

Bringing tomorrow's electronics to life



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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.

202208_MRSI-HIV1

MRSI-H1 1 MICRON DIE BONDER





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-H1 is developed from our popular MRSI-H platform, further improving accuracy to 1 micron level.

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-H1 Applications

MRSI-H1-LD



- This standard system is widely used in advanced photonics such as lasers, receivers, transceivers, lighting, and sensors, etc.
- Carries key technological building blocks from our field-proven, flexible and high-speed MRSI-HVM platform
- Heated head option designed for the higher density eutectic packaging
- “On-the-fly” auto tool changer has twelve vacuum tips/collets integrated on the bonding head for zero time tool change

MRSI-H1-HPLD



- Specifically designed for bonding large high-power laser diodes in mass production
- Capable of die bonding single emitter, bar laser in different packages, like CoS, C-mount, Bar-on-Submount (BoS), etc. within one machine
- Customized design self-leveling tools for Co-planarity solution

MRSI-H1-LDMOS



- Specifically designed for bonding GaAs, Si, GaN, SiC dies for RF Power Amplifiers and Microwave Applications in mass production
- Programmable die scrubbing process for a void free bonding process
- Inline heaters, conveyors and loader/unloader options for improve UPH

MRSI-H1-TO



- Specifically designed for handling multi-dies and multi-processes for complex TO products without tool changeover. e.g. TO-based EMLs and WDM LDs for 5G
- TO handling module combined with pick and place head for dual parallel processing
- Capability of both epoxy and eutectic die bonding in one process flow

Value to our Customers



- Industry leading throughput, superior flexibility, and ultra-high-accuracy in high-volume, high-mix manufacturing
- Easy to use icon-based interface running on a Windows™ platform for ease of 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-H1

1 Micron Die Bonder

	H1-LD		H1-HPLD	H1-LDMOS	H1-TO
CONFIGURATION	STANDARD	HEATED HEAD	FOR HPLD CHIP/BAR	FOR RF AMPLIFIER, POWER DEVICE	FOR TO-BASED ASSEMBLY
APPLICATIONS					
CoC/CoS/CoB	●	●	●	●	●
CoC Silicon Photonics	●	●			
3D Die Stacking	●	●			
Pillar-to-Pillar Bonding	●	●			
AOC/PCB	●				
Gold Box	●				
Complex TO, E.g. EML/WDM					●
PROCESSES					
Multi-die	●	●	●	●	●
Multi-process	●	●		●	●
Eutectic	●	●	●	●	●
Epoxy Stamping	●	●		●	●
Epoxy Dispensing	●			●	
UV Curing	●				
Localized Heating		●			
Flip-chip Bonding	●	●	●		●
Co-planarity Bonding	●		●	●	●
FEATURES AND OPTIONS					
Composite Base	●	●	●	●	●
Single Gantry/Head	●	●	●	●	●
Heated Head		●			
Ultrafast Eutectic Station	●	●	●	●	●
On-the-fly Tool Change	●		●	●	●
Remote Auto Tool Change		●			
TO Pick-and-Place Head					●
Dual TO 0° & 90° Eutectic Station					●
Inline Conveyor	●	●		●	
Input GP/WP & Wafer	●	●	●	●	●
Output Stage	●	●	●	●	●