

Invented for life



# DAS 3000 ADAS Calibration System

Fast, reliable and future-proof calibration of front cameras and radar sensors for modern driver assistance systems



# What is ADAS?

## Advanced Driver Assistance Systems

Advanced Driver Assistance Systems (ADAS) are vehicle technologies that provide safer driving experiences for the vehicle, driver, passenger, and the surrounding environment. ADAS technologies are paving the road to autonomous vehicles which can run full time with only maintenance stops. The primary goal is to reduce accidents and save lives.

**ADAS technologies are commonly referred to in levels of automation**

Level 0 No automation	Level 1 Driver assistance	Level 2 Partial automation	Level 3 Conditional automation	Level 4 High automation	Level 5 Full automation
Full-time driver performance is executed by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems	Driving mode-specific execution by a driver assistance system of either steering or acceleration and deceleration, using information about the driving environment, with the expectation that the human driver performs all remaining aspects of the dynamic driving task	Driving mode-specific execution by a driver assistance system of both steering and acceleration or deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task	Driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, with the expectation that the human driver will respond appropriately to request to intervene	Driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene	Full-time performance by an automated driving system of all aspects of the dynamic driving task, under all roadway and environmental conditions that can be managed by a human driver

### Common ADAS functions found in today's vehicles

Surround View Camera

Automatic emergency braking

Adaptive cruise control

Backup camera

Blind spot warning

#### Driving control assistance

- Adaptive cruise control
- Active driving assistance
- Lane keeping assistance

#### Collision intervention

- Automatic emergency braking
- Automatic emergency steering
- Rear automatic emergency braking

#### Collision warnings

- Blind spot warning
- Forward collision warning
- Lane departure warning
- Parking obstruction warning
- Rear cross traffic warning

#### Parking assistance

- Active parking assistance
- Remote parking assistance

#### Other driver assistance systems

- Automatic high beams
- Backup camera
- Driver monitoring
- Heads-up display
- Night vision
- Surround view camera

## There are two main types of ADAS calibration:

Static and Dynamic. While most vehicles will require one or the other, some vehicles may require both. Here is a quick breakdown of the differences between Dynamic and Static calibrations:

### Dynamic Calibration

- Pre-determined service drive of 5 to 30 miles at set speed intervals
- Initiated through a diagnostic scan tool
- In some cases, may require a pre-alignment or static calibration before the dynamic calibration process
- Difficult during inclement weather and poses a liability for shops sending technicians to drive customer vehicles outside of the shop environment

