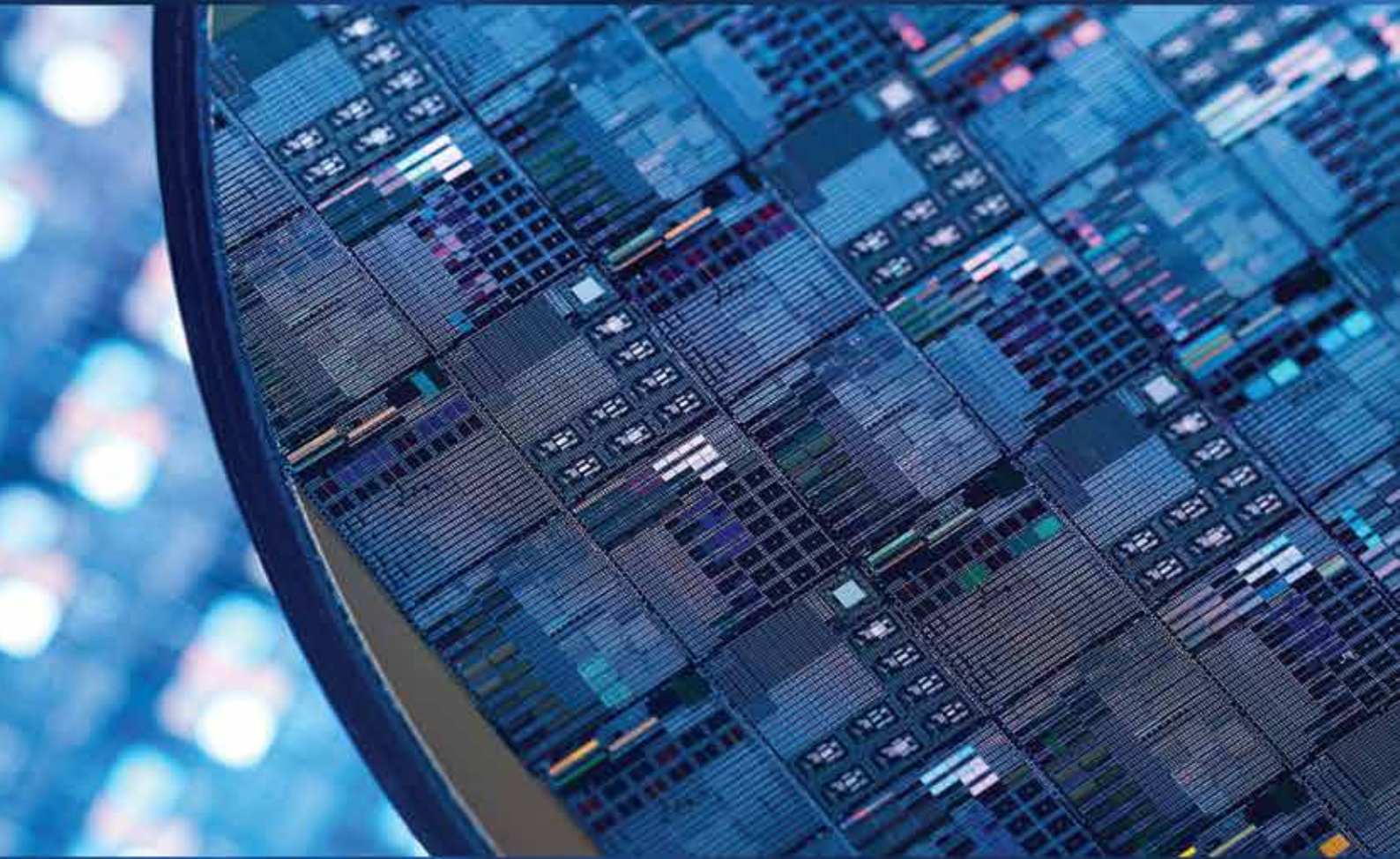




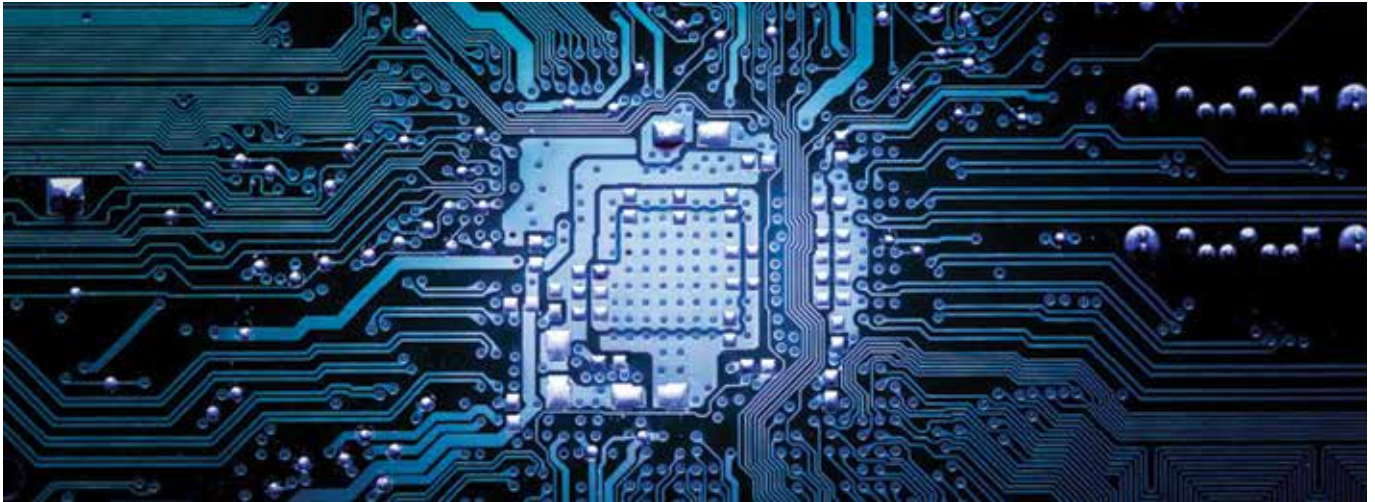
Semiconductor Backend Tools Catalog



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



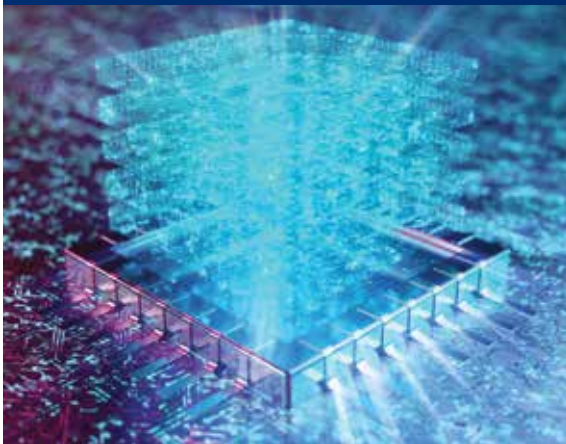
Community

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.

Wire Bond. Product Families



Window Clamp Inserts

Custom designed to your package, the Window Clamp holds leadframe fingers to the Heat Block