

- Operating income EUR 243 million (up 14.4% from 2006)
- EBITDA EUR 14.7 million
- EBIT EUR 10.6 million
- Equity EUR 31 million (equity ratio 25%)
- Market CAP EUR 77 million
- Enterprise value EUR 109.9 million



# Historical milestones

- **1962/66: Established in Arendal, Norway (Electric Bureau / Kilsund Electronics)**
- **1997: Listed on Oslo Stock Exchange**
- **Additional expertise acquired through M&A and restructuring of:**
  - SAAB and Bofors in Sweden
  - Ericsson, EB, Nera, Alcatel and Kongsberg in Norway
- **1999: First site in Sweden (Jönköping)**
- **2001: First site in Lithuania (Kaunas)**
- **2007: Sourcing organisation in China (Ningbo)**



# Vision and values

## Vision

- **Our solutions deliver success!**

**We contribute to sustain and strengthen customers competitiveness and market positions**

## Values

- **Reliability**
- **Creativity**
- **Positivity**
- **Involvement**



# Strategy

- **Organic growth**

- Increase market share for existing and new customers
- Continue to focus on improved profitability and capital employed
- Add low-cost manufacturing capacity

- **Acquired growth**

- Take a proactive and leading role in the Nordic/Baltic EMS/ME markets by engaging in M&A

- **Build organisational capacity for growth and adaptation**

- Kitron's staff and manufacturing facilities supported by sound processes and information systems
- Leverage on the company's vision and core values

# Human resources

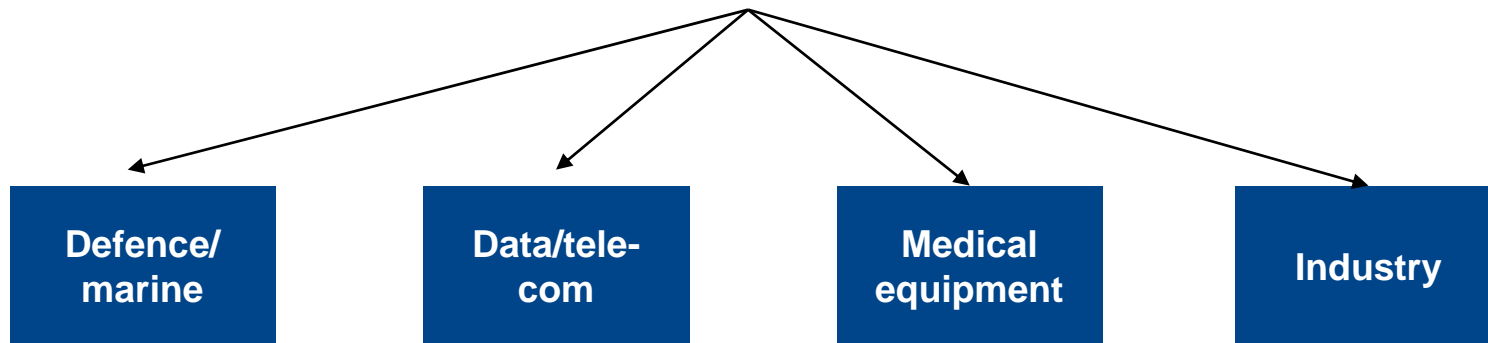
- **Kitron's most important competitive edge and strength is the competence of our employees.**
- **It is part of our strategy to maintain and develop a high level of competence through professional and active development programs and recruitment.**
- **Our corporate HR programs and activities is supporting this ambition and is based on our common values and business strategy.**

# Covering the entire value chain

## KITRONS VALUE ADDED TO THE PRODUCT



**KITRON develops, industrialises and manufactures electronic products for the professional corporate market**



# Product development

- **Development capabilities**
  - Electronics, mechanics, software and mechatronics
  - Special competences & component database, CIS
  - Complete development project or add-in-services
- **Secure product life cycle profitability**
  - Material life cycle, manufacturing and quality
  - Re engineering
- **Short time to market (TTM)**
  - Product industrialisation included in the development phase



