

COMPANY PROFILE

Take your advanced technology further

An engineering-led manufacturing partner for complex electronics across the product lifecycle

ENGINEERING | MANUFACTURING | SUSTAINMENT

Extel Technologies helps OEMs and scaleups develop, manufacture, and sustain technically complex electronic products.

Our local engineering team works directly with customers to develop new solutions, build prototypes, and progress products into repeatable manufacture.

That capability remains connected with industrialisation, recurring production, test,

supply chain management, and lifecycle support.

With manufacturing operations in Melbourne and California, we provide access to engineering and manufacturing capability in Australia and the United States, creating practical options for regional production, expansion, second sourcing, and continuity planning.

Established 1991 | Dual-site manufacturing | High-mix, low-to-medium-volume electronics

Manufacturing capability to meet your program

We work with organisations whose products depend on technically capable manufacturing, controlled quality and supply continuity over time. Our role can begin with a new product, an established production program, or a requirement to transfer, recover or expand manufacturing

01

ESTABLISHED PROGRAM

Recurring PCBA and box-build manufacture, supported by production planning, material coordination, inspection, test and delivery. Engineering and lifecycle support remain available throughout the relationship, including for component changes, production issues, repair and obsolescence.

02

PRODUCT DEVELOPMENT AND PRODUCTION ENTRY

Local collaborative product development, prototypes, DfX and NPI. We can work from the development stage or with an existing design, bringing engineering, materials, manufacturing processes and test together to support progression into deployment and repeatable production.

03

TRANSFER, RECOVERY AND EXPANSION

Support for programs changing manufacturer, appointing an additional manufacturing partner, addressing production difficulties, or establishing production capability in Australia or the United States. We begin with the product's existing requirements and the technical, quality and process evidence needed to reproduce it at the receiving operation.

OUR MANUFACTURING PROFILE FIT

- Technically complex electronic assemblies and products.
- High-mix, low-to-medium-volume production and recurring demand.
- Products requiring engineering involvement, controlled changes and production support.
- Programs with material quality, traceability, component-supply or lifecycle requirements.

Industries we serve include defence and national security; mining technology; medical devices and diagnostics; critical infrastructure and networks; advanced industrial and instrumentation; robotics and autonomous systems; agriculture; climate and energy; space systems; transport, EV and rail systems.

Program fit is determined by the product, manufacturing requirements and applicable quality and compliance standards, not industry alone.

One connected approach

Keeping engineering, manufacturing, quality and supply expertise connected across development, production and sustainment.

For your team that means access to people who can assess decisions across technical, supply, production and commercial implications. Local program teams coordinate communication and issue resolution, with access to wider group expertise and leadership when needed.

■ DURING DEVELOPMENT

Design choices can be considered alongside component availability, assembly, test and production requirements, supporting progression from prototype into manufacture.

■ DURING RECURRING PRODUCTION

Materials, schedules, quality evidence, engineering changes and delivery requirements remain connected.

■ THROUGH PRODUCT LIFE

Build history, repair findings and component lifecycle information support decisions about continued production, revision or retirement.

A COMPONENT CHANGE IS ALSO A MANUFACTURING DECISION

When a part becomes unavailable, the response may involve alternative sourcing, engineering assessment, test changes, existing inventory and delivery timing.

Our model brings those considerations together, giving your team a clearer basis for deciding what to change and when.



BUILT FROM PRODUCT EXPERIENCE

Extel was founded in Melbourne in 1991 as an original equipment manufacturer, developing, producing and marketing its own telecommunications technology products.

In 2009, Extel began its transition from OEM to electronics manufacturing services. Having been responsible for our own products from engineering and production through market delivery and lifecycle support, we understand the technical and commercial issues our customers manage across the product lifecycle.

That experience continues to influence how we work today. Bringing complex electronics into production requires design, manufacturing, test, supply and quality decisions to work together. Design choices affect manufacturability and test. Component choices affect availability, cost and lifecycle risk. Quality requirements influence process and documentation. Once a product is in market, sustaining it also depends on the engineering knowledge, manufacturing history and supply decisions behind it.

