



Semiconductor Backend Tools Catalog



2022



AT A GLANCE



Oricus Semicon Solutions is an innovative Semiconductor Tools manufacturing company who, with almost 100 years of collective expertise, craft high tech bespoke tooling solutions for the global Semiconductor Assembly and Test industry.

From one-off customised products to large scale production, our R&D strength, precision manufacturing experience and problem-solving capabilities are impeccable. With a passion for engineering and customer oriented service, we deliver price competitive precision Semiconductor Tooling solutions to a global market with a local presence.

Oricus is made up of a global network of professionals with strong commitment and passion for our work. The company is managed and operated with a spirit of professionalism based on the foundation of integrity, equality and respect. We are determined, objective with a sense of ownership to deliver on our goals. We value our values, professionalism, passion, perseverance and our relentless pursuit to deliver value for our customers.



Authenticity



Expertise



Professionalism



Perseverance



Passion



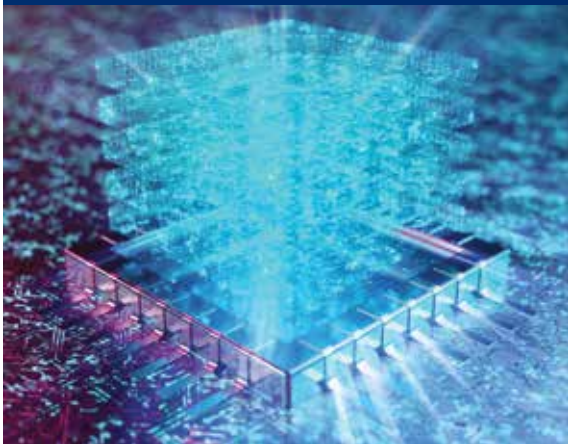
Community

Oriented to Customer's needs



We excel at creating specials – one of a kind pieces, with one of a kind craftsmanship combining with the latest in manufacturing technology to produce micro precision tooling. Oricus can Design and Manufacture either one-offs or high volume orders to your unique specifications, from High Temperature resistant tools for Power Devices to tools with complex geometries for 3D Advanced Packaging.