# New product introduction - NPI

**Kitron NPI specialises in product industrialisation and prototype assembly**

**Our business concept is to contribute to create value to our customers by:**

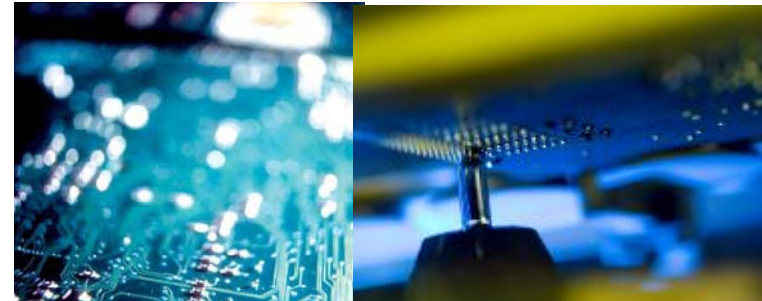
- **Shorten Product “Time to Market”**
  - Quality assurance of specifications, processes and equipment
  - Reduce possible errors at start of manufacturing
  - Prototype investigations
  - Dedicated prototype SMT lines
  
- **Reduce life-time cost of the product**
  - Choose components with good availability and best price/right cost
  - Design for manufacturing and test studies
  - Secure optimal automatization for manufacturing and test
  
- **Simplify communication**
  - Connect multidisciplinary competence between development, suppliers and manufacturing

# Sourcing

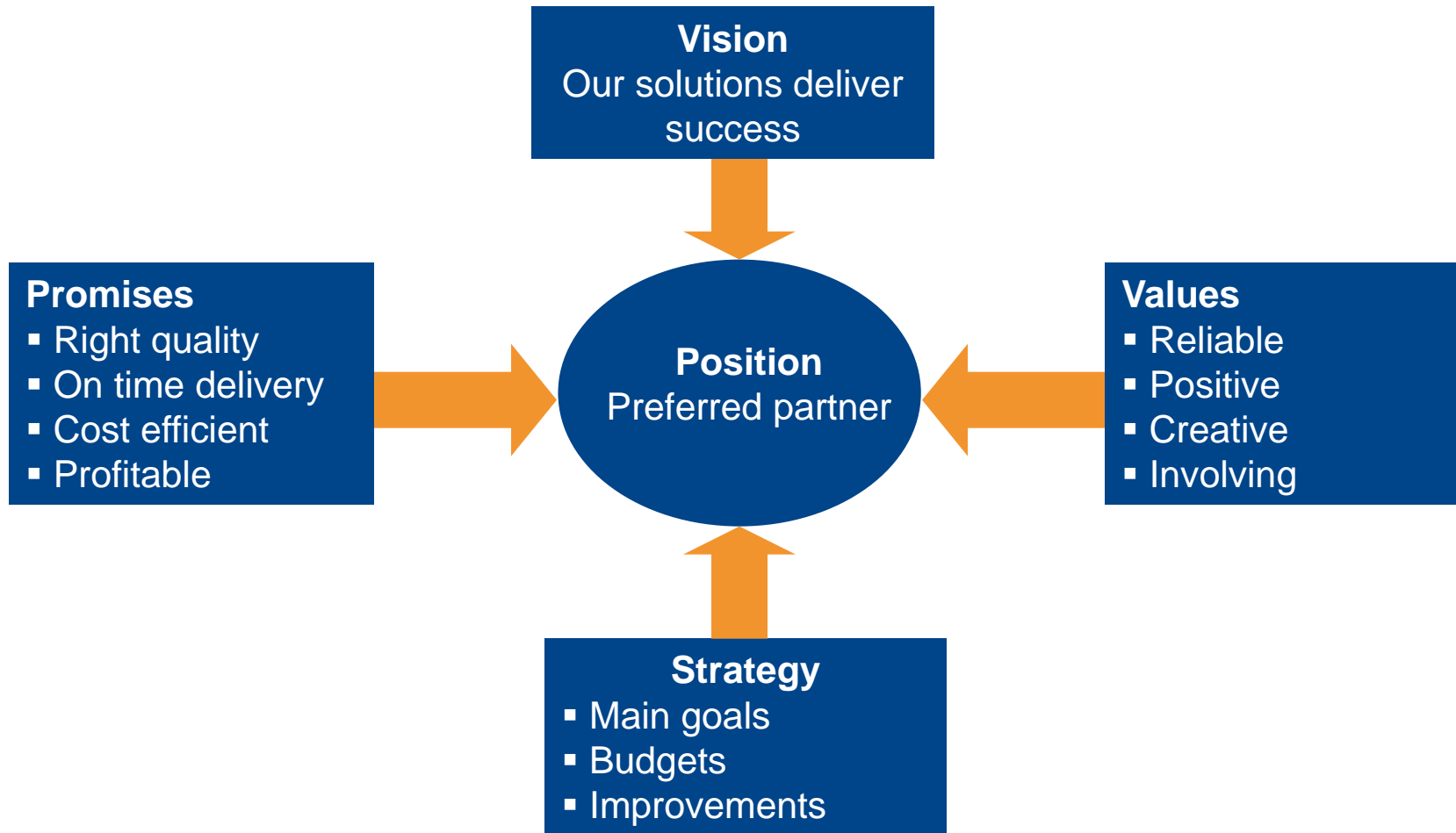
- **Global sourcing**  
We continuously monitor and take advantage of the opportunities that the global supplier market offers
- **Cost reduction programs**  
Cost improvements will secure our customers supply chain and competitiveness
- **Preferred vendor list**  
Focus on consolidation and benefit in matters of cost, quality and attention from the key suppliers