### Static Calibration

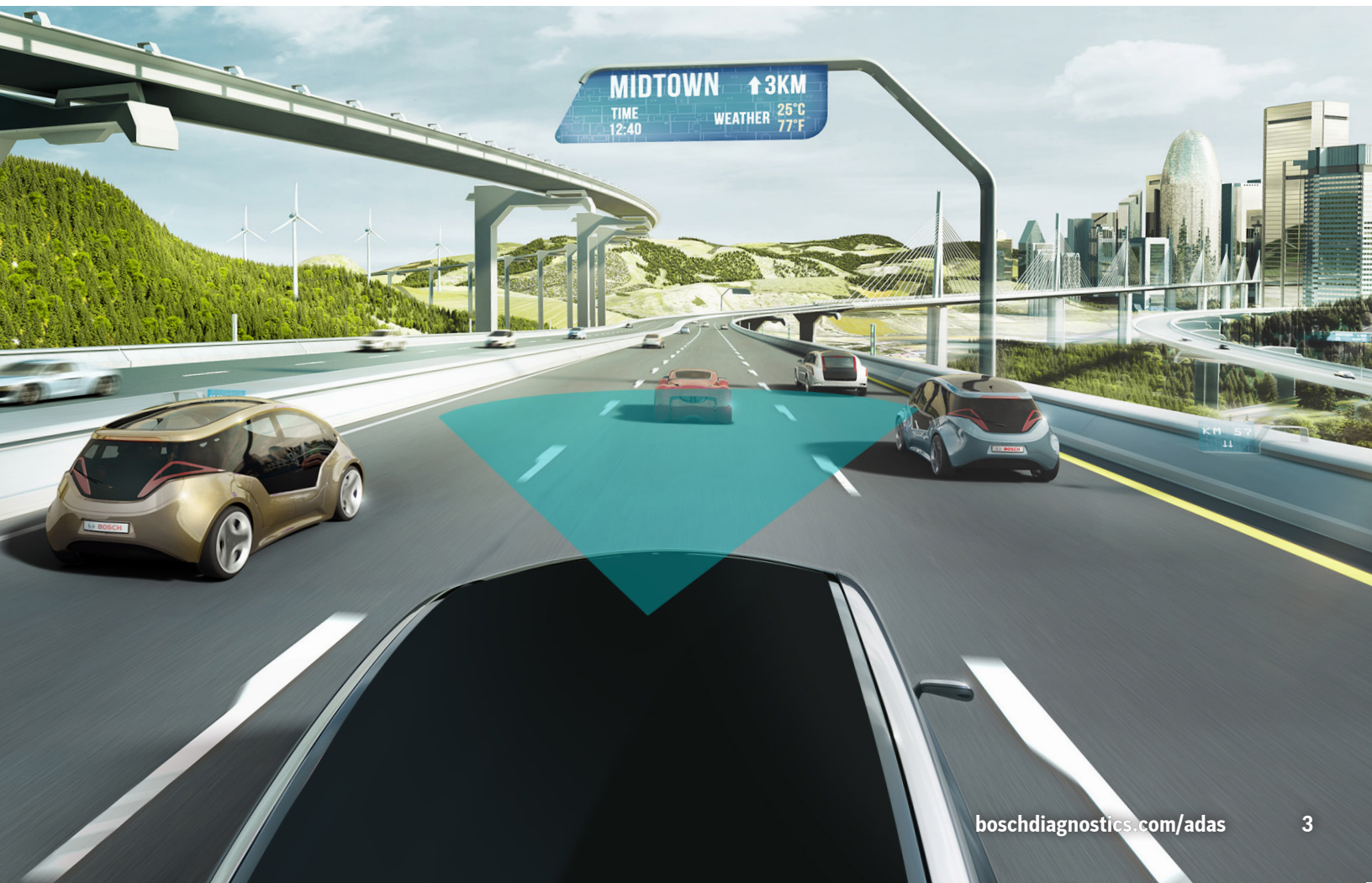
- Placement of targets or radar reflectors at predetermined locations in a static shop environment
- Initiated through a diagnostic scan tool
- Requires fixture and targets in addition to scan tool

## Importance of Accuracy and Precision



### Precise recalibration is critical

Through our engineering expertise and extensive testing, gain confidence in precise measurements and trust that your customers' vehicles are recalibrated within the tightest tolerances to the strictest standards, correctly the first time.



# The superior ADAS workflow, only from Bosch

## OEM Sensor Co-Development

Bosch is the only automotive supplier developing both new ADAS technologies with OEMs and the equipment required to calibrate these vehicle systems. Bosch has calibration coverage on all major OE platforms and continues to co-develop as new vehicles are designed.

## World's Largest Automotive Supplier

As the largest supplier of sensors, Bosch knows what it takes to accurately calibrate ADAS systems. Bosch is partnering with many of the largest OEMs to develop the next generation of cameras, radars and sensors.



## Recalibration Experience

Bosch has long been developing recalibration solutions with millions of calibrations to date.

## Invented for Life

We want our products to spark enthusiasm, improve quality of life, and help conserve natural resources.

## Simplified Set-up Process

Commonized OE procedures to simplify set-up and calibration processes.

## Designed for the Future

Bosch ADAS Positioning System (BAP) utilizes patented technology along with industrial-grade sensors to measure the distance and angles of the targets in relation to the vehicle, providing the most accurate and precise calibration available in the industry.

## Speed and Efficiency

Saves shops time and money by getting customer vehicles calibrated faster and with the confidence that it's done right.

## Precision and Confidence

From the precision digital measurements to the intuitive user-interface, the DAS 3000 is designed to take the ambiguity out of the calibration.

## Integrated Target Storage

Allows technicians to stow their camera targets while allowing immediate access for the fastest calibration set up while keeping targets clean and serviceable.



**The tools you need to get the job done right  
and make your shop money**

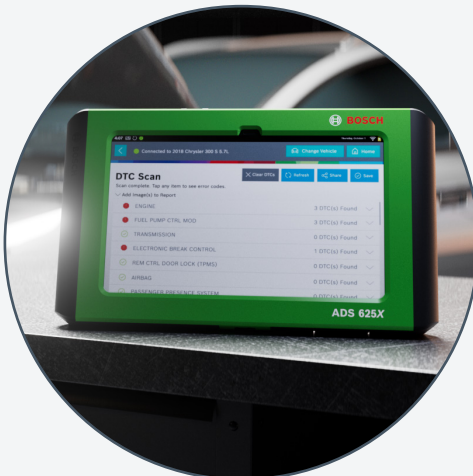
# Leverage the guided interactive calibration for the most precise and efficient set-up

