

2024

SETAP05 eStation User Manual

V0.2

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Version History

Version	Date	Summary	Author	Approval
0.1	2024-07-05	Document Initialization		
0.2	2024-07-25	Document proofreading		



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1. Summarize

This document applies to projects based on ESL Gen3.

This document applies to projects based on eRetail 3.2 or later.

The document applies to projects based on SETAP05.

1.1 eStation Introduction

The eRetail electronic label solution can be simply divided into five parts: upper-level customer application, eRetail 3.2 system, eBusiness, eStation and ESL equipment.

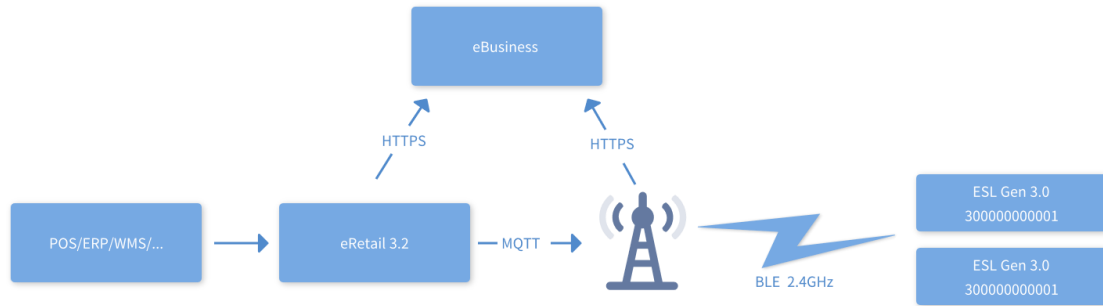
Upper level customer application refers to the data management system in the final customer's business project, such as POS, SAP/ERP, WMS, HIS and so on.

eRetail 3.2, which is responsible for integrating with the upper tier customer application data, managing the eStation and ESL devices, as well as packaging the upper tier application data and delivering it to the hardware.

eBusiness, the online management platform for eStation and eRetail, which is used to manage base station devices and communicate with eRetail, where the device management module is used to configure, manage, and OTA base station devices;

eStation, also called Access Point, referred to as AP, is the subject-object described in this manual, and ESL here refers to ESL Gen 3.0 in particular.

The view of the overall structure of the electronic labeling solution divided according to the above is as follows:



The eStation has the following features:

1. Multiple deployment modes are supported, including traditional fixed-parameter deployment and also auto-configured rapid deployment;<
2. Support multi-protocol expansion: according to the project requirements, it can increase the expansion of the industry's mainstream IoT communication protocols;
3. Resistant to network fluctuation: supports large data volume local caching and the Access Point work is not interfered with by network jitter.

Specific Nouns Explained:

eStation is the data node in the eRetail electronic labeling solution, often called the Access Point, or AP.

eStation supports concurrent operation and offline caching of data.

Device ID, also known as device short code, is the unique identification of the base station in the system, which adopts 0-9, A-Z and excludes the letters O and I. It can provide 344 (1336336) address shortcodes from 0000 to ZZZZ. The applied MAC address pool ranges from 90:A9:F7:30:00:00 to 90:A9:F7:FF:FF: FF following the mapping relationship. The mapping is done according to the one-to-one mapping relationship, that is, 0000 corresponds to 90:A9:F7:30:00:00, 0001 corresponds to 90:A9:F7:30:00:01, and so on.

Note:

Device ID is a logical concept attached to eStation by the eRetail system.

