

6 May 2026

dorsaVi Advances Ultra-Edge Strategy with Launch of Modular Hardware Platform Program

The commencement of the Ultra-Edge Modular Design program marks dorsaVi's transition from technology and IP development to the design and build of a manufacturable, partner-ready hardware platform.

Key Highlights:

- **Execution Plan progression:** The Ultra-Edge Modular Design and Build program is the third workstream in dorsaVi's five-stage Execution Plan, the step where the Company's chip technology, following initial validation, moves from the laboratory into a physical, manufacturable product intended for deployment in real-world robotics, exoskeleton and industrial AI applications.
- **Three-Layer Modular Hardware Architecture:** The program establishes a hardware architecture that separates sensing, compute, and memory into distinct but interoperable layers enabling flexible configuration across robotics, autonomous systems, exoskeletons, clinical wearables, and industrial IoT without redesigning the underlying technology stack.
- **Ultra Low power target:** The power architecture is being designed specifically for in-memory compute, targeting operation within sub-1mW power budgets, the threshold required for coin-cell battery-operated autonomous and wearable devices.
- **Industry Guided Design:** The Technical Advisory Board, including Roger Peniche, former Vice President of Engineering and Manufacturing at Omron Robotics, has provided direct guidance on the hardware requirements of next-generation robotics and autonomous systems, and those requirements have directly shaped the modular architecture's design priorities.
- **Transition from Technology Developer to Hardware Platform Provider:** Successful completion of the program positions dorsaVi to offer a manufacturable, partner-ready ultra-edge intelligence module that can be licensed, embedded, or deployed across the full breadth of the Company's commercial target verticals marking a defining milestone in the Company's evolution.
- **Validation Pathway:** Initial validation planned within the Company's existing FDA-cleared and TGA-certified sensor hardware.
- **Integration Interface Under Assessment:** An API layer is being assessed to provide a clean, documented integration interface through which robotics manufacturers, industrial automation integrators, and autonomous systems developers can embed dorsaVi's ultra-edge intelligence stack into their own platforms without requiring expertise in RRAM physics or neuromorphic chip architecture.

Melbourne, Australia, 06 May 2026 – dorsaVi Limited (ASX: DVL) (“dorsaVi” or “the Company”) is pleased to announce the commencement of its Ultra-Edge Modular Design and Build program, the third workstream in the Company’s five-stage Execution Plan and the program through which dorsaVi will translate its RRAM semiconductor and neuromorphic computing intellectual property into a physical, manufacturable hardware platform.

This program represents a critical transition point as the Company has spent the past period proving the science, securing IP licences with world-class research partners and validating that its RRAM memory and neuromorphic processing technologies work together as a coherent system¹. The Ultra-Edge Modular Design and Build program aims to convert this validated technology into a manufacturable hardware platform, a device that can be tested in dorsaVi’s own sensor products, offered to external partners, and ultimately embedded into the next generation of robotics, exoskeletons and autonomous systems, where ultra-low-power local intelligence is the critical performance constraint these markets have not yet been able to solve.