## Step 1



Plug in VCI and Auto ID

## Step 2



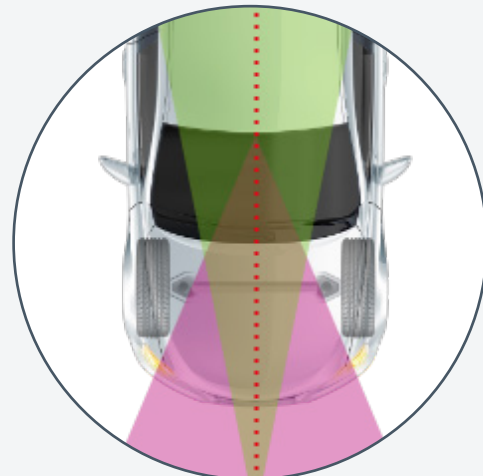
Complete pre-scan diagnostics report

## Step 4



Follow on-screen prompts to identify targets and components

## Step 3



Select ADAS system to calibrate

## Step 5



Position the fixture



## Step 6



Place targets



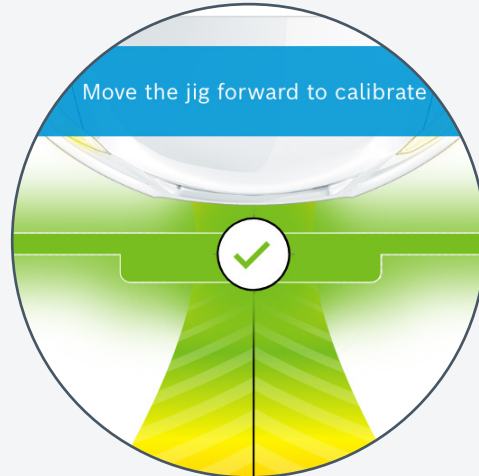
## Step 8



Complete post-scan  
diagnostics report



## Step 7



Confirm and calibrate!

# DAS 3000 Components



- A.** Fixture
- B.** Magnetic bracket
- C.** CTA 120 prismatic radar reflector

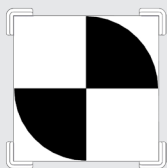
- D.** Vision positioning camera
- E.** Bumper plate
- F.** Wheel targets



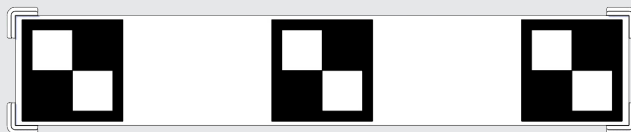
- G.** Integrated target storage
- H.** Bumper contact plate
- I.** Magnetic camera target crossbar

# Target Boards

The DAS 3000 kit includes 14 camera target boards (below) and 1 Dual Purpose Camera and Radar board (page 18)

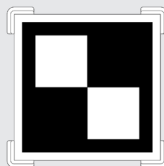


**CTA 218**  
**Universal/Infiniti**  
**Type 1 Target Set**  
**(Set of 2)**

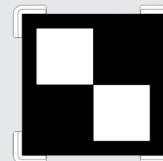


**CTA 219**  
**Toyota 3-in-1 Target**

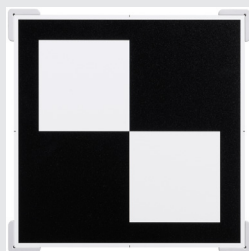
**CTA 216**  
**Toyota Type 1**  
**Target**



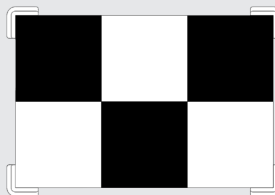
**CTA 217**  
**Toyota/Lexus**  
**Type 3 Target**



**CTA 301**  
**Subaru Dual Side Target**



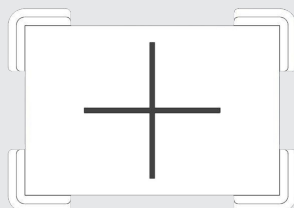
**CTA 214**  
**Subaru MWA**  
**Target Set (Set of 3)**



**CTA 203**  
**Honda Type 1**  
**Target Set**  
**(Set of 2)**



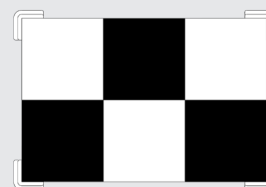
**CTA 205**  
**Honda Type 3 Target**



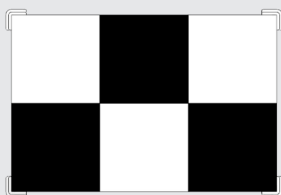
**CTA 207**  
**Hyundai/Kia**  
**Type 3 Target**



