Geekplus Picking System Standard Interface Document

Version： 3.4.0

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History

Update Date	Version	Comment	Modifier	Review Date
2019-2-21	V2.4.17	Initialize according Chinese version document	Dong Li	2019-2-21
2019-3-12	V2.4.18	Update all interface URLs to adapt to the interface configuration platform	Ying Cao	2019-03-12
		Update following interfaces to reflect the latest enhancement: 1. Inventory Reconciliation 2. Goods Delivery Note Creation 3. Goods Delivery Note Feedback 4. Stocktaking Command Creation 5. Stock Batch Adjustment	Dong Li	2019-03-19
2019-5-10	V2.4.19	Update 6.4: Rename it to "Inventory Query Interface" and update fields Add 2 new interfaces: 6.16 – Internal Stocktaking Variance Adjustment Feedback Interface, 6.22 – Inventory Reconciliation Interface	Dong Li	
2019-6-11	V3.2.10	Merge GPS and WMS interfaces together into one document.	Dong Li	2019-6-12
		Updated example for 6.15.3	Dong Li	2019-7-4
2019-7-13	V3.2.11	Update all interface URL	Dong Li	2019-7-15
2019-07-17	V3.2.12	Update all examples	Dong Li	2019-7-18
2019-12-03	V3.2.13	Update paragraph 5 and correct some examples	Dong Li	2019-12-04
2020-01-12	V3.3.1	Update to newest version because of different version migration	Dong Li	2020-04-17
2020-12-08	V3.3.2	Update to include C200 related information	Dong Li	2020-12-08
2021-4-16	V3.3.3	Red hightlight	Dong Li	2021-4-16
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1 Introduction

This document defines general external service interfaces of Geek+ Robotics Picking System enterprise service platform. The interface aims at rapidly integrating Geek+ system with customer's own system via information flow, accelerating intelligence and automation process for our customers in order to achieve a win-win situation.

2 Service Description

Module	Interface Name	Data Flow	Provide By	Standard?
Basic Data	SKU Synchronization	Customer → Geek+	Geek+	Yes
	Container Synchronization	Customer → Geek+	Geek+	Yes
	Sequence Number Synchronization	Customer → Geek+	Geek+	Yes
	Carrier Synchronization	Customer → Geek+	Geek+	Yes
	User Synchronization	Customer → Geek+	Geek+	Yes
Inbound	Putaway Order Creation	Customer → Geek+	Geek+	Yes
	Putaway Order Confirmation	Geek+ → Customer	Customer	Yes
	Putaway Order Cancellation	Customer → Geek+	Geek+	Yes
Outbound	Pick Order Creation	Customer → Geek+	Geek+	Yes
	Pick Order Confirmation (By Order)	Geek+ → Customer	Customer	Yes
	Pick Order Confirmation (By Container)	Geek+ → Customer	Customer	Yes
	Pick Order Cancellation	Customer → Geek+	Geek+	Yes
	Binding Container Notification	Geek+ → Customer	Customer	Yes
Inventory	Container/Sowing Wall Release	Customer → Geek+	Geek+	Yes
	Stocktaking Command Creation	Customer → Geek+	Geek+	Yes
	Stocktaking Command Confirmation	Geek+ → Customer	Customer	Yes
	Stocktaking Discrepancy Adjustment Creation	Customer → Geek+	Geek+	Yes
	Stocktaking Discrepancy Adjustment Confirmation	Geek+ → Customer	Customer	Yes
	Internal Stocktaking Variance Adjustment Feedback	Geek+ → Customer	Customer	Yes
	Inventory Batch Property Adjustment Creation	Customer → Geek+	Geek+	Yes
	Inventory Batch Property Adjustment Confirmation	Geek+ → Customer	Customer	Yes
	SKU Real-time Inventory Query	Customer → Geek+	Geek+	Yes

	Inventory Snapshot Reconciliation	Geek+ → Customer	Customer	Yes

3 Parameter Safety And Data Integrity Control

3.1 Interface Access Method

- Geek+ standard interfaces are **REST API**, Transmit **JSON** with **HTTP** protocol, encoding format UTF-8.

- The calling interval of any interface is set by default to be no less than **10** seconds which is configurable.

- Interface timeout is set to 30 (configurable) seconds by default.

- The amount of data transferred by interface is set to be 200 (configurable) records.

3.2 Message Specification

- Organize message with JSON format (Content-Type=application/json)

- The time format is UTC timestamp, expressed in **Long** type, in milliseconds. For example, 1559402551012 means 2019-06-01 23:22:31:012

- Input parameters are strictly case-sensitive

4 Parameter Definition

Required Interface Parameters

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Field	Description	Remark
warehouse_code	Warehouse code	Docking warehouse. Geek+ will provide the value.
owner_code	Owner code	Docking customer. Geek+ will provide the value.
user_id	User name	Docking user. Geek+ will provide the value.
user_key	User password	Docking user password. Geek+ will provide the value.

5 Interface Description

5.1 SKU Synchronization Interface

5.1.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse Code	warehouse_code	varchar(16)	Y	Warehouse code
Goods Owner	owner_code	varchar(16)	Y	Goods owner code
Owner Name	owner_name	varchar(64)	N	Goods owner name
SKU Code	sku_code	varchar(64)	Y	Goods unique identification
SKU ID	sku_id	varchar(32)	N	Upstream SKU ID
SKU Name	sku_name	varchar(128)	N	If empty, fill with SKU code by default
Remark	remark	varchar(255)	N	Remark
Basic Unit	unit	varchar(12)	N	SKU basic unit of measure piece by default
Shelf Life	shelf_life	int(4)	N	Unit of measure is day, need to fill for shelflife goods, otherwise don't fill.
SKU Status	sku_status	tinyint(4)	N	0: Disable / 1: Enable Default 1
SKU ABC Category	sku_abc	varchar(10)	N	10: Super class A goods 20: Class A goods 30: Class B goods 40: Class C goods Default 40
Wares Type	wares_type_code	varchar(64)	N	Wares type
SKU Price	sku_price	decimal(13,3)	N	Unit(RMB), 0 by default
SKU Length	length	decimal(8,1)	N	Unit(cm), 0 by default
SKU Width	width	decimal(8,1)	N	Unit(cm), 0 by default

SKU Height	height	decimal(8,1)	N	Unit(cm), 0 by default
SKU Volume	volume	decimal(21,3)	N	Unit(cm^3), 0 by default
SKU Net Weight	net_weight	decimal(10,3)	N	Unit(g), 0 by default
SKU Gross Weight	gross_weight	decimal(10,3)	N	Unit(g), 0 by default
Minimum Inventory Limitation	min_count	int(10)	N	SKU minimum inventory
Maximum Inventory Limitation	max_count	int(10)	N	SKU maximum inventory
Place of Production	production_location	varchar(64)	N	SKU product place
SKU Specification	specification	varchar(100)	N	SKU Specification
SKU Brand	sku_brand	varchar(32)	N	SKU Brand
SKU Size	item_size	varchar(100)	N	SKU Size
SKU Color	item_color	varchar(100)	N	SKU Color
Style	item_style	varchar(100)	N	Style, e.g. Male, Female
Picture URL	pic_url	varchar(128)	N	Picture URL
Is Sequence SKU Or Not	is_sequence_sku	tinyint(4)	N	0: False / 1: True Default 0
Is Breakable Or Not	is_breakable	tinyint(4)	N	0: False / 1: True Default 0
Is Dangerous Or Not	is_dangerous	tinyint(4)	N	0: False / 1: True Default 0
Is Precious Or Not	is_precious	tinyint(4)	N	0: False / 1: True Default 0
Is Abnormal Or Not	is_abnormity	tinyint(4)	N	0: False / 1: True Default 0
Is Need Production Batch Manage Or Not	Is_need_product_batch_manage	tinyint(4)	N	0: False / 1: True Default 0
Is Need Expiration Manage Or Not	is_need_exp_manage	tinyint(4)	N	0: False / 1: True Default 0
Is Need Batch Manage Or Not	is_need_batch_manage	tinyint(4)	N	0: False / 1: True Default 0
Is Package Material Or Not	is_material	tinyint(4)	N	0: False / 1: True Default 0
SKU Bar Code Info (2nd level, bar_code_list, not required if no bar code)				
SKU Code	sku_code	varchar(64)	N	SKU Code
SKU Bar Code	bar_code	varchar(32)	Y	SKU Bar Code
SKU Packing Spec (2nd level, sku_packing, not required if no packing information)				
SKU Code	sku_code	varchar(64)	N	SKU Code
Packing Specification	packing_spec	varchar(16)	Y	Packing Specification, e.g. 1*10*6
First Level Packing Bar Code	mini_packing_code	varchar(32)	N	Packing bar code
First Level Packing Quantity	mini_packing_amount	int(8)	Y	First level packing quantity
Length	mini_length	decimal(6,1)	Y	First level packing length, Unit(cm)
Width	mini_width	decimal(6,1)	Y	First level packing width, Unit(cm)
Height	mini_height	decimal(6,1)	Y	First level packing height, Unit(cm)
Volume	mini_volume	decimal(16,3)	Y	First level packing volume, Unit(cm^3)
Weight	mini_weight	decimal(8,1)	Y	First level packing weight, Unit(g)
Second Level Packing Bar Code	second_packing_code	varchar(32)	N	Packing bar code
Second Level Packing Quantity	second_packing_amount	int(8)	Y	Second level packing quantity
Length	second_length	decimal(6,1)	Y	Second level packing length, Unit(cm)
Width	second_width	decimal(6,1)	Y	Second level packing width, Unit(cm)
Height	second_height	decimal(6,1)	Y	Second level packing height, Unit(cm)

Volume	second_volume	decimal(16,3)	Y	Second level packing volume, Unit(cm³)
Weight	second_weight	decimal(8,1)	Y	Second level packing weight, Unit(g)
Third Level Packing Bar Code	third_packing_code	varchar(32)	N	Packing bar code
Third Level Packing Quantity	third_packing_amount	int(8)	Y	Third level packing quantity
Length	third_length	decimal(6,1)	Y	Third level packing length, Unit(cm)
Width	third_width	decimal(6,1)	Y	Third level packing width, Unit(cm)
Height	third_height	decimal(6,1)	Y	Third level packing height, Unit(cm)
Volume	third_volume	decimal(16,3)	Y	Third level packing volume, Unit(cm³)
Weight	third_weight	decimal(8,1)	Y	Third level packing weight, Unit(g)

5.1.2 Interface Functionality

Receive SKU information. Whenever SKU is updated, deleted or added, the SKU synchronize interface is called to pass the latest updating, so as to ensure the information in both systems are consistent.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/skuInfoImport?warehouse_code={warehouse_code}&owner_code={owner_code}

5.1.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "sku_amount": 1,
        "sku_list": [
            {
```

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```
    "owner_code": "lidong",
    "sku_id": "ERPSKU001",
    "sku_code": "sku001",
    "sku_name": "memory",
    "sku_price": 18.9,
    "unit": "EACH",
    "remark": "128GB",
    "length": 15.5,
    "width": 20,
    "height": 8.5,
    "volume": 100.25,
    "net_weight": 200,
    "gross_weight": 230,
    "min_count": 100,
    "max_count": 20000,
    "shelf_life": 90,
    "specification": "2piece/box",
    "sku_status": 1,
    "sku_abc": "30",
    "is_sequence_sku": 0,
    "production_location": "Beijing",
    "sku_brand": "AMD",
    "item_size": "XL",
    "item_color": "red",
    "item_style": "show",
    "pic_url": "http://tianmao.com/h/sku001.jpg",
    "bar_code_list": [
        {
            "bar_code": "code1"
        }
    ],
    "sku_packing": [
        {
            "packing_spec": "1*10*6",
            "mini_packing_code": "code1",
            "mini_length": 10,
            "mini_width": 10,
            "mini_height": 10,
            "mini_volume": 1000,
            "mini_weight": 50,
            "mini_packing_amount": 1,
            "second_packing_code": "PM0002",
            "second_length": 30,
            "second_width": 30,
```