Industry Leading Solutions



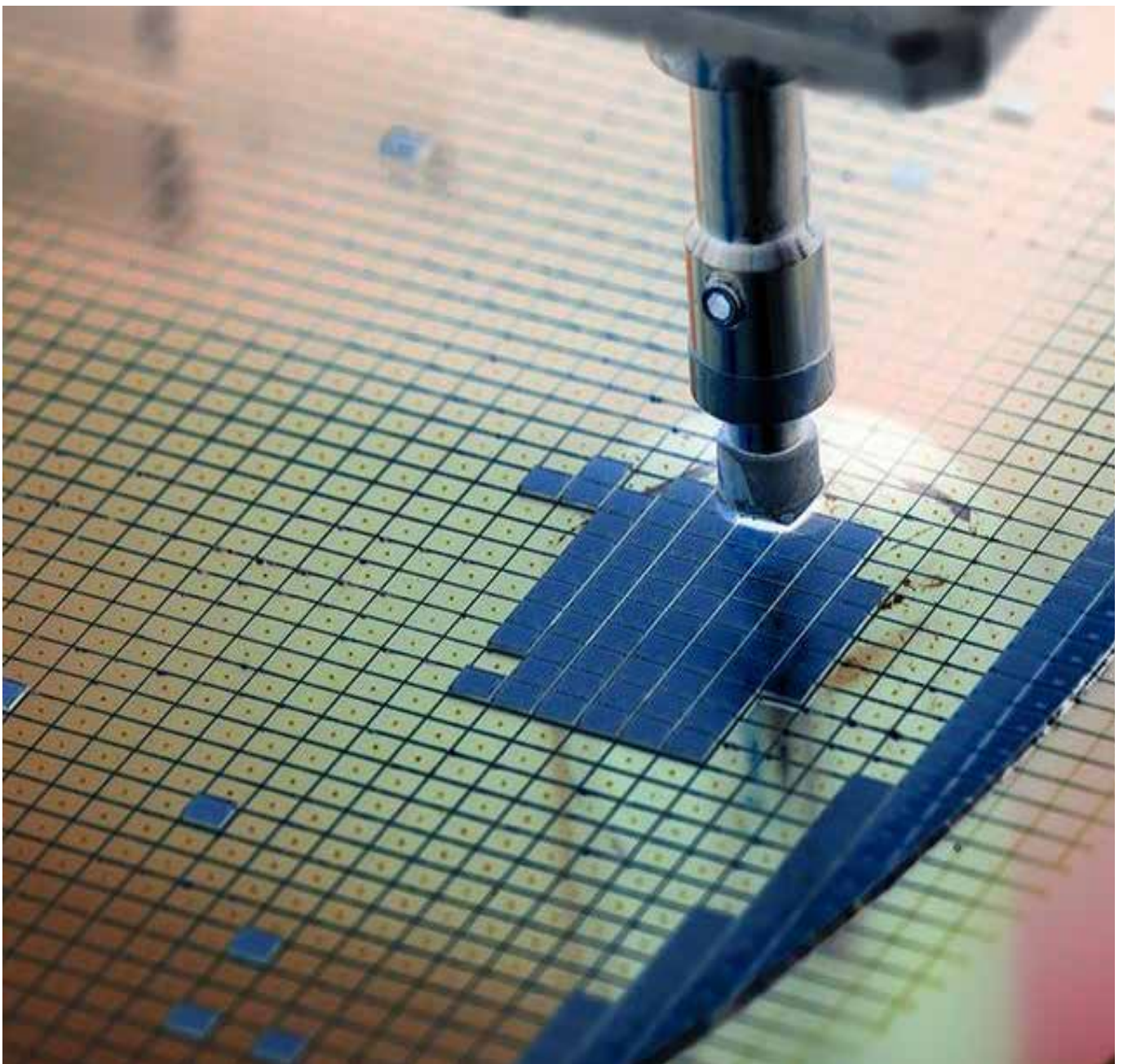
Our Technical Sales Consultants and R&D teams of seasoned Semiconductor Assembly and Test industry professionals will study your chip and package requirements and offer effective and competitive tooling solutions that will work right out of the box. Oricus has the solution to your tooling requirements. Leave it to us and you can focus on your key processes.

Research and Development



R&D is the cornerstone of our commitment to deliver market leading tooling solutions. Our Material Science know-how, coupled with our Manufacturing Expertise and knowledge on the latest demands of Integrated Circuits Packaging allow us to offer tools that maximizes productivity and minimizes downtime.

Die Attach



Adhesive Systems



Single Tube Dispensers

Single Tubing Adhesive Dispensing Nozzles are designed for dotting micro amounts of adhesives for small die sizes or used as an Adhesive writing pen.



Multi Tube Dispensers

Multi Tubing Dispenser designs allow for higher throughput with a larger volume of adhesive delivery within the same time frame.



Adhesive Stamping Tools

Adhesive Stamping Tools are designed according to your adhesive's viscosity and thixotropy specifications to ensure optimal stamping performance.