## Key formula

Customer + R&D +  
Kitron Sourcing =  
Success !

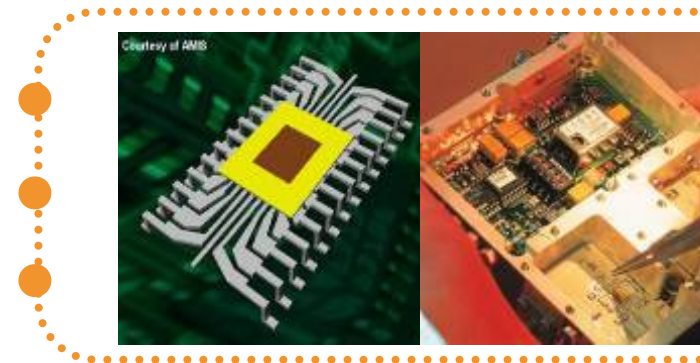


# Kitron - Strategic position



# Competitive edge

- **Quality**
  - Right quality in line with specifications
- **Delivery**
  - Meet OTD expectations
- **Competence and innovation**
  - Expertise in every process
- **Price**
  - The expected quality to a competitive price



# International customer base

## Defence/ Marine



**SAAB**



**THALES**



## Data/Telecom



SAAB TRANSPONDERTECH



**RADIO COMPONENTS**  
SWEDEN AB

## Medical equipment



GE Healthcare



Maquet

**SECTRA**

## Industry



**VOLVO**



**DANAHER**  
MOTION

**BOMBARDIER**



**MYDATA**

Our solutions deliver success!