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```
                    "second_height": 30,
                    "second_volume": 27000,
                    "second_weight": 300,
                    "second_packing_amount": 6,
                    "third_packing_code": "PL0003",
                    "third_length": 50,
                    "third_width": 50,
                    "third_height": 50,
                    "third_volume": 125000,
                    "third_weight": 3000,
                    "third_packing_amount": 60
                }
            ]
        }
    ]
}
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "id": "sku001",
```

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```
                    "code": "GKP-IPS-E10011",
                    "message": "Illegal value for packing_spec"
                }
            ],
            "owner_code": "lidong",
            "sku_code": "sku001"
        }
    ]
  }
}
```

5.2 Container Synchronization Interface

5.2.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse Code	warehouse_code	varchar(16)	N	Warehouse code
Container Code	container_code	varchar(32)	Y	Container code
Usage	use_type	tinyint(4)	N	1: Picking 2: Down Shelf 3: Putaway 0: Do not distinguish usage Default 1
Available Or Not	status	tinyint(4)	N	0: Occupied 1: Available Default 1
Container Type	type	tinyint(4)	N	1: Pallet 2: Circulation Bin 3: Circulation Cart Default 1

5.2.2 Interface Functionality

Receive container information. Whenever container information is modified, deleted or added, the container information synchronize interface is called to pass the latest container details, so as to ensure the information in both systems are consistent.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/containerImport?warehouse_

code={warehouse_code}&owner_code={owner_code}

5.2.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "container_amount": 2,
        "container_list": [
            {
                "container_code": "CTN001",
                "use_type": 1,
                "status": 1,
                "type": 2
            },
            {
                "container_code": "CTN002",
                "use_type": 1,
                "status": 1,
                "type": 2
            }
        ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
```

```
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00041",
                        "message": "Invalid type value"
                    }
                ],
                "container_code": "CTN002"
            }
        ]
    }
}
```

5.3   Sequence Number Synchronization Interface

5.3.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse Code	warehouse_code	varchar(16)	N	Warehouse code
SKU Code	sku_code	varchar(64)	Y	SKU code
Owner Code	owner_code	varchar(16)	Y	Goods owner
Sequence Number	sn_code	varchar(64)	Y	Sequence number
Status	status	tinyint(4)	Y	0: Disable 1: Enable
Remark	remark	varchar(255)	N	Remark

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5.3.2 Interface Functionality

Receive sequence numbers. Whenever sequence is updated, deleted or added, the

sequence number synchronize interface is called to pass the latest updating, so as to

ensure the information in both systems are consistent.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/snImportRequest?warehouse

_code={warehouse_code}&owner_code={owner_code}

5.3.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "sn_amount": 2,
        "sn_list": [
            {
                "sku_code": "sku001",
                "sn_code": "sn001",
                "owner_code": "lidong",
                "warehouse_code": "geekplus",
                "status": 1,
                "remark": "test sn download1"
            },
            {
                "sku_code": "sku001",
                "sn_code": "sn002",
                "owner_code": "lidong",
```

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```
                    "warehouse_code": "geekplus",
                    "status": 1,
                    "remark": "test sn download2"
                }
            ]
        }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E70006",
                        "message": "SKU/Goods owner does not exist"
                    }
                ],
                "sn_code": "sn002"
            }
        ]
    }
}
```

5.4 Carrier Synchronization Interface

5.4.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Carrier Code	carrier_code	varchar(16)	Y	Carrier Code
Carrier Name	carrier_name	varchar(128)	Y	Carrier Name
Carrier Abbreviation	carrier_abbr	varchar(100)	Y	Carrier Abbreviation
Status	active_flag	tinyint(4)	Y	0: Disable 1: Enable
Contacter	contact_person	varchar(32)	N	Contacter
Contact Tel	contact_tel	varchar(16)	N	Contact Tel
Contact Fax	fax	varchar(16)	N	Contact Fax
Contact eMail	email	varchar(100)	N	Contact eMail
Country	country	varchar(32)	N	Country
Province	province	varchar(32)	N	Province
City	city	varchar(32)	N	City
Address	addr	varchar(512)	N	Address
Zip	zip_code	varchar(32)	N	Zip
Remark	remark	varchar(256)	N	Remark

5.4.2 Interface Functionality

Receive carrier information. Whenever carrier is updated, deleted or added, the carrier synchronize interface is called to pass the latest updating, so as to ensure the information in both systems are consistent.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/carrierInfoImport?warehouse_code={warehouse_code}&owner_code={owner_code}

5.4.3 Example

Request Message

```json
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "carrier_info_amount": 2,
        "carrier_info_list": [
            {
                "carrier_code": "UPS",
                "carrier_name": "UPS Express",
                "carrier_abbr": "UPS",
                "active_flag": 1,
                "contact_person": "Mr. Li",
                "contact_tel": "555",
                "fax": "555",
                "email": "555@qq.com",
                "country": "CN1",
                "province": "JS",
                "city": "SZ",
                "addr": "NO. 278, XXX Street",
                "zip_code": "900",
                "remark": "For testing"
            },
            {
                "carrier_code": "FEDEX",
                "carrier_name": "FedEx Express",
                "carrier_abbr": "FedEx",
                "active_flag": 0,
                "contact_person": "Mr. Tayler",
                "contact_tel": "555",
                "fax": "555",
                "email": "5551@qq.com",
                "country": "CN1",
                "province": "JS",
                "city": "SZ",
                "addr": "NO. 113, xxx Road",
```

```
                    "zip_code": "900",
                    "remark": "For testing"
            }
        ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed！  "
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00041",
                        "message": "Invalid status"
                    }
                ],
                "carrier_code": "FEDEX"
            }
        ]
    }
}
```

5.5 User Synchronization Interface

5.5.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
User Login Name	user_name	varchar(32)	Y	User Login Name
User Real Name	real_name	varchar(32)	N	User Real Name
Password	password	varchar(64)	Y	Password
Status	status	tinyint(4)	Y	0: Disable 1: Enable
Role List (2nd Level, role_list, Not mandatory)				
Role Name	role_name	varchar(64)	Y	Role Name

5.5.2 Interface Functionality

Receive user information. Whenever user is updated, deleted or added, the user synchronize interface is called to pass the latest updating, so as to ensure the information in both systems are consistent.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/userCreateImportRequest?warehouse_code={warehouse_code}&owner_code={owner_code}

5.5.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
```

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```
            "user_key": "111111"
        },
        "body": {
            "user_list": [
                {
                    "user_name": "johnw",
                    "real_name": "John Woods",
                    "password": "abcdefg",
                    "status": 1,
                    "role_list": [
                        {
                            "role_name":"picker"
                        }
                    ]
                }
            ]
        }
    }
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
```

```
                    {
                        "code": "GKP-IPS-E00041",
                        "message": "Invalid status"
                    }
                ],
                "user_name": "johnw"
            }
        ]
    }
}
```

5.6　Putaway Order Creation Interface

5.6.1　Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse	warehouse_code	varchar(16)	Y	Warehouse
Putaway Order Code	receipt_code	varchar(64)	Y	Upstream entry command, primary key
Pallet Code	pallet_code	varchar(32)	N	Pallet code
Original Note	orig_note	varchar(32)	N	User creates virtual order to offset inventory variance
Related Receipt	related_receipt	varchar(64)	N	Related note code
Type	type	tinyint(4)	Y	0: Purchasing receiving 1: Normal receiving 2: Transfer receiving 3: ASN receiving 4: Return receiving 5: Replenishment receiving 6: Other receiving 7: Virtual entry
Creation Date	creation_date	long	N	Creation date, UTC timestamp. Default current time
Supplier Code	supplier_code	varchar(16)	N	Supplier Code
Carrier Code	carrier_code	varchar(16)	N	Carrier Code
SKU Total Amount	sku_amount	int(8)	N	SKU Total Amount
SKU Type Total Amount	sku_type_amount	int(8)	N	SKU Type Total Amount
Remark	remark	varchar(1024)	N	Remark
Origal plantform Code	orig_plantform_code	varchar(32)	N	Origal plantform Code(TB=淘宝、TM=天猫、JD=京东、DD=当

				当、PP=拍拍、YX= 易讯、EBAY=ebay、QQ=QQ 网购、AMAZON=亚马逊、SN=苏宁、GM=国美、WPH=唯品会
Source warehouse code	source_warehouse_code	varchar(20)	N	Source warehouse code
Target warehouse code	target_warehouse_code	varchar(20)	N	Target warehouse code
Original order code	orig_order_code	varchar(64)	N	Original order code
New waybill code	new_waybill_code	varchar(64)	N	New waybill code
Is Original Box Or Not	is_original_box	int(4)	N	0: No 1: Yes Default 0
Putaway type	putaway_type	int(4)	N	0:Multi product Circulation Bin put away 1: Single product Circulation Bin put away 2: Package put away 3: Pallet put away 40: BinToPerson-Spare parts 41: BinToPerson-Full container 42: BinToPerson-Whole pallet 43: BinToPerson-To be collected
Putaway Order Specification (2nd level, sku_list, gather by SKU, batch code, container)				
Order Line Number	item	int(12)	N	Order line number
SKU Code	sku_code	varchar(64)	Y	SKU Code
Container	container_code	varchar(32)	N	Container
Goods Owner	owner_code	varchar(16)	Y	Goods Owner
SKU id	sku_id	varchar(64)	N	Upstream SKU ID
Bar Code	bar_code	varchar(64)	N	Bar Code
SKU Name	sku_name	varchar(128)	N	SKU Name
Quantity	amount	int(8)	Y	Quantity
SKU Quality	sku_level	int(11)	Y	0: Qualified goods 1: Defective goods
Production Date	production_date	long	N	Production date, UTC timestamp.
Expiration Date	expiration_date	long	N	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	N	External Batch
Manufacturing Batch	batch_property04	varchar(100)	N	Manufacturing Batch
Receiving Date	input_date	long	N	Receiving date, UTC timestamp.
Box Code	box_code	varchar(32)	N	Box Code
Receipt Mode	receipt_mode	tinyint(4)	N	10: Whole piece 20: Whole box 30: Whole pallet 40: Mix Default 10

Packing Specification	packing_spec	varchar(16)	N	Packing specification. E.g. 1*8*6
Third Level Packing	third_packing_count	int(8)	N	Large packing
Second Level Packing	second_packing_count	int(8)	N	Medium packing
First Level Packing	mini_packing_count	int(8)	N	Minimal packing
Deposit Quantity In Shelf Bin	can_deposit_amount	int(11)	N	Deposit Quantity In Shelf Bin
Sku version	sku_version	varchar(32)	N	Sku version
Product code	product_code	varchar(64)	N	Product code, Same product may have different product code due to different business
Consignor Province	consignor_province	varchar(64)	N	Consignor Province
Consignor City	consignor_city	varchar(64)	N	Consignor City
Consignor District	consignor_district	varchar(64)	N	Consignor District
Consignor Address	consignor_address	varchar(512)	N	Consignor Address
Consignor Zip Code	consignor_zip_code	varchar(64)	N	Consignor Zip Code
Consignor	consignor	varchar(64)	N	Consignor
Consignor Phone	consignor_phone	varchar(64)	N	Consignor Phone
Consignor Telephone	consignor_tel	varchar(64)	N	Consignor Telephone

5.6.2 Interface Functionality

Receive putaway orders. (NOTE: Only support creation, cannot support updating)

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/receiptNoteImport?warehouse_code={warehouse_code}&owner_code={owner_code}

5.6.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
```

```json
    "body": {
        "receipt_amount": 2,
        "receipt_list": [
            {
                "receipt_code": "shd001",
                "type": 0,
                "pallet_code": "A001",
                "creation_date": 1481192046000,
                "supplier_code": "s001",
                "carrier_code": "c001",
                "remark": "test",
                "sku_list": [
                    {
                        "sku_code": "sku001",
                        "sku_level": 0,
                        "owner_code": "lidong",
                        "amount": 100,
                        "out_batch_code": "batch001"
                    },
                    {
                        "sku_code": "sku002",
                        "sku_level": 0,
                        "owner_code": "lidong",
                        "amount": 200,
                        "production_date": 1481192046000,
                        "expiration_date": 1581192046000
                    }
                ]
            },
            {
                "receipt_code": "shd002",
                "type": 0,
                "pallet_code": "A001",
                "creation_date": 1481192046000,
                "supplier_code": "s001",
                "carrier_code": "c001",
                "remark": "test",
                "sku_list": [
                    {
                        "sku_code": "sku001",
                        "sku_level": 0,
                        "owner_code": "lidong",
                        "amount": 100,
                        "out_batch_code": "batch002"
```