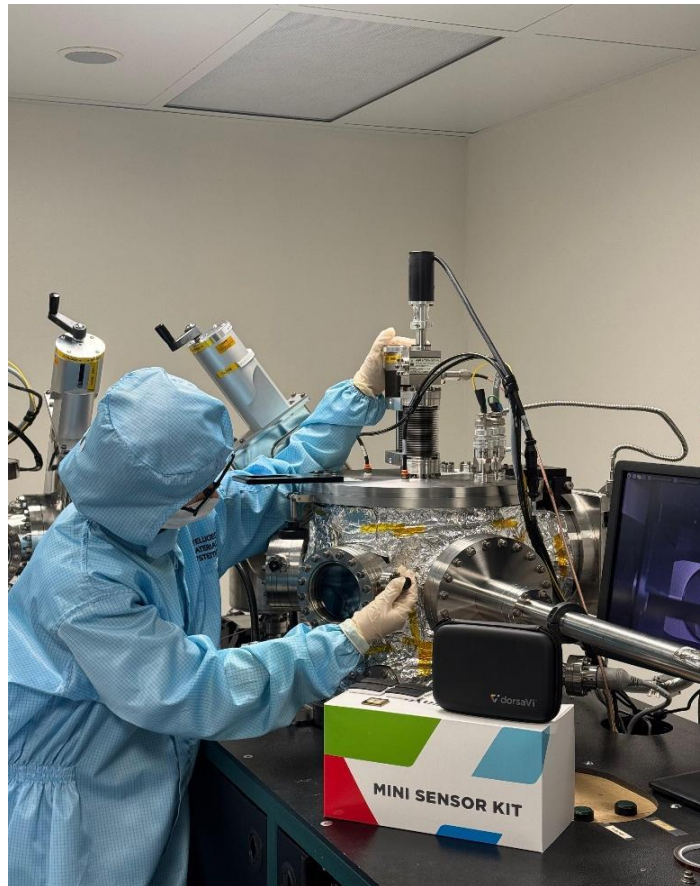


Figure 1: RRAM chip characterisation work in progress, with dorsaVi’s commercially-deployed sensor hardware visible on the bench illustrating the integration of the existing sensor business with the hardware development program.

¹ Refer to ASX Announcement dated 21 April and 28 April 2026

The Ultra Edge Modular Program: Four Core Workstreams

The Ultra-Edge Modular Design program has four core workstreams, together designed to produce a hardware platform that is not only technically capable but commercially deployable, manufacturable at scale, integrable with partner systems, and validated in a real-world, regulatory-approved environment:

- **Modular Device Pack Architecture:** Defining the overall system architecture and the physical and logical boundaries between layers.
- **Layer Separation:** Separating sensing, compute, and memory into distinct but interoperable hardware layers, each independently configurable and upgradeable.
- **Power Architecture:** Designing a power management system specifically optimised for in-memory compute and sub-1mW autonomous operation.
- **API Layer Development:** Building the commercial integration interface through which external partners can embed dorsaVi's ultra-edge intelligence stack into their own platforms.

The Architecture: Sense, Decide, Act

The defining characteristic of the program is its modular architecture, a deliberate design philosophy that separates the three fundamental functions of an intelligent edge device into distinct, interoperable layers. These three layers, sensing, compute and memory, are the hardware foundation that enables dorsaVi's Sense → Decide → Act operating model on a single integrated platform:

LAYER	FUNCTION	DORSAVI IMPLEMENTATION
SENSING	Data capture from the physical world	dorsaVi's FDA-cleared and TGA-certified movement sensor hardware - a validated, clinically proven data capture foundation with over a decade of real-world field deployment across clinical, elite sports, defence, and occupational health environments.
COMPUTE	Real-time inference and decision-making	The neuromorphic processing architecture being developed (the "reflex engine") delivering brain-inspired compute that processes sensor data in parallel, adapts at the edge, and operates at ultra-low power without cloud dependency.
MEMORY	Persistent storage of model weights and states	The RRAM memory technology being developed with Nanyang Technological University Singapore (NTU) and ITRI enabling non-volatile, non-power-consuming storage of AI model parameters directly within the memory array where inference occurs.

Table 1: Ultra-Edge Modular Architecture expressed in 3 layers

By building each function as a separate, swappable module rather than locking them into a single fixed design, dorsaVi gains several important commercial advantages. The same core architecture can be configured for entirely different products; a clinical wearable, an industrial safety sensor, a collaborative robotics platform, without a full redesign each time. As the technology matures, individual layers can be upgraded independently without disrupting the commercial relationships and integrations already built on top of the platform.

This modular approach is not just a technical choice but is a core commercial strategy. It means dorsaVi can license or partner at the individual layer level, giving the Company a much wider range of commercial models than a single all-in-one chip design would allow.

The Power Architecture: Intelligence at Sub-1mW

Among the most technically significant workstreams within the program is the development of a power architecture specifically optimised for in-memory compute operation. Conventional edge AI devices are designed around the assumption that computation and memory are separate, and that data will move continuously between them. This assumption is embedded into every aspect of their power management such as the voltage regulators, the clock distribution networks, the memory refresh cycles. Designing a power architecture for in-memory compute requires rethinking these assumptions from first principles.

dorsaVi's power architecture targets operation within sub-1mW power budgets, the threshold required for coin-cell battery-operated devices and always-on autonomous sensing platforms. This is a level of power efficiency that conventional Von Neumann architectures cannot achieve while simultaneously delivering meaningful AI inference capability. The in-memory compute paradigm where inference occurs within the RRAM array itself, without data movement between separate memory and compute units is the enabling technology that makes sub-1mW intelligent operation achievable.