# Manufacturing facilities





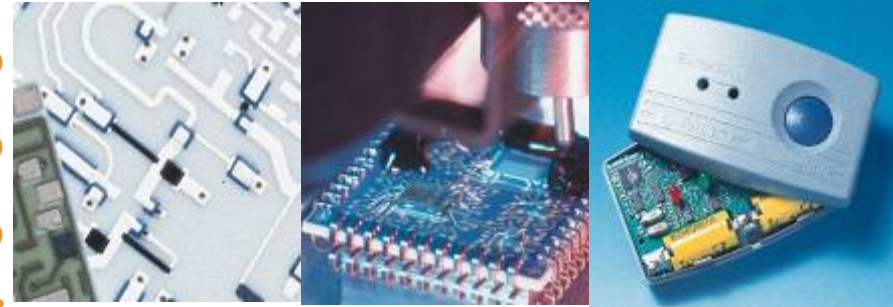
# The Arendal facility

- **Manufacturing area 18 000 sq.m**
- **650 employees**
- **Quality & environmental standards**
  - General, ISO 9001:2000
  - Environmental, ISO 14001:2004
  - Medical, ISO13485:2003, QSR (FDA)
  - Defence, AQAP 2120
- **Key competencies:**  
Electronics, test, box-build products, HLA, system integration, NPI, test developm.
- **Key technologies:**  
SMT, Through Hole Assembly, AOI, Xray, washing, coating, wave and selective soldering, environment and vibration testing



# The Røros facility

- **Manufacturing area 2 200 sq.m**
- **90 employees**
- **Thick film hybrids and microelectronic modules**
- **ISO 9001, TS 16949, ISO 14001**
- **Manufacturing of thickfilm substrates based on**
  - Ceramic or steel plate materials
  - Gold/silver/platinum/copper conductor materials
  - Prototyping, small batch and high volume



# The Jönköping facility

- **Manufacturing area 5 000 sq.m.**
- **95 employees**
- **NPI & industrialisation capability**
- **Quality & environmental standards**
  - ISO 9001:2000
  - ISO 14001
- **Special competences & resources**
  - Clean room
  - Microelectronics
  - Environmental test centre
  - Component engineering





# The Karlskoga facility

- **Manufacturing area 7 500 m<sup>2</sup>**
- **145 employees**
- **Quality & environmental standards**
  - ISO 9001:2000
  - ISO 13485:2003
  - QSR (21 CFR part 820)
- **Special competences**
  - Leading quality analysis laboratory
  - Optronics
  - Medical equipment and defence



# The Kaunas facilities

- **Manufacturing area 8 000 m2 (3 sites)**
- **380 employees**
- **Focus areas**
  - Industry, medical equipment, defence/marine, data/telecom
- **Quality & environmental standards**
  - ISO 9001:2000
  - ISO 13485:2003
  - ISO 14001:2004
- **Compliance**
  - QSR (21CFR Part 820) / CGMP
  - FDA listed company
- **Awards**
  - Gazelle of Lithuania 2004 & 2005
  - National Quality Prize of Lithuania 2005
  - The winner of the 3rd International Quality Tournament for CEE (EFQM) 2007



# Appendix

# Special expertise

	FACILITY
▪ AQAP – Project management under military conditions	Arendal
▪ Calibration	Jönköping
▪ Component technology & database	Jönköping
▪ Electronics design for harsh environments	Oslo
▪ Embedded controllers	Oslo
▪ Environmental test lab	Jönköping
▪ Functional test systems, $\mu$ -wave products	Jönköping
▪ Functional test systems, advanced platform	Karlskoga
▪ Functional test systems, PC-platform	Arendal
▪ Industrial design	Oslo
▪ IT management/Industrial	Jönköping
▪ Microelectronics CAD	Jönköping
▪ Microelectronics packaging	Jönköping
▪ Opto electronics	Karlskoga
▪ PCB CAD (complex PCBs)	Oslo
▪ Plastic design and modelling	Oslo
▪ QSR – Regulation affairs for management of medical development projects	Oslo
▪ Quality analysis	Karlskoga
▪ Sensors and actuators	Oslo
▪ Wireless technology (RF)	Arendal
▪ ASIC & FPGA Design	Oslo