Flux Systems

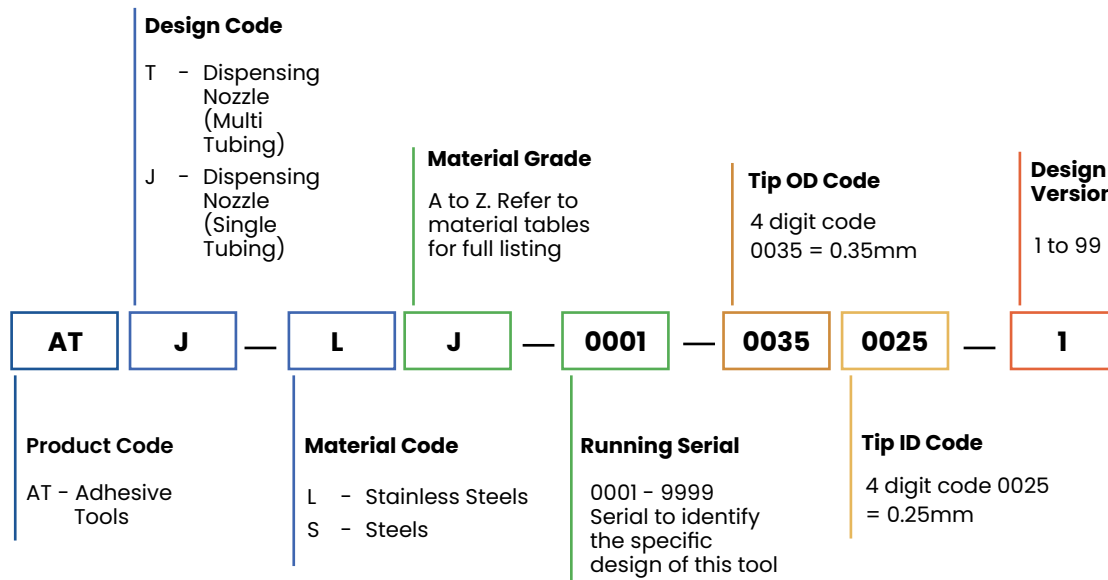
Flux Plates are machined to precise tolerances to ensure reservoir depth and volume. Flux Scrapers designed to scrape across the surface to eliminate overflow.



Spanker Tools

Designed with custom cavity layers and profiles to ensure 100% adhesive coverage to fully adhere to bondline thickness requirements.

Part Numbers And Ordering



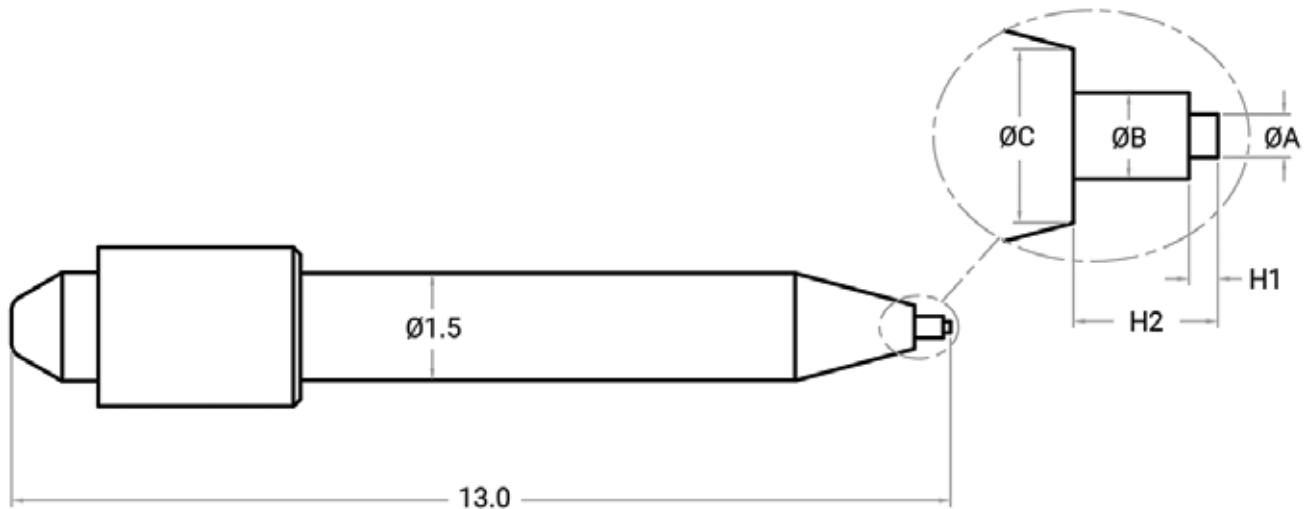
Stamping Tools *Adhesive*



Adhesive Stamping Tool's primary function is to transfer the adhesive from the Flux Plate or Rotating Cup onto the leadframe or substrate. These tools are commonly used for small dies $\leq 0.38 \times 0.38\text{mm}$ (15×15 mils) in CSP or LED applications.

Our line of Adhesive Stamping Tools are designed according to your adhesive's viscosity and thixotropy specifications to ensure optimal stamping performance.