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```
                },
                {
                    "sku_code": "sku002",
                    "sku_level": 0,
                    "owner_code": "lidong",
                    "amount": 200,
                    "production_date": 1481192046000,
                    "expiration_date": 1581192046000
                }
            ]
        }
    ]
}
}
```

Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Record already exists!"
                    }
                ],
```

```
                    "receipt_code": "shd002"
                }
            ]
        }
    }
}
```

5.7 Putaway Order Confirmation Interface

5.7.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Putaway Order Code	receipt_code	varchar(64)	Upstream entry command
Pallet Code	pallet_code	varchar(32)	Pallet code
Status	status	tinyint(4)	4: Putaway finished Only submit putaway finished
Type	type	tinyint(4)	0: Purchasing receiving 1: Normal receiving 2: Transfer receiving 3: ASN receiving 4: Return receiving 5: Replenishment receiving 6: Other receiving 7: Virtual entry
Putaway Start Time	start_time	long	Putaway start time, UTC timestamp.
Putaway Completion Time	completion_time	long	Putaway completion time, UTC timestamp.
Receipt Status	receipt_status	int(4)	0: Normal 1: Abnormal
Receiver	receiptor	varchar(32)	Receiver (login name)
Workstation Number	workstation_no	varchar(16)	Workstation number
Supplier Code	supplier_code	varchar(16)	Supplier Code
Carrier Code	carrier_code	varchar(16)	Carrier Code
Total Number of Planned Received SKU	plan_sku_amount	int(8)	Total Number of Planned Received SKU
Total Number of Planned Received SKU Type	plan_sku_type_amount	int(8)	Total Number of Planned Received SKU Type
Actual Number of Received SKU	sku_amount	int(8)	Actual Number of Received SKU
Actual Number of Received SKU Type	sku_type_amount	int(8)	Actual Number of Received SKU Type

Actual Putaway Order Specification (2nd level, sku_list)

Order Line Number	item	int(12)	Order line number
SKU Code	sku_code	varchar(64)	SKU Code
SKU id	sku_id	varchar(64)	Upstream system SKU id
Bar code	bar_code	varchar(32)	Bar code
Container	container_code	varchar(32)	Container
SKU Name	sku_name	varchar(128)	SKU Name
Receipt Flag	receipt_flag	tinyint(4)	0: Exact receipt 1: Deficit receipt
Goods Owner	owner_code	varchar(16)	Goods Owner
Planned Receive Quantity	plan_amount	int(8)	Planned Receive Quantity
Actual Receive Quantity	amount	int(8)	Actual Receive Quantity
SKU Quality	sku_level	int(11)	SKU Quality 0: Qualified goods 1: Defective goods
Production Date	production_date	long	Production date, UTC timestamp.
Expiration Date	expiration_date	long	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	External batch code
Manufacturing Batch	batch_property04	varchar(100)	Manufacturing batch
Packing Specification	packing_spec	varchar(16)	Packing specification
Shelf bin specification (3rd level, shelf_bin_list, white box integration only)			
Shelf Code	shelf_code	varchar(256)	Shelf code
Shelf Bin Code	shelf_bin_code	varchar(256)	Shelf bin code
Quantity	quantity	int(8)	Actual putaway quantity
Operator	operator	varchar(256)	Operator

5.7.2 Interface Functionality

Confirm customer the actual received after complete putaway or enforce close putaway order.

HTTP request method: POST

URL path: To be provided by customer

5.7.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "interface_code":"feedback_receipt_note",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "receipt_amount": 2,
        "receipt_list": [
            {
                "receipt_code":"shd001",
                "pallet_code":"A001",
                "type":0,
                "status":4,
                "receipt_status":0,
                "completion_time":1102098121000,
                "sku_list": [
                    {
                        "sku_code":"sku001",
                        "owner_code":"lidong",
                        "receipt_flag":0,
                        "sku_level":0,
                        "amount":100,
                        "shelf_bin_list": [
                            {
                                "shelf_code":"A000030",
                                "shelf_bin_code":"A000030F1A",
                                "quantity":48,
                                "operator":"testUser"
                            },
                            {
                                "shelf_code":"A000055",
                                "shelf_bin_code":"A000055F3B",
                                "quantity":52,
                                "operator":"testUser"
                            }
                        ]
                    },
                    {
                        "sku_code":"sku002",
                        "owner_code":"lidong",
                        "receipt_flag":0,
                        "sku_level":0,
```

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```
                    "amount":200,
                    "shelf_bin_list": [
                        {
                            "shelf_code":"A000030",
                            "shelf_bin_code":"A000030F1A",
                            "quantity":148,
                            "operator":"testUser"
                        },
                        {
                            "shelf_code":"A000055",
                            "shelf_bin_code":"A000055F3B",
                            "quantity":52,
                            "operator":"testUser"
                        }
                    ]
                }
            ]
        },
        {
            "receipt_code":"shd002",
            "pallet_code":"A001",
            "type":0,
            "status":4,
            "receipt_status":0,
            "completion_time":1102098121000,
            "sku_list": [
                {
                    "sku_code":"sku001",
                    "owner_code":"lidong",
                    "receipt_flag":0,
                    "sku_level":0,
                    "amount":100,
                    "shelf_bin_list": [
                        {
                            "shelf_code":"A000030",
                            "shelf_bin_code":"A000030F1A",
                            "quantity":48,
                            "operator":"testUser"
                        },
                        {
                            "shelf_code":"A000055",
                            "shelf_bin_code":"A000055F3B",
                            "quantity":52,
                            "operator":"testUser"
```

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```
                                }
                            ]
                        },
                        {
                            "sku_code":"sku002",
                            "owner_code":"lidong",
                            "receipt_flag":0,
                            "sku_level":0,
                            "amount":200,
                            "shelf_bin_list":
                            [
                                {
                                    "shelf_code":"A000030",
                                    "shelf_bin_code":"A000030F1A",
                                    "quantity":48,
                                    "operator":"testUser"
                                },
                                {
                                    "shelf_code":"A000055",
                                    "shelf_bin_code":"A000055F3B",
                                    "quantity":152,
                                    "operator":"testUser"
                                }
                            ]
                        }
                    ]
                }
            ]
        }
    }
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid receipt code!"
                    }
                ],
                "receipt_code": "shd002"
            }
        ]
    }
}
```

5.8 Putaway Order Cancellation Interface

5.8.1 Interface Field List

	Field Name	Interface Field	Type(Length)	Required?	Remark
Request Msg	Putaway Order Code	receipt_code	varchar(32)	Y	Upstream entry command
	Warehouse	warehouse_code	varchar(16)	Y	Warehouse
	Goods Owner	owner_code	varchar(16)	Y	Goods owner
	Cancel Time	cancel_date	long	Y	Cancel time, UTC timestamp.
	Remark	remark	varchar(64)	N	Remark
Response Message	Putaway Order Code	receipt_code	varchar(32)	Y	Upstream entry command
	Warehouse	warehouse_code	varchar(16)	Y	Warehouse
	Remark	remark	varchar(64)	Y	Remark
	Cancel Time	cancel_date	long	Y	Cancel time, UTC timestamp.
	Cancel Succeed Or Not	operation_result	int	Y	0: Cancel succeed 1: Cancel failed
	Error Message	error_message	varchar(64)	N	Detailed error if cancel failed

5.8.2 Interface Functionality

Receive putaway order cancellation request and response cancel result.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/receiptNoteCancel?warehouse_code={warehouse_code}&owner_code={owner_code}

5.8.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "receipt_amount":2,
        "receipt_list": [
            {
                "warehouse_code": "geekplus",
                "receipt_code":"shd001",
                "owner_code": "lidong",
                "cancel_date":1481192046000,
                "remark":""
            },
            {
                "warehouse_code": "geekplus",
                "receipt_code":" shd003",
                "owner_code": "lidong",
                "cancel_date":1481192046000,
                "remark":""
            }
        ]
    }
```

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```
        }
```

Response Message For Success

```
{
    "header": {
        "msgCode":"200",
        "message":"Call succeed!"
    },
    "body": {
        "receipt_amount":2,
        "receipt _list": [
            {
                "receipt_code":"shd001",
                "warehouse_code":"geekplus",
                "owner_code": "lidong",
                "cancel_date":1481192046000,
                "remark":"",
                "operation_result":0
            },
            {
                "receipt_code":"shd003",
                "warehouse_code":"geekplus",
                "owner_code": "lidong",
                "cancel_date":1481192046000,
                "remark":"",
                "operation_result":0
            }
        ]
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode":"400",
        "message":"Call failed!"
    },
    "body": {
        "receipt_amount":2,
        "receipt _list": [
            {
                "receipt_code":"shd001",
                "warehouse_code":"geekplus",
                "owner_code": "lidong",
```

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```
                    "cancel_date":1481192046,
                    "remark":"Cancel testing",
                    "operation_result":0
            },
            {
                    "receipt_code":"shd003",
                    "warehouse_code":"geekplus",
                    "owner_code": "lidong",
                    "cancel_date":1481192046,
                    "remark":"Cancel testing",
                    "operation_result":1,
                    "error_message":"Cannot cancel"
            }
        ]
    }
}
```

5.9   Pick Order Creation Interface

5.9.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse Code	warehouse_code	varchar(16)	Y	Warehouse code
Pick Order Code	out_order_code	varchar(64)	Y	Customer goods delivery note code
Goods Owner	owner_code	varchar(16)	Y	Goods owner
Wave Code	out_wave_code	varchar(32)	N	External wave code
Original Note	orig_note	varchar(32)	N	User create virtual order to offset inventory variance
Order Type	order_type	tinyint(4)	Y	0: Order delivery 1: Transfer delivery 2: Move delivery 3: Return delivery 4: Other delivery 5: Virtual delivery 6: Virtual delivery against inventory shortage 7: Self picking order 8: Store distribution order 10: Tally order 19: Flow-pick order 20: JIT order

				21: Maintenance outgoing
				66: Full container delivery
Picking Type	pick_type	tinyint(4)	N	0: Entire order picking (entire delivery command carried out in robot warehouse) 1: Partial picking (partial delivery command carried out in robot warehouse) Default 0
Wait Or Not	is_waiting	tinyint(4)	N	Wait for replenishment or not if system shortage 0: Do not wait 1: Wait Default 1
Short Pick Allowed Or Not	is_allow_lack	tinyint(4)	N	0: Disallow 1: Allow Default 0
Auto Push Wall Or Not	is_auto_push_wall	tinyint(4)	N	Push wall type 1: Auto push wall 0: Manual scan order Default 1
Allow Merge Order Or Not	can_merge	tinyint(4)	N	Allow merge order or not 0: Disallow 1: Allow Default 1
Designated Container Type	designated_container_type	tinyint(4)	N	Designated container type 0: Customized 1: Pallet 2: Circulation bin 3: Circulation cart Default 2
Allow Splitting Order Or Not	is_allow_split	tinyint(4)	N	0: Disallow 1: Allow Default 1
Priority	priority	int(6)	N	0: Normal 1: Emergency 2: Urgent 99999: Highest priority Default 0
Pick Order Creation Date	creation_date	long	Y	Pick task creation date, UTC timestamp.
Expected Finish Date	expected_finish_date	long	N	Expected finish date, UTC timestamp. Geek+ system will default a finish date if no value from upstream system

