



**Beyond Connection**

***Senju Comtek Corp.***  
***Corporate Profile***

SCC1402 Rev. 06

**Edition 2023 - 2024**

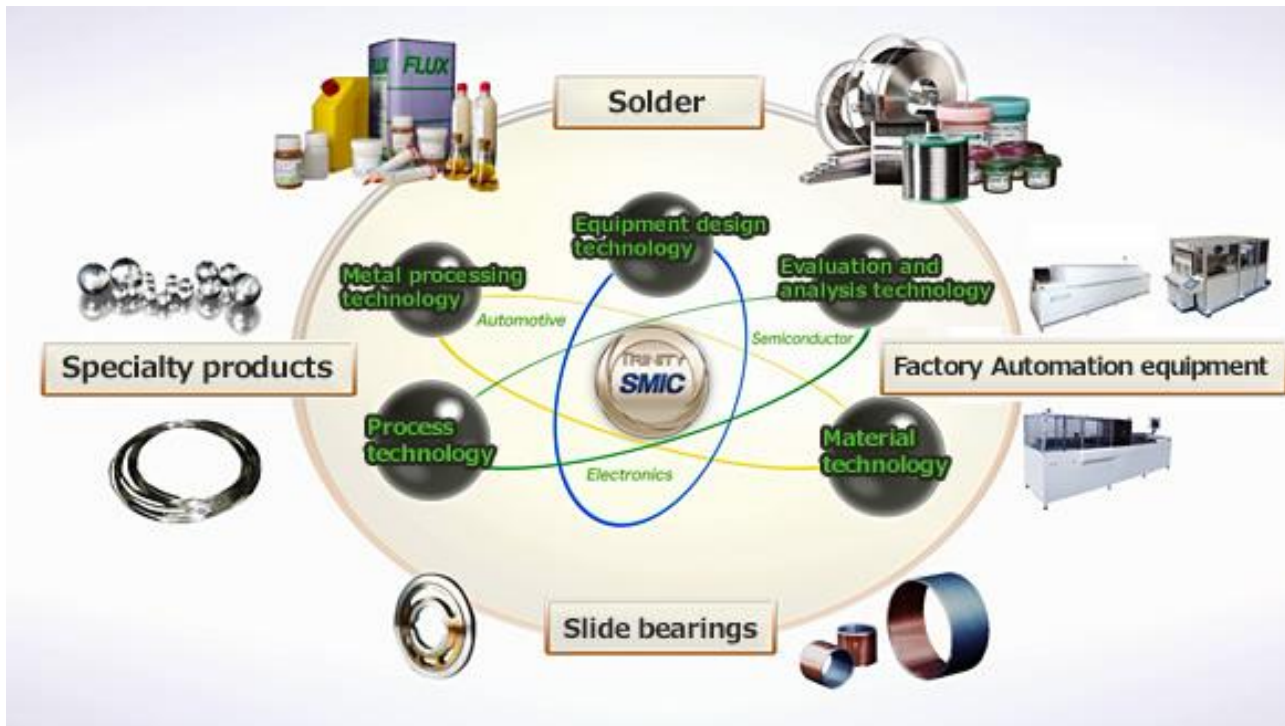
■ **Senju Comtek Corp. is a subsidiary of Senju Metal Industry Co., Ltd. (SMIC) located in Tokyo, Japan.**

- **SMIC was founded in 1938.**
- **Total sales of SMIC is approx. US \$860M / yr.**  
Data: 04/01/21~03/31/22 (\$1 USD = 131.5JPY, 2022 IRS Yearly Average Exchange Rate)
- **1,638 employees in Japan and 566 worldwide** (as of December 31, 2022)
- **More than 1,700 satisfied customers worldwide**
- **SMIC Products and Services**
  - Soldering materials & chemical mfg.
  - Soldering equipment mfg.
  - Technical / Field service
  - Bearings and Bushings mfg.
  - Sprinklers mfg. (by subsidiary)



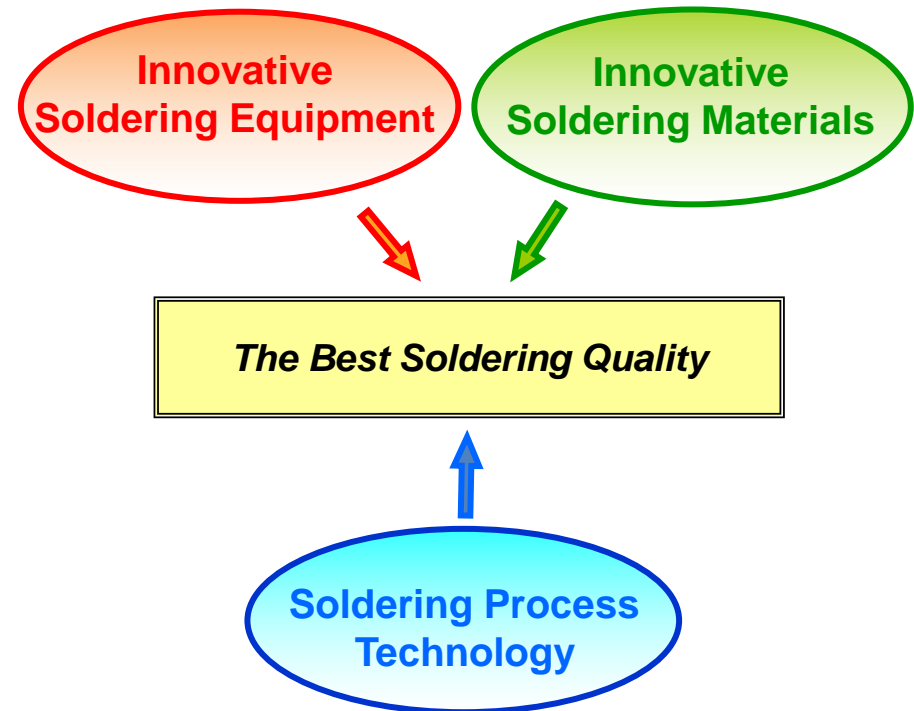
**SMIC Headquarters  
Tokyo, Japan**

- **SMIC is a Global Company Contributing to Society through Our Joint Technology.**
- **With Our Superior Know-how and Ideas, SMIC Offers Creative Solutions for Semiconductor, Automotive, Mobile (High Density) and Low Cost Materials.**