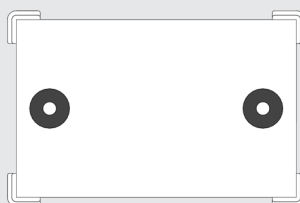
**CTA 200**  
**Universal XL Target Board**



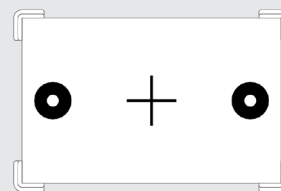
**CTA 212**  
**Nissan Type 2 Target Set**  
**(Set of 2)**



**CTA 208**  
**Mazda Type 2 Target Set**  
**(Set of 2)**



**CTA 209**  
**Mazda Type 1 Target Set**  
**(Set of 2)**



**CTA 210**  
**Infiniti/MB/Nissan**  
**Type 2 Target**

*Targets are not to scale.*

# Floor Mat Targets

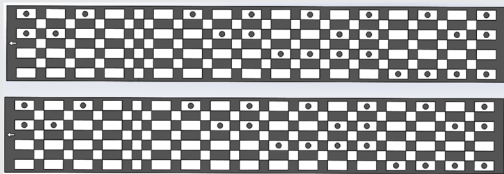
## Included with DAS 3000-3 Kit

The surround view and backup camera floor mats are ruggedized for a shop environment. They're made of a highly durable vinyl and have a UV protected coating to reduce glare and prevent fading.

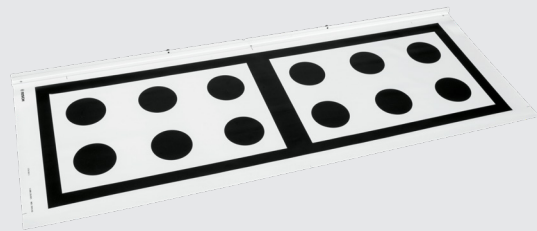
**Floor mat targets come with easy storage/cleanup**



**SCT 450S80**  
**General Motors Floor Mat**



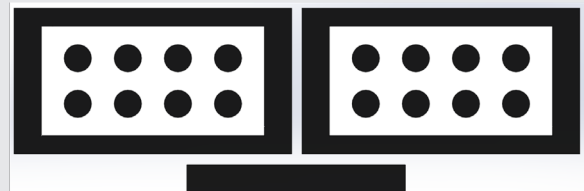
**SCT 450S70**  
**Ford Floor Mat (Set of 2)**



**CTA 501**  
**VAG Rear Camera Floor Mat**



**CTA 500**  
**VAG 360 Surround View Floor Mat**



**SCT 450S53**  
**Honda Floor Mat**

*Targets are not to scale.*

# CTA 120

**The CTA 120 Prismatic Radar Reflector is an integral part of the front, rear and corner radar calibration systems process for Kia, Hyundai, Mazda, Toyota and Honda vehicles**

- Dual lasers for set-up: Red line laser for distance and green line laser for alignment
- Designed with fiberglass material to avoid false or improper radar calibration
- Carrier engineered to connect future targets and alignment technologies

Includes:

- DAS 3000 Adapter
- Prismatic reflector
- Stand with baseplate
- Height pointer
- Offset height level scale