Is Feedback By Container Or Not	inf_function	int(4)	N	0: Feedback by order 1: Feedback by container Default 0
Print Type	print_type	tinyint(4)	N	0: Do not print 1: Print purchasing specification 2: Print waybill 3: Print purchasing 4: Print HU label specification and waybill Default 0
Waybill Code	waybill_code	varchar(16)	N	Waybill code
Print Content	print_content	text	N	Content to be printed. All fields and the values to be printed can be combined in one. Refer to below example for the comination format.
Carrier Type	carrier_type	tinyint(4)	N	0: 3rd party logistics 1: Self-owned logistics Default 0
Carrier Code	carrier_code	varchar(16)	N	Carrier Code
Carrier Name	carrier_name	varchar(32)	N	Carrier Name
Carrier Line Code	carrier_line_code	varchar(32)	N	Carrier Line Code
Carrier Line Name	carrier_line_name	varchar(64)	N	Carrier Line Name
Consignor Province	consignor_province	varchar(16)	N	Consignor Province
Consignor City	consignor_city	varchar(32)	N	Consignor City
Consignor District	consignor_district	varchar(32)	N	Consignor District
Consignor Address	consignor_address	varchar(256)	N	Consignor Address
Consignor Zip Code	consignor_zip_code	varchar(8)	N	Consignor Zip Code
Consignor	consignor	varchar(32)	N	Consignor
Consignor Phone	consignor_phone	varchar(18)	N	Consignor Phone
Consignor Telephone	consignor_tel	varchar(24)	N	Consignor Telephone
Consignment Company	consignment_company	varchar(64)	N	Consignment Company
Consignor Remark	consignor_remark	varchar(64)	N	Consignor Remark
Consignee Province	consignee_province	varchar(16)	N	Consignee Province
Consignee City	consignee_city	varchar(32)	N	Consignee City
Consignee District	consignee_district	varchar(64)	N	Consignee District
Consignee Address	consignee_address	varchar(256)	N	Consignee Address
Consignee Zip Code	consignee_zip_code	varchar(8)	N	Consignee Zip Code
Consignee Code	consignee_code	varchar(32)	N	Consignee Code
Consignee	consignee	varchar(256)	N	Consignee
Consignee Phone	consignee_phone	varchar(18)	N	Consignee Phone
Consignee Telephone	consignee_tel	varchar(24)	N	Consignee Telephone
Consignee Remark	consignee_remark	varchar(64)	N	Consignee Remark
Original Platform Code	orig_plantform_code	varchar(32)	N	Original platform code

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				(TB=淘宝、TM=天猫、JD=京东、DD=当当、PP=拍拍、YX=易讯、EBAY=eBay、QQ=QQ 网购、AMAZON=亚马逊、SN=苏宁、GM=国美、WPH=唯品会)
Original Platform Name	orig_plantform_name	varchar(64)	N	Original platform name
Shop Code	shop_code	varchar(32)	N	Shop code
Shop Name	shop_name	varchar(64)	N	Shop name
Package Type Code	package_type_code	varchar(32)	N	Package type code
Package Type Name	package_type_name	varchar(64)	N	Package type name
Follow Operation	follow_operation	varchar(512)	N	Follow operation indicate, e.g. packing
Pay Time	pay_time	long	N	Pay time
Payment Fee	payment_fee	decimal (20,2)	N	Payment fee
Real Name	real_name	varchar(32)	N	Real name
Identity Card No.	identity_card	varchar(32)	N	Identity card no.
Is Need Waybill Or Not	is_need_waybill	tinyint(4)	N	Is need waybill or not 0: No 1: Yes Default 0
Pay Method	pay_method	int(11)	N	Pay method, 10 sender pay， 20 recipient pay， 30 third party pay.
Is Reverse Or Not	is_reverse	int(11)	N	Is reverse or not， 0 not reverse，1 reverse
Total Fee	total_fee	decimal (20,2)	N	Total fee
Sku Fee	sku_fee	decimal (20,2)	N	Sku fee
Discount Fee	discount_fee	decimal (20,2)	N	Discount fee
Receivable Fee	receivable_fee	decimal (20,2)	N	Receivable fee
Express Type	express_type	tinyint(4)	N	Express type (1=weekday; 2=weekend; 101=Arrive on the same day; 102=next morning delivery; 103=The next day; 104=Presupposition; 105=Day of the next day)
Pick Order Specification (2nd level, sku_list)				
Order Line Number	item	int(12)	N	Order line number
SKU Code	sku_code	varchar(64)	Y	SKU Code
SKU Id	sku_id	varchar(64)	N	Upstream system SKU Id
Bar Code	bar_code	varchar(64)	N	Bar Code
Goods Owner	owner_code	varchar(16)	Y	Goods Owner
Quantity	amount	int(8)	Y	Quantity
SKU Quality	sku_level	int(11)	Y	0: Qualified goods

				1: Defective goods
Production Date	production_date	long	N	Production date, UTC timestamp.
Expiration Date	expiration_date	long	N	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	N	External batch code
Manufacturing Batch	batch_property04	varchar(100)	N	Manufacturing batch code
Packing Specification	packing_spec	varchar(32)	N	Packing specification, e.g. 1*8*6
Actual Price	actual_price	double(20,2)	N	Actual Price
Dicsount Fee	discount_fee	double(20,2)	N	Dicsount Fee
Third Level Packing	third_packing_count	int(8)	N	Large packing
Second Level Packing	second_packing_count	int(8)	N	Medium packing
First Level Packing	mini_packing_count	int(8)	N	Minimal packing

5.9.2 Interface Functionality

Receive pick order. (NOTE: Only support creation, cannot support updating)

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/outOrderImport?warehouse_

code={warehouse_code}&owner_code={owner_code}

5.9.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "order_ amount":1,
        "order_list": [
            {
                "out_order_code":"do001",
                "order_type":0,
                "out_wave_code":"wave2020001",
```

```
            "owner_code":"lidong",
            "print_type":2,
            "print_content":"[{\"field1\":\"value1\",\"field2\":\"value2\",\"field3\":\"valu
e3\",\"field4\":\"value4\",\"field5\":\"value5\",\"field6\":\"value6\",\"field7\":\"value7\",\"field
8\":\"value8\",\"field9\":\"value9\"}]",
            "carrier_type":1,
            "carrier_code":"UPS",
            "carrier_name":"UPS Express",
            "waybill_code":"U2020001",
            "is_allow_lack":0,
            "creation_date":1481192046000,
            "priority":0,
            "expected_finish_date":1481192046000,
            "sku_list": [
                {
                    "sku_code":"sku001",
                    "sku_id":"1001",
                    "out_batch_code":"batch001",
                    "sku_level":0,
                    "amount":1
                },
                {
                    "sku_code":"sku002",
                    "sku_id":"1002",
                    "sku_level":0,
                    "amount":2,
                    "production_date": 1481192046000,
                    "expiration_date": 1581192046000
                }
            ]
        }
    ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
```

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```
    }

Response Message For Failure

{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Record already existed!"
                    }
                ],
                "out_order_code": "do001"
            }
        ]
    }
}
```

5.10 Pick Order Confirmation Interface (By Order)

5.10.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Pick Order Code	out_order_code	varchar(64)	Pick order code from customer
Order Type	order_type	tinyint(4)	0: Order delivery 1: Transfer delivery 2: Move delivery 3: Return delivery 4: Other delivery 5: Virtual delivery 6: Virtual delivery against inventory shortage 7: Self picking order 8: Store distribution order

			10: Tally order
			19: Flow-pick order
			20: JIT order
			21: Maintenance outgoing
			66: Full container delivery
Status	status	tinyint(4)	3: Picking complete Only submit picking complete
Is Exception Or Not	is_exception	tinyint(4)	0: Normal 1: Exception
Goods Owner	owner_code	varchar(16)	Goods owner
Picking Start Time	start_time	long	Picking start time, UTC timestamp.
Picking Finish Time	finish_date	long	Picking finish time, UTC timestamp.
Picker	picker	varchar(32)	Picker (login name)
Short Delivery Flag	lack_flag	tinyint(4)	0: Normal 1: Partial short delivery 2: Full short delivery
Container Quantity	container_amount	int(4)	Container quantity
Picking Type	pick_type	tinyint(4)	0: Entire order picking (entire delivery command carried out in robot warehouse) 1: Partial picking (partial delivery command carried out in robot warehouse)
Shop Code	shop_code	varchar(32)	Shop Code
Shop Name	shop_name	varchar(64)	Shop Name
Total Planned SKU Quantity	plan_sku_amount	int(8)	Total Planned SKU Quantity
Total Picked SKU Quantity	pickup_sku_amount	int(8)	Total Picked SKU Quantity
Wall Code	wall_code	varchar(20)	Wall code
Pick Order Specification (2nd level, sku_list)			
Order Line Number	item	int(12)	Order line number
SKU ID	sku_id	varchar(64)	Upstream system SKU id
SKU Code	sku_code	varchar(64)	SKU Code
Goods Owner	owner_code	varchar(16)	Goods owner
Plan Quantity	plan_amount	int(8)	Plan picking quantity
Picking Quantity	pickup_amount	int(8)	Acutal picking quantity
Packing Specification	packing_spec	varchar(16)	Packing Specification
SKU Quality	sku_level	int(11)	0: Qualified goods 1: Defective goods
Production Date	production_date	long	Production date, UTC timestamp.
Expiration Date	expiration_date	long	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	External batch code
Bar Code	bar_code	varchar(64)	Bar code

Remark	remark	varchar(64)	Remark
Cell code	cell_code	varchar(32)	Cell code
Sequence number specification (3rd level, sn_list, only SN managed SKU can have sn_list)			
Sequence Number	sequence_no	varchar(32)	Sequence number
Shelf bin specification (3rd level, shelf_bin_list, white box integration only)			
Shelf Code	shelf_code	varchar(256)	Shelf code
Shelf Bin Code	shelf_bin_code	varchar(256)	Shelf bin code
Quantity	quantity	int(8)	Actual putaway quantity
Operator	operator	varchar(256)	Operator
Pick Order's Container (2nd level, container_list)			
Container Code	container_code	varchar(32)	Container Code
Pallet code	pallet_code	varchar(64)	Pallet used by container palletizing. Only apply to C200 whole box picking.
SKU Quantity	sku_amount	int(8)	SKU Quantity
Quantity of SKU Type	sku_type_amount	int(8)	Quantity of SKU Type
Creation Time	creation_date	long	Creation time, UTC timestamp.
Workstation number	workstation_no	varchar(32)	Workstation number
Seeding bin code	seeding_bin_code	varchar(32)	Seeding bin code
Picker	picker	varchar(32)	Picker
SKU Specification In Container (3rd level, sku_list)			
Order Line Number	item	int(12)	Order line number
SKU Code	sku_code	varchar(64)	SKU Code
SKU ID	sku_id	varchar(64)	Upstream system SKU ID
Goods Owner	owner_code	varchar(16)	Goods Owner
Bar Code	bar_code	varchar(64)	Bar Code
SKU Quality	sku_level	int(4)	0: Qualified goods 1: Defective goods
Quantity	amount	int(8)	SKU quantity
Production Date	production_date	long	Production date, UTC timestamp.
Expiration Date	expiration_date	long	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	External Batch
Packing Specification	packing_spec	varchar(16)	Packing Specification
Remark	remark	varchar(64)	Remark
Sequence number In Container (4th level, sn_list, only SN managed SKU can have sn_list)			
Sequence Number	sequence_no	varchar(32)	Sequence number

5.10.2 Interface Functionality

Confirm customer the actual pick result after complete picking or enforce close pick order.