## ■ TRINITY SMIC, a Total Solution Provider

- Our key competence is soldering technology.
- 3 segments of key competence
  - Soldering Material Technology
  - Soldering Equipment Technology
  - Soldering Process Technology
- One stop shopping concept
- All technology aspects work together to achieve...  
**the Best Soldering Quality!**



Concept of TRINITY SMIC

# GLOBAL NETWORK

SMIC Group Companies Sales and Manufacturing Locations

<http://www.senju.com/en/>





- **Senju Comtek Corp., Part of the SMIC Global Network**
  - **Founded in 1997**
  - **Headquarters in Santa Clara (Silicon Valley), California**
  - **Covering the Americas and more**
  - **More than 50 employees**
  - **Manufacturing solder paste, solder bar, solid solder wire and liquid flux in the USA**
  - **Sales: Soldering Materials (domestic mfg. and import)  
Soldering Equipment (import)**
  - **Services: Technical, Field and Customer Services**



■ **Customer Segments**

- Semiconductor
- Board Assembly (consumer / industrial)
- EMS
- Device
- Automotive
- A broad and equally diversified customer portfolio ensures stability and long term growth.

**SMIC has more than 1,700 satisfied customers worldwide.**

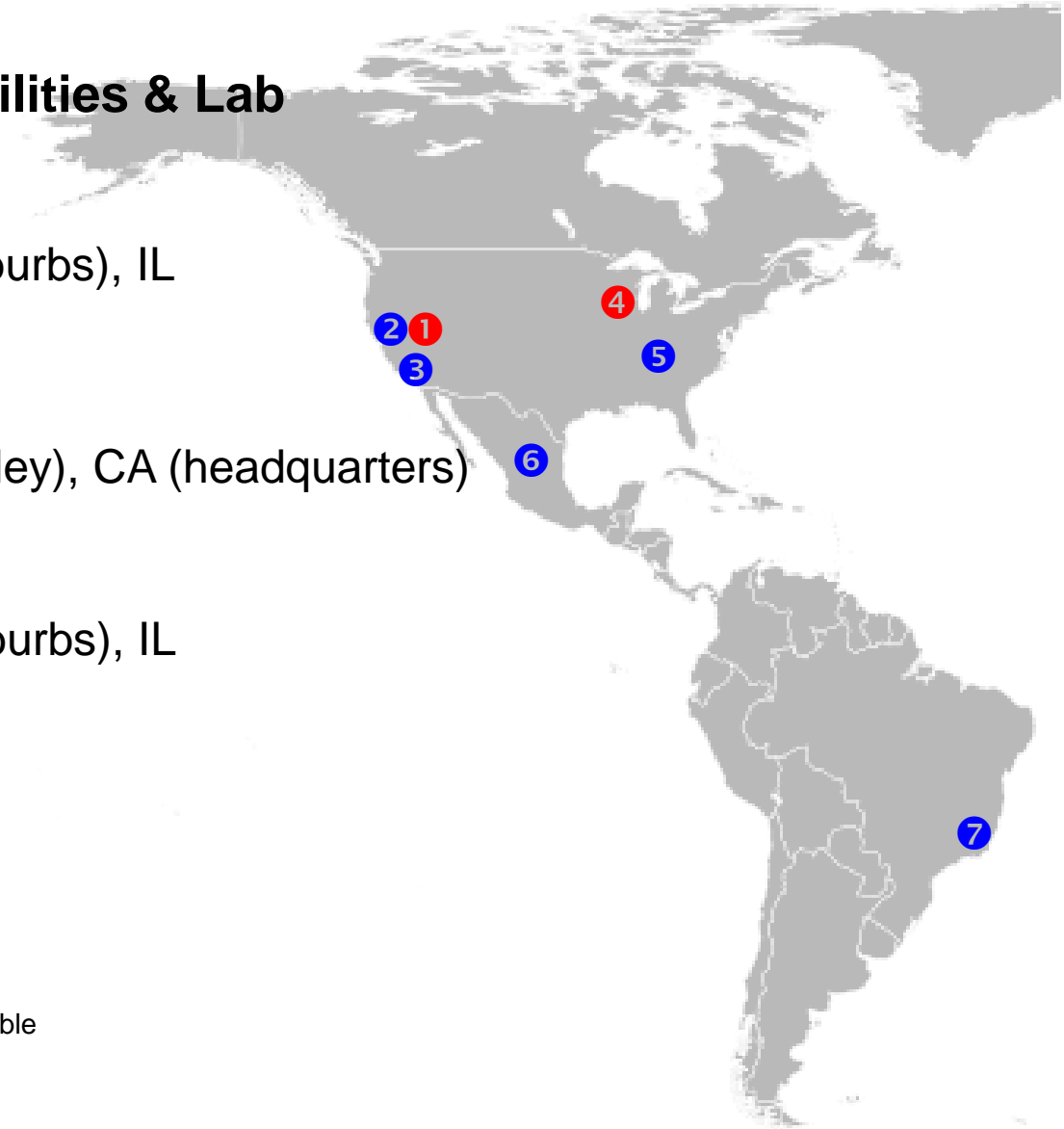
## ■ Two Manufacturing Facilities & Lab

- ① San Jose, CA
- ④ Mundelein (Chicago suburbs), IL

## ■ Six Sales Locations

- ② Santa Clara (Silicon Valley), CA (headquarters)
- ③ San Diego, CA\*
- ④ Mundelein (Chicago suburbs), IL
- ⑤ Oak Ridge, TN\*
- ⑥ Guadalajara, Mexico
- ⑦ Campinas, Brazil