Insert for precise wirebonding of interconnects to be performed.



Heat Block Inserts

Consists of a frame supporting face and a die pad supporting face and used as a leadframe support plate during the Wirebond process.



Finger Clamps and Bridges

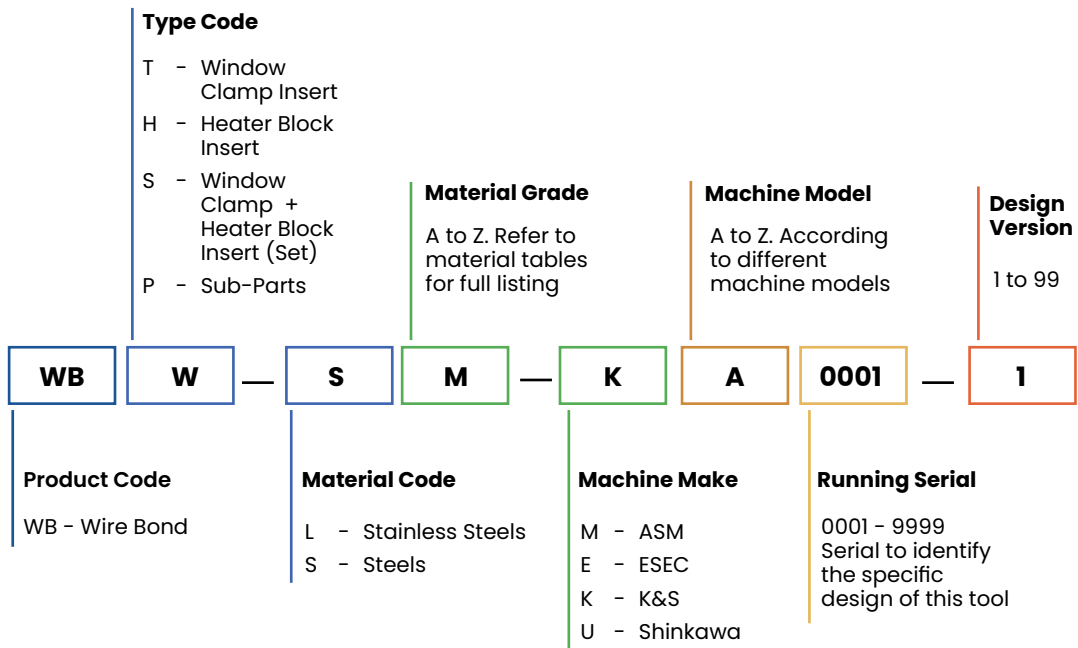
Bridges are used to hold the Finger Clamps in place, while the Finger Clamps contact the lead of the leadframe for the Wedge Bonding process.



