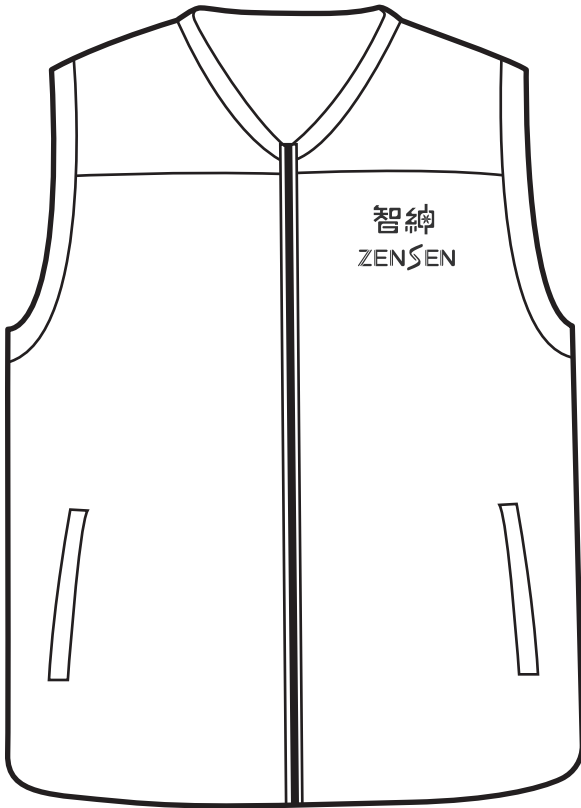


Smart Fall-Protective Airbag Vest

User Manual

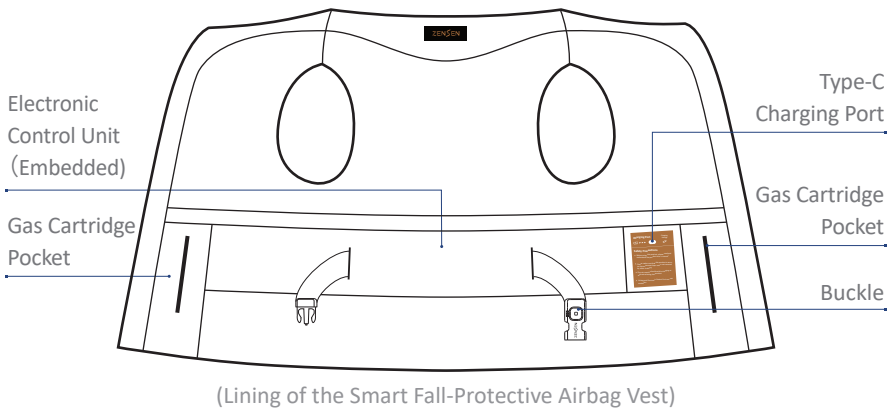


Shandong GuanYun Technology Co., Ltd.

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Quick Start



Parts Diagram of the Smart Fall-Protective Airbag Vest

(All illustrations are diagrams for reference only.
Please refer to the actual product)

The Smart Fall-Protective Airbag Vest is equipped with a rechargeable battery. Before first use, please fully charge the battery, which takes approximately 4 hours.

Put On the Smart Fall-Protective Airbag Vest

Before putting on the Smart Fall-Protective Airbag Vest, pay attention to the front-back and inside-outside orientation to avoid wearing it backwards. Wear it as a regular vest on the **outermost layer of clothing, ensuring that no hats, collars, or other clothing cover the surface of the Vest**. Then, snap the buckle. You should hear “Beep Beep” sound, see all indicator lights illuminate and then turn off after one second. Now the Smart Fall-Protective Airbag Vest is correctly worn and the device has started up successfully.

Take Off the Smart Fall-Protective Airbag Vest

First, unsnap the buckle. Once the indicator lights turn off, indicating that the device has stopped working, you can take off the Smart Fall-Protective Airbag Vest.