\*: Equipment field service personnel available







**San Jose Facility, CA**



**Manufacturing in Controlled Environment**



**Mundelein Facility, IL**

**■ ISO and IATF Certified Manufacturing Facilities**

- **San Jose Facility: ISO 9001:2015 certified**
- **Mundelein Facility: ISO 9001:2015, ISO 14001:2015 and IATF16949:2016 certified**



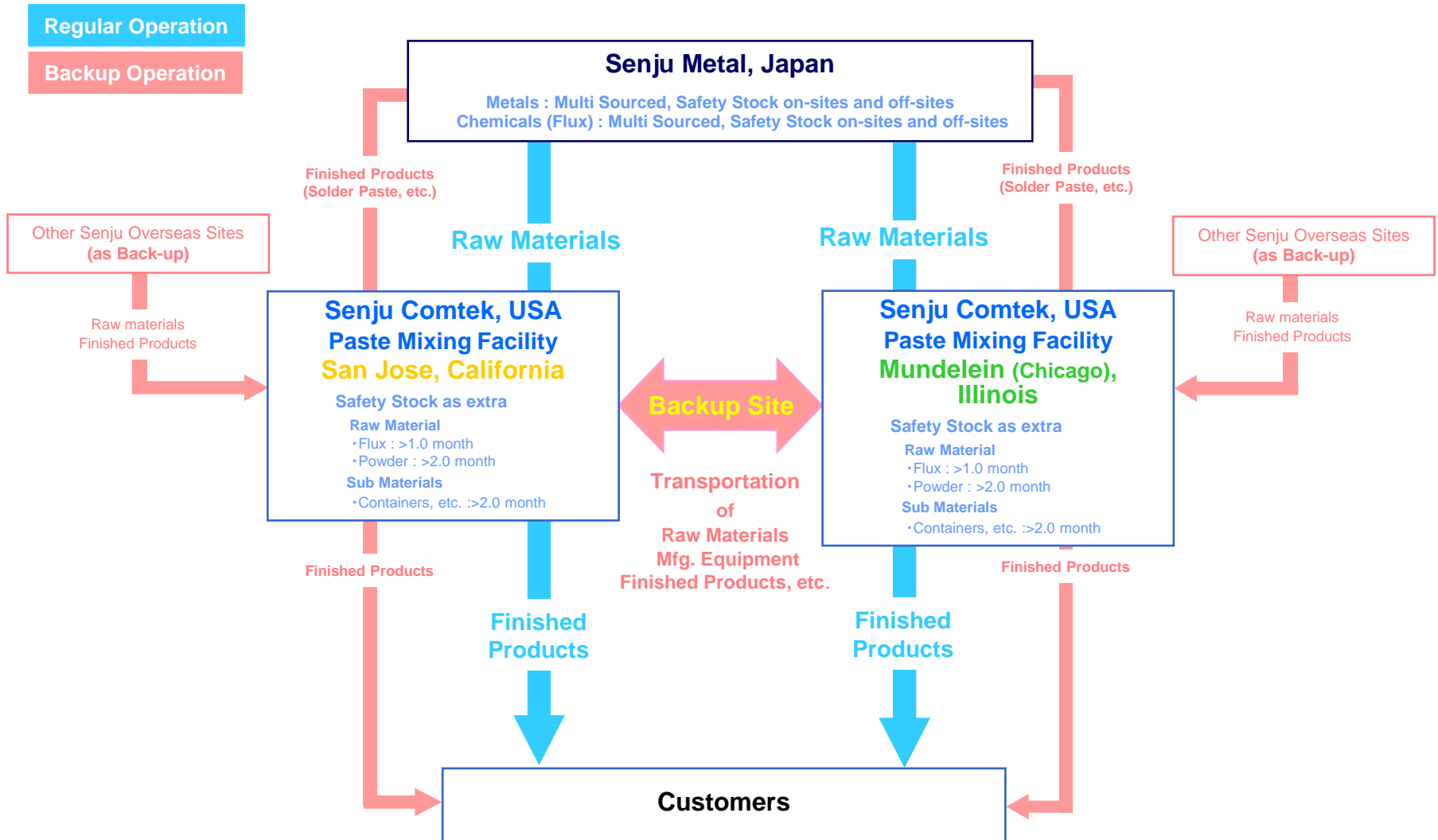
**San Jose Facility  
ISO 9001:2015 Certification**



**Mundelein Facility  
IATF16949:2016 Certification**

Note: A copy of the certification is available upon request.