1.2 Introduction to eBusiness Device Management Module

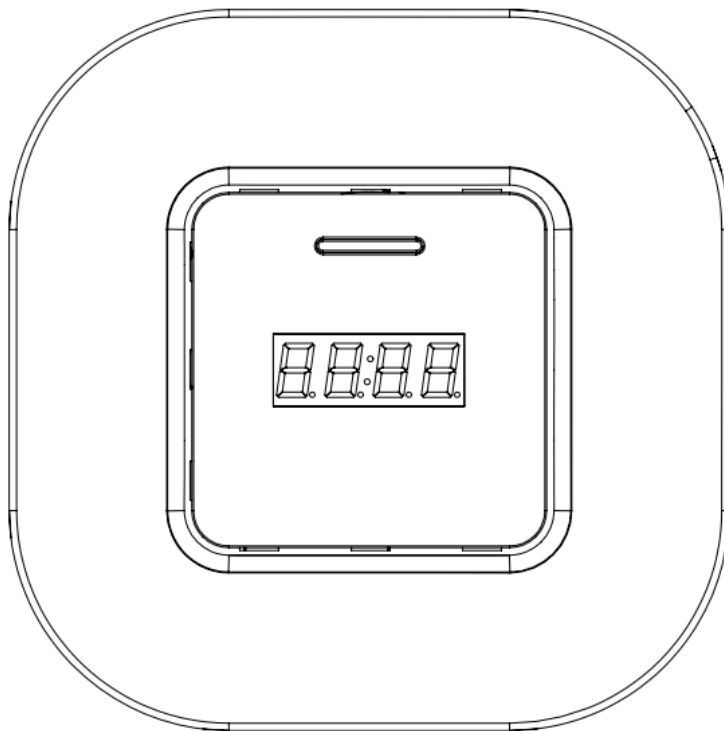
The eBusiness device management module is a management tool for eStation deployment configuration, mainly providing eStation device configuration and service connection functions for field implementers, and is also used for OTA upgrades (eRetail system also supports OTA).

eBusiness is server side application, it requires eStation need connect to the Internet to configure

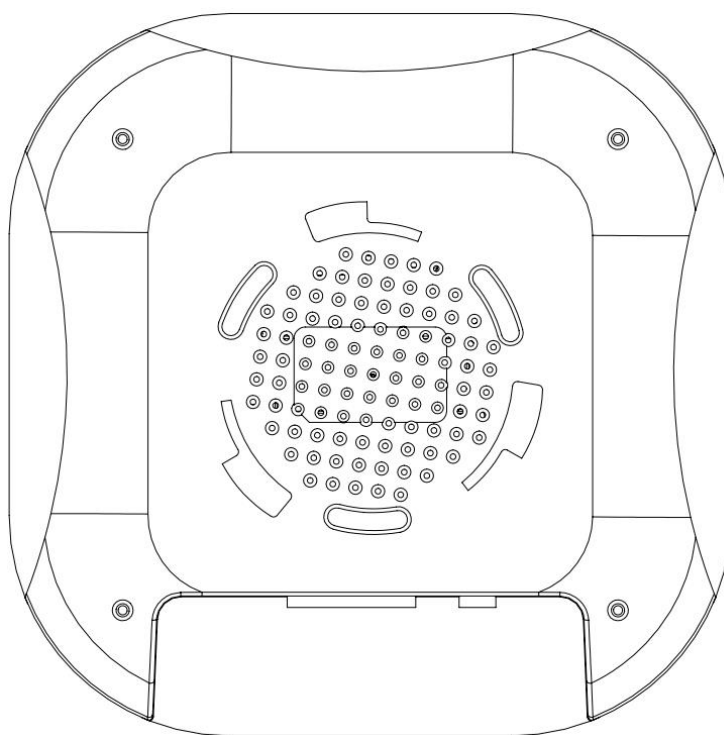
2. eStation Usage

2.1 Physical Descriptions

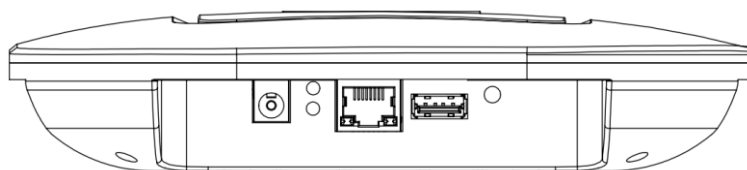
Name	Access Point
Model	SETAP05
Dimensions(L*W*H)	190mm*190mm*41mm
Weight	335g
Interface	USB 2.0
Internet	Ethernet
Electricity	DC 12V 1A, PoE
Indication	4-bit digital tube



(Front view)



(Back view)



(Interface view)



2.2 Display Code

Assuming that the eStation's ID is set to 01, the digital carried by the eStation may be displayed as follows:

Display content	Implication
----	eStation initialization
boot	Rebooting, typically after apply configuration
FILE	USB flash drive configuration mode, ready for USB flash drive configuration
COFG	Configuration mode, or OTA mode, is being configured or upgraded
A-01	ID: 01, online
F-01	ID: 01, offline
P-01	ID: 01, port failure
5678	Total number of caches.

