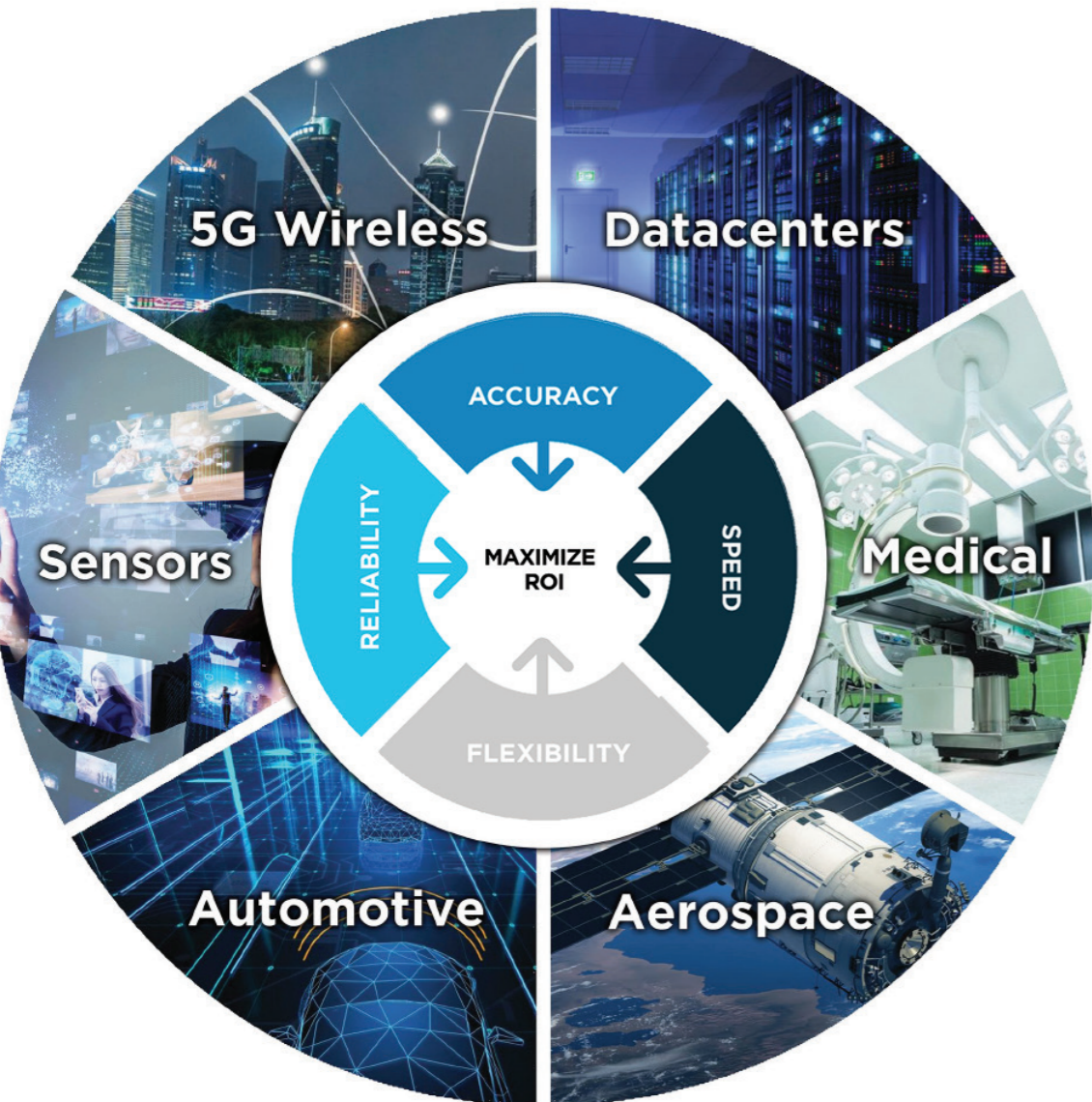


MRSI-S-HVM
0.5 MICRON DIE BONDER



Bringing tomorrow's electronics to life



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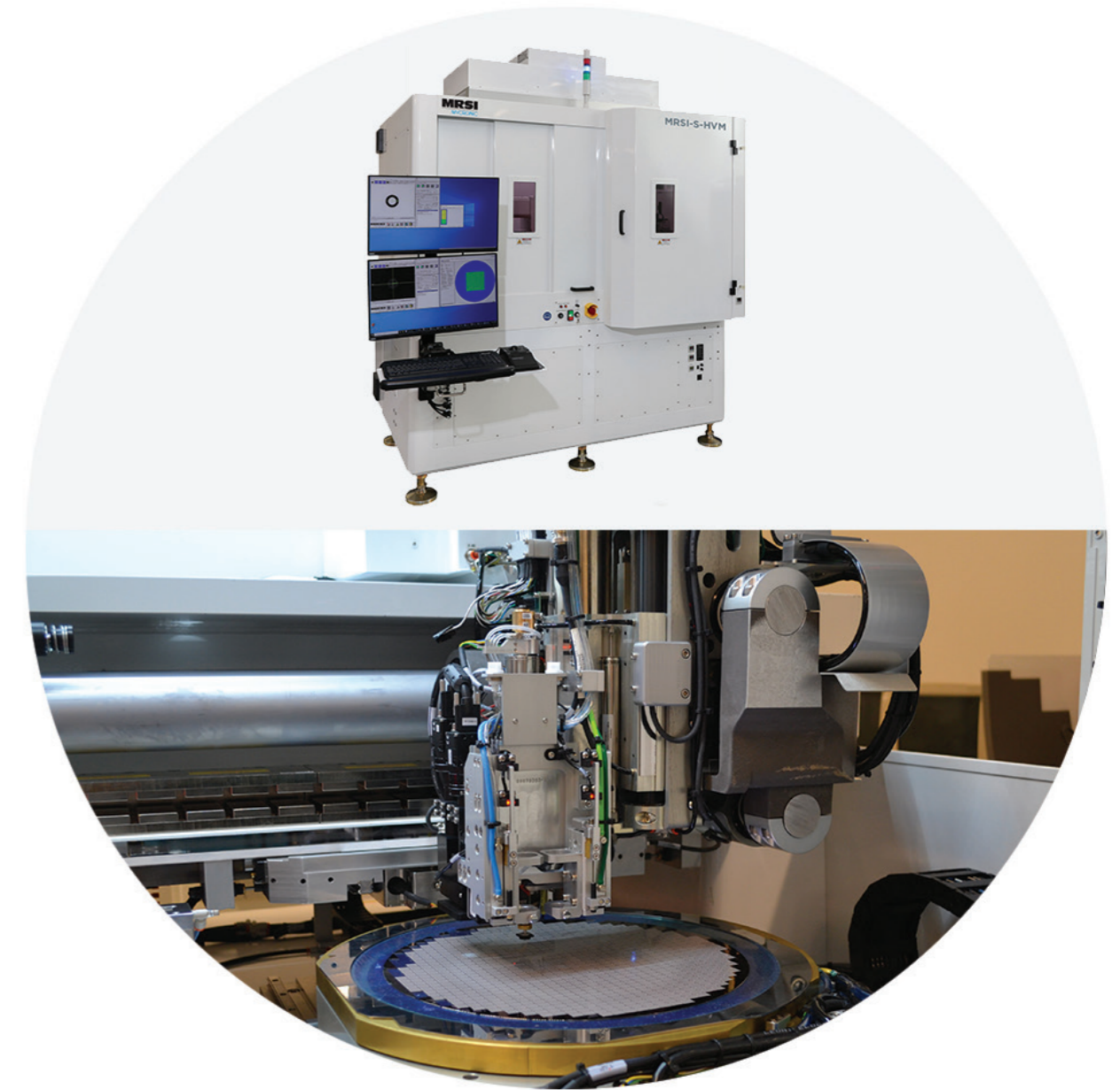
 <p>North America 554 Clark Rd., Tewksbury, MA USA 01876 Tel: +1 978 667 9449 Email: sales.mrsi@mycronic.com</p>	 <p>MRSI China 101, Block A, Huahan Innovation Park, Langshan Road, Shenzhen, China 518057 Tel: +86 755 26414155</p>
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MRSI Systems (Mycronic Group), is the leading manufacturer of fully automated, high-speed, high-precision and flexible eutectic and epoxy die bonding systems. We offer solutions for research and development, low-to-medium volume production, and high-volume manufacturing of photonic devices such as lasers, detectors, modulators, AOCs, WDM/EML TO-Cans, Optical transceivers, LIDAR, VR/AR, sensors, and optical imaging products. With 30+ years of industry experience and our worldwide local technical support team, we provide the most effective systems and assembly solutions for all packaging levels including chip-on-wafer (CoW), chip-on-carrier (CoC), PCB, and gold-box packaging. For more information visit www.mrsisystems.com.

Mycronic is a Swedish high-tech company engaged in the development, manufacture and marketing of production equipment with high precision and flexibility requirements for the electronics industry. Mycronic headquarters is located in Täby, north of Stockholm and the Group has subsidiaries in China, France, Germany, Japan, Singapore, South Korea, the Netherlands, United Kingdom and the United States. Mycronic (MYCR) is listed at Nasdaq Stockholm. www.mycronic.com

Specifications are subject to change without notice.