## Business Continuity Plan Using Two Mfg. Facilities

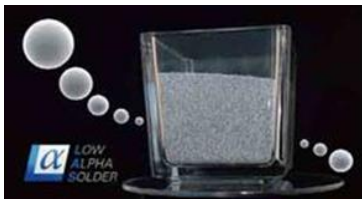


- **Our Ultimate Goal is Customer Satisfaction with the Best Quality.**
  - **SMIC has been recognized receiving *the 2023 Outstanding Supplier Award* in the Intel\* Excellence, Partnership, Inclusion and Continuous Improvement (EPIC) Supplier Program.**
    - The Intel EPIC Supplier Program has three award levels.
    - The “Outstanding Supplier Award” recognizes the highest performance across all measures.
    - Official Announcement:  
<https://www.intel.com/content/www/us/en/newsroom/article/intel-announces-2023-supplier-award-recipients.html#gs.1y50cs>
    - Previously named the Supplier Continuous Quality Improvement Program (SCQI), SMIC has won the SCQI Award 16 times in the past.
  - **SMIC and Senju Comtek produces soldering materials for Intel Corporation.**



\*: Intel is a trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.

- **Senju offers Soldering Materials and Soldering Equipment in combination with the highest levels of Technical and Customer Support.**
  - **Soldering Materials**
    - Paste, Bar, Wire, Preform, Anodes, Spheres and others.
    - Fluxes for wave soldering, ball attach, repair and chip attach
    - Technical services (e.g. analysis, on-site support, certifications, etc.)
  - **Soldering Equipment**
    - Soldering equipment in different formats for PTH / SMT PCB assembly and semiconductor applications
    - Solder recovery systems
    - Field and Customer services





## Soldering Materials



**ECO SOLDER PASTE**

Realizes next-generation mounting


**Solder Paste**



**ECO SOLDER BALL**

Realizes semiconductor mounting that is a step ahead


**Solder Ball**



**ECO SOLDER CORED**

Continue to take on new challenges and keep evolving

**Flux Cored Solder**



**LIQUID FLUX**

Promises effective solder wettability

**Liquid Flux**



**ECO SOLDER BAR & WIRE**

Environmentally sustainable, using alloy composed of plentiful metals

**Bar & Wire**



**FLUX for SEMI-CONDUCTORS**

Takes advantage of organic synthesis technologies

**Flux for Semi-Conductors**



**ECO SOLDER PREFORM**

Changes the future of mounting

**Solder Preform**

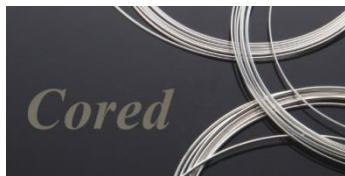


**ECO SOLDER**  
Lead-Free Solder

**MILATERA**  
Low Temperature Soldering for Earth

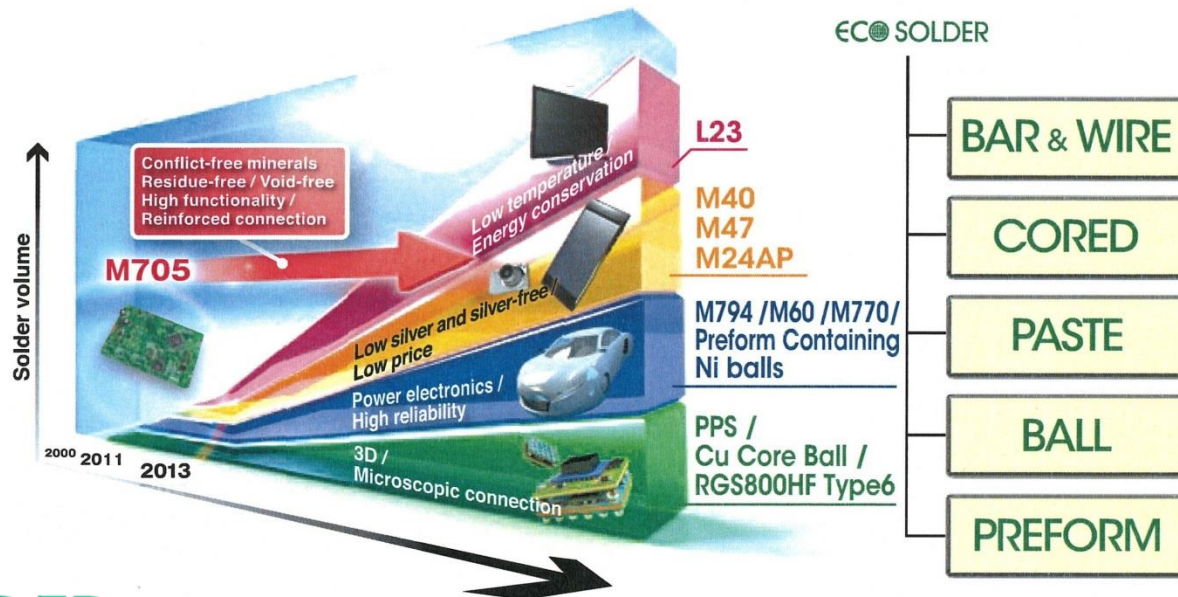
## ■ A Leader Among Pb-free Solder Manufacturers

- SMIC introduced the industry's first environmentally-friendly lead-free product in 1996.
- SMIC had patents for the industry standard tin-silver-copper "SAC" alloys, including the familiar M705 (SAC305) and M31 (Sn-3.5 Ag-0.75 Cu) alloys.
- The patents were open and under license to many solder manufacturers.
- We offer Lead-free and Lead Solder Alloys in many different formats.