The power architecture workstream encompasses:

- **Voltage Supply and Regulation:** Designing supply and regulation schemes compatible with RRAM switching requirements and the low-voltage operation of neuromorphic compute circuits.
- **Power Gating:** Strategies that allow inactive modules to reach near-zero power states between inference events, critical for always-on sensing platforms with limited energy budgets.
- **Energy Harvesting Compatibility:** Designing for deployment in environments where battery replacement is impractical including embedded industrial sensors, remote autonomous field systems, and long-duration wearable devices.

The Hardware Integration Interface: How Partners connect through API

Alongside the hardware architecture workstreams, dorsaVi is assessing the design of an API layer that would support Ultra-Edge device integration with external hardware platforms and partner systems. This work is being scoped as the future commercial interface of the program, the mechanism through which dorsaVi's modular intelligence stack could be made accessible to robotics manufacturers, industrial automation integrators, autonomous systems developers, and medical device companies seeking to embed ultra-edge AI capability into their own products.

The intent is for the API to abstract the complexity of the underlying hardware, providing a clean, documented interface to the sensing, compute, and memory layers so that partner developers can integrate dorsaVi's capability without requiring deep expertise in RRAM physics or neuromorphic chip architecture. This reflects a well-established platform strategy in advanced hardware: building a proprietary technology layer, then making it accessible to a partner ecosystem that extends the

commercial reach of the underlying IP. The specific design, scope and commercial structure of this layer are being assessed and validated as part of the broader program.

For robotics and autonomous systems partners in particular, an API layer of this kind would be designed to provide a pathway to embed sub-millisecond, ultra-low-power local inference into their platforms without the capital investment and development timeline required to build advanced memory and neuromorphic compute capability from scratch. dorsaVi sees this as a meaningful potential commercial advantage, allowing the Company to participate in the value created by the robotics, autonomous systems and industrial AI markets without needing to build every end application itself.