As Extel evolved from OEM to manufacturing and technology partner, our capabilities expanded across engineering, industrialisation, procurement, manufacturing, quality, test and lifecycle support, creating the connected delivery model we operate today.

Today, we support OEMs and scaleups across Australia and internationally, from early product development and prototype transition through recurring production, change management, repair and sustainment.

The acquisition of Synergetics in California in 2024 extended that model into the United States, adding engineering and manufacturing capability and creating an Australian-US platform for customers requiring support across both markets.

Local product development

From prototyping and NPI to program sustainment in a moving market.



Extel's local engineering team works closely with customer engineering and technology groups to develop new solutions, build prototypes and turn them into end products. Direct technical collaboration supports rapid development and iteration, with manufacturability, component supply and test considered as the product takes shape.

This connection is valuable when development schedules are short: engineering questions can be addressed with input from the people responsible for building, verifying and supporting the product. The development pathway reflects the product's complexity and requirements.

Our role includes electronic product design and development, prototype and engineering builds, component review, technical problem-solving and product enhancement. Engineering support continues into recurring production and sustainment.

DFX AND COMPONENT ENGINEERING

Design for Manufacture, Assembly and Test reviews assess how the product can be built and verified consistently. Design for Supply Chain and BOM health reviews address component availability, long lead times, single-source exposure and obsolescence.

Reviews connect:

- Assembly constraints, test access and production repeatability.
- Component selection, sourcing options and lifecycle requirements.
- Design and component changes with their manufacturing implications.
- Value-engineering opportunities across components, procurement and production.

Gain additional design and engineering capability while keeping IP ownership, design authority and final release firmly in your hands.

INDUSTRIALISATION AND NPI

We bring the design and bill of materials together with the manufacturing processes, tooling, work instructions, inspection and test requirements needed for repeatable production. Prototype and engineering builds provide a practical basis for resolving issues and refining the production process before recurring release.

TEST DEVELOPMENT AND PRODUCT ENHANCEMENT

Our technical services include functional test-jig development, customised functional and in-circuit testing, and firmware engineering and testing. Test methods, coverage and acceptance criteria are developed around the product and manufacturing requirement.

Support for upgrades and sustaining engineering can include component replacement, redesign, firmware or software updates and associated testing within the agreed scope. Engineering and production documentation are updated as approved changes are introduced.

Sustained program delivery from board to assembly

Managing established electronics programs across production, supply, quality and engineering change.

Extel supports established production programs from PCBA through box build and final assembly, with production planning, procurement, quality, test and engineering support coordinated across the program.

Our role extends beyond individual builds. We manage the manufacturing requirements of an active program over time, including build planning, material availability, approved product revisions, configuration control, engineering changes, inspection and test requirements, supplier coordination, technical issue resolution and delivery commitments.

This supports continuity of production and delivery as demand, supply conditions, technical requirements and product configurations change.