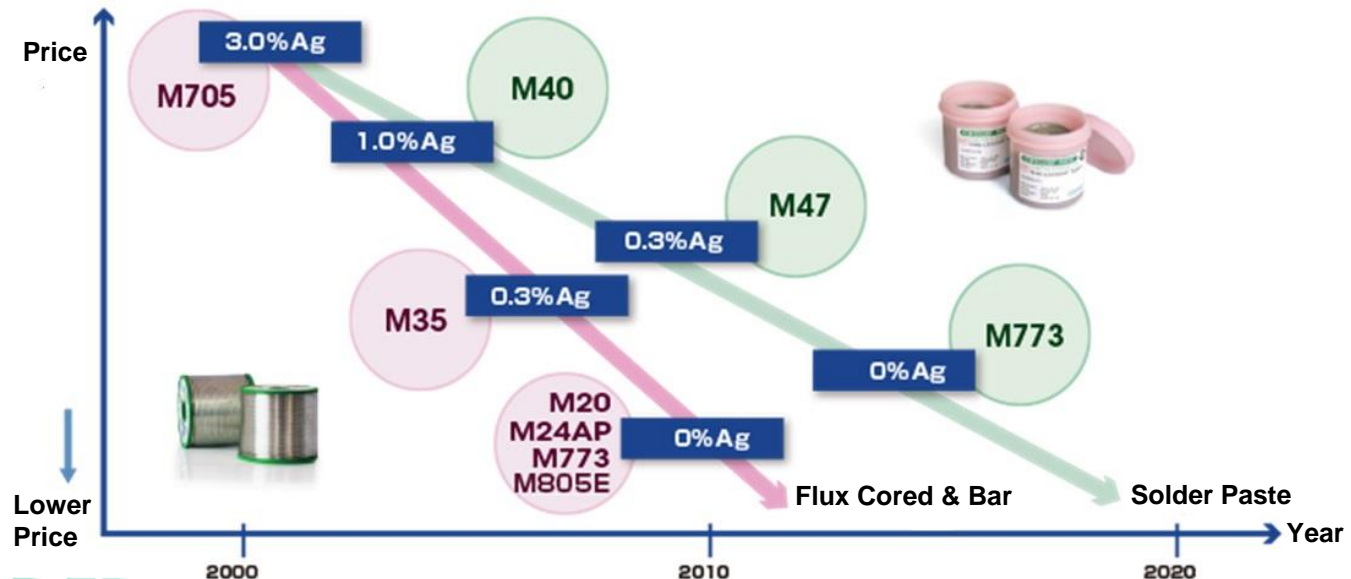
■ Evolving from M705 (SAC305) to New ECO SOLDER

- M705 (SAC305 alloy) has been the industrial standard of lead-free solder.
- Looking for more economical and reliable lead-free alloys
- More lead-free alloy selections for various applications





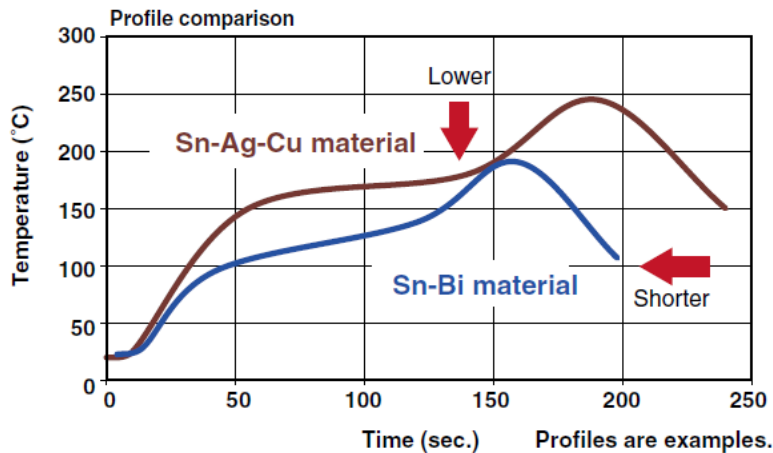
- **Low or No Silver ECO SOLDER is One of the Answers.**
  - **SAC305 (M705) is the Industry Standard.**
  - **Now available 1.0%, 0.3% and 0% silver contained alloys**
  - **Wide selections of alloy types for your products**
  - **Solder paste is made in the U.S.A.**



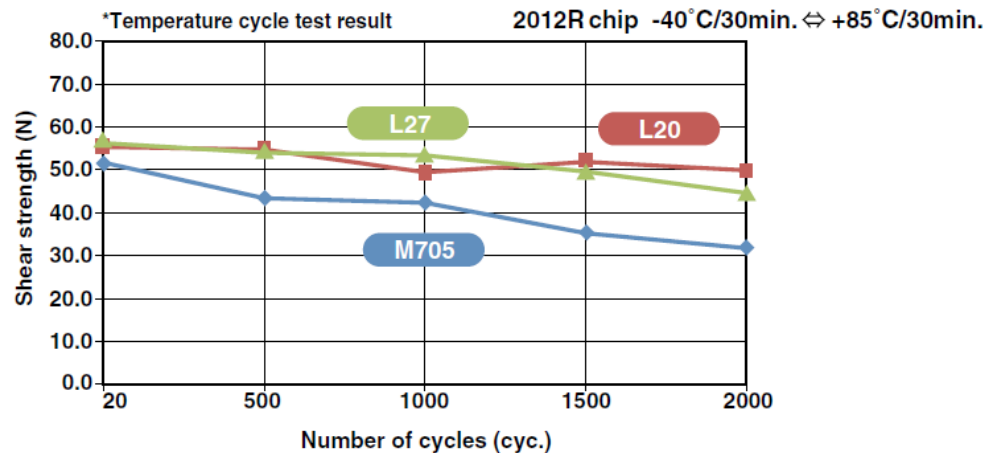
## Low-temperature Packaging Technology

- Low-temperature soldering enables the use of inexpensive low heat-resistant components or materials.
- Lower melting temperature than conventional Sn-Pb
- L series low temperature solder