Anvil Blocks

Wedge Bonding Anvil Blocks are used as a platform to support the leadframe pad and fingers when the finger clamps applies a downward force for the bonding process.

Part Numbers And Ordering



Heat Block Insert

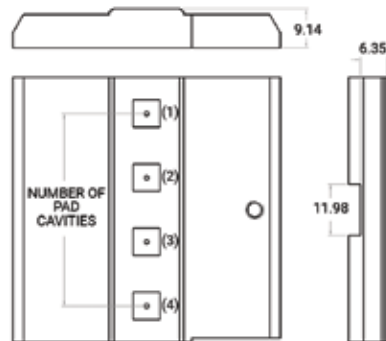


Heater Block Insert is a Wirebond tool that is made up of a frame supporting face and a die pad supporting face and used as a leadframe support plate during the Wirebond process.

The Heater Block Insert features a mounting platform designed to accommodate a lead frame and a die that is attached to the lead frame. The heating element of the Heater Block Insert includes a centralized heating surface and peripheral heaters around the centralized heating surface. This allows the selective heating of the locations on the lead frame in preparation for wirebonding.

In order to ensure a smooth and productive Wirebond process, a Heater Plate that is designed specifically for your leadframe and package is important.

Oricus manufactures a wide range of Heater Block Inserts to fit a wide range of machines from OEMs such as K&S, ASM, Shinkawa and more.



Features

- Suitable for use in a wide range of Wirebonding machines
- Die pad cavities are machined to ensure exacting position tolerances relative to your leadframe or substrate
- Contact surfaces and datums of our Heat Block Insert are precision machined for superior flatness to ensure firm workholding of the leadframe or substrate
- Wide variety of die pad cavity designs like Flat, Angle, Upper Bias, Lower Bias and other customized designs to resolve issues like Non-Stick On Pad (NSOP), die crack and missing wires
- Materials for our Heat Block Inserts are selected with great care for their excellent heat transfer properties that delivers uniform heat distribution on the contact surfaces of the leadframe or substrate

Benefits

- Our Heat Block Inserts are designed and manufactured for a perfect fit to your specific application and equipment
- Plug-and-Play installation that reduces waste and minimizes set up time
- Precision controlled flatness on the pad cavity and top surface of the heater plate ensures a smooth and productive Wirebonding process
- Wealth of experience in the requirements for different types of packages
- In depth understanding of the benefits and limitations of various Wirebond equipment allows us to design the best tool for your particular application

Part Number	Number of Pad Cavities
WBH-SM-KA0001-01	4
WBH-SM-KA0002-01	5
WBH-SM-KB0001-01	4
WBH-SM-KB0002-01	6
WBH-SM-KC0001-01	5
WBH-SM-KC0002-01	5