HTTP request method: POST

URL path: To be provided by customer

5.10.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "interface_code": "feedback_outbound_order",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "order_amount": 1,
        "order_list": [
            {
                "out_order_code": "TG2631633943118848",
                "status": 3,
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "is_exception": 0,
                "order_type": 0,
                "plan_sku_amount": 3,
                "pickup_sku_amount": 3,
                "pick_type": 1,
                "lack_flag": 0,
                "finish_date": 1522824460032,
                "pkg_amount": 0,
                "container_amount": 1,
                "inf_function": 0,
                "sku_list": [
                    {
                        "item": 1,
                        "sku_code": "sku001",
                        "bar_code": "",
                        "sku_level": 0,
                        "plan_amount": 1,
                        "pickup_amount": 1,
                        "out_batch_code": "batch001",
```

```
                    "production_date": 0,
                    "expiration_date": 0,
                    "remark": "",
                    "owner_code": "lidong",
                    "sn_list":[
                        {
                            "sequence_no":"SN1001"
                        }
                    ],
                    "shelf_bin_list": [
                        {
                            "shelf_code": "A000030",
                            "shelf_bin_code": "A000030F1A",
                            "quantity": 1,
                            "operator": "picker001"
                        }
                    ]
                },
                {

                    "item": 2,
                    "sku_code": "sku002",
                    "bar_code": "",
                    "sku_level": 0,
                    "plan_amount": 2,
                    "pickup_amount": 2,
                    "out_batch_code": "",
                    "production_date": 1481192046000,
                    "expiration_date": 1581192046000,
                    "remark": "",
                    "owner_code": "lidong",
                    "shelf_bin_list": [
                        {
                            "shelf_code": "A000030",
                            "shelf_bin_code": "A000030F1A",
                            "quantity": 2,
                            "operator": "picker001"
                        }
                    ]
                }
            ],
            "container_list": [
                {
                    "picker": "picker001",
                    "container_code": "CTN001",
```

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```
                    "sku_amount": 3,
                    "sku_type_amount": 2,
                    "creation_date": 1522824460037,
                    "sku_list": [
                        {
                            "item": 1,
                            "sku_code": "sku001",
                            "bar_code": "",
                            "sku_level": 0,
                            "amount": 1,
                            "out_batch_code": "batch001",
                            "production_date": 0,
                            "expiration_date": 0,
                            "owner_code": "lidong",
                            "sn_list":[
                                {
                                    "sequence_no":"SN1001"
                                }
                            ]
                        },
                        {
                            "item": 2,
                            "sku_code": "sku002",
                            "bar_code": "",
                            "sku_level": 0,
                            "amount": 2,
                            "out_batch_code": "",
                            "production_date": 1481192046000,
                            "expiration_date": 1581192046000,
                            "owner_code": "lidong"
                        }
                    ]
                }
            ]
        }
    ]
    }
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
```

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```
    },
    "body": {
        "success": true,
        "error_list": null
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list":   [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid order code!"
                    }
                ],
                "out_order_code": "shd002"
            }
        ]
    }
}
```

5.11 Pick Order Confirmation Interface (By Container)

5.11.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse Code	warehouse_code	varchar(16)	Warehouse code
Container List (1st Level, container_list)			
Container Code	container_code	varchar(32)	Container Code
Container Type	container_type	int(4)	Container type 1: Pallet 2: Circulation Bin 3: Circulation Cart

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Pallet Code	pallet_code	varchar(32)	Pallet used by container palletizing. Only apply to C200 whole box picking.
Total SKU Quantity	sku_amount	int(8)	Total SKU Quantity
Total SKU Type Quantity	sku_type_amount	int(8)	Total SKU Type Quantity
Creation Time	creation_date	long	Creation Time
Picker	picker	varchar(32)	Picker
Workstation Number	workstation_no	varchar(128)	Workstation Number
Target Outlet	target_outlet	int(4)	Target outlet code
Seeding Bin Number	pick_seeding_bin_no	varchar(20)	Seeding Bin Number
Container Details (2nd Level, sku_list)			
Pick Order Code	out_order_code	varchar(64)	Pick Order Code
Order Line Number	item	int(12)	Order line number
SKU Code	sku_code	varchar(64)	SKU Code
SKU Id	sku_id	varchar(64)	SKU Id
Bar Code	bar_code	varchar(64)	Bar Code
Owner Code	owner_code	varchar(16)	Owner Code
SKU Quality	sku_level	int(11)	SKU Quality
Quantity	amount	int(8)	Quantity
Production date	production_date	long	Production date, UTC timestamp
Expiration date	expiration_date	long	Expiration date, UTC timestamp
External Batch	out_batch_code	varchar(64)	External Batch
Packing Spec	packing_spec	varchar(16)	Packing Spec
Pickup Sequence	pickup_seq	int(11)	Pickup Sequence
Order Item Pick Time	pick_order_item_finish_time	long	Order item pick time
Short Pick Flag	lack_flag	tinyint(4)	0: Normal 1: Partial short delivery 2: Full short delivery
Is Pick Order Last Container Or Not	is_last_container	tinyint(4)	0: No 1: Yes
Total Containers Of Order	container_amount	int(8)	Total containers of the order, will not have value until it's last container
Sequence number In Container (3rd level, sn_list, only SN managed SKU can have sn_list)			
Sequence Number	sequence_no	varchar(32)	Sequence number
Shelf bin specification (3rd level, shelf_bin_list, white box integration only, does not apply to RoboShuttle)			
Shelf Code	shelf_code	varchar(256)	Shelf code
Shelf Bin Code	shelf_bin_code	varchar(256)	Shelf bin code
Quantity	quantity	int(8)	Actual putaway quantity

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5.11.2 Interface Functionality

Confirm customer the completed containers and detailed sku inside the container once

container is full and closed.

HTTP request method: POST

URL path: To be provided by customer

5.11.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "interface_code": "feedback_outbound_container",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "warehouse_code": "geekplus",
        "container_list": [
            {
                "container_code": "CTN001",
                "container_type": 2,
                "sku_amount": 3,
                "sku_type_amount": 2,
                "creation_date": 1522824460037,
                "picker": "picker001",
                "workstation_no": "1",
                "sku_list": [
                    {
                        "out_order_code": "TG2631633943118848",
                        "packing_spec": "",
                        "item": 1,
                        "sku_code": "sku001",
                        "bar_code": "",
                        "sku_level": 0,
                        "owner_code": "lidong",
```

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```
                    "amount": 1,
                    "out_batch_code": "batch001",
                    "production_date": 0,
                    "expiration_date": 0,
                    "pickup_seq": 1,
                    "lack_flag": 0,
                    "pick_order_item_finish_time":1522824460037,
                    "is_last_container": 1,
                    "container_amount": 1,
                    "sn_list":[
                        {
                            "sequence_no":"SN1001"
                        }
                    ],
                    "shelf_bin_list": [
                        {
                            "shelf_code": "A000030",
                            "shelf_bin_code": "A000030F1A",
                            "quantity": 1
                        }
                    ]
                },
                {
                    "out_order_code": "TG2631633943118848",
                    "packing_spec": "",
                    "item": 1,
                    "sku_code": "sku002",
                    "bar_code": "",
                    "sku_level": 0,
                    "owner_code": "lidong",
                    "amount": 2,
                    "out_batch_code": "",
                    "production_date": 1481192046000,
                    "expiration_date": 1581192046000,
                    "pickup_seq": 1,
                    "lack_flag": 0,
                    "pick_order_item_finish_time":1522824460037,
                    "is_last_container": 1,
                    "container_amount": 1,
                    "shelf_bin_list": [
                        {
                            "shelf_code": "A000030",
                            "shelf_bin_code": "A000030F1A",
                            "quantity": 2
```

```
                                }
                            ]
                        }
                    ]
                }
            ]
        }
    ]
  }
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid container code!"
                    }
                ],
                "container_code": "CTN001"
            }
        ]
    }
}
```

5.12 Pick Order Cancellation Interface

5.12.1 Interface Field List

	Field Name	Interface Field	Type(Length)	Required?	Remark
Request Msg	Pick Order Code	out_order_code	varchar(32)	Y	Pick Order Code
	Warehouse Code	warehouse_code	varchar(16)	Y	Warehouse
	Goods Owner	owner_code	varchar(16)	Y	Goods Owner
	Cancel Time	cancel_date	long	Y	Cancel time, UTC timestamp.
	Remark	remark	varchar(64)	N	Remark
Response Message	Pick Order Code	out_order_code	varchar(32)	Y	Pick Order Code
	Warehouse Code	warehouse_code	varchar(16)	Y	Warehouse
	Goods Owner	owner_code	varchar(16)	Y	Goods Owner
	Remark	remark	varchar(64)	Y	Remark
	Cancel Time	cancel_date	long	Y	Cancel Time, UTC timestamp.
	Cancel Succeed Or Not	operation_result	int	Y	0: Cancel succeed 1: Cancel failed 2: Cancel succeed and need re-putaway the picked goods
	Error Message	error_message	varchar(64)	N	Detailed error if cancel failed

5.12.2 Interface Functionality

Receive pick order cancellation request and response cancel result.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/outOrderCancel?warehouse_code={warehouse_code}&owner_code={owner_code}

5.12.3 Example

Request Message

```
{
    "header": {
```

```
            "warehouse_code": "geekplus",
            "user_id": "testUser",
            "user_key": "111111"
    },
    "body": {
        "order_amount": 2,
        "order_list": [
            {
                "out_order_code": "order001",
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046,
                "remark": ""
            },
            {
                "out_order_code": "order002",
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046,
                "remark": ""
            }
        ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "order_amount": 2,
        "order_list": [
            {
                "out_order_code": "order001",
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046000,
                "remark": "",
                "operation_result": 0
            },
            {
                "out_order_code": "order002",
```

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```
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046000,
                "remark": "",
                "operation_result ": 0
            }
        ]
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message": "Call failed!"
    },
    "body": {
        "order_amount": 2,
        "order_list": [
            {
                "out_order_code": "order001",
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046000,
                "remark": "",
                "operation_result": 0
            },
            {
                "out_order_code": "order002",
                "warehouse_code": "geekplus",
                "owner_code": "lidong",
                "cancel_date": 1481192046,
                "remark": "",
                "operation_result ": 1,
                "error_message": "Order is completed"
            }
        ]
    }
}
```

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5.13 Binding Container Notification Interface

5.13.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse code
Binding containers （2nd, binding_list）			
Record Unique ID	id	int(10)	Record Unique ID
Pick Order Code	out_order_code	varchar(64)	Pick Order Code
Order Type	order_type	int(4)	Pick Order Type
Owner Code	owner_code	varchar(16)	Owner Code
Operator	operator	varchar(32)	Operator
Operate Time	operate_time	long	Operate Time
Container Number	container_code	varchar(32)	Container Number
Workstation Number	workstation_no	varchar(16)	Workstation Number
Seeding Bin Code	seeding_bin_code	varchar(32)	Seeding Bin Code
Destination	destination	varchar(32)	Destination

5.13.2 Interface Functionality

Notify customer after binding container to rebin wall.

HTTP request method: POST

URL path: To be provided by customer

5.13.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "interface_code":"feedback_bind_container",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "warehouse_code":"geekplus",
        "binding_list": [
            {
```

```
              "id":"1481194026000",
              "out_order_code":"PickOrder001",
              "order_type":1,
              "owner_code":"lidong",
              "operator":"user001",
              "operate_time":1481192046000,
              "container_code":"CTN001",
              "workstation_no":"2",
              "destination":"C1",
              "seeding_bin_code": "A01"
          },
          {
              "id":"1481194026001",
              "out_order_code":"PickOrder003",
              "order_type":0,
              "owner_code":"lidong",
              "operator":"user003",
              "operate_time":1481192046000,
              "container_code":"CTN003",
              "workstation_no":"5",
              "destination":"A1",
              "seeding_bin_code": "B03"
          }
      ]
   }
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
```

```
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "container does not exist"
                    }
                ],
                "id": "1481194026000"
            }
        ]
    }
}
```

5.14 Stocktaking Command Creation Interface

5.14.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse	warehouse_code	varchar(16)	Y	Warehouse
Customer Stocktaking Command	stocktake_command_code	varchar(32)	Y	Stocktaking command code
Command Type	type	tinyint(4)	Y	2: Stocktaking according to SKU 3: Stocktaking according to batch number of SKU
Stocktaking Mode	stocktake_command_type	tinyint(4)	N	Stocktaking mode 0: Non-blind stocktaking 1: Blind stocktaking Default 0
Creation Date	creation_date	long	Y	Stocktaking creation time, UTC timestamp.
Stocktaking Start Time	start_datetime	long	N	Stocktaking start time, UTC timestamp.
Stocktaking End Time	end_datetime	long	N	Stocktaking end time, UTC timestamp.
Random Stocktaking Shelf Quantity	random_ stocktake_amount	int(8)	N	Random stocktaking shelf quantity
Remark	remark	varchar(64)	N	Remark
Stocktaking Command Specification (2nd level, sku_list)				

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SKU Code	sku_code	varchar(64)	**C**	SKU Code Fill by condition, sku_code and shelf_code cannot be empty at the same time.
SKU id	sku_id	varchar(64)	N	Upstream system SKU id
Packing Specification	packing_spec	varchar(16)	N	Packing Specification
Goods Owner	owner_code	varchar(16)	Y	Goods Owner
Shelf Code	shelf_code	varchar(16)	**C**	Shelf Code Fill by condition, sku_code and shelf_code cannot be empty at the same time.
Shelf Bin Code	shelf_bin_code	varchar(24)	N	Shelf Bin Code
SKU Quality	sku_level	tinyint(4)	N	0: Qualified goods 1: Defective goods Default 0
Production Date	production_date	long	N	Production date, UTC timestamp.
Expiration Date	expiration_date	long	N	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	N	External batch code

5.14.2 Interface Functionality

Receive stocktake commands. (NOTE: Only support creation, cannot support updating).

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/stockTakeImport?warehouse_

code={warehouse_code}&owner_code={owner_code}

5.14.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "user_id":"testUser",
        "user_key":"111111"
    },
```

```
    "body": {
        "command_amount":2,
        "command_list": [
            {
                "stocktake_command_code":"code001",
                "creation_date":1481192046000,
                "type":2,
                "remark":"test",
                "sku_amount":2,
                "sku_list": [
                    {
                        "sku_code":"sku001",
                        "owner_code":"lidong"
                    },
                    {
                        "sku_code":"sku002",
                        "owner_code":"lidong"
                    }
                ]
            },
            {
                "stocktake_command_code":"code002",
                "creation_date":1481192146000,
                "type":2,
                "remark":"test",
                "sku_amount":3,
                "sku_list": [
                    {
                        "sku_code":"sku003",
                        "owner_code":"lidong",
                        "out_batch_code":"batch003"
                    },
                    {
                        "sku_code":"sku004",
                        "owner_code":"lidong",
                        "out_batch_code":"batch004"
                    }
                ]
            }
        ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode": "400",
        "message":"Call failed!"
    },
    "body": {
        "suceess": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Record already exists"
                    }
                ],
                "stocktake_command_code":"code01"
            }
        ]
    }
}
```