Short-time low-temperature soldering using Sn-Bi solder realizes energy conservation more than 50%



Sn-Bi low-temperature lead-free solder with high thermal fatigue resistance





## Semiconductor Solutions

### 3D PACKAGING

**Cu Cored Ball**

**Passive component mounting**

- Solvent clean Type5 solder paste M10-PHW
- Solder preform for replenishment 0402 Type Chip Solder
- Halogen-free ultra-fine wire flux cored solder CBF

**Packaging**

- Achieves both thermal fatigue/drop impact resistance Solder Ball M770
- Solder ball with high thermal fatigue resistance M60 M758
- Exhibits high shape retention capability Cu Cored Ball
- Solder paste for POP NSV320 Series
- Solder paste for joint reinforcement JPP
- Low-volatile water-soluble flux WF-6317

**Component embedded mounting**

- Ensures joints and spaces simultaneously Cu Cored Ball
- Maintains adhesion after re-heating RAM Series

**Semiconductor packaging**

- Void prevention type no-clean solder paste GLV Series
- No-clean Type5 solder paste M705-RGS800

**Bump formation**

- Solder ball AS ball with a 100µm or smaller diameter M705 / M200
- 100µm or smaller diameter Cu Cored Ball / Cu Ball
- Transfer solder sheet PPS
- Solder paste for micro-bump formation M200-BPS
- Flux for ball formation MR-T100

## Automotive Solutions

**REAR WINDOW EQUIPPED WITH HOT WIRE**

- Wire solder for glass GLS Series

**Solar panel**

- Wire solder for aluminum ALS Series

**Engine control unit**

- High reliability solder paste & ball M53 / M794 / M758 / M731
- Preform containing Ni balls HQ
- Achieves both high heat resistance and high drop impact resistance M770
- Soft residue flux cored solder MACROS
- No-clean/residue & void-free NRB Series
- Solder paste containing Ni balls RAM Series
- Significantly reduces voids even on Cu-OSP substrates GLV Series
- Paste that prevents flux cracking C3T

**Battery**

- Electrodes for batteries Pb Foil

**Pump**

- Flux cored solder with excellent wettability GAO

**Plain bearing**

- Lead-free Clean Metal

**Power steering & ABS**

- Residue-free solder paste NRB Series
- Solder paste for cleaning WDA Series
- Solder paste for solvent cleaning NXC400ZH

**Motor**

- Flux cored solder with excellent wettability GAO Series

**Various sensors and automotive electrical equipment**

## High-Density Mounting Solutions

**Microscopic component mounting**

- Supports 0201 components M705-RGS800 Type6

**Medium-temperature substrate mounting**

- For joint reinforcement M705-JPP
- Prevents non-wet failures M705-RGS800
- Supports microscopic components M705-RGS800 Type6

**Cut-off fuse**

- For safety and security of battery circuits Solder Clad

**Component terminal plating**

- Electrode for plating Purealloy Anode
- Media for barrel plating Solder Shot

**Narrow pitch connector mounting**

- Flux cored solder with a 0.1 mm diameter EFC

**Earphones**

- High sound quality solder alloy

**VCM (camera module)**

- Flux cored solder with no residue cracking FORTE

**Flexible substrate mounting**

- Water-soluble solder paste WSG36 Series

**Low temperature shield case mounting**

- Low temperature Sn-Bi solder L20 / L27
- 1005 Type Chip Solder
- Molten solder Coat Case
- For low temperature joint reinforcement L20-JPP

**Solder replenishment for TH parts**

- Solder Preform

**Semiconductor packaging**

- Solder ball for outer M770
- Solder paste for bump BPS Series
- Transfer solder paste NSV320ZH
- Super active flux MB-T100
- Ultra-low residue flux 901K5
- Transfer flux DELTALUX GTN-68
- Transfer solder sheet supporting narrow pitches PPS

## ■ Safe Pb-free Solder Alloys and Chemical Substances

- All alloy compositions and fluxes comply with RoHS 2 (2011/65/EU, (EU)2015/863) directive.
- Investigation and updated status of our products is available when the REACH / SVHC List and REACH Annex XIV / XVII are revised.
- Compliance investigation is available for EPA / TSCA, California Proposition 65 and other regulations upon request.
- Compliance investigation for specific substances is available (e.g. PFAS, UV absorbers, etc.)
- A Certification of Compliance (CoC) for each regulation is available upon request.

## ■ Raw Materials Used by Senju Metal Group for its Products Have been Validated as Non-Conflict Minerals.

- Fully support the vision and goals of the Responsible Minerals Initiative (RMI) of Responsible Business Alliance (RBA)
  - We recognize and respect the standards outlined by the RBA Code of Conduct.
  - We support compliance with Section 1502 of the Dodd-Frank Act and the SEC's final rule for 3TG.
  - Senju Metal Group has confirmed with all of its tin (Sn) base metal sourcing companies and its smelters in writing that their minerals are conflict-free, while further conducting physical audits with each smelter within our supply chain.
  - Upon customer request, Senju Metal Group will provide the list of smelters via the Conflict Mineral Reporting Template (**CMRT**).
  - In addition to 3TG information, will provide the list of smelters via the Extended Minerals Reporting Template (**EMRT**) for cobalt and mica and the Pilot Reporting Template (**PRT**) for nickel and copper.