Product Overview

The Smart Fall-Protective Airbag Vest is an AI-powered wearable device developed by Guanyun-Tech with the support of various innovation and entrepreneurship programs. Based on human posture monitoring, this product provides the following key functions regarding high-risk actions such as falling: pre-incident prediction with real-time protection for the user and post-incident detection. The embedded smart sensors in this product record the user’s behavioral data in real-time and analyze their movement features through self-developed AI algorithm. When the system detects that the user is about to experience high-risk actions such as falling, it will activate the protection mechanism: deploying airbag, providing effective cushioning for the user, thereby reducing the impact to the limbs from the ground. This product focuses on protecting key areas of the user, including the hips, waist, buttocks, back, neck, head, and face. Additionally, it features adaptive algorithm, positioning and tracking, geo-fencing, out-of-zone alert, manual alert, family members management, and other functions, delivering a comprehensive protective solution for middle-aged and elderly individuals, people with mobility challenges, and patients during daily activities.

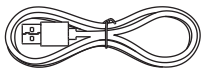
Packing List



The Smart Fall-Protective Airbag Vest ×1




User Manual ×1



Charging Cable ×1

Product Parameters

Product Name	Smart Fall-Protective Airbag Vest
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Model Name	ZS-SP1
Input Characteristics	5 V  1 A
Cell Type	Li-Polymer
Battery Capacity	1350 mAh

Operating Instructions













Before first use, please read the product user manual carefully. Ensure that all components are included in the package and check for any damage.

Charging Guide

Before first use, please fully charge the battery, which takes approximately 4 hours.

To begin charging, unzip the Vest and locate the charging port indicator on the left inside. Plug the charging cable into the port to start charging.

When the battery is charging, the status and indicator lights display as follows:

Charging Status	Status Display	
Low Battery	  	Blue Light Flashing, Green Light Off, Red Light Off
Medium Battery	  	Blue Light On, Green Light Flashing, Red Light Off
High Battery	  	Blue Light On, Green Light On, Red Light Flashing
Fully Charged	  	Blue Light On, Green Light On, Red Light On

Note:

* This device only supports a charging voltage of 5 V. Please ensure that the output voltage of the charger is 5 V to avoid damaging the device.

Device Binding

1. Download, Install, Register, and Log in

Search for “ZenAlert” on the Google Play Store or Apple Store, download and

install the app. When entering the app, select “Guardian” mode, enter your phone number to receive a verification code, complete the registration, and log in.

2. Scan the QR Code to Bind

On the homepage, click the “Go to Add” button or the top-right plus sign to redirect to the device pairing interface. Fill in the wearer’s account and other information, and scan the QR code on the back of the buckle to bind.



3. Wearer Log In

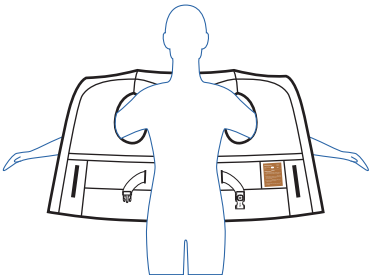
The wearer should also download and install “ZenAlert”. When entering the app, select “Wearer” mode and log in directly using the wearer account created in Step 2.

Wearing Instructions

Wear the Smart Fall-Protective Airbag Vest as the **outermost layer of clothing**. **Ensure that no hats, collars, or other clothing cover its surface.**

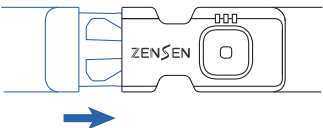
1. Put on the Vest

Wear it as a regular vest, ensuring the correct front-back and inside-outside orientation to avoid wearing it backwards.



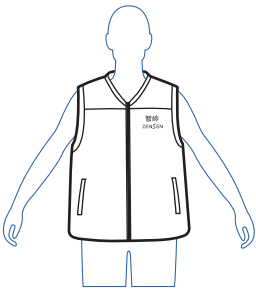
2. Snap the Buckle

Snap the buckle. You will hear “Beep Beep” sound and all indicator lights illuminate and then turn off after one second, indicating that the device has started up successfully.



3. Zip Up

Zip the zipper up to the top as much as possible to achieve the best protective effect.