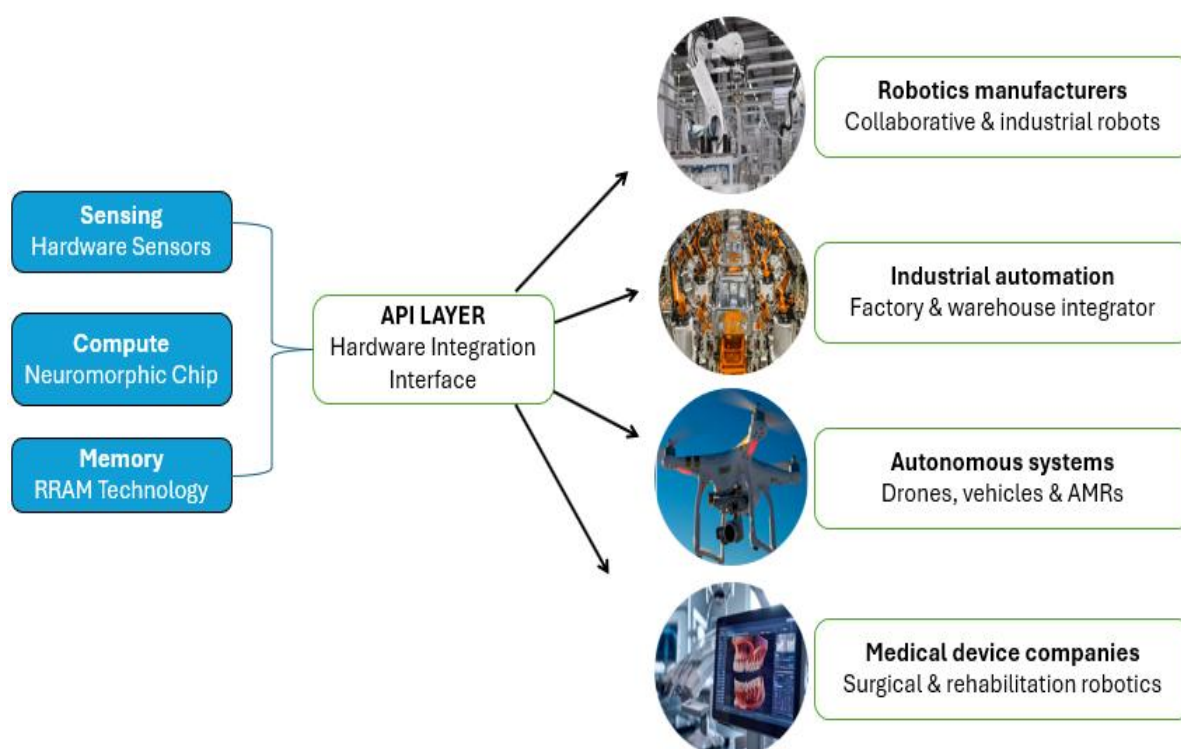


Figure 2: An API layer connecting dorsaVi's modular intelligence stack to partner systems across robotics, industrial automation, autonomous systems, and medical devices.

Why This Matters: The Hardware Requirements of Next-Generation Robotics

The Ultra-Edge Modular Design program is not being developed in isolation from market demand but it is being shaped by it. The Company's Technical Advisory Board, which includes Roger Peniche, former Vice President of Engineering and Manufacturing at Omron Robotics, has provided direct guidance on the hardware requirements of next-generation robotics and autonomous systems, and those requirements have directly informed the design priorities of the modular architecture.

The robotics and autonomous systems industry is converging on a common set of requirements that current architectures cannot satisfy:

- **Collaborative Robots:** Need to make safety-critical decisions in sub-millisecond timeframes without cloud dependency in human environments where any latency creates unacceptable risk.

- **Autonomous Drones:** Need to navigate, detect obstacles, and make real-time decisions on power budgets measured in milliwatts, without GPS and without connectivity.
- **Industrial Automation:** Must detect anomalies and adapt in real time, continuously, without the latency or bandwidth overhead of cloud-based inference.
- **Exoskeletons and Prosthetics:** Need to interpret human movement intent and respond instantaneously, on a device small enough to wear and a battery small enough to last a full day.

Every one of these requirements maps directly to a design priority in dorsaVi's Ultra-Edge Modular Design program. The separated sensing, compute, and memory layers allow the architecture to be configured for the specific form factor and power constraints of each application. The sub-1mW power architecture targets the coin-cell battery budgets of wearable and autonomous devices. The neuromorphic compute layer delivers the sub-millisecond inference speeds required for safety-critical robotic decision-making. The API layer provides the integration pathway for manufacturers to embed this capability into platforms that are already being built.

The Ultra-Edge Modular Design program is dorsaVi's response to these markets not as a component supplier, but as a platform provider with a differentiated, IP-protected hardware architecture that addresses the fundamental performance constraints these markets have not yet been able to solve.

MARKET	PROJECTED SIZE	KEY DORSAVI CAPABILITY
Autonomous vehicle Systems	USD 214B by 2030 ²	Sub-1mW inference, no cloud dependency, real-time edge decisions
Robotics	USD 218B by 2031 ³	Sub-millisecond neuromorphic compute, safety-critical edge AI
Industrial IoT & Edge AI Hardware	USD 68.7B by 2031 ⁴	Modular architecture, API-first integration, OEM licensing model

Table 2 – Target Markets and dorsaVi's Relevant Capability

Exoskeletons and rehabilitation robotics remain a priority commercial vertical across the entire integrated platform.

From Laboratory to Platform: The Commercial Logic of Modularity

One of the most common failure modes in advanced technology development is the gap between impressive laboratory results and a product that can actually be manufactured and sold. Chip technologies that perform brilliantly in a university research environment often take a decade or more to become deployable products, if they make it at all. The constraints of real-world manufacturing, integration and commercial cost are fundamentally different from the constraints of academic research.

² [Autonomous Vehicle Market Size | Industry Report, 2030](#)

³ [Robotics Market Size, Growth Analysis & Industry Report, 2031](#)

⁴ [Edge AI Hardware Market - Companies, Trends & Insights](#)

dorsaVi's modular design approach is specifically structured to address this gap. By building the architecture around interoperable layers rather than a monolithic design, each layer can be tested and refined independently before the full system is integrated. By validating the architecture in its own FDA-cleared sensor hardware first, the Company generates real-world performance data in a regulated environment before approaching external partners. By developing the API layer in parallel with the hardware, the Company ensures the commercial interface is ready at the same time as the hardware whilst avoiding the common failure mode where advanced hardware is developed without a clear path to market integration.