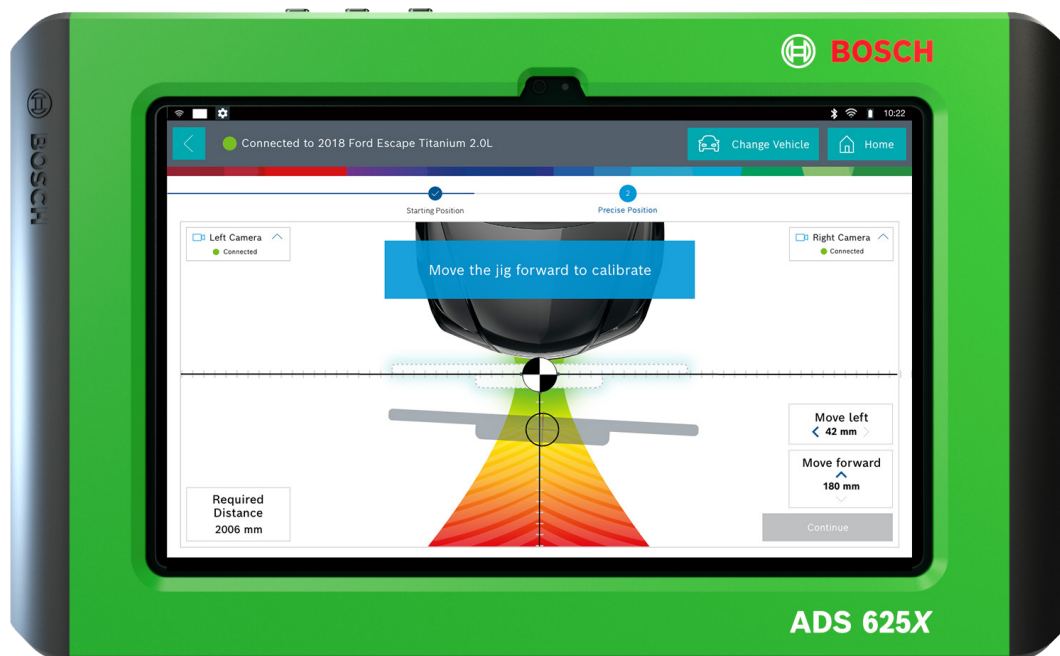


# ADAS Recalibrations on the ADS 625X

## The ADS 625X scan tool is integrated into the DAS 3000 system

The ADAS guided instruction module walks users through the entire recalibration process including fixture placement, target selections and sensor recalibration.

Offering pre- and post-scan reporting options as well as a full complement of diagnostic coverage. The ADS 625X scan tool brings the power of ADAS recalibration to your shop.



*Scan tool sold separately.*



### 3970-ADAS2-SUB Card

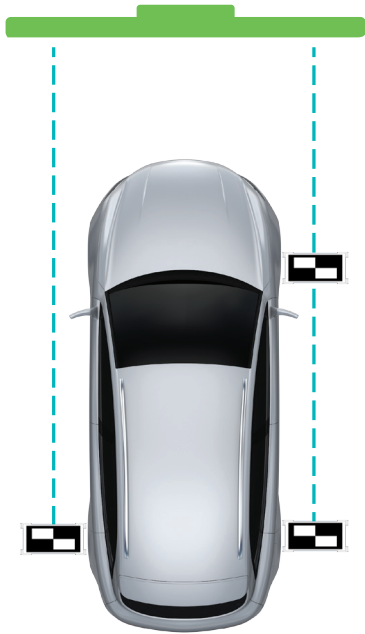
The 12-month software subscription includes diagnostic coverage and static ADAS calibration coverage for Domestic, Asian and European brands - updated monthly.

Quick access to:

- Repair-Source, the comprehensive library of OE service and repair information. No searching repair and info sites - pulls vehicle specific information on your tool
- Full Color Wiring Diagrams
- Code-Assist on-tool confirmed fixes, and many more powerful diagnostic features

# Standardized Set-ups

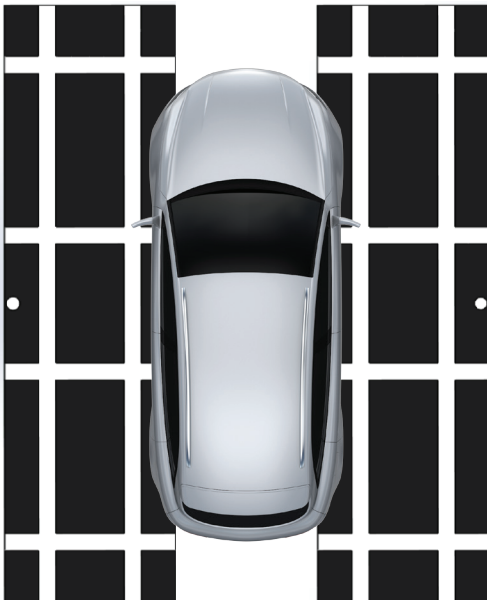
Standardized recalibration procedures are based on the unique requirements of each OEM make and model, minimizing setup variations and simplifying ADAS recalibrations.



**Front Facing Radar (DAS 3000)  
Front Facing Camera (DAS 3000)**



**Front Facing Radar (CTA 120)**



**Surround View Calibration**



**Dynamic Calibration**

# Set-up, Training, and Support

Bosch is committed to not only providing the best calibration equipment, but also helping shops use that equipment to its fullest.

**White Glove On-Site Setup and Installation:** Where available, on-site set-up and product training is offered for shops with the purchase of the DAS 3000. An authorized Bosch field representative will unpack, assemble and provide instruction on the use of the DAS 3000 for ADAS calibrations, including the most common calibration procedures. Contact your local Bosch field representative for more information on scheduling on-site set-up and training.