Function Button Instructions

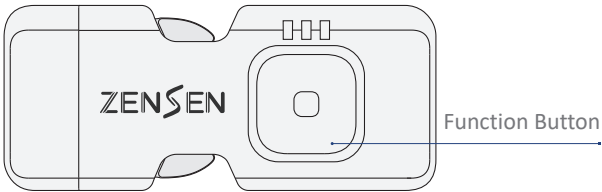













Diagram of the Smart Fall-Protective Airbag Vest’s Buckle

Press and hold the function button for 2 to 3 seconds: The product will enter the manual alert state and emit a “Beep Beep, Beep~” sound (two short beeps followed by one long beep). The alarm will continue until it is manually canceled (by pressing the function button briefly) or the device is powered off.

Indicator Lights and Beeps Description

Status Category	Status Display	
Start Up	   	“Beep Beep” sound with all indicator lights illuminating
Device Online		Green light on
Device Connecting/Offline		Green light flashing
Low Battery Warning	 	“Beep Beep Beep Beep Beep” sound with blue light flashing
Empty Gas Cartridge/Cable Not Properly Connected	 	“Beeeep~” long sound with red light flashing
Fall Alarm/Manual Alarm		“Beep Beep, Beep~” sounds with two short and one long Beep

Notes:

- * **Do not snap the buckle when not wearing the Vest.**
- * Do not snap the buckle or wear the Vest during battery charging.
- * When encountering a prompt indicating an empty gas cartridge or gas cartridge cable plug not securely plugged in, you should first ensure that the device is powered off before proceeding with troubleshooting.

Repair and Maintenance

Disassembly and Cleaning

- The Electronic Control Unit and Airbag Module can be removed from the vest. The vest can be washed normally after all components have been completely removed. Other components are not washable with water, but can be cleaned with a soft damp cloth.

Battery Maintenance

- When the Vest is not in use for a long period, please charge the battery regularly. If it has not been charged for more than 30 days, the Vest may not work correctly.
- The charging temperature should be maintained between 0 °C and 40 °C (32 °F ~ 104 °F).

Product Storage

- Store in a dry and shaded place. The storage temperature should be between -10 °C and 45 °C (14 °F ~ 113 °F). Exceeding this range may cause damage to the Vest.

Troubleshooting

- If any abnormal conditions are found in the product, do not disassemble it by yourself. Please contact customer service to obtain technical support.

Risk Notification

Please read the following risk notification carefully and watch the product usage

video to ensure correct use of this product (Please scan the QR code on the last page to obtain the video). All losses caused by incorrect use shall be borne by the user.

1. Please strictly follow all the instructions in this manual. Failure to comply may result in personal injury, property damage, the Vest system failure, or loss of protective functionality.
2. Please wear the Vest as the outermost layer of clothing and ensure that there are no backpacks or other items blocking it to avoid the airbag failing to deploy correctly in case of a fall.
3. Do not carry any sharp objects and ensure none are present within the airbag coverage area. Sharp objects may damage the airbag, thereby affecting the protective effect. If the user falls on a sharp object, it will cause damage to the airbag, and the product may not provide effective protection.
4. This product only provides limited protection to the body parts within the coverage area of the airbag. In the event of falls or impacts caused by third-party factors (e.g., vehicle collisions, high-risk sports) as well as jumping or falling from a height, this product may not provide effective protection. User must pay attention to their own safety.
5. Patients with severe osteoporosis may suffer fractures even from minor bumps. This product may not be able to provide sufficient protection, and prompt medical attention is recommended.
6. The airbag protection trigger mechanism of this product is based on the fall of the user under normal standing or walking conditions. During a fall, if the user grabs a handrail, holds the side-wall, supports with hands, sits or squats, the product may not trigger the protection mechanism; in scenarios like sitting down quickly or lying down rapidly, the built-in sensors will detect the characteristics of vigorous human movement. As a result, the product may classify that the user is about to fall and deploys the airbag.
7. The gas cartridge in this product is a high-pressure gas canister kit. When the protection is triggered, this device will produce a loud noise. People with serious heart diseases and other similar conditions are not advised to use this product.
8. When the system triggers protection, the airbag will inflate and deploy rapidly. During the inflation of the airbag, the waist, neck and head may be compressed, causing some discomfort. For user with poor health conditions, this may lead to complications.