This approach also strengthens the Company's IP position. The modular architecture means that dorsaVi controls each layer of the stack independently — **sensing, compute, and memory** — and can licence, partner, or commercialise each layer separately or in combination, depending on the specific requirements and commercial structure of each partner relationship.



Figure 3: dorsaVi engineering team conducting wafer-level inspection during early-stage hardware validation work.

Strategic Context: The Five-Stage Execution Plan

The Ultra-Edge Modular Design and Build program is the third workstream in dorsaVi's five-stage Execution Plan, presented at the Semiconductor Conference in March 2026⁵. The modular design architecture is the hardware expression of dorsaVi's broader technology convergence strategy, the physical embodiment of the **Sense** → **Decide** → **Act** framework.

Each layer of the modular architecture corresponds directly to a layer of the convergence stack: the sensing layer to dorsaVi's existing FDA-cleared sensor hardware, the memory layer to the RRAM

⁵ [DVL:ASX Announcement - DVL Semiconductor Conference Presentation - March 2026 - 25 Mar 2026](#)

technology being developed with NTU and ITRI, and the compute layer to the neuromorphic architecture being developed.

The Board believes that the successful completion of the Ultra-Edge Modular Design program will represent a defining milestone in dorsaVi’s evolution, the point at which the Company transitions from technology developer to hardware platform provider, with a manufacturable, partner-ready product that can be deployed across the full breadth of its target commercial verticals.

Mathew Regan, Group Chief Executive Officer of dorsaVi, said: *“The Ultra Edge Modular Design program marks the point where our technology thesis begins to translate into a physical product. We have spent the past period establishing the scientific and IP foundations of what we are building — securing our licences with Technion and NTU, assembling a world-class Technical Advisory Board, and validating the underlying performance characteristics of our RRAM and neuromorphic approach. We are now progressing that foundation into hardware.*

The decision to build modularly was deliberate. A monolithic design may have accelerated early development, but it would have constrained us to a single configuration and commercial pathway. The modular architecture provides flexibility — to configure the platform for different applications, to upgrade individual layers as the technology evolves, and to partner at the layer level rather than only at the full-system level. In a market as diverse as robotics and autonomous systems, that flexibility is important.

The integration interface is equally important. The robotics and autonomous systems industry is seeking embeddable hardware capabilities that can be integrated into platforms already under development. Our approach is designed to support sub-millisecond local inference within highly constrained power environments, and to enable partners to incorporate this capability without needing to develop underlying semiconductor architecture themselves.

We are progressing this in a staged and deliberate way. We believe the Ultra Edge Modular Design program has the potential to deliver a hardware platform that is both technically differentiated and commercially relevant, and we look forward to updating the market as each workstream progresses.”