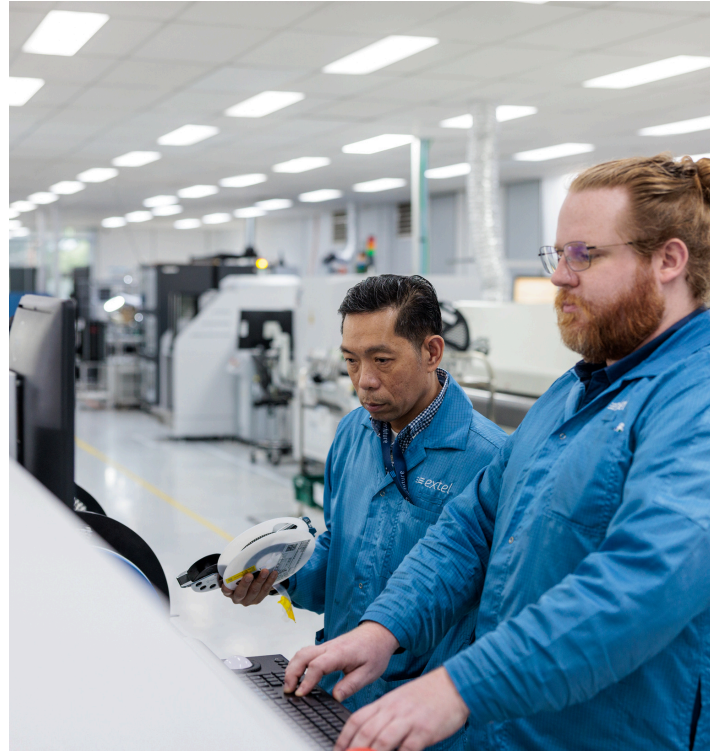
PRINTED CIRCUIT BOARD ASSEMBLY

Surface-mount and through-hole assembly support technically complex boards and mixed-technology products. Manufacturing is backed by inspection, traceability and product-specific testing within the required scope. Our manufacturing capability also includes selective soldering, conformal coating and environmental stress screening where applicable to the product.

BOX BUILD AND SYSTEM INTEGRATION

Our capability extends from PCBA into higher-level electronics assemblies and box build, bringing boards, enclosures and subassemblies together within the defined product scope. Procurement and supplier coordination support the build items required for assembly and integration.

Our U.S. manufacturing facility also specialises in **cable and harness assembly** in California, supporting both integration requirements and established cable and harness programs.



ONGOING PRODUCTION SUPPORT

Manufacturing program support includes:

- Build planning and schedule coordination.
- Material planning and supply continuity management.
- Procurement and supplier coordination.
- Configuration and documentation control.
- Engineering-change implementation.
- Production issue investigation and technical escalation.
- Inspection and test management.
- Regulatory and certification support for product, component and manufacturing changes.
- Process, yield and productivity improvement.
- Management of approved product variants and revisions.

Quality, inspection and technical control

CERTIFIED MANAGEMENT SYSTEMS

Quality controls are embedded through material receipt, manufacture, inspection, test, technical resolution and release, supported by certified management systems and documented production records.

MANAGEMENT SYSTEM CERTIFICATIONS

AS9100D | ISO 13485 | ISO 9001

ELECTRONICS INDUSTRY STANDARDS

IPC-A-610 | IPC J-STD-001 | IPC-7711/7721

SECURITY AND DEFENCE

DISP | PSZ2 | E8 ML2 | AUKUS Authorized User
ITAR registered (U.S.)

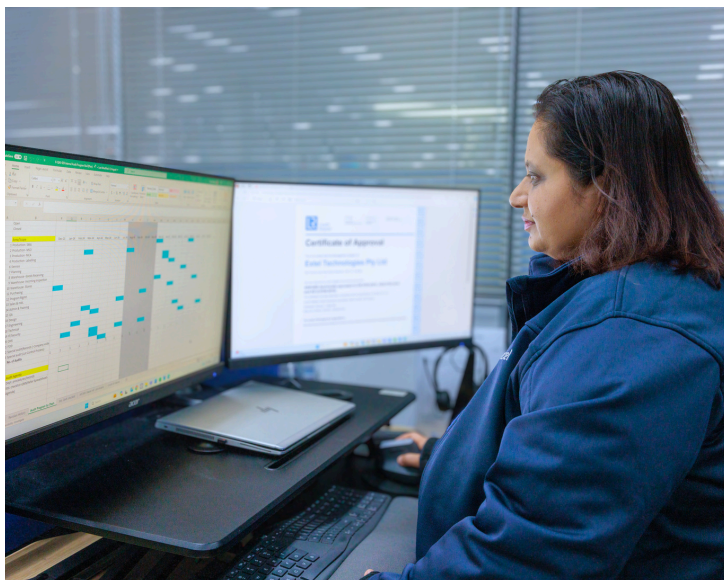
PRODUCT AND MANUFACTURING CONTROLS

FAI to meet AS9102 | RoHS | FOD control | ESD control | CAPA

These systems support controlled processes, supplier management, production and quality records, non-conformance management, corrective action and product release.