9. When not wearing the Smart Fall-Protective Airbag Vest, please ensure that the buckle is unsnapped to stop the device from working. Otherwise, movement, rolling or collision may trigger the deployment of the airbag.
10. This product should not be used outdoors in rain, splashed with water, or immersed in water.
11. While correctly wearing and using this product, if a fall occurs and the safety airbag deploys, yet the user still sustains injuries or other losses, our company assumes no legal liability or economic compensation.

Safety Precautions

1. Upon receiving the product, if you notice any damage (e.g., deformation, cracks), please stop using it and contact customer service promptly.
2. Please make sure to choose a product size that fits your body size. An ill-fitting product may affect the protective effect and may even fail to provide effective protection.
3. When wearing this product, please remember to check the battery level. If the device runs out of power, the airbag will not deploy.
4. Prolonged overcharging or discharging will damage the battery and shorten its lifespan. Please charge the battery before it completely runs out and unplug the charger once it is fully charged.
5. When charging, please choose an appropriate temperature and avoid charging at excessively high or low temperatures to ensure the battery's charging efficiency and lifespan.
6. As the gas cartridge in this product is a high-pressure gas canister kit, it may be prohibited to wear or carry on public transportation such as subway, high-speed train, and airplane.
7. Please note that this product is not suitable for children.
8. This product contains precise and sensitive components, so it should be stored carefully and kept out of reach of children.
9. Prolonged exposure to harsh environments (e.g., high temperatures, cold, humidity) may cause malfunctions in the control devices, gas cartridges, and other components, reducing its protective effectiveness.
10. Do not stick paper, adhesive tape, or other coverings on this product, as they may hinder the deployment of the airbag. Do not apply paint, cleaners, or other

chemicals to this product. Avoid using external heat sources (e.g., hair dryers, drying machines) to dry this product.

11. Do not attempt to repair, sew, disassemble, or replace your Vest yourself or entrust it to unauthorized personnel. These operations should only be performed by professionals authorized by the manufacturer.

If you have any after-sales service need, please email our after-sales service at: service@guanyun-tech.com.

Reuse Instructions

1. The Smart Fall-Protective Airbag Vest can be used multiple times. If the airbag is deployed and the appearance remains intact, it can be reused approximately ten times by replacing the gas cartridges.
2. After the airbag in the Smart Fall-Protective Airbag Vest is deployed, if you need to reuse the product, carefully inspect the airbag for damaged. If intact, you can replace the gas cartridges by yourself. For specific replacement instructions, scan the QR code on the last page of this user manual (ZenSen official account).
3. Gas cartridges are available for purchase on the company's official online store or through authorized dealers.

User Manual Version Notes:

Thank you for choosing Smart Fall-Protective Airbag Product. This manual provides a comprehensive guide on using the Smart Fall-Protective Airbag Vest, please read it carefully before first use. If you need to download the latest version of the user manual or have any other inquiries, please visit the company's official website at: www.guanyun-tech.com.

* For your safety and optimal experience, it is crucial to use the latest version of the user manual that corresponds to your product.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

FCC ID: 2BOM6ZS-SP1

Certificate of Conformity

Product Name	Smart Fall-Protective Airbag Vest		
Product Model			
Manufacturing Date		Inspector	

This product has passed the inspection, complies with relevant quality standards, and is approved for factory release.

Warranty Card

User Information	Name	Phone Number
	Address	
Product Information	Product Name	
	Device Code	
Sales Unit Information	Vendor Name	Sale Date
	Contact Phone Number	Invoice Number
Repair Record		

Notes:

- 1. This card serves as the warranty for the product. To claim three guarantees service (repair, replacement, refund), present this card along with the purchase invoice. Keep it carefully.
- 2. This card becomes valid only when stamped by the sales unit.
- 3. This card is valid solely for the device with the above-mentioned equipment code.



ZenSen Official Account

This product is underwritten by **PICC** Insurance

Contact Us

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Email: info@guanyun-tech.com

Website: www.guanyun-tech.com

Contact Address: Building 3, Future Entrepreneurship Plaza, Jinan Innovation Zone, Shandong, China