# More about the Arendal facility

## ■ EMS capability

- Surface mounting
- Through Hole Assembly
- Soldering
- Coating
- Repair stations
- Inspection systems
- Test systems
- Test development
- NPI ( New Product Introduction )
- Training and workmanship standards





# More about the Kaunas facilities

- **Industrialisation**
- **Product & sub-system testing**
- **Production**
  - Electronic assembly (SMD, THD, wave&selective soldering, manual)
  - Final assembly
  - High level assembly
  - Automated cleaning&coating process
  - Test
  - In-circuit test
  - Bur-In test
  - Cable harness assembly
  - Back plane production (press-fit technology)
  - Repair services
- **Product & sub-system testing**
- **Global logistics solutions to Kitron customers and end-users**
- **After sales & repair services**

# More about the Jönköping facility

## ■ EMS capability

- Pick & Place SMT machines
- AOI
- X-ray
- 0201, BGA, Fine Pitch
- Press fit
- Selective soldering
- Function test equipment
- Burn In
- Programming stations incl JTAG
- Cleaning of PCBs
- Repair station for BGA

# More about the Jönköping facility

## ■ **Microelectronics capability**

- Clean room 1 000 and 100 000 ppm
- Wire- and die bonding
- Bonding area down to 30 $\mu$
- Al and Au wire bonding – Fine and heavy wire
- Ribbon bonding for RF applications
- Wafer sawing
- Probe testing
- Vision/ Documentation x 1 000
- Pull testing
- Plasma cleaning
- Hermetic encapsulation



# More about the Jönköping facility

## Environmental Test Centre

One of Scandinavia's largest environmental test centers for robust and professional electronics systems. Long experience of complete product testing for industrial, medical, automotive and military products.

### ■ Equipment

- Electro dynamic vibrators
- Climate chambers
- Shock test equipment
- Centrifuge
- Temperature chock chambers
- Temperature chamber
- Salt spray chamber
- EMC test equipment
- ESD test equipment

# More about the Karlskoga facility

## ■ EMS-capability

- Pick & Place SMT machines
- AOI
- X-ray
- 0201, BGA, Fine pitch
- Press fit
- Selective soldering
- Funktion test equipment
- Environmental testing
- Burn In
- Cleaning of PCBs
- Repair station for BGA
- Plastic mouldel
- Conformal coating

# More about the Karlskoga facility

- **High quality production within**
  - Electronics
  - Mechatronics
  - High level assembly
- **Focus on Defence and Med Tech**
- **One of Sweden's leading quality analysis laboratories**
- **Focus on medium volume production of advanced products**
- **Prototypes – Industrializing - NPI**
- **Development of test systems**
- **Environmental test laboratory**



# More about the Karlskoga facility

## ■ Med Tech

- Long experience of Med Tec production  
Life supporting – Therapy – Diagnosis
- Kitron is Scandinavia's leading EMS manufacturer within Med Tech area
- Vision to develop within Med Tech segment – KIP

## ■ Defence

- Historically the centre of Swedish defence industry. Alfred Nobel acquired the Bofors company 1894.
- Advanced military electronic production since 1974
- Reference list include: RBS70, Taurus KEPD 350, Bolide, Asrad-R, BAMSE, N-LAW, Bill2, Carl-Gustav, AT4, STRIX, Sea Owl, Bofors 40 and 57 mm guns, Combat vehicle 9040, FH77, Archer, Lemur, Bonus, Excalibur, 3P

# Kitron Analysis Laboratory

- **Quality analysis of components**
- **Design verification/qualification**
- **Verification/qualification**
  - Interconnections
  - Soldering process
  - Materials
  - Coating, adhesives and cleaning processes
  - Optical surfaces
  - ESD protection revision/consulting/education
- **Advanced instrumentation**
  - Scanning Electronic Microscope
  - Microfocus X-Ray Microscope
- **Independent failure investigations of electronic systems and components**