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3. eBusiness - Device Management

3.1 Main interface

ID	AP	Config version	AP Version	Mod Version	Online	Running	Current task	Device IP	Activation time	Remark	Operations
0047	AP05	0	1.0.7.11	1.0.087	Offline	Running	Config	192.168.4.68	3624-06-26 18:11:14		
004H	AP05	0	1.0.7.11	1.0.087	Offline	Running	Config	192.168.4.67	3624-06-26 17:56:25		
002F	AP05	32	1.0.7.25	1.0.087	Offline	Running	DK	192.168.4.54	2024-06-27 19:40:08		
004S	AP05	0	1.0.7.11	1.0.087	Offline	Running	Config	192.168.4.9	2024-06-26 13:04:19		
006R	AP05	8	1.0.6.76	1.0.087	Offline	Running	DK	192.168.4.8	2024-05-22 19:41:03		
006Q	AP05	0	1.0.6.75	1.0.087	Offline	Running	OTA	255.255.255.255	2024-05-22 19:39:48		
006P	AP05	8	1.0.6.76	1.0.087	Offline	Running	DK	255.255.255.255	2024-05-22 19:37:16		
006N	AP05	8	1.0.6.76	1.0.087	Offline	Running	DK	255.255.255.255	2024-05-22 19:36:12		
006M	AP05	8	1.0.6.76	1.0.087	Offline	Running	DK	255.255.255.255	2024-05-22 19:32:29		
006L	AP05	8	1.0.6.76	1.0.087	Offline	Running	DK	255.255.255.255	2024-05-22 19:31:01		

The main interface functions as follows:

1. List the information related to the base station: device ID, device type, configuration version number, base station version, module version, online status, operation status, current task, activation time, and notes.
2. Supports searching by device ID, device type, configuration version number, online status, operation, version update progress, MAC address, activation time, and notes.
3. Display the online status of the device: online, offline, mouse touch the online status icon to view the number of heartbeats and the last heartbeat time.

Heartbeat symbol: the last heartbeat time within 2 minutes displays red, more than 2 minutes within 4 minutes displays light red, and more than 4 minutes displays gray.

Offline: the last heartbeat time is considered offline for more than 2 minutes, and online for less than 2 minutes.

4. You can view the operation of the device: normal, abnormal, and the status of the current task.

Abnormal: less than 30% disk space remaining

Abnormal icon will be displayed when abnormal, touch to display the prompt text:
disk space is insufficient.

Config: Configuring; OTA: OTA in progress; Report: Reporting; OK: Current task completed.

5. Version update progress:

Ongoing: Configuration version, Access Point version, or module version has a pending update prompt.


Completed: there is no prompt for updating the configuration version, Access Point version, or module version.

6. Device ID: 4-digit device short code, the unique identification code of the Access Point equipment in the system, corresponding to the display in the location of the Access Point label as shown in the figure or scanning QR code to get.