Oricus manufactures a wide range of Adhesive Stamping Tools to fit a wide range of machines from OEMs such as Datacon, ESEC, ASM, Palomar, MRSI, Muhlbauer and more. Our tools can be designed and manufactured to according to the stamping performance required for your specific application.



Features

- Manufactured from various Stainless Steel, HSS and Carbide grades
- Multiple profile designs such as Round, Square/Rectangular, Star, X-Groove and Matrix to cater to different application needs
- Available in Multi Gang Tools designs for maximum productivity

Benefits

- Field tested design offers superior bond line thickness
- Precision machined tool shanks deliver minimum play when installed into the machine tool holders
- Each tool's stamping profile is tailor made according to your die or device requirements

Part Number	ØA (mm)	ØB (mm)	ØC (mm)	H1 (mm)	H2 (mm)
ATY-SJUR-0001-001	0.10	0.25	0.50	0.05	0.50
ATY-SJUR-0001-002	0.10	0.30	0.50	0.10	0.50
ATY-SJUR-0001-003	0.13	0.35	0.50	0.05	0.50
ATY-SJUR-0001-004	0.10	0.40	0.60	0.10	0.50
ATY-SJUR-0001-005	0.10	0.45	0.80	0.10	0.50
ATY-SJUR-0001-006	0.10	0.50	0.80	0.10	0.50
ATY-SJUR-0001-007	0.10	0.55	0.80	0.10	0.50
ATY-SJUR-0001-008	0.10	0.60	0.80	0.10	0.50
ATY-SJUR-0001-009	0.10	0.65	0.80	0.10	0.50
ATY-SJUR-0001-010	0.15	0.75	1.00	0.10	0.50
ATY-SJUR-0001-011	0.20	0.80	1.00	0.15	0.50
ATY-SJUR-0001-012	0.20	0.90	1.20	0.20	0.80
ATY-SJUR-0001-013	0.25	0.90	1.20	0.10	0.80
ATY-SJUR-0001-014	0.20	0.95	1.50	0.15	0.80
ATY-SJUR-0001-015	0.30	1.00	1.50	0.15	1.00

ESD Properties

Conductive < 10⁵ Ω

Applications

Standard Die Attach
Flip Chip
2.5D/3D
Wafer Level Packaging
Panel Level Packaging
System in a Package