INDUSTRY EXPERTISE AND LEADERSHIP

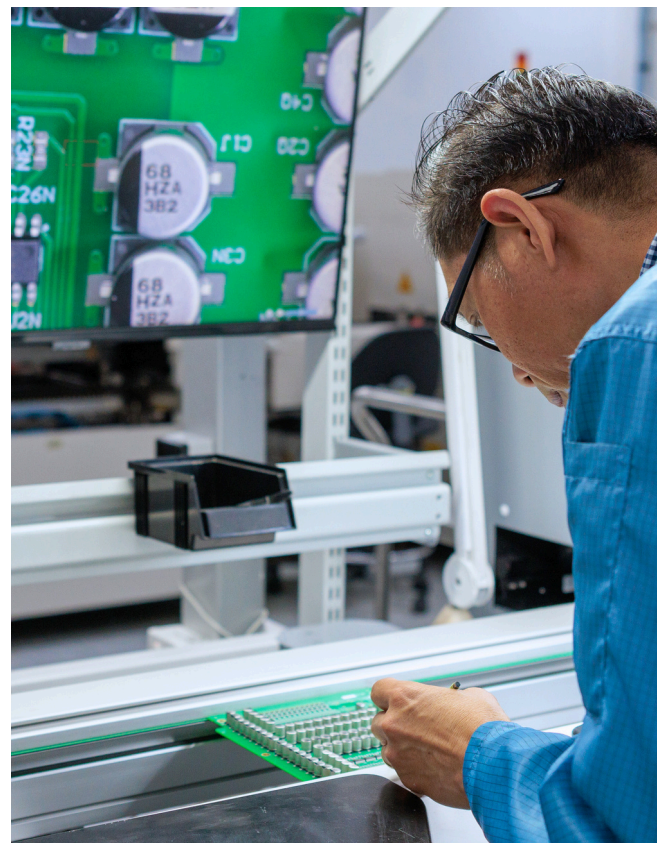
In-house Master IPC Trainer capability supports training, interpretation and consistent application of workmanship requirements within the manufacturing environment.



INSPECTION AND TESTING

Inspection and test are selected according to the assembly, product requirements and defined acceptance criteria.

- Solder paste inspection (SPI) for verification of deposition before component placement.
- 3D AOI for assessment of component placement and visible solder conditions, supported by AI-assisted inspection programming.
- 3D X-ray inspection for hidden solder joints and internal assembly conditions, including BGA and other bottom-terminated components.
- In-circuit testing (ICT) where required by the product and test strategy.
- Product-specific functional testing against defined product requirements.



Connected records behind every program delivery

Oracle NetSuite OneWorld and Advanced Manufacturing, together with connected production and inspection systems, connect product revisions, materials, manufacturing activity and quality records across the program.

These connections help answer practical questions: **which revision applies, which materials were used, what happened during the build, and what evidence supports release?**

01 PRODUCTION DEFINITION AND APPROVED CHANGE

BOMs, revisions, workflows and approvals connect engineering changes with procurement requirements, work instructions and production activity.

02 MATERIAL AND MANUFACTURING HISTORY

Work orders, inventory movements and lot/serial records link material use to the build. Inspection, test, rework and non-conformance evidence remain connected to that history.

03 RELEASE, DELIVERY AND LIFECYCLE VISIBILITY

Production status and quality evidence inform release and fulfilment decisions. Linked shipment, service and records extend visibility through delivery and support.

MATERIAL INTEGRITY THROUGH THE BUILD

Material identification, component counting and lot control connect incoming stock with production records. Customer-specific identifiers support segregation where required. Component Count Numbers link quantity records with lot control; post-build recounting and reconciliation update the remaining material position. Mycronic intelligent storage system supports automated component storage and retrieval. These controls support both correct material use and visibility of what remains available for subsequent builds.