ESD Properties

Conductive $10^5 \Omega$

Applications

Ball Bonding

Material

Superalloys
Stainless Steels
Tool Steels

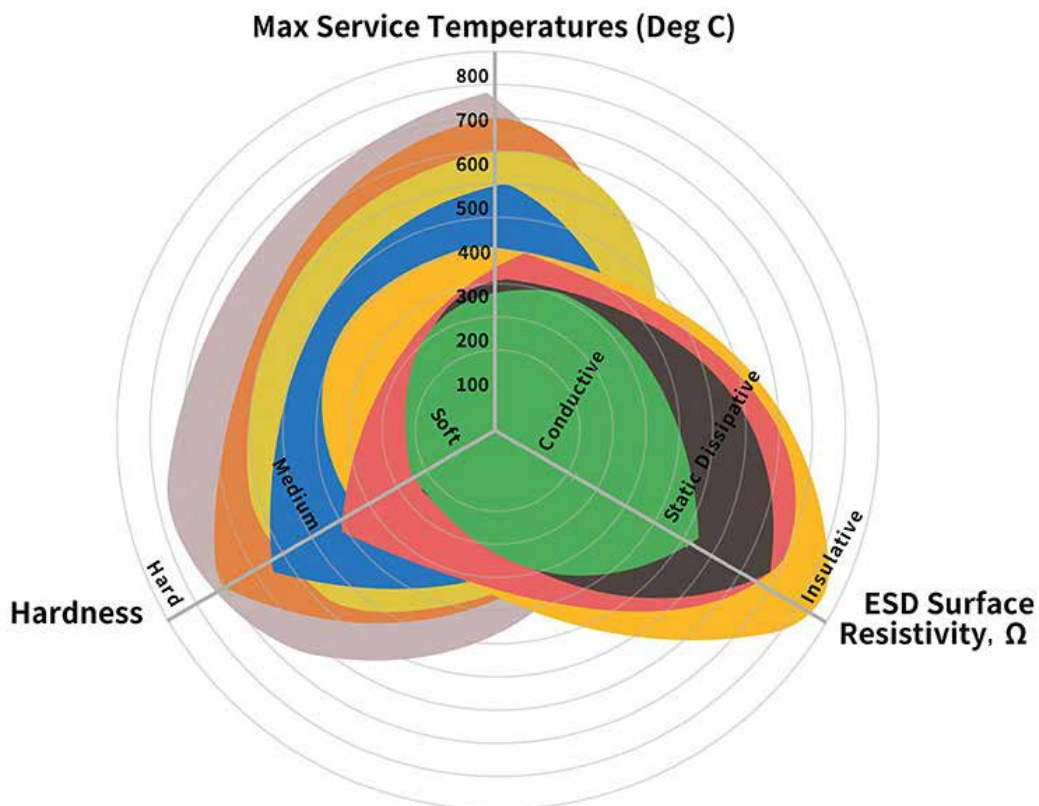
Die Pad Cavity Designs

Flat
Angle
Upper Bias
Lower Bias

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

Non Ferrous Metals NF Line

Superalloy SA Line

Performance Engineering Plastics SP Line

Stainless Steel SS Line

Engineering Plastics EP Line

Tool Steel TS Line

Rubber R Line

<p>WC LINE</p> <p>Tungsten Carbide</p> <p>High Wear & High Temp Resistance</p> <ul style="list-style-type: none"> Carbide, K15 Carbide, K30 Carbide, M30 Carbide K40 Carbide, MG30 	<p>SA LINE</p> <p>Superalloy</p> <p>All-Round Superior Performance</p> <ul style="list-style-type: none"> Haynes 25 (L605) Inconel Alloy 625 Inconel Alloy 718 Incoloy Alloy 925 Nitronic 50 Nitronic 60 Titanium Grade 2 Stellite 6 Stellite 31 	<p>SS LINE</p> <p>Stainless Steel</p> <p>Balanced Properties</p> <ul style="list-style-type: none"> 15-5 PH 17-4PH SUS 430F SUS 420 SUS 440C SUS 316 SUS 301 SUS 304 SUS 303 	<p>TS LINE</p> <p>Tool Steel</p> <p>High Strength</p> <ul style="list-style-type: none"> 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>NF LINE</p> <p>Non Ferrous Metals</p> <p>Special Applications</p> <ul style="list-style-type: none"> Aluminium 7075 Aluminium 6061 Copper Brass Hovadur K350 	<p>SP LINE</p> <p>Performance Engineering Plastics</p> <p>Advantageous Performance & Value</p> <ul style="list-style-type: none"> 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>EP LINE</p> <p>Engineering Plastics</p> <p>Economical And Versatile</p> <ul style="list-style-type: none"> Acrylic/ Polycarbonate TECAFORM SD Delrin ESD Delrin White Delrin Black POM PEEK PEEK HT PEEK GF 30% PEEK CF 30% 	<p>R LINE</p> <p>Rubber</p> <p>Geometric Flexibility ESD Protection</p> <ul style="list-style-type: none"> NBR NBR (Soft) NBR (Hard) NBR (Coated) HPR HPR (Soft) HPR (Hard) UPR CR (ESD) CR