ESL Access Point

003T

Model: SETAP05

Input: DC 12V  1A

CMIIT ID: 24J3213GN637

LOT NO: P20231220000133

S/N: 90A9F7400081

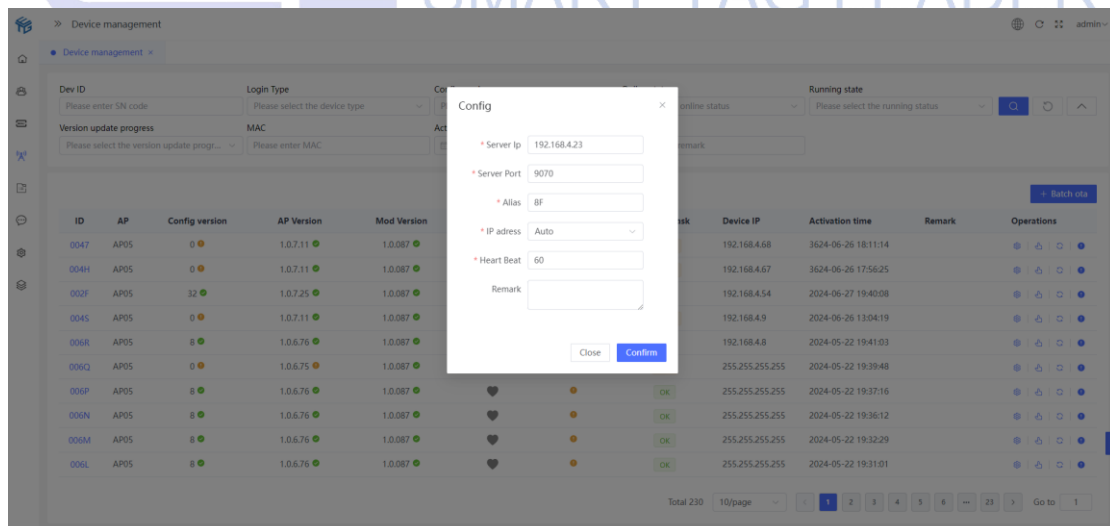


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7. Base station version: the version number of the current base station; when the version number and the current base station version are the same, it will show green logo, otherwise it will show an orange prompt, and the mouse touch will show the latest version number of the base station to be updated, and the text will show as follows: # version number to be updated # to be updated.

8. Module version: the module version number of the current base station; when the version number and the current module version are the same, it will show a green logo, otherwise it will show an orange prompt, and the mouse touch will show the latest version number of the base station to be updated, and the text will show as follows: # version number to be updated # to be updated.
9. Click the Configure button to configure the server address, port number, digital pipe display, heartbeat interval, and notes for the base station.
10. Click the Refresh button to refresh the base station information.
11. Click the Push or Batch Push button to select the firmware type (AP, MOD, DSL, ESL) to push, and when the base station receives more than one version number to be configured or upgraded, only the latest version will be updated.
12. Clicking on the Reset Activation button allows you to reactivate and write data to this base station using the activation tool.

