

LaunchPad™ 80

Meet the future of VRU
test platforms today



Introducing the LaunchPad™ 80

LaunchPad is our range of compact, remotely operated test platforms that carry Vulnerable Road User (VRU) dummy targets for Advanced Driver Assistance System (ADAS) development and testing. Now, the latest addition to the family is the LaunchPad 80, a platform designed specifically for motorcycle target testing. With unrivalled 80km/h test speeds, together with braking at over 0.6g, the LaunchPad 80 has the high speed and rapid deceleration you need to perform realistic motorcycle test scenarios.

With proven LaunchPad technology, you'll be ready to meet current and future test requirements. LaunchPad 80 is the first solution built specifically for VRU testing that fully meets the speed requirements of the 2023 Euro NCAP AEB/LSS protocols.

The low profile, robust aluminium chassis permits over-driving with passenger cars, trucks and buses - withstanding loads up to 3550kg per tyre. Inside, its fully sealed electronics are rated to IP67, allowing testing in adverse weather and making cleaning easy.

It can be operated using a handheld controller, programmed to follow a predetermined path and, for the ultimate in testing efficiency, its movement can be precisely synchronised with the test vehicle and other ADAS targets, even along complex paths and at varying speeds.

The LaunchPad™ 80 Solution

The LaunchPad 80 comes as a complete testing solution with high performance radio communications and flexible software that makes it easy to set up and quickly get testing. The LaunchPad 80 solution includes the following components:



Remotely operated over-runable low profile robotic platform



Integrated data radio communications system for data transfer using standard licence-free WiFi radio frequencies (depending on territory)



Two sets of battery wings to allow simultaneous running and charging



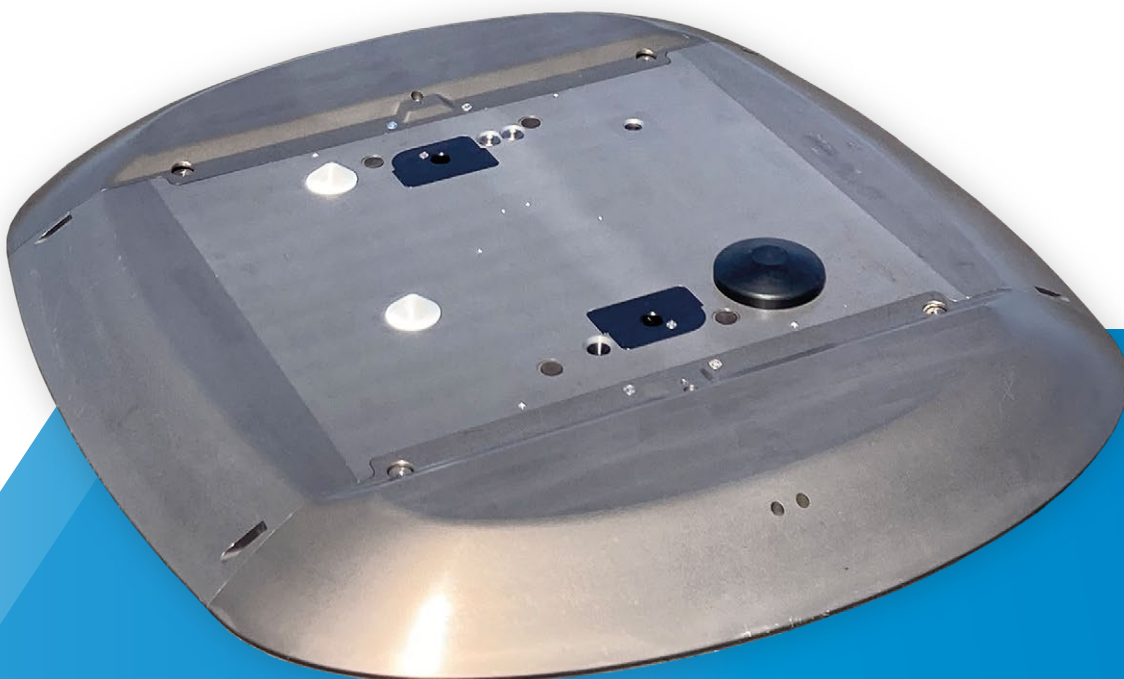
High power charger with bulk charge in under 1 hour



Robot Controller software for seamless operation alongside AB Dynamics driving robots



First year of email, phone and online support included





The LaunchPad 80 is ideal if you need to:

- / test ADAS and AVs using motorcycle targets
- / test AVs with higher levels of autonomy in challenging scenarios
- / develop and test to standards that exceed those currently required
- / test using complex scenarios using multiple targets
- / improve testing efficiency

In addition to high speed and rapid deceleration capabilities, the LaunchPad 80 is packed with technology that enables you to test accurately, reliably, and efficiently.



Manoeuvrability

With a four-wheel steering system, the LaunchPad 80 has excellent manoeuvrability. Rear-wheel steering helps maintain stability at high speeds as well as path-following precision. The four-wheel-drive system features slip control for superior traction. This level of manoeuvrability enables the latest collision mitigation features to be tested in complex scenarios with accuracy and repeatability.

Powerful deceleration

High power front and rear hydraulic braking provides exceptional stopping of over 6m/s^2 , enabling testing of motorcycle AEB scenarios that were once only possible with car targets. The LaunchPad's front and rear disk brakes are on independent circuits for in-built redundancy and additional safety.



High-capacity battery system

Improved efficiency from the battery, electrical amplifiers and motors, together with excellent thermal management, enables repeated high-speed testing. Double the battery capacity of the original LaunchPad, rapid battery swap and fast charging mean you'll benefit from superior range and uninterrupted testing throughout the day.