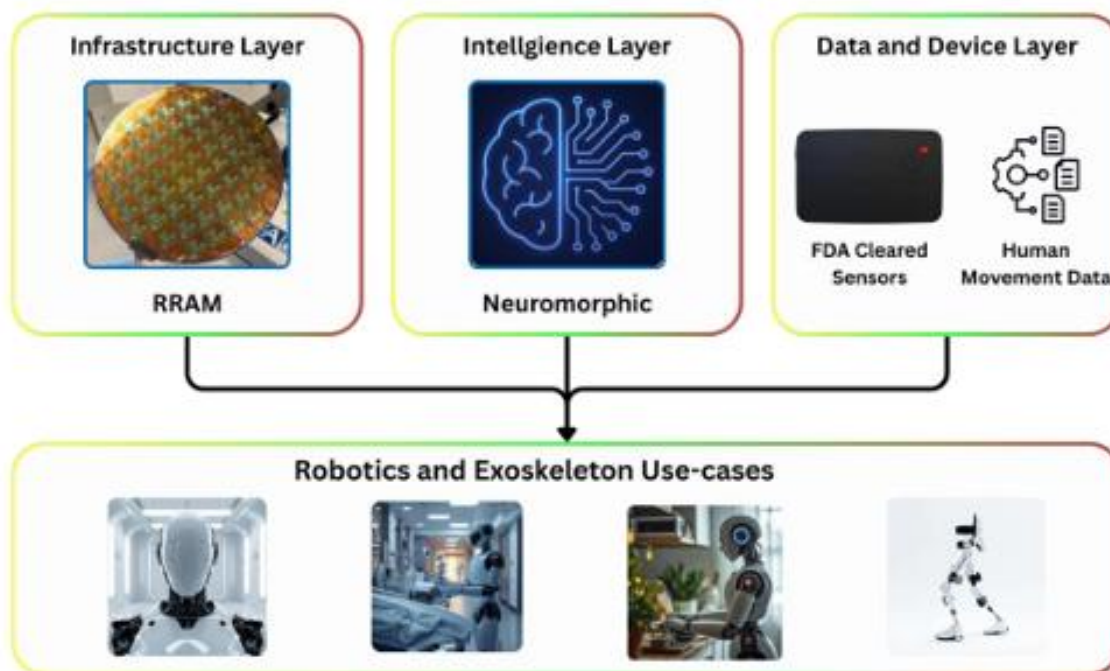


Figure 4: *dorsaVi's Ultra-Edge Modular architecture brings three proprietary hardware layers, RRAM infrastructure, neuromorphic intelligence, and sensor-driven data capture, into a single integrated platform purpose-built for applications such as robotics and exoskeleton.*

This release has been authorised for lodgement to the ASX by the Board.

- ENDS -

<p>Mathew Regan</p> <p>Group Chief Executive Officer</p> <p>+61 427 477 298</p> <p>Email: mregan@dorsaVi.com</p>	<p>Gernot Abl</p> <p>Chairman</p> <p>+61 419 802 653</p> <p>Email: ga@dorsaVi.com</p>
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Forward-Looking Statements

This announcement may contain certain forward-looking statements and projections. Such forward-looking statements/projections are estimates for discussion purposes only and should not be relied upon. Forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved. *dorsaVi* Limited does not make any representations and provides no warranties concerning the accuracy of the projections and disclaims any obligation to update or revise any forward-looking statements/projections based on new information, future events or otherwise, except to the extent required by applicable laws.

About *dorsaVi*

dorsaVi Ltd (ASX: DVL) is an ASX company focused on delivering intelligence at the ultra-edge. Enabling real time AI-driven decisions to be made locally, at the point of sensing, without reliance on cloud connectivity. *dorsaVi*'s wearable sensor technology captures, quantifies, and assesses detailed human movement and position outside a biomechanics lab, in both real-time and real situations for up to 24 hours, across clinical applications, elite sports, and occupational health and safety. Underpinning this vision, *dorsaVi* is building the hardware foundations of the ultra-edge through strategic investments in neuromorphic computing and RRAM memory technology. *dorsaVi*'s focus is on three major markets:

- **Ultra-Edge Intelligence:** *dorsaVi*'s sensor platforms are designed to process and act on data locally, embedding AI-driven inference directly at the point of capture. By investing in neuromorphic computing and RRAM memory technology, *dorsaVi* enables real-time decision-making without round-tripping to the cloud, delivering lower latency, lower power consumption, and reliable operation in latency- and connectivity-constrained environments across industrial, clinical, and autonomous systems applications.
- **Workplace:** *dorsaVi* enables employers to assess risk of injury for employees as well as test the effectiveness of proposed changes to OHS workplace design, equipment or methods based on objective evidence. *dorsaVi* works either directly with major corporations, or through an insurance company's customer base with the aim of reducing workplace compensation and claims. *dorsaVi* has been used by major corporations including London Underground, Vinci Construction, Crown Resorts, Caterpillar (US), Boeing, Monash Health, Coles, Woolworths, Toll, Toyota, Orora, Mineral Resources and BHP.

- Clinical: dorsaVi is transforming the management of patients with its clinical solutions (ViMove+) which provide objective assessment, monitoring outside the clinic and immediate biofeedback. The clinical market is broken down into physical therapy (physiotherapists), hospital in the home and elite sports. Hospital in the home refers to the remote management of patients by clinicians outside of physical therapy (i.e. for orthopaedic conditions). Elite sports refer to the management and optimisation of athletes through objective evidence for decisions on return to play, measurement of biomechanics and immediate biofeedback to enable peak performance.

Further information is available at www.dorsavi.com