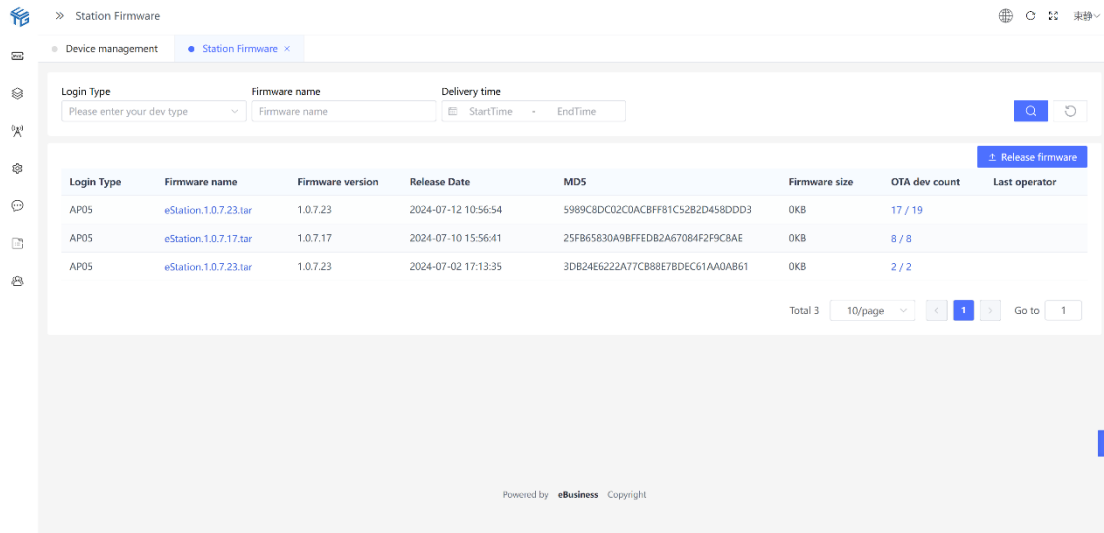
3.2 Configure



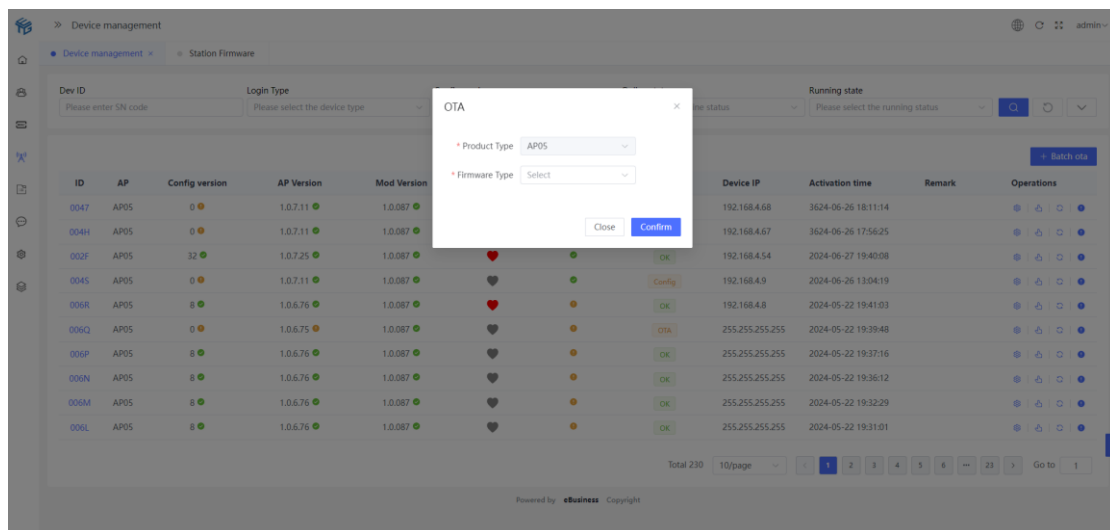
1. On the device management page, click the configuration button corresponding to the list device to configure the server address, server port number, digital pipe display, IP address, heartbeat frequency, and note information of the base station device.
2. The server address is the eRetail server address, the server port number is the

eRetail port number, the heartbeat frequency is in seconds, and it is recommended to set the duration to 60s, and the IP address can be selected from the automatic IP and the specified static IP.

3.3 Devices OTA



1. In the Access Point firmware page, you can publish the firmware version of each device type, and after publishing, you can carry out OTA for the specified device in the device management page, and you can also click the number of OTA devices to view the OTA status of each firmware.



2. Click the OTA button on the device management page to push the content of the

latest uploaded firmware version of the specified type to the device, supporting batch push.

3.4 Device Details

Click the device ID in the device management list to open the corresponding device information, OTA logs, communication logs, and configuration logs.

The screenshot displays the 'Device management' interface. A modal window titled 'Device information' is open, showing details for device ID 0047. The interface includes a table of devices and a detailed view of a selected device.

ID	AP	Config version
0047	AP05	0
004H	AP05	0
002F	AP05	32
0045	AP05	0
006R	AP05	8
006Q	AP05	0
006P	AP05	8
006N	AP05	8
006M	AP05	8
006L	AP05	8

Basic information					
Dev ID	0047	MAC	90A9FF40008F	AP Type	AP05
Equipment serial number	cd1e7abe-165e-40f3-8997-ee23f100e1d8			Factory serial number	P20231220000220
Mod Version	1.0.087	AP Version	1.0.7.11	Remaining space	210/1951
Local IP	192.168.4.68	NetWork IP	192.168.4.68	Activation time	3624-06-26 18:11:14

configuration information					
Config version	0	Server ip	192.168.1.92	Server Port	9071
Configuration time	2024-07-17 10:33:57	Digital tube display	00	Heartbeat interval	15

Other information					
Total number of pending tasks	0	Sending tasks	0	Report num	433
heart rate	39775	Last heartbeat time	2024-06-26 10:29:37	Report time	2024-06-26 10:29:23
OperateBy	0047				