5.15 Stocktaking Command Feedback Interface

5.15.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Customer Stocktaking Command	stocktake_command_code	varchar(32)	Customer stocktaking command code

Stocktaking Note Code	stocktake_code	varchar(32)	Geek+ system stocktaking note
Status	status	tinyint(4)	2: Stocktaking completed Only submit stocktaking completed
Completion Time	creation_date	long	Stocktaking complete time, UTC timestamp.
Remark	remark	varchar(64)	Remark
Operator	operator	varchar(32)	Operator
Operate Time	operate_time	long	Operate time, UTC timestamp .
Workstation Number	workstation_no	varchar(32)	Workstation Number
Stocktaking Command Specification (2nd level, sku_list)			
SKU Code	sku_code	varchar(32)	SKU dode
SKU ID	sku_id	varchar(32)	Upstream system SKU ID
Goods Owner	owner_code	varchar(16)	Goods owner
Bar Code	bar_code	varchar(32)	Bar code
Packing Specification	packing_spec	varchar(16)	Packing specification
System Quantity	system_amount	int(8)	Geek+ system quantity (aggregate on batch level if batch appointed, otherwise aggregate on SKU level)
Stocktaking Quantity	stocktake_amount	int(8)	Actual stocktaking quantity (aggregate on batch level if batch appointed, otherwise aggregate on SKU level)
Operator	operator	varchar(32)	Operator
Operation Date	operation_date	long	Operate time, UTC timestamp .
SKU Quality	sku_level	int(4)	0: Qualified goods 1: Defective goods
Production Date	production_date	long	Production date, UTC timestamp .
Expiration Date	expiration_date	long	Expiration date, UTC timestamp .
External Batch	out_batch_code	varchar(32)	External Batch
Shelf Code	shelf_code	varchar(16)	Shelf Code
Shelf Bin Code	shelf_bin_code	varchar(24)	Shelf Bin Code

5.15.2 Interface Functionality

After stocktaking command is completed, Geek+ feedback the result to customer.

HTTP request method: POST

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URL path: To be provided by customer

5.15.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "interface_code":"feedback_ stocktake_command_back",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "command_list": [
            {
                "operator":"stuser1",
                "operateTime":1481194026000,
                "warehouse_code":"geekplus",
                "stocktake_command_code":"code001",
                "stocktake_code":"takeCode001",
                "status":2,
                "creation_date":1481192046000,
                "remark":"test",
                "workstation_no":"2",
                "sku_list": [
                    {
                        "sku_id":"1001",
                        "sku_code":"sku001",
                        "owner_code":"lidong",
                        "bar_code":"",
                        "out_batch_code":"batch001",
                        "sku_level":0,
                        "system_amount":10,
                        "stocktake_amount":8,
                        "packing_spec":"",
                        "operator":" stuser1",
                        "operation_date":1347682930000,
                        "shelf_code":"A001",
                        "shlef_bin_code":"A00101A",
                        "production_date":0,
                        "expiration_date":0
```

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```
                }
            ]
        }
    ]
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid record"
                    }
                ],
                "stocktake_command_code": "code001"
            }
        ]
    }
}
```

5.16 Stocktaking Discrepancy Adjustment Creation Interface

5.16.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse	warehouse_code	varchar(16)	Y	Warehouse
External Adjustment Note Code	out_adjustment_code	varcha(32)	Y	Customer's adjustment note code
External Stocktaking Command Code	stocktake_command_code	varchar(32)	Y	Customer's stocktaking command code
Creation Date	creation_date	long	Y	Creation date, UTC timestamp.
Remark	remark	varchar(64)	N	Remark
Adjustment Note Specification (2nd level, sku_list)				
SKU Code	sku_code	varchar(32)	Y	SKU code
SKU ID	sku_id	varchar(32)	N	Upstream system SKU id
Goods Owner	owner_code	varchar(16)	Y	Goods owner
External Batch	out_batch_code	varchar(32)	N	External batch code
SKU Quality	sku_level	tinyint(4)	Y	0: Qualified goods 1: Defective goods
Quantity	amount	int(8)	Y	Adjust Quantity Positive number: increased qty Negative number: decreased qty
Shelf Code	shelf_code	varchar(16)	N	Shelf Code
Shelf Bin Code	shelf_bin_code	varchar(24)	N	Shelf Bin Code

5.16.2 Interface Functionality

Customer issues adjustment request to Geek+ for inventory adjustment after receiving and verifying the stocktaking result from Geek+.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/outAdjustmentImport?warehouse_code={warehouse_code}&owner_code={owner_code}

5.16.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "adjustment_amount": 1,
        "adjustment_list": [
            {
                "out_adjustment_code": "adjustmentcode001",
                "stocktake_command_code": "code01",
                "creation_date": 1481192046000,
                "remark": "test",
                "sku_amount": 2,
                "sku_list": [
                    {
                        "sku_code": "sku001",
                        "owner_code": "geekplus",
                        "out_batch_code": "batch001",
                        "sku_level": 0,
                        "amount": 10
                    },
                    {
                        "sku_code": "sku002",
                        "owner_code": "geekplus",
                        "out_batch_code": "batch002",
                        "sku_level": 0,
                        "amount": -5
                    }
                ]
            }
        ]
    }
}
```

Response Message For Success

```
{
```

```
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "record already existed!"
                    }
                ],
                "out_adjustment_code": "adjustmentcode001"
            }
        ]
    }
}
```

5.17 Stocktaking   Discrepancy   Adjustment Confirmation Interface

5.17.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse code
External Adjustment Note Code	out_adjustment_code	varchar(32)	Customer's adjustment note code
Status	status	tinyint(4)	0: Adjust succeed

			1: Adjust failed
External Stocktaking Command Code	stocktake_command_code	varchar(32)	Customer's stocktaking command code
Adjustment Note Specification (2ⁿᵈ level, sku_list)			
SKU Code	sku_code	varchar(32)	SKU Code
Packing Specification	packing_spec	varchar(16)	Packing specification, e.g. 1*8*6
Goods Owner	owner_code	varchar(16)	Goods owner
External Batch	out_batch_code	varchar(32)	External batch code
SKU Quality	sku_level	tinyint(4)	0: Qualified goods 1: Defective goods
Adjust Quantity	amount	int(8)	Adjusted quantity
Adjustment Result for Line	line_status	tinyint(4)	0: succeed 1: failed

5.17.2 Interface Functionality

After stocktaking discrepancy is adjusted, Geek+ feedback the result to customer.

HTTP request method: POST

URL path: To be provided by customer

5.17.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "interface_code": "feedback_adjustment",
        "user_id": "testuser",
        "user_key": "111111"
    },
    "body": {
        "adjustment_amount": 1,
        "adjustment_list": [
            {
                "warehouse_code": " geekplus",
                "out_adjustment_code": " adjustmentcode001",
                "stocktake_command_code": "code01",
                "status": 0,
                "sku_amount": 2,
```

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```
                    "sku_list": [
                        {
                            "sku_code": "sku001",
                            "owner_code": "lidong",
                            "sku_level": 0,
                            "amount": 10,
                            "out_batch_code": "batch001",
                            "line_status": 0
                        },
                        {
                            "sku_code": "sku002",
                            "owner_code": "lidong",
                            "sku_level": 0,
                            "amount": -5,
                            "out_batch_code": "batch002",
                            "line_status": 0
                        }
                    ]
                }
            ]
        }
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
```

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```
        {
            "errors": [
                {
                    "code": "GKP-IPS-E00013",
                    "message": "Invalid record"
                }
            ],
            "out_adjustment_code": " adjustmentcode001"
        }
    ]
  }
}
```

5.18 Internal Stocktaking Variance Adjustment Feedback Interface

5.18.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Adjustment Code	adjustment_code	varchar(16)	Geek+ Adjustment code
Stocktake Code	stocktake_code	varchar(32)	Geek+ Stocktake code or related short picking order
Operator	operator	varchar(32)	Operator
Workstation Number	workstation_no	varchar(32)	Workstation number
Adjusted Specialist (2nd level, sku_list)			
SKU Code	sku_code	varchar(64)	SKU code
SKU Id	sku_id	varchar(64)	Upstream system SKU id
Goods Owner	owner_code	varchar(16)	Owner Code
SKU Quality	sku_level	int(4)	0: Qualified goods 1: Defective goods
Production Date	production_date	long	Production date, UTC timestamp.
Expiration Date	expiration_date	long	Expiration date, UTC timestamp.
External Batch	out_batch_code	varchar(32)	External batch
SKU Adjusted Quantity	amount	int(8)	SKU adjusted Qty Positive number: Qty increase Negative number: Qty decrease
Adjust Reason	reason_code	varchar(128)	Reason code for adjustment

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5.18.2 Interface Functionality

After internal stocktaking complete, if there're discrepancy, supervisor can review and

adjust inventory in Geek+ backstage system. Then this interface will be used to feedback

customer the adjusted details.

HTTP request method: POST

URL path: To be provided by customer

5.18.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "interface_code": "inventory_feedback",
        "user_id": "testuser",
        "user_key": "111111"
    },
    "body": {
        "adjustment_amount": 1,
        "adjustment_list": [
            {
                "adjustment_code": "pt123456033",
                "stocktake_code": "PXT2018100901",
                "warehouse_code": "geekplus",
                "operator": "supervisor",
                "workstation_no": "2",
                "sku_list": [
                    {
                        "sku_code": "sku001",
                        "owner_code": "lidong",
                        "amount": -2,
                        "out_batch_code": "batch",
                        "sku_level": 0,
                        "reason_code": "1"
```

```
                }
            ]
        }
    ]
  }
}
```

Expected Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid record"
                    }
                ],
                "adjustment_code": "pt123456033"
            }
        ]
    }
}
```

5.19 Container/Sowing Wall Release/Occupy Interface

5.19.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse	warehouse_code	varchar(16)	Y	Warehouse code
Container / Sowing Wall Code	container_code	varchar(32)	Y	Container code or sowing wall code
Type	type	tinyint(4)	Y	10: Container 20: Sowing wall
Operation type	operation_type	tinyint(4)	N	0：Occupy 1：Release Default 1
Remark	remark	varchar(255)	N	Remark

5.19.2 Interface Functionality

Customer can call this interface to release or occupty container / sowing wall.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/containerRelease?warehouse_code={warehouse_code}&owner_code={owner_code}

5.19.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
```

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```
            "container_amount": 1,
            "container_list": [
                {
                        "container_code": "CTN001",
                        "operation_type": 1,
                        "type":10
                }
            ]
        }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true,
        "size": 0,
        "container_amount": 0
    }
}
```

Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "container_amount": 1,
        "container_list": [
            {
                    "container_code": "CTN001",
                    "operation_type": 1,
                    "type":10,
                    "errorMsg": "There are unfinished picking tasks"
            }
        ]
    }
}
```

5.20 Inventory Batch Property Adjustment Creation Interface

5.20.1 Interface Field List

Field Name	Interface Field	Type(Length)	Required?	Remark
Warehouse	warehouse_code	varchar(16)	Y	Warehouse
Batch Adjustment Code	batch_adjustment_code	varchar(32)	Y	Batch adjustment code
Batch Adjustment Type	batch_adjustment_type	tinyint(4)	Y	Adjustment type 1: Status 2: Goods owner 3: Shelf life 4: Batch 5: Quantity
Distribution System	distribution_system	varchar(32)	Y	Distribution system
Manual Indicate Shelf Bin Or Not	manually_designated_bin	tinyint(4)	N	1: Yes, manual indicate 0: No, automatic indicate Default 0
Batch Adjustment Specification	**(2nd level, sku_list)**			
Line Number	item	bigint(12)	N	Line number
SKU Code	sku_code	varchar(64)	Y	SKU code
Goods Owner	owner_code	varchar(16)	Y	Goods owner
External Batch Management Type	batch_manage_type	tinyint(4)	N	External batch management type 0: Batch management 1: Non batch management Default 0
Original External Batch Code	out_batch_code	varchar(64)	C	Original external batch code Fill by condition, out_batch_code cannot be empty if batch_manage_type is 0 or null.
Original SKU Quality	sku_level	int(4)	N	Original SKU Quality 0: Quality goods 1: Defective products
Original Production Date	production_date	long	N	Original Production date, UTC timestamp
Original Expiration Date	expiration_date	long	N	Original Expiration date, UTC timestamp
Shelf Bin Code	bin_code	varchar(20)	N	Shelf bin code

Adjustment Quantity	adjustment_num	int(11)	Y	Adjustment quantity
Target Goods Owner	target_owner_code	varchar(20)	Y	Target goods owner
Target SKU Quality	target_sku_level	int(4)	N	Target SKU Quality 0:Quality goods 1:Defective products
Target out batch code	target_out_batch_code	varchar(64)	N	Target out batch code
Target Production Date	target_production_date	long	N	Target Production date,　UTC timestamp
Target Expiration Date	target_expiration_date	long	N	Target Expiration date,　UTC timestamp
Remark	remark	varchar(64)	N	Remark

5.20.2 Interface Functionality

Inventory batch property adjustment interface is used to receive the request from customer for the inventory goods batch property changing.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/inventoryBatchAdjustmentUpdate?warehouse_code={warehouse_code}&owner_code={owner_code}

5.20.3 Example

Request Message

```
{
    "header": {
        "warehouse_code":"geekplus",
        "user_id":"testUser",
        "user_key":"111111"
    },
    "body": {
        "adjustment_amount":1,
        "adjustment_list": [
            {
                "batch_adjustment_code":"1117",
```

```
                "batch_adjustment_type":2,
                "warehouse_code":"geekplus",
                "distribution_system":"FLUX",
                "sku_list": [
                    {
                        "item":1,
                        "sku_code":"sku001",
                        "owner_code":"lidong",
                        "batch_manage_type":0,
                        "out_batch_code":"batch001",
                        "adjustment_num":100,
                        "target_owner_code":"yunji",
                        "remark":""
                    }
                ]
            }
        ]
    }
}
```

Response Message For Success

```
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
```

```
                "code": "GKP-IPS-E00013",
                "message": "record already exist"
            }
        ],
        "batch_adjustment_code":"1117"
    }
  ]
 }
}
```

5.21 Inventory Batch Property Adjustment Feedback Interface

5.21.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Batch Adjustment Code	batch_adjustment_code	varchar(32)	Batch adjustment code
Batch Adjustment Type	batch_adjustment_type	tinyint(4)	Adjustment type 1: Status 2: Goods owner 3:Shelf life 4: Batch 5: Quantity
Distribution System	distribution_system	varchar(32)	Distribution system
Adjustment Status	status	tinyint(4)	20: Succeed 30: Failed
Batch Adjustment Specification	**(2nd level, sku_list)**		
Line Number	item	bigint(12)	Line number
SKU Code	sku_code	varchar(32)	SKU Code
Adjustment Status	status	tinyint(4)	20: Succeed 30: Failed
Original Owner	orig_owner_code	varchar(16)	Original Owner
Original External Batch Code	orig_out_batch_code	varchar(64)	Original External Batch Code
Original SKU Quality	orig_sku_level	int(4)	Original SKU Quality
Original Production Date	orig_production_date	long	Original Production Date
Original Expiration Date	orig_expiration_date	long	Original Expiration Date
Plan Adjust Qty	plan_adjustment_num	int(11)	Plan Adjust Qty
Actual Adjust Qty	actual_adjustment_num	int(11)	Actual Adjust Qty
Target Owner	target_owner_code	varchar(20)	Target Owner

Target SKU Quality	target_sku_level	int(4)	Target SKU Quality
Target External Batch Code	target_out_batch_code	varchar(64)	Target External Batch Code
Target Production Date	target_production_date	long	Target Production Date
Target Expiration Date	target_expiration_date	long	Target Expiration Date

5.21.2 Interface Functionality

Geek+ feedback the actual result for inventory batch properties adjustment.

HTTP request method: POST

URL path: To be provided by customer

5.21.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "interface_code": "feedback_inventory_batch_adjustment_back",
        "user_id": "testUser",
        "user_key": "111111"
    },
    "body": {
        "adjustment_amount": 1,
        "adjustment_list": [
            {
                "batch_adjustment_code": "1117",
                "batch_adjustment_type": 2,
                "warehouse_code": "geekplus",
                "distribution_system": "FLUX",
                "status": 20,
                "sku_list": [
                    {
                        "item": 1,
                        "sku_code": "sku001",
                        "status": 20,
                        "orig_owner_code": "lidong",
                        "batch_manage_type": 0,
                        "orig_out_batch_code": "batch001",
```

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```json
                        "plan_adjustment_num": 100,
                        "actual_adjustment_num": 100,
                        "target_owner_code": "yunji",
                        "remark": ""
                    }
                ]
            }
        ]
    }
}
```

Expected Response Message For Success

```json
{
    "header": {
        "msgCode": "200",
        "message": "Call succeed!"
    },
    "body": {
        "success": true
    }
}
```

Expected Response Message For Failure

```json
{
    "header": {
        "msgCode ": "400",
        "message": "Call failed!"
    },
    "body": {
        "success": false,
        "error_list": [
            {
                "errors": [
                    {
                        "code": "GKP-IPS-E00013",
                        "message": "Invalid record"
                    }
                ],
                "batch_adjustment_code":"1117"
            }
        ]
    }
}
```

5.22 SKU Real-time Inventory Query Interface

5.22.1 Interface Field List

		Name	Field	Type	Required	Comment
Request Message		**HEADER**	header			
		Warehouse	warehouse_code	varchar(16)	Y	Warehouse
		User Name	user_id	varchar(16)	Y	User Name
		User Password	user_key	varchar(16)	Y	User Password
		BODY	body			
		Warehouse	warehouse_code	varchar(16)	Y	Warehouse
		SKU List	**sku_list** (sku_list is mandatory and the required fields under this list must have value)			
		Goods Owner	owner_code	varchar(32)	Y	Goods Owner
		SKU Code	sku_code	varchar(32)	Y	SKU Code
		SKU Quality	sku_level	int(4)	N	SKU Quality
		External Batch	out_batch_code	varchar(32)	N	External Batch
		Production Date	production_date	long	N	Production Date, UTC timestamp
		Expiration Date	expiration_date	long	N	Expiration Date, UTC timestamp
		Product Batch	product_batch	varchar(64)	N	Product batch code
		Expect Return List	**expect_sku_list** (Not mandatory. If not fill, will aggregate by owner_code + sku_code)			
		Need Return SKU Quality	sku_level	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Batch	out_batch_code	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Prod Date	production_date	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Exp Date	expiration_date	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Status	inventory_status	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Shelf	shelf_code	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return Shelf Bin	shelf_bin_code	boolean	N	Default false. If set true, will aggregate by adding this dimension
		Need Return product batch code	product_batch	boolean	N	Default false. If set true, will aggregate by adding this dimension
Res		**HEADER**	header			
		Message Code	msgCode	varchar(16)	Y	Message Code

Message	message	varchar(16)	Y	Message
BODY	**body**			
Warehouse	warehouse_code	varchar(16)	Y	Warehouse
SKU List	sku_list			
Goods Owner	owner_code	varchar(16)	Y	Goods Owner
SKU Code	sku_code	varchar(64)	Y	SKU Code
SKU Id	sku_id	varchar(32)	N	Upstream system SKU id
SKU Quality	sku_level	int(4)	N	SKU Quality (0:qualified, 1:defect). Whether response this field depend on expect_sku_list setting in request message
Product Date	production_date	long	N	Production date, UTC timestamp. Whether response this field depend on expect_sku_list setting in request message
Expiration Date	expiration_date	long	N	Expiration date, UTC timestamp. Whether response this field depend on expect_sku_list setting in request message
External Batch	out_batch_code	varchar(32)	N	External batch. Whether response this field depend on expect_sku_list setting in request message
Inventory Status	Inventory_status	int(4)	N	Inventory status (0:Normal, 10: Near expire, 20: Expired, 30: Freezed). Whether response this field depend on expect_sku_list setting in request message
Shelf Code	shelf_code	varchar(16)	N	Shelf code. Whether response this field depend on expect_sku_list setting in request message
Shelf Bin Code	shelf_bin_code	varchar(24)	N	Shelf bin code. Whether response this field depend on expect_sku_list setting in request message
Quantity	amount	int(8)	Y	SKU quantity
Product Batch	product_batch	varchar(64)	N	Product batch. Whether response this field depend on expect_sku_list setting in request message
Audit Date	audit_date	long	Y	Audit date

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5.22.2 Interface Functionality

Query SKU's Real time inventory interface.

HTTP request method: POST

Request URL example:

http://{hostname}:{port}/geekplus/api/artemis/pushJson/skuInventoryQuery?warehouse_code={warehouse_code}&owner_code={owner_code}

5.22.3 Example

Request Message

```
{
    "header": {
        "warehouse_code": "geekplus",
        "user_id": "testUser",
        "user_key": "111111"
    },
     "body": {
        "warehouse_code":"geekplus",
        "sku_list": [
            {
                "sku_code": "sku001",
                "owner_code": "lidong",
                "out_batch_code": "bacth001",
                "sku_level": 0
            },
            {
                "sku_code": "sku002",
                "owner_code": "lidong",
                "out_batch_code": "bacth002",
                "sku_level": 1
            },
            {
                "sku_code": "sku003",
                "owner_code": "lidong",
                "production_date": 1546313004567,
```

```
                "out_batch_code": "bacth003"
            }
        ],
        "expect_sku_list": [
            {
                "sku_level": true,
                "out_batch_code": true,
                "production_date": true
            }
        ]
    }
}
```

Response Message

```
{
    "header": {
        "msgCode ": "200",
        "message": "Call succeed!"
    },
    "body": {
        "warehouse": "geekplus",
        "sku_list": [
            {
                "sku_code": "sku001",
                "sku_id": "",
                "owner_code": "lidong",
                "sku_level": 0,
                "out_batch_code": "batch001",
                "production_date": 1526458607839,
                "amount": 100,
                "audit_date": 1557458604567
            },
            {
                "sku_code": "sku002",
                "sku_id": "1002",
                "owner_code": "lidong",
                "sku_level": 1,
                "out_batch_code": "batch002",
                "production_date": 1526458607839,
                "amount": 10,
                "audit_date": 1557458604567
            },
            {
```

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```
            "sku_code": "sku003",
            "owner_code": "lidong",
            "sku_level": 0,
            "out_batch_code": "bacth003",
            "production_date": 1546313004567,
            "amount": 20,
            "audit_date": 1557458604567
        }
    ]
    }
}
```

5.23 Inventory Snapshot Reconciliation Interface

5.23.1 Interface Field List

Field Name	Interface Field	Type(Length)	Remark
Warehouse	warehouse_code	varchar(16)	Warehouse
Goods Owner	owner_code	varchar(32)	Goods owner
SKU Code	sku_code	varchar(32)	SKU code
SKU Quality	sku_level	int(4)	SKU quality
Production Date	production_date	long	Production date
Expiration Date	expiration_date	long	Expiration date
External Batch	out_batch_code	varchar(32)	External batch
Product Batch	batch_property04	varchar(64)	Product batch code
Shelf Code	shelf_code	varchar(16)	Shelf code
Shelf Bin Code	shelf_bin_code	varchar(24)	Shelf bin code
SKU Quantity	amount	int(8)	SKU qty
Audit Time	audit_time	long	Audit time
SKU ID	sku_id	varchar(32)	Upstream SKU ID
Packing Specification	packing_spec	varchar(16)	Packing Specification , e.g. 1*10*6
Current page	current_page	int(8)	Current page, default the first line.
Page size	page_size	int(8)	Page size, default 2000
Total page number	total_page_num	int(8)	Total page number

5.23.2 Interface Functionality

According to the agreed time with customers, Geek+ system produces daily inventory

snapshots. Then this interface sends the inventory snapshot information to the

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customer by calling customer's interface or transfer CSV file.