CONTROLLED TECHNICAL RESOLUTION

Rework is managed through defined scope, approvals, records and release criteria. Non-conformances and corrective actions connect the issue with its investigation and response. Inspection results, test evidence, repair findings and production data inform improvements to the manufacturing process.

For customers, this provides a basis for schedule discussions, technical investigations and product changes grounded in the relevant build, material and release evidence.



Supply chain decisions grounded in program delivery

Electronic component supply influences delivery timing, product choices, inventory exposure and working capital. We connect procurement and component management with engineering and production, so these decisions can be made together.

PLANNING AND WHAT-IF ANALYSIS

Material requirements planning combines BOM structure, forecast demand, current stock and build timing. Analysis includes required quantities, attrition allowances and common parts across assemblies.

NetSuite what-if reporting assesses whether available stock can support a proposed production requirement and identifies where supply gaps would arise. This gives the team a practical basis for assessing a schedule change, additional build or revised demand before committing materials and production resources.

SOURCING DEPTH AND COMPONENT SUPPORT

Local program teams draw on dedicated group procurement resources, senior procurement oversight and established manufacturer and authorised-distributor relationships. Sourcing considers market availability, approved channels and customer-approved alternatives where required.

Engineering input connects potential substitutions with manufacturability, test, product requirements and the approval needed before a change is implemented. BOM health reviews and obsolescence monitoring extend that assessment across the product's support life.

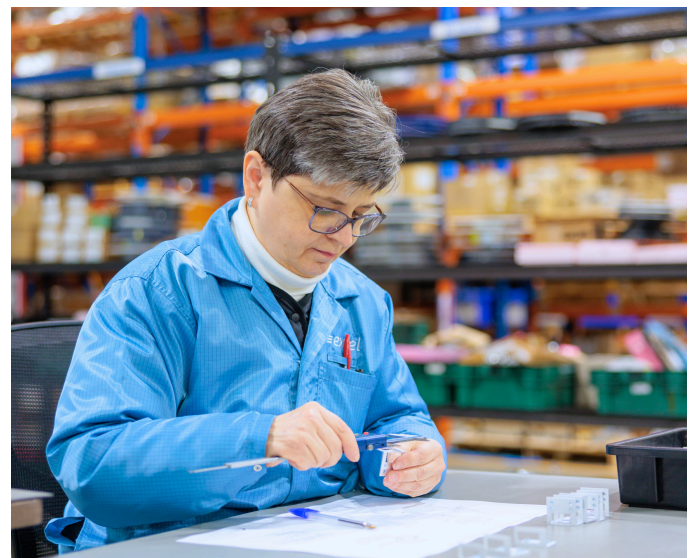
INVENTORY OPTIONS AND WORKING CAPITAL

Available options include vendor-managed inventory (VMI), safety-stock buffering for critical or long-lead components, and agreed arrangements for holding component inventory and material liability on our balance sheet. The commercial model establishes purchasing responsibility, ownership, funding, release to production and treatment of excess or obsolete material. These arrangements give customers options for securing a material pipeline while managing the timing and extent of inventory commitments.

Forecast assumptions and buffer levels can be assessed alongside supply exposure, build schedules and working-capital requirements. The appropriate arrangement depends on the program and is agreed with the customer.

WAREHOUSING AND LOGISTICS

Storage, inventory management and logistics support are available to all customers and coordinated with production, delivery and lifecycle requirements.



A CLEARER BASIS FOR COMMITMENT

Which builds stock can support | Where supply gaps may arise | Which alternatives need review | What inventory the program will carry

Delivery continuity throughout the product lifecycle

Lifecycle support forms part of the continuing manufacturing relationship. Extel supports established programs and products through service and repair, component change, obsolescence management, product evolution and ongoing delivery.