Tool Material

Carbide
Superalloys
Stainless Steels

Stamping Profile Design

Round
Square/Rectangular
Star
X-Groove
Matrix

Outer Profiles

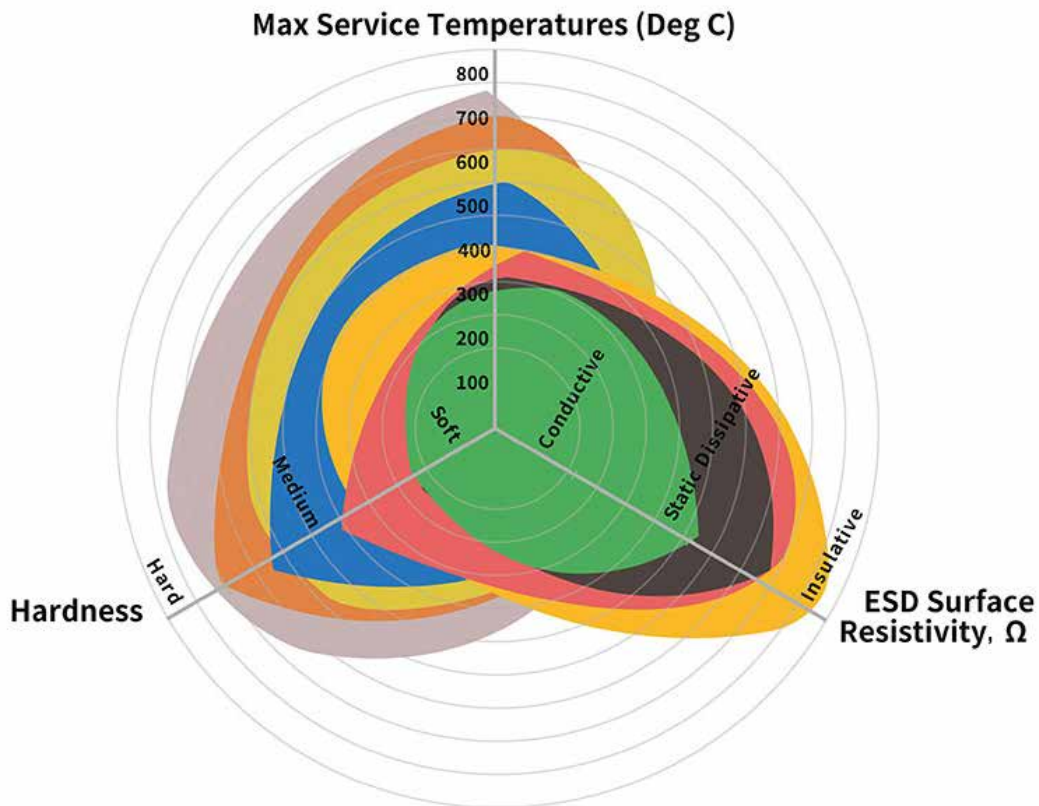
Round
Square
Rectangular
Custom



MATERIALS

Oricus's extensive line of engineered materials specially developed and selected to offer optimal tooling performance for your specific Semiconductor Backend process. Our in-house materials are closely developed in partnership with Original Equipment Manufacturers with input from our customers. For externally procured materials, each material goes through a rigorous Quality Assurance and Performance Assessment programme before making it into our material list.

Oricus' in depth understanding and experience of materials allows us to formulate tooling solutions that work for you. As part of our value proposition, we study the conditions of your application and suggest the most appropriate material that meets your needs.



Tungsten Carbide *WC Line*

Superalloy *SA Line*

Stainless Steel *SS Line*

Tool Steel *TS Line*

Non Ferrous Metals *NF Line*

Performance Engineering Plastics *SP Line*

Engineering Plastics *EP Line*

Rubber *R Line*

<p>WC LINE</p> <p>Tungsten Carbide</p> <p>High Wear & High Temp Resistance</p> <p>Carbide, K15 Carbide, K30 Carbide, M30 Carbide K40 Carbide, MG30</p>	<p>SA LINE</p> <p>Superalloy</p> <p>All-Round Superior Performance</p> <p>Haynes 25 (L605) Inconel Alloy 625 Inconel Alloy 718 Incoloy Alloy 925 Nitronic 50 Nitronic 60 Titanium Grade 2 Stellite 6 Stellite 31</p>	<p>SS LINE</p> <p>Stainless Steel</p> <p>Balanced Properties</p> <p>15-5 PH 17-4PH SUS 430F SUS 420 SUS 440C SUS 316 SUS 301 SUS 304 SUS 303</p>	<p>TS LINE</p> <p>Tool Steel</p> <p>High Strength</p> <p>CPM-10V SKD 11 SKH 51 Mirrax 40 ASP 23 Stavax XW 10 XW 42 Assab 718 - HH HSS DF2 DF3 Ramax HH Rochling 2315</p>
<p>NF LINE</p> <p>Non Ferrous Metals</p> <p>Special Applications</p> <p>Aluminium 7075 Aluminium 6061 Copper Brass Hovadur K350</p>	<p>SP LINE</p> <p>Performance Engineering Plastics</p> <p>Advantageous Performance & Value</p> <p>Torlon 4432 (PAI) Torlon 4301 (PAI) Torlon 5030 (PAI) Torion 7130 (PAI) Vespel SCP5050 (P) Vespel SP 21 (PD) Vespel SP1 (PI) ESD Semitron 520 ESD Semitron 420 ESD Semitron 410C ESD Semitron 225</p>	<p>EP LINE</p> <p>Engineering Plastics</p> <p>Economical And Versatile</p> <p>Acrylic/ Polycarbonate TECAFORM SD Delrin ESD Delrin White Delrin Black POM PEEK PEEK HT PEEK GF 30% PEEK CF 30%</p>	<p>R LINE</p> <p>Rubber</p> <p>Geometric Flexibility ESD Protection</p> <p>NBR NBR (Soft) NBR (Hard) NBR (Coated) HPR HPR (Soft) HPR (Hard) UPR CR (ESD) CR</p>