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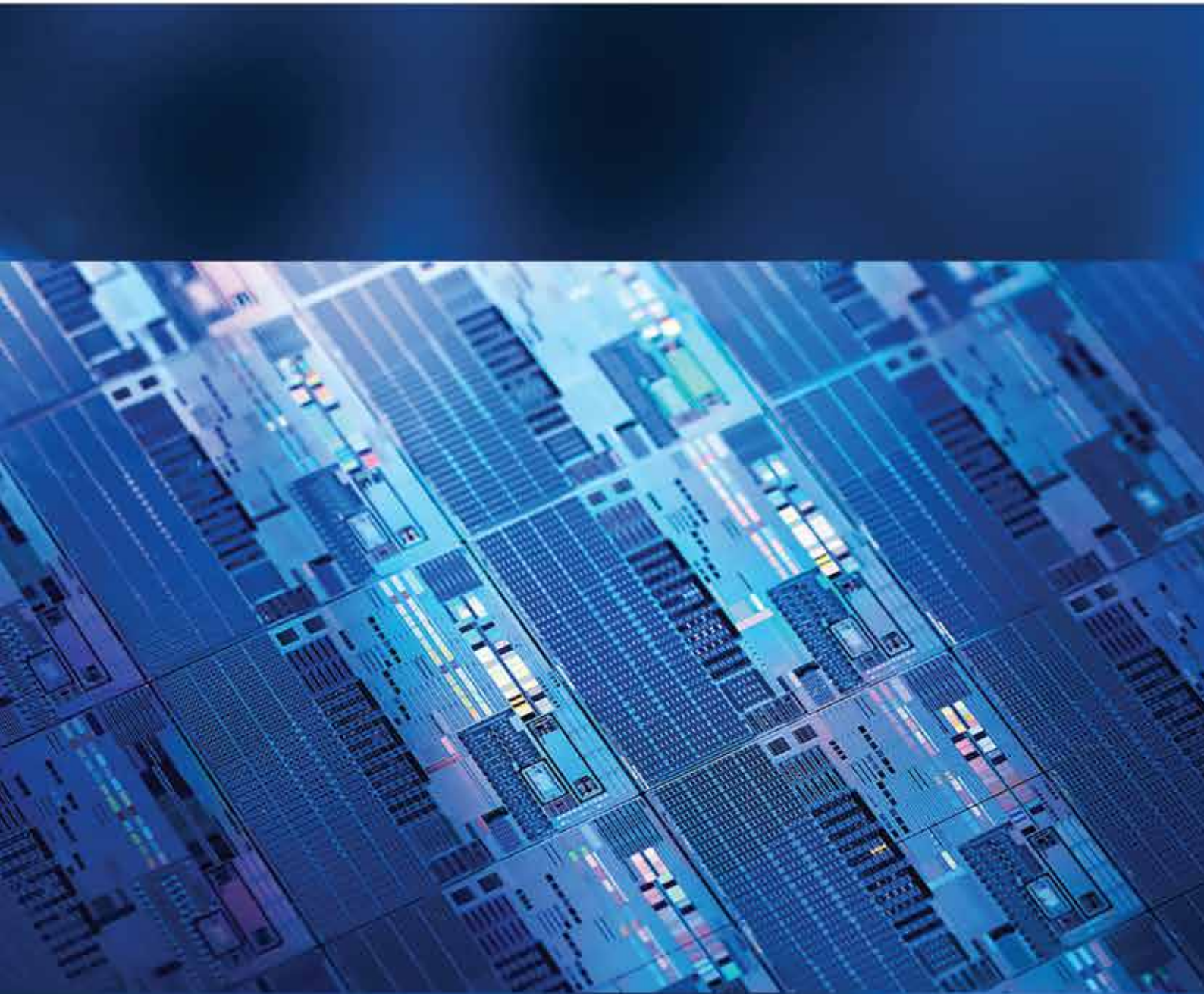
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