Details of Policy of SMIC: [https://www.senju.com/en/csr/social\\_responsibility/supplier\\_responsibility/conflict.php](https://www.senju.com/en/csr/social_responsibility/supplier_responsibility/conflict.php)



RMI Web Site: <http://www.responsiblemineralsinitiative.org/>

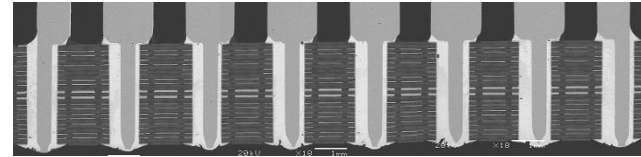


Responsible Business Alliance  
Formerly the Electronic Industry Citizenship Coalition  
Advancing Sustainability Globally

## ■ Technical Services

- **Lab Analysis**

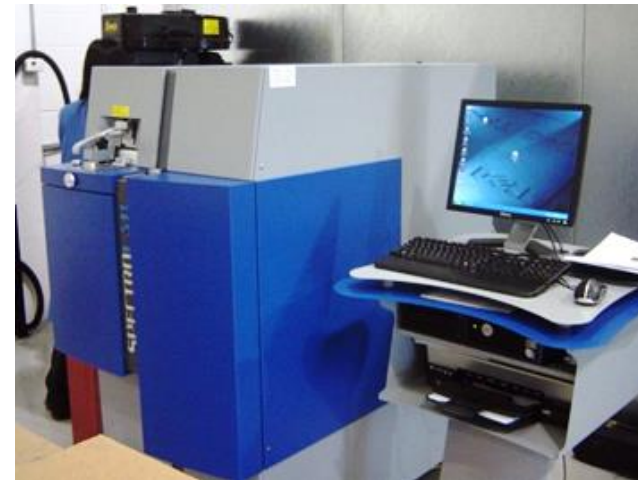
- Cross Section
- SEM Observation
- Solder Purity Analysis (samples from solder pot)



- **Any soldering related Technical Consultation**



San Jose Facility

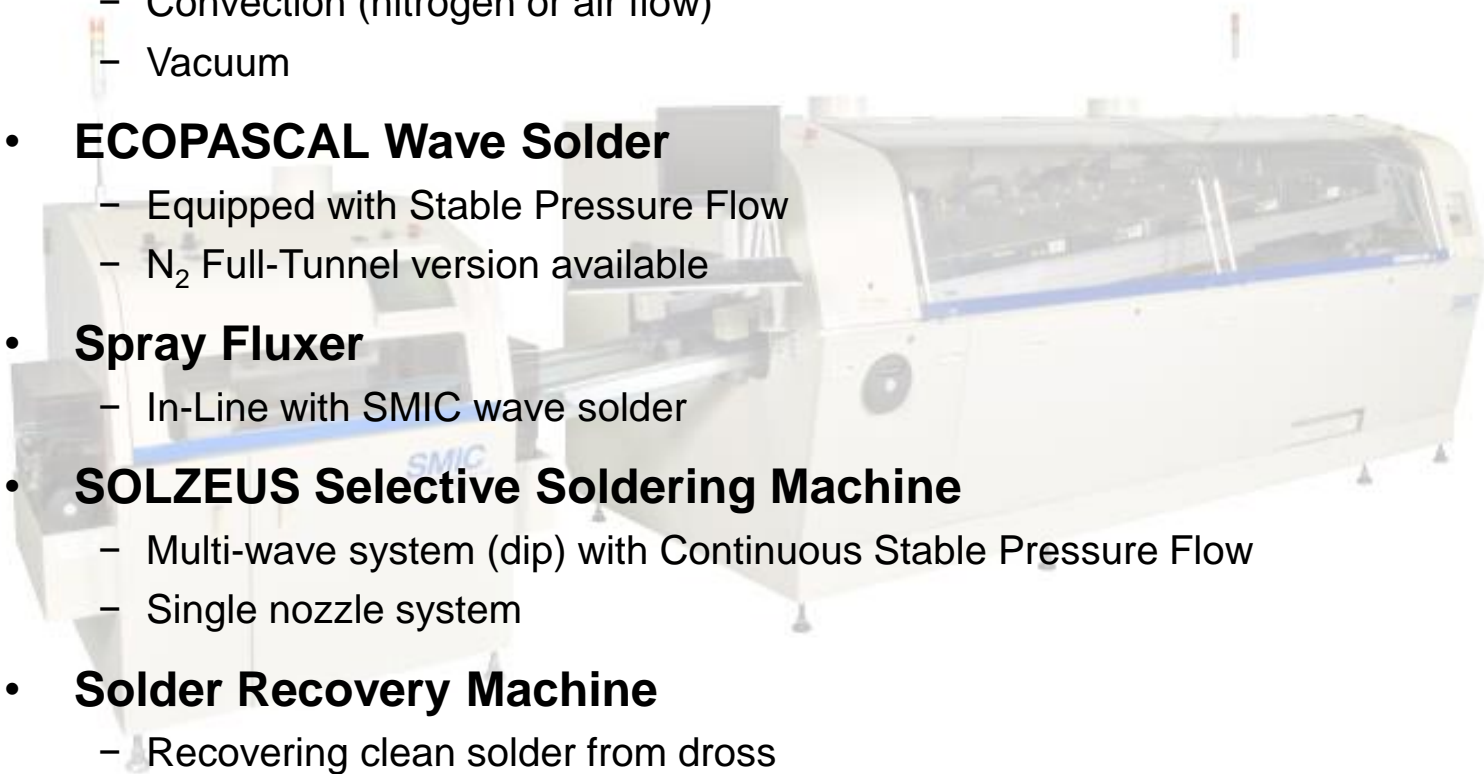


Mundelein Facility



## ■ Soldering Equipment

- **Reflow Oven**
  - Convection (nitrogen or air flow)
  - Vacuum
- **ECOPASCAL Wave Solder**
  - Equipped with Stable Pressure Flow
  - N<sub>2</sub> Full-Tunnel version available
- **Spray Fluxer**
  - In-Line with SMIC wave solder
- **SOLZEUS Selective Soldering Machine**
  - Multi-wave system (dip) with Continuous Stable Pressure Flow
  - Single nozzle system
- **Solder Recovery Machine**
  - Recovering clean solder from dross
- **Injection Molded Solder (IMS) Equipment**
  - Semiconductor application