**Online Training Courses:** Registered users will also receive one year of access to a 4-part technical ADAS training via the Bosch Automotive Training Solutions (BATS). This 4-hour training course will cover topics such as the foundational concepts of ADAS, ADAS features, components and systems overviews as well as DAS 3000-specific topics related to ADAS calibration.



## Tech Support

### **ADAS support is included with the DAS 3000-3 Calibration Solution.**

While the DAS 3000 offers an intuitive user experience, ADAS support is readily available to assist technicians. Our professionally trained, multilingual ADAS technical support team can answer questions, troubleshoot, and assist virtually with issues relating to ADAS calibrations. Furthermore, our team offers support for the DAS 3000 hardware and scan tool functionality, ensuring users have the resources needed to efficiently and effectively complete their tasks. Our ADAS team can also provide remote assistance to troubleshoot ADAS calibration issues and recommend solutions to help get the job done.

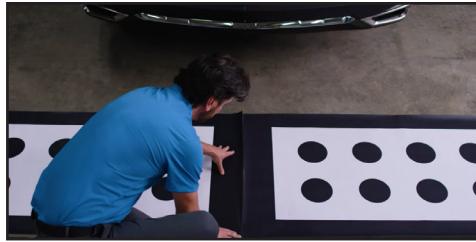
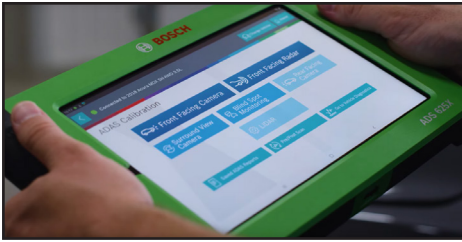
**The ADAS Support team can be reached at:**

**Tel: 1-888-812-3275**

**[techsupport.diagnostics@us.bosch.com](mailto:techsupport.diagnostics@us.bosch.com)**

# Bosch Exclusive White Glove On-Site Setup and Installation

Providing the industry's top ADAS calibration and diagnostic equipment is just the starting line. We understand that your team's expertise with our tools is key. That's why we're fully committed to helping your technicians unlock the full potential of every Bosch solution integrated into your workshop.



## Unlock the Full Potential of Your DAS 3000 ADAS Calibration System

We are pleased to offer comprehensive support designed to optimize your investment in the Bosch DAS 3000 ADAS Calibration System. With the purchase of a DAS 3000, your workshop is eligible for our complimentary **White Glove On-Site Setup and Installation Service**.

This invaluable service goes beyond a simple delivery, providing your team with the expertise and resources to hit the ground running. A Bosch field representative will conduct a professional on-site setup, delivering key benefits including:

- **On-Site Setup and Assembly:** We ensure your DAS 3000 is correctly and efficiently prepared for immediate operation in your workshop.
- **Calibration Demo Training:** Receive hands-on, in-depth instruction relevant to your shop's needs and common vehicle types.
- **Confidence in Calibration:** We empower your team with the knowledge and practical skills to perform accurate and reliable ADAS calibrations from day one.
- **Reduced Learning Curve:** Minimize downtime and accelerate proficiency with expert guidance, getting your new system productive faster.
- **Maximized ROI:** By ensuring correct usage and optimal performance, we help you quickly realize the full return on your DAS 3000 investment.
- **Direct Access to Bosch Experts:** Your team will have the opportunity to ask questions and receive personalized advice from our experienced field representatives.