NOTE: Fields – current_page, page_size, total_page_num – will only apply to sending data by interface. There's no retry if customer's interface response failure for specific request.

5.23.3 Example

Request Message (if customer provide interface for Geek+ to call)

```
{
    "header": {
        "warehouse_code":"geekplus",
        "interface_code":"feedback_inventory_confirm",
        "user_id":"testuser",
        "user_key":"111111"
    },
    "body": {
        "current_page":1,
        "total_page":10,
        "page_size":10,
        "sku_list": [
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012203-26R",
                "out_batch_code":"batch1",
                "amount":210
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012203-26R",
                "out_batch_code":"batch2",
                "amount":310
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
```

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```
                "sku_code":"10CM0-012203-26R",
                "out_batch_code":"batch3",
                "amount":31
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012203-26R",
                "out_batch_code":"batch4",
                "amount":10
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012203-26R",
                "out_batch_code":"batch5",
                "amount":3
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012343-27R",
                "out_batch_code":"batch1",
                "amount":10
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012343-27R",
                "out_batch_code":"batch2",
                "amount":310
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012343-27R",
                "out_batch_code":"batch3",
                "amount":110
            },
            {
                "warehouse_code":"geekplus",
                "owner_code":"lidong",
                "sku_code":"10CM0-012343-28R",
                "out_batch_code":"batch9",
```

```
            "amount":870
        },
        {

            "warehouse_code":"geekplus",
            "owner_code":"lidong",
            "sku_code":"10CM0-012203-32R",
            "out_batch_code":"",
            "amount":810
        },
    ]
  }
}
```
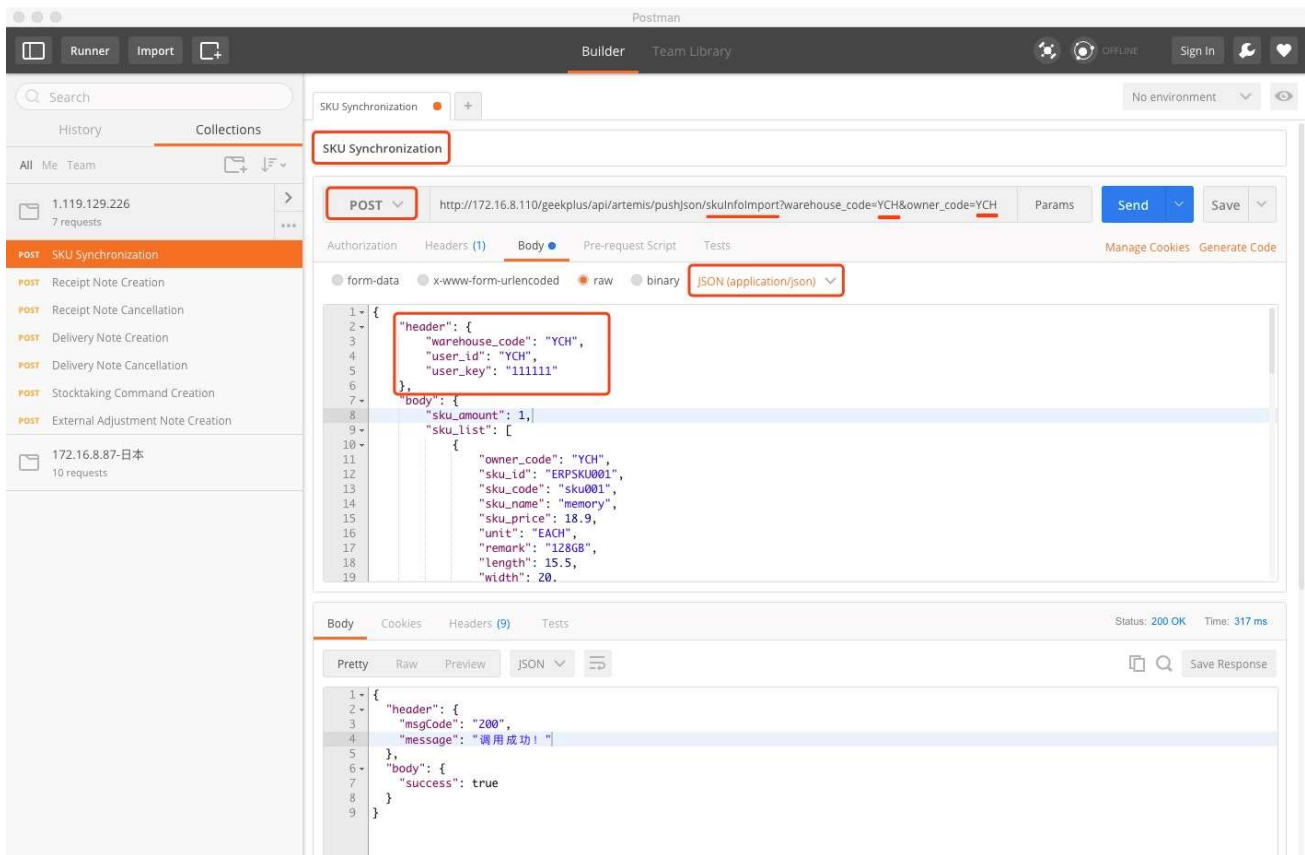
6 Error Code List

Error Code	Description	Classification
200	Interface call succeed	
400	Interface call failed	Technical failed，refer to returned message

7 Appendex I

PostMan Calling Sample

8 Appendex II

SDK download URL: http://ips.geekplus.com/static/artemisfe/#/login

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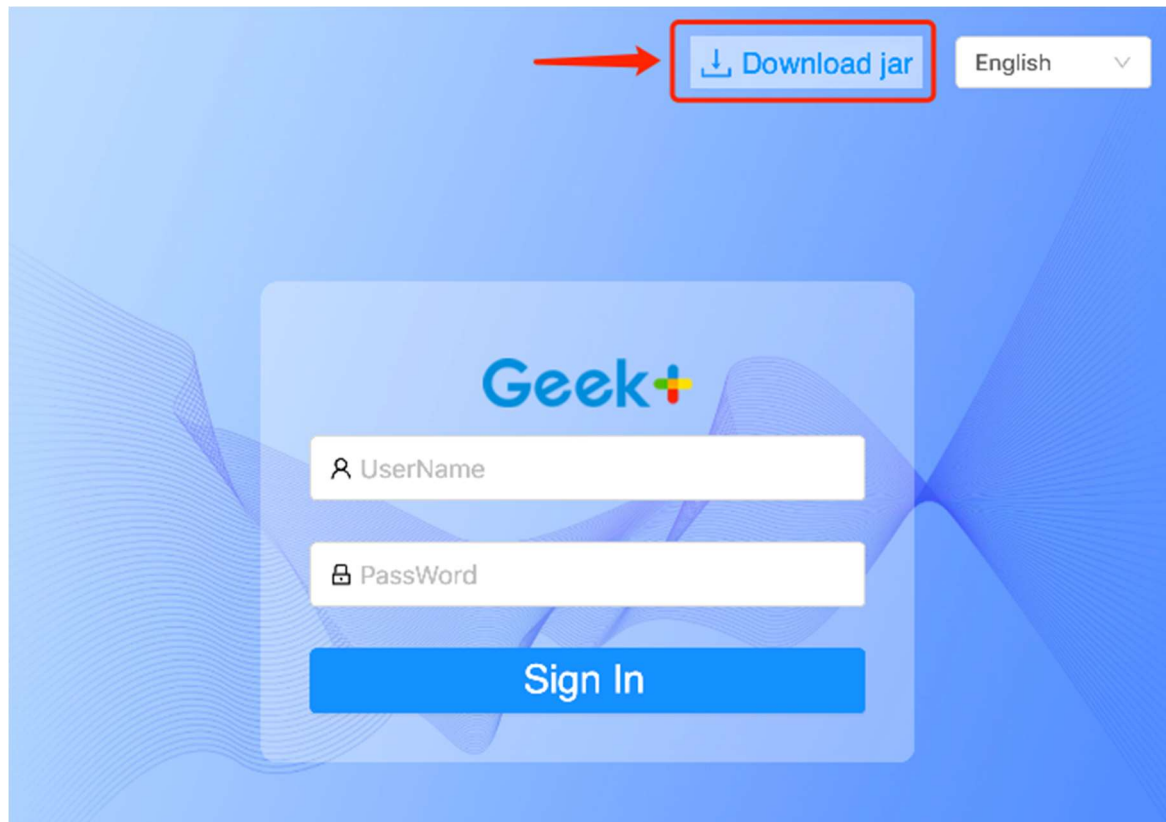
Geek+ IPS (Integration Platform System) SDK provides API functions such as request encapsulation, response interpretation, etc. You can easily complete API calls and API result acquisition by using this SDK.

Take SKU synchronization interface as example, you can use SDK like below way:

Introduce JAR into Maven:

```xml
<dependencies>
    <dependency>
        <artifactId>artemis-sdk</artifactId>
        <groupId>com.geekplus</groupId>
        <version>1.0.0-SNAPSHOT</version>
    </dependency>
</dependencies>
```

Java Code:

```java
//url
String serverUrl = "http://localhost:8082/geekplus/api/artemis";
```

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```java
DefaultArtemisClient defaultArtemisClient = new DefaultArtemisClient(serverUrl);


//entity
SkuImportRequest request = new SkuImportRequest();
request.setWarehouseCode("Test");
request.setOwnerCode("Test");
request.setSkuAmount(1);


//sku info
List<SkuImportRequest.SkuInfo> skuList = new
ArrayList<SkuImportRequest.SkuInfo>();
SkuImportRequest.SkuInfo skuInfo = new SkuImportRequest.SkuInfo();
skuInfo.setSkuCode("sku0001");
skuInfo.setSkuName("sku0001");
//bar code
List<SkuImportRequest.SkuBarcode> barcodeList = new
ArrayList<SkuImportRequest.SkuBarcode>();
SkuImportRequest.SkuBarcode barcode = new SkuImportRequest.SkuBarcode();
barcode.setBarCode("barcode001");
barcode.setSkuCode("sku0001");
barcodeList.add(barcode);
skuInfo.setBarcodeList(barcodeList);


//package
List<SkuImportRequest.SkuPackage> skuPackageList = new
ArrayList<SkuImportRequest.SkuPackage>();
SkuImportRequest.SkuPackage skuPackage = new SkuImportRequest.SkuPackage();
skuPackage.setPackingSpec("1*2*3");
skuPackage.setMiniLength(BigDecimal.ONE);
skuPackage.setMiniWeight(BigDecimal.ONE);
skuPackage.setMiniWidth(BigDecimal.ONE);
skuPackage.setMiniHeight(BigDecimal.ONE);
skuPackage.setMiniVolume(BigDecimal.ONE);
skuPackage.setSecondLength(BigDecimal.ONE);
skuPackage.setSecondWeight(BigDecimal.ONE);
skuPackage.setSecondWidth(BigDecimal.ONE);
skuPackage.setSecondHeight(BigDecimal.ONE);
skuPackage.setSecondVolume(BigDecimal.ONE);
skuPackage.setThirdLength(BigDecimal.ONE);
skuPackage.setThirdWeight(BigDecimal.ONE);
skuPackage.setThirdWidth(BigDecimal.ONE);
skuPackage.setThirdHeight(BigDecimal.ONE);
skuPackage.setThirdVolume(BigDecimal.ONE);
```

```
skuPackageList.add(skuPackage);

skuInfo.setSkuPackageList(skuPackageList);


//扩展字段

Map<String, Object> extFields = new HashMap<String, Object>();

extFields.put("is_rfid_sku","1");

extFields.put("wares_type_id_4","8518549");

skuInfo.setExtFields(extFields);


skuList.add(skuInfo);

request.setSkuList(skuList);


//请求

ResponseRoot<SkuImportResponse> responseRoot =

defaultArtemisClient.execute(request, HttpMessageFormatEnum.JSON);

System.out.println("responseRoot:" + JSONUtil.objToJson(responseRoot));
```

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