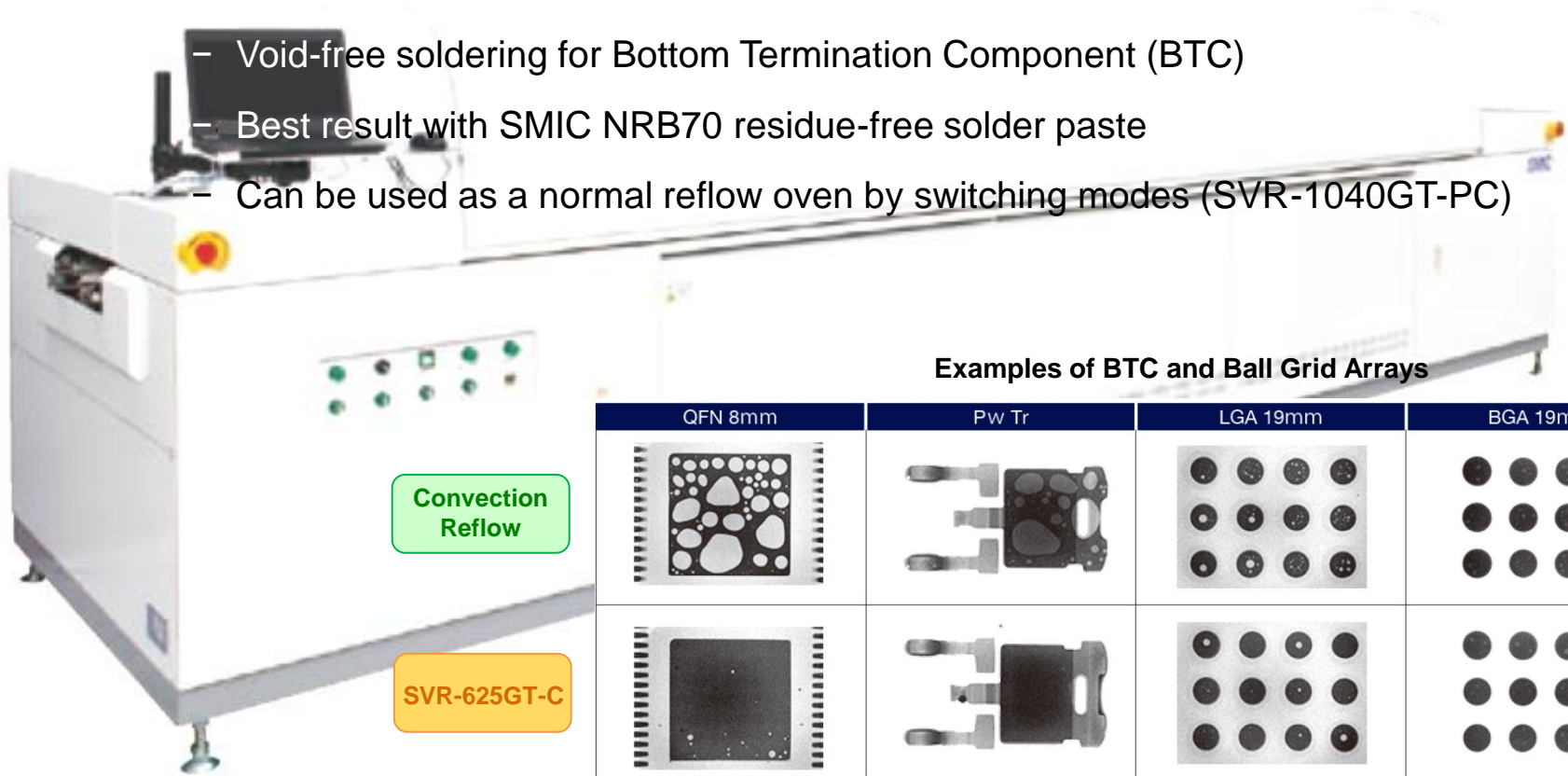




■ We Always Propose the Most Advanced Equipment Technology to the Industry.

- Vacuum Reflow Oven, SVR-625GT-C and SVR-1040GT-PC

- Vacuum environment at reflow zone
- Void-free soldering for Bottom Termination Component (BTC)
- Best result with SMIC NRB70 residue-free solder paste
- Can be used as a normal reflow oven by switching modes (SVR-1040GT-PC)



Examples of BTC and Ball Grid Arrays

QFN 8mm	Pw Tr	LGA 19mm	BGA 19mm

## ■ Field and Customer Services

- **Equipment Installation**

- Flexible scheduling to meet customer's needs

- **Equipment Maintenance and Repair**

- Field service from San Diego, CA and Oak Ridge, TN office
- Warranty work
- Annual PM contract
- On demand
- Spare parts sales (from Oak Ridge, TN office)

- **Customer Services**

- Training (operation and maintenance)
- On-site process development support (e.g. parameters setting)
- Technical consultation

**1 Santa Clara Headquarters (Sales / Engineering Dept.)**

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Santa Clara, CA 95051

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## *Thank You*

*Please feel free to contact us*

[Web Site - http://www.senju.com/en](http://www.senju.com/en)