202205_MRSI-S-HVMV1



MRSI Systems has been serving optoelectronic and microelectronic customers for the past 35 years and understands their requirement to scale efficiently in today's fast-paced marketplace.

Applications are found across a wide range of market segments, such as life & health sciences, aerospace, defense, automotive, lighting, communications, and more.

MRSI's die bonding solutions help our customers to enable just-in-time supply and fast-pace innovations of critical components for high-growth market segments. The MRSI-HVM and MRSI-H provide industry leading high-speed for high-volume manufacturing. The new MRSI-S-HVM 0.5 micron die bonder provides industry-leading speed and flexibility for integrated photonics application.

These die bonding solutions are built with the same hardware and software platforms configured to minimize process deviations, reduce NPI cost, and increase ROI for customers with MRSI's long proven product reliability and global customer support.



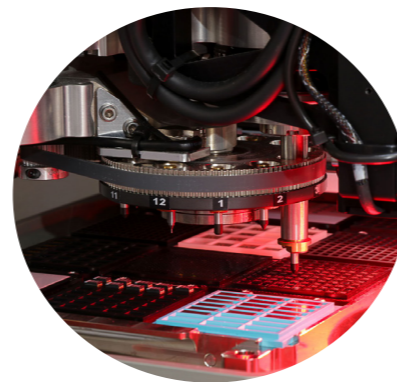
MRSI-S-HVM Applications

Applications & Features

- Designed for integrated photonics volume manufacturing applications, semiconductor wafer level packaging, multi-chips, multi-processes production in one machine.
- Two modes with auto-change over: $\pm 0.5\mu\text{m}$ @ 3σ and $\pm 1.5\mu\text{m}$ @ 3σ ; both with on-axis z-force for die bonding. MRSI proprietary high z-force option available.
- Capable of Chip-on-Wafer (CoW); Chip-on-Interposer (CoI); Silicon photonics; die from III-V wafer (8 inches) picked & placed onto a silicon wafer (12 inches) and mapping.
- Multiple processes, including DAF, eutectic, epoxy stamping and dispensing, thermal heating from top and bottom, and MRSI proprietary bottom laser soldering.
- Flip chip bonding with direct alignment of fiducials on both bonding interfaces without additional reference or calibration required.
- MRSI proprietary wafer table with automated leveling.
- MRSI-S-HVM inherited all of the MRSI-HVM's parallel processes using MRSI proprietary auto tool change and dual gantry/head.
- Material input methods include wafer, Waffle pack, and Gel-Pak®, as well as customized fixtures.

Value to our Customers

- Industry-leading throughput, superior flexibility, and ultra-high-accuracy in high-volume, high-mix manufacturing, multiple process options.
- Being able to switch between 0.5 micron and 1.5 micron modes allows customers to balance different bonding accuracy requirements in one machine for the best throughput and ROI.
- Easy to use icon-based interface running on a Windows™ platform for easy programming, and low-cost machine maintenance.
- Industry-leading local technical support teams and application expertise.
- 35+ years of experiences in the industry with reliable 24/7 field operations.



MRSI-S-HVM 0.5 Micron Die Bonder

CONFIGURATION

STANDARD S-HVM-C S-HVM-L

APPLICATIONS

APPLICATIONS	STANDARD	S-HVM-C	S-HVM-L
0.5 μm Placement	●	●	
Chip-on-Carrier (CoC)	● ⁽¹⁾	●	●
Chip-on-Submount (CoS)	●	●	●
Chip-on-Baseplate or Board (CoB)	●	●	●
High Density Top Heating Eutectic Bonding	●	●	●
Wafer Level Packaging	●		●
Silicon Photonics	●	●	●
Co-Packaged Optics	●	●	
Multi-chip, Multi-process Production in One Machine	●	●	●

Note (1) 1.5 μm accuracy mode only.

PROCESSES

PROCESSES	STANDARD	S-HVM-C	S-HVM-L
Eutectic Bonding	●	●	●
Epoxy Stamping	●	●	●
UV Epoxy Dispensing	●	●	●
Localized Heating	●	●	●
Thermal Compression Bonding	●	●	●
Flip-chip Bonding	●	●	●
Co-planarity Bonding	●	●	●

FEATURES & OPTIONS

FEATURES & OPTIONS	STANDARD	S-HVM-C	S-HVM-L
Dual Gantry/Head	●	●	●
0.5 μm Alignment Systems	●	●	
Laser Soldering	●		●
Heated Head (R)*	●	●	●
On-the-fly Tool Change (L)	●	●	●
Remote Auto Tool Change (R)	●	●	●
Output Stage (R)		●	
8"/12" Wafer Table for CoW (R)	●		●
Input GP/WP & Wafer	●	●	●
Epoxy Dispensing and Stamping	●	●	●

*R=Right Side, L=Left Side