MANUFACTURING TRANSFER AND CONTINUITY PLANNING

For a transfer, second source or production recovery, we assess the documentation, BOM, sourcing requirements, tooling, test methods and manufacturing knowledge needed by the receiving operation.

The scope can include documentation-gap review, process and test transfer, production validation, ramp planning and supply coordination. The objective is to establish a defined manufacturing basis for the transferred product and its subsequent recurring production.

OBSOLESCENCE AND PRODUCT CHANGE

When a component or existing configuration can no longer support the program's requirements, we help assess the manufacturing implications of the available response. Support can include component review, replacement options, engineering changes, test updates and agreed upgrade or redesign activity.

SERVICE AND REPAIR

Diagnostics, component-level troubleshooting, repair and controlled rework support products requiring attention after manufacture. Build history, inspection and test records can inform the investigation and the work required.

Repair findings also provide information for engineering and production teams when a recurring issue, component concern or process improvement needs to be assessed.

One **engineering-led** manufacturing partner with an established Australian U.S. manufacturing pathway



01

ENGINEERING-LED ACCOUNTABILITY

Engineering remains connected from product development and industrialisation through production, engineering change and technical problem-solving.



02

INTEGRATED SUPPLY-CHAIN & LIFECYCLE LEADERSHIP

BOM risk, sourcing, availability, inventory, scenario planning and obsolescence are managed alongside engineering and production to support continuity throughout the product lifecycle.



03

CONNECTED PRODUCTION, QUALITY & CONTROL

Connected production systems, process control, inspection and test provide visibility and traceability across manufacturing and product release.



04

AUSTRALIA + U.S. MANUFACTURING

Manufacturing capability in Australia and California provides options for regional production, expansion, second sourcing and continuity through one group.

For relevant defence programs, the Extel group combines AS9100D certification, DISP Level 1 status and AUKUS Authorized User status in Australia with an ITAR-registered U.S. operation, supporting the quality, security and defence-trade requirements involved in working across Australian and U.S. programs.

AUSTRALIAN FACILITY

Advanced manufacturing infrastructure for complex electronics

See how our people, systems, equipment and secure manufacturing environment come together to support high-mix, high-reliability electronics programs right here in Australia.

EXPLORE THE FACILITY



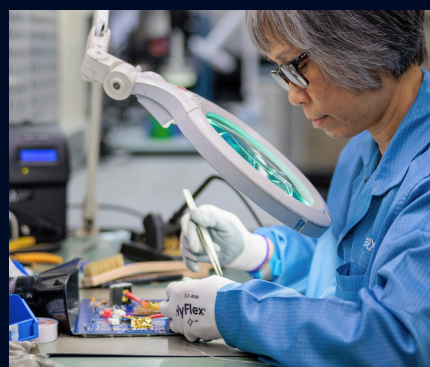
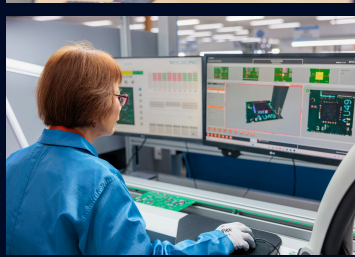
Take a virtual tour

Scan the QR code for a closer look at our Melbourne HQ



Arrange a site visit

Contact us to schedule a tour with an Extel team member



All photography featured in this company profile was captured at Extel Technologies' Melbourne facility. No stock imagery has been used.

Discuss your program requirements

If you are developing, transferring, scaling or sustaining a complex electronics product, we would welcome the chance to discuss your requirements.

We can work with your team to define the manufacturing approach, address technical and supply considerations, and establish the path forward.

ESTABLISHED MANUFACTURE

Recurring production, engineering support, supply and delivery requirements.

PRODUCT DEVELOPMENT

Local collaboration, prototypes, DfX, test development, industrialisation and NPI.

TRANSFER OR EXPANSION

Manufacturing transfer, additional-source production or Australian and U.S. production options.

LIFECYCLE SUPPORT

Component availability, obsolescence, repair and sustaining manufacture.

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