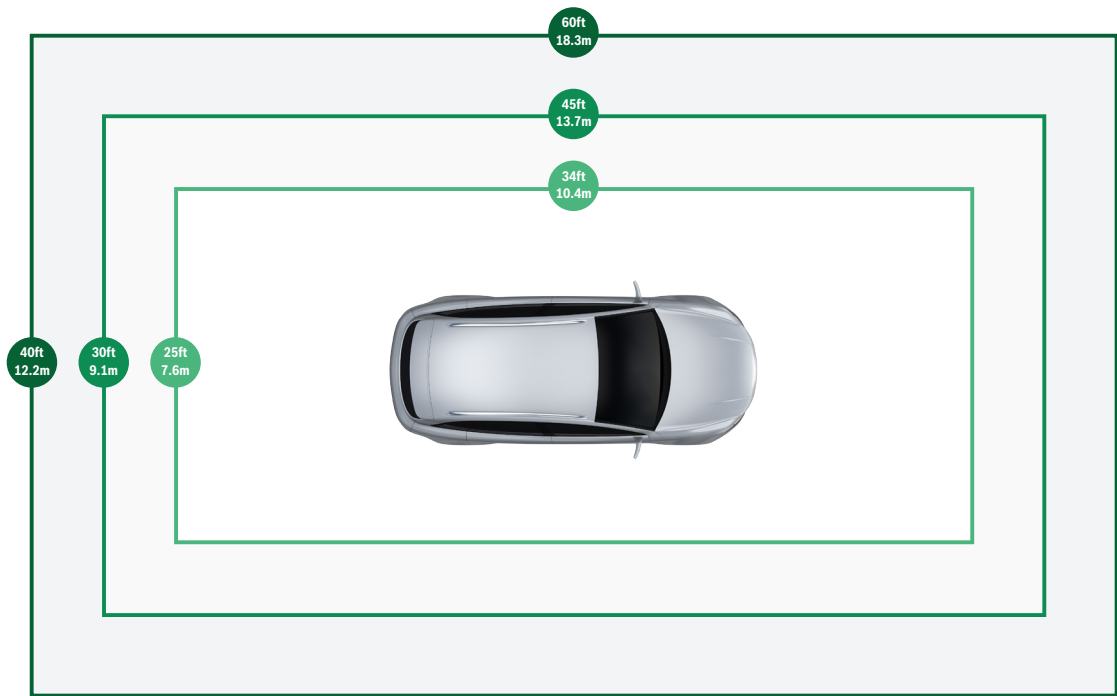
# ADAS Recalibration Facility Recommendations

## Space Dimensions

The space needed to recalibrate a vehicle can vary by OEM, vehicle, or calibration type. That is why Bosch recommends a space of 30 x 45 feet as a general floor space requirement. Not every vehicle will require this amount of space, but our recommended dimensions maximize the number of vehicles that a shop can recalibrate.

We realize that not every shop has this type of space available. A 25 x 34 foot area can be utilized; however, depending on the specific calibration type, vehicle repositioning within the space may be necessary to complete the calibration.

	Length	Width
<b>Optimally Flexible Space:</b> If you are looking for an ADAS specific space that will accommodate the largest number of ADAS equipped vehicles, these are dimensions that should be considered.	60ft 18.3M	40ft 12.2M
<b>Recommended Space:</b> This is the amount of space that Bosch recommends in order to calibrate most vehicles based on a careful analysis of the OE processes. Some larger vehicles may require additional space based on the vehicle's size and calibration type.	45ft 13.7M	30ft 9.1M
<b>Minimum Space:</b> This is the minimum space that Bosch recommends for ADAS calibrations with the DAS 3000 and the accompanying equipment. This amount of space will allow for recalibration on most ADAS equipped vehicles. However, depending on the vehicle size and type of calibration, it may require the vehicle to be moved within the space to complete a full recalibration.	34ft 10.4M	25ft 7.6M

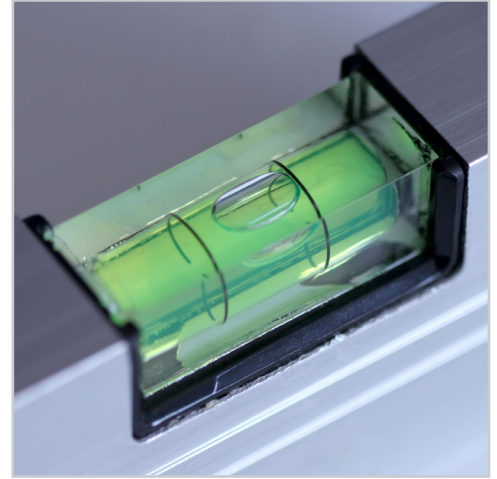


Note: Spaces smaller than the 34ft x 25ft can be utilized to recalibrate some vehicles and ADAS systems, but as the space decreases so do the number and types of vehicles that can be calibrated.

## Floor Level

The floor of the calibration space should be as level as possible. Bosch recommends that there should be no more than a 10mm difference across the floor from the driver's side to the passenger side of the vehicle and from rear of the vehicle to the front of the vehicle.

This can be measured by setting up a string line in the area that will be designated for calibration. Pull the line taut and measure the height of the string on one side. Adjust the string from the opposite side until it shows that it is level using a bubble level. Then measure the height of the string at both ends. The difference between the measurements should be no more than 10mm.



## Lighting

Lighting can change with seasons, weather and the time of day. Lighting can also be affected by a facility's windows or garage doors opening and closing. The calibration area should be well lit with evenly diffused and distributed light in the calibration area. It is recommended to cover any windows with direct sunlight during a calibration and avoid any directional lighting around vehicle during calibration.