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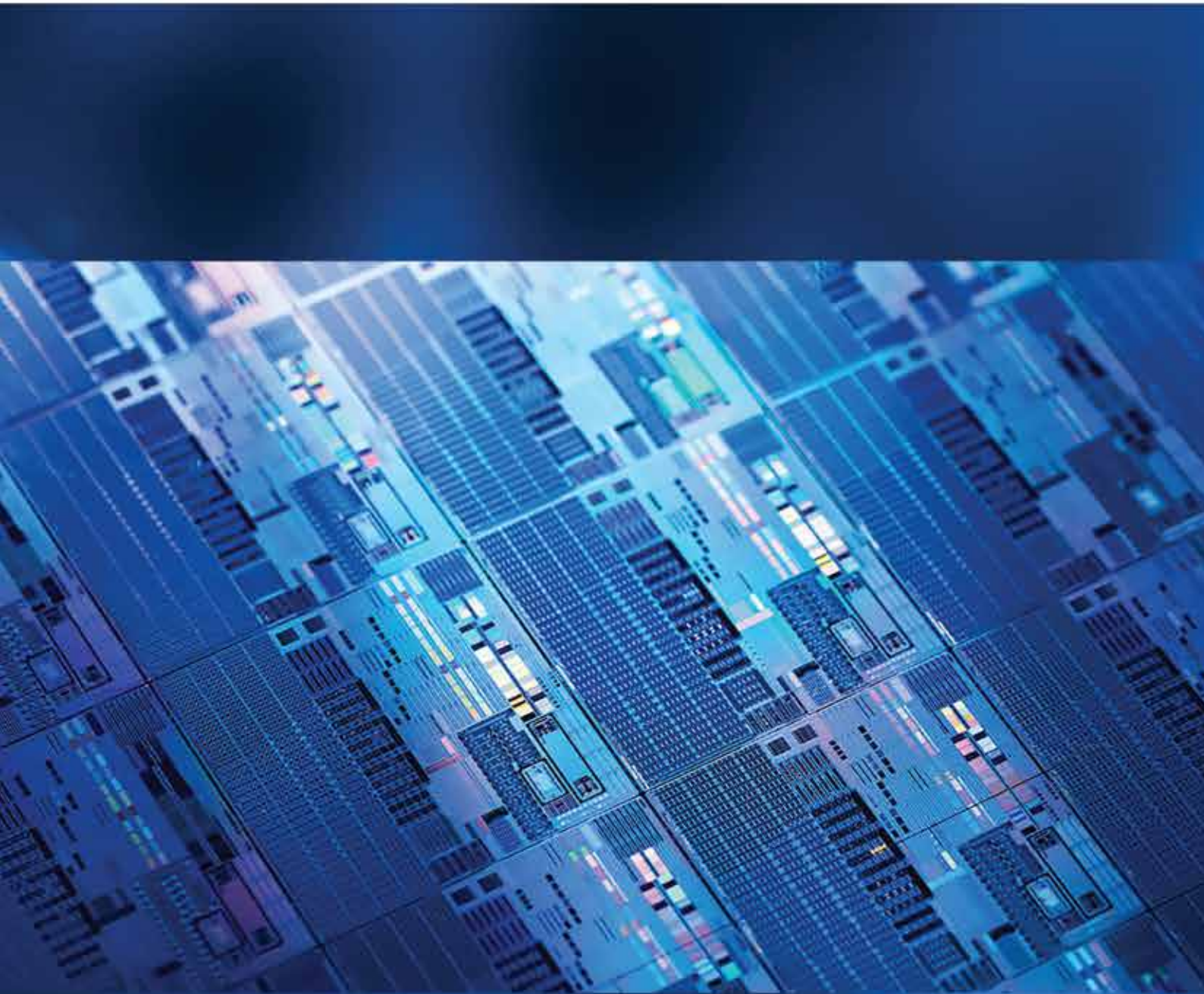
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