Reliable communications

The LaunchPad 80's onboard telemetry supports all our existing systems including TrackFi and TrackFi PowerMesh. Both systems provide reliable low-latency data transfer over distances of 1km or more using licence-free spectrum.

Precise positioning and synchronisation

With an integrated GPS-corrected inertial navigation system, the LaunchPad 80 offers precise positioning that is accurate to 2cm. The LaunchPad 80 can share its positional data with your other vehicles and ADAS targets and using the Synchro software system it can precisely synchronise with them even while following complex paths at varying speeds.

Software

LaunchPad 80 is managed using the same software as all of our track test products – Robot Controller Software. It contains a comprehensive suite of tools for you to efficiently plan, carry out, analyse and repeat even the most complex scenarios.

Programming the trajectory of your LaunchPad 80 is simple thanks to the graphical path generation utility – Scenario Generator. It's easy to create, import and export scenarios, whatever their complexity.

Our test wizard guides you through scenario set-up and comes preloaded with scenarios covering the protocols from major safety assessment authorities including Euro NCAP, NHTSA, JNCAP and C-NCAP.

Graphing, reporting and scenario playback features provide detailed analysis of test vehicle performance, making it easy to identify areas for improvement.





Sensor signature

The LaunchPad 80 has been designed from the ground up for minimal radar return. Its low profile curved chassis sits directly below the target and fully between its wheelbase, to ensure negligible impact on both radar and ADAS camera systems.



Easy maintenance

When it comes to transporting your LaunchPad rather than operating it, integrated lifting eyes allow you to move the LaunchPad 80 safely using supplied slings. There are also optional service wheels for convenient manoeuvring by one person.

Removable nose cones allow for quick and simple access to motors, wheels and brakes for easy inspection, maintenance and wheel replacement.



Safety systems

We have implemented multiple safety features into our latest LaunchPad. The LaunchPad 80 is equipped with an independent safety controller separate from the rest of the control system, which automatically applies the brake in the event of a fault, such as loss of telemetry or power. The software also allows you to set a virtual boundary which the LaunchPad 80 will detect and automatically avoid crossing.

Support and training

All new LaunchPad 80s come with a one-year Silver support package, which includes software upgrades and remote technical support via email, phone and online. We also offer a range of comprehensive upgrade and training packages that enable you to choose the technical support which best matches your requirements.

Specifications

The LaunchPad 80 from AB Dynamics makes reliable ADAS testing with motorcycles a reality, even in the most challenging scenarios.

Dimensions

1045 x 960 x 80mm

Weight (approx.)

75kg

Weather resistance

Fully sealed chassis electronics, waterproof to IP67

Maximum speed (with target)

80km/h

Maximum acceleration

3.0m/s² (Euro NCAP PTW fitted)

Maximum braking

>6m/s² (Euro NCAP PTW fitted)

Payload

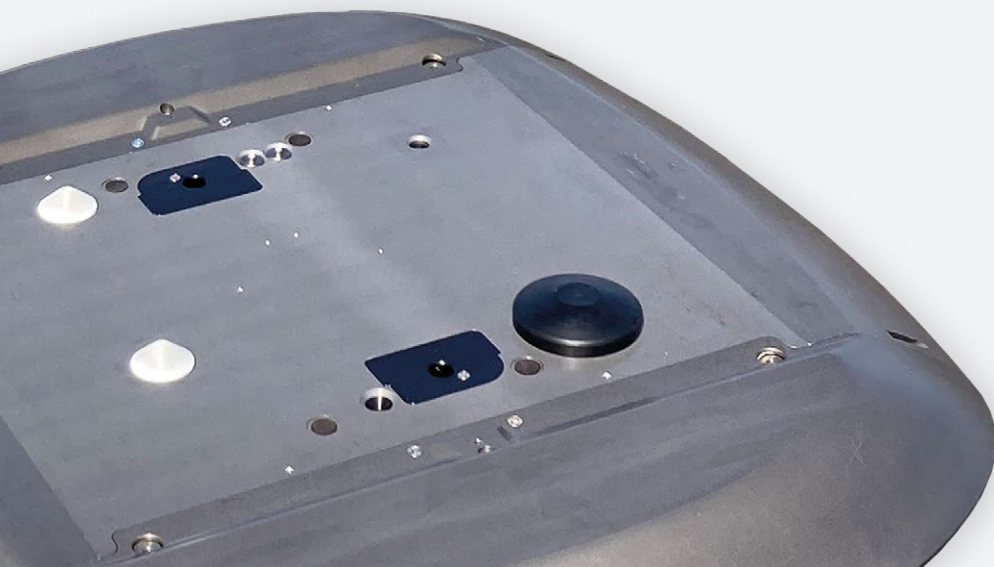
Maximum 15kg motorbike, moped

Batteries

Twin high-capacity LiFePO4 battery packs 800Wh; rapid battery swap system

Drive-over capacity

3550kg per wheel



About AB Dynamics

When you choose a solution engineered by AB Dynamics, you're benefitting from proven hardware and software, 40 years of knowledge and experience, plus unrivalled service and support.

Our range of automotive testing, verification and validation solutions encompass dynamics, suspension and steering characterisation, durability, advanced driver assistance systems and autonomy.

We pride ourselves on delivering solutions that enable the development of safer, more enjoyable, efficient, and eco-friendly vehicles. As a key partner to the global automotive industry, our customers include the top 25 vehicle manufacturers, Tier 1 suppliers, test facilities and autonomous vehicle developers.

As part of the AB Dynamics Group of companies, we offer a wide range of vehicle autonomy, simulation, and testing solutions. As a group, we enable customers to develop and test vehicles in laboratory and virtual environments, validate on the track before finally evaluating vehicles and on public roads.





www.abdynamics.com

info@abdynamics.com

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