## Background and Surrounding Areas

Because many of the ADAS sensors utilize light and radar, being aware of the surrounding area during a calibration is important. The area outside of the calibration area should be clear of geometric patterns in line of sight, for example behind the targets/fixture. The floor and the walls should be one solid light neutral color.

During a recalibration, the recommended space should be clear of vehicles, toolboxes or other shop equipment. Also, ensure that no one is walking through the recalibration space during a recalibration event.



# DAS 3000-3 Includes



## Primary Components Included

Fixture



Wheel Clamp Markers



CTA 120 Prismatic Radar Reflector



3970-ADAS2-SUB Card



## Accessory Tool Box Included

Accessory Tool Box with tape measure, center line string, plumb bob, bubble level, digital inclination meter & storage case.

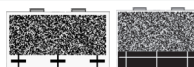


## Target Boards Included

CTA 300 VW/Audi Dual Purpose Camera/Radar Target Board



CTA 301 Subaru Dual Side Target Board



CTA 200 Universal XL Target Board



CTA 203 Honda Type 1 Target (Set of 2)



CTA 216 Toyota Type 1 Target



CTA 210 Infiniti/MB/Nissan Type 2 Target



CTA 209 Mazda Type 1 Target (Set of 2)



CTA 205 Honda Type 3 Target



CTA 217 Toyota/Lexus Type 3 Target



CTA 207 Hyundai/Kia Type 3 Target



CTA 212 Nissan Type 2 Target (Set of 2)



CTA 218 Universal/Infiniti Type 1 Target (Set of 2)



CTA 208 Mazda Type 2 Target (Set of 2)



CTA 214 Subaru MWA Target Set (Set of 3)



CTA 219 Toyota 3-in-1 Target



## Floor Mats Included

SCT 450S80 GM Floor Mat



SCT 450S70 Ford Floor Mat (Set of 2)



SCT 450S53 Honda Floor Mat



CTA 500 VAG 360 Surround View Floor Mat



CTA 501 VAG Rear Camera Floor Mat



## Integrated Target Storage Included

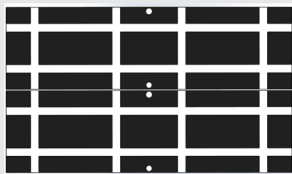
Stow your camera targets in a clean and serviceable way, allowing immediate access for the fastest calibration setup.



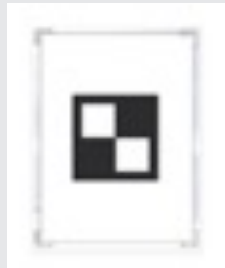
# DAS 3000-3: Enhance Your System with These Add-ons

Plan your individual service scope and vehicle coverage with the variety of targets for calibration. Our targets are designed to calibrate lane assist systems, road sign recognition systems as well as automatic emergency braking systems.

Bosch calibration solutions are compliant with OEM requirements.



**SCT 450S56**  
**Mitsubishi Floor Mat**



**CTA 211**  
**Mitsubishi Type 1 Target**  
(Requires two, sold separately)



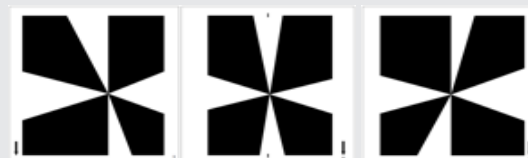
**SCT 450S50**  
**Nissan Floor Mat**



**CTA 150**  
**Audi LiDAR Kit**



**CTA 110**  
**Doppler Simulator**



**CTA 511**  
**Mercedes Rear Camera Floor Mat**

*Targets are not to scale.*

# Driven by efficiency

Bosch technologies are integrated into nearly all vehicles worldwide. Our focus is on enabling mobility while ensuring the safety and convenience of people.

Therefore, we have dedicated the last 130+ years of pioneering spirit and expertise in research and manufacturing to achieving this.

We continue to work on our unique combination of solutions for spare parts, diagnostic devices, workshop equipment and services.

- Solutions for efficient vehicle repairs
- Innovative workshop equipment and software
- The world's most comprehensive range of new and replacement parts
- Large network of wholesale customers, for quick and reliable parts supply
- Skilled technical hotline support
- Comprehensive educational and training offers
- Targeted sales and marketing support



**Calculate your  
annual revenue by  
investing in the  
Bosch ADAS solution**



[boschdiagnostics.com/  
adas/roi-calculator](https://boschdiagnostics.com/adas/roi-calculator)