



MultiSKUPriceAndStockAPI v5

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Document Revision

Date	Version	Description
19/10/2020	1.0	Initial draft

API Description

MultiSKUPriceAndStockAPI is a RESTful API which provides real-time price and stock availability information for up to 50 product items per call. This API should be called on an ad-hoc basis when the latest price and inventory information is required. Customers requiring bulk catalogue updates should utilize the Ingram Micro FTP price and availability files. Your local ecommerce representatives can provide further details on the FTP service.

What is RESTful?

Representational State Transfer (REST) is a software architectural style that defines a set of constraints to be used for creating Web services. Web services that conform to the REST architectural style, called RESTful Web services (RWS), provide interoperability between computer systems on the Internet. RESTful Web services allow the requesting systems to access and manipulate textual representations of Web resources by using a uniform and predefined set of stateless operations.

Authentication

API authentication is provided through OAuth 2.0. OAuth 2.0 is an authorization type that enables you to approve an application that contacts another application for you without exposing your password. A token is requested from the Access Token URL by providing the App ID and Client Secret assigned to your application in the Ingram Micro Partner Central portal. The issued token is valid for 24 hours and should be included in the Authorization HTTP header when calling the API.

Request

Item	Value
Access Token URL (production and sandbox)	https://api.ingrammicro.com/oauth/oauth30/token
Method	POST
Content-Type	application/x-www-form-urlencoded
Form field 1 name	grant_type
Form field 1 value	client_credentials
Form field 2 name	client_id
Form field 2 value	<i>Your application App ID</i>
Form field 3 name	client_secret
Form field 3 value	<i>Your application Shared Secret</i>

Sample Request

```
POST https://api.ingrammicro.com/oauth/oauth30/token
grant_type=client_credentials&client_id=W83TU6HBE9cOVdwB6ngroBnV4Lrw2KBI&client_secret=nqZJXva14dWI3Sxf
```

Response

Item	Value
access_token	<i>Your access token</i>
token_type	Bearer
expires_in	<i>Token expiry (seconds)</i>

Sample Response

```
{  
  "access_token": "m13aA1Z62Yi1R6k634h19Ga84lmz",  
  "token_type": "Bearer",  
  "expires_in": "86399"  
}
```

System Availability

During normal operating conditions, APIs should be available during weekdays between the times listed in the table below. Ingram Micro endeavours to limit planned maintenance activities to evenings and weekends. These outages will be communicated in advance where possible. API availability may be limited during weekends and public holidays.

Country	Weekday Available From (local time)	Weekday Available To (local time)
BE and NL	00:00	00:00
AT, CH, DE, HU, SE	05:00	23:00
ES and PT	06:00	01:00
FR and IT	05:00	00:00
UK	06:00	00:30

Rate Limiting

This API is subject to rate limiting. Rate limiting ensures fair access to API resources for all users and prevents performance degradation due to excessive transaction volumes.

Rate-Limiting Period (s)	Transaction Limit
60	60

Rate limits can be monitored by checking special HTTP headers returned in the API response

Response Header Name	
X-RateLimit-Limit	Number of transactions allowed within rate-limiting period
X-RateLimit-Remaining	Number of transactions remaining within rate-limiting period
X-RateLimit-Reset	Rate-limiting period reset timestamp (UNIX format - milliseconds elapsed since 1970-01-01 00:00:00)

If a rate limit is exceeded, an HTTP 429 response code will be returned (Too Many Requests). No further API calls will be allowed until the rate limiting reset period is reached.

Ingram Micro Warehouse Identifiers

Warehouse identifiers are used in several APIs such as MultiSKUPriceAndStockAPI and OrderCreateAPI. The table below provides a cross-reference for the codes provided in these messages. Please note that only certain product ranges can be ordered directly from the central warehouse. Your local ecommerce representative can advise on options for identifying these products via the FTP price file service. Only products listed as available in the local/central warehouse are available to order.

Customer Account Country	ERP	Local Warehouse IDs	Local Warehouse locations	Central Warehouse ID	Central Warehouse location
AT	Impulse	28 44	Vienna, Austria Straubing, DE	N/A	N/A
BE	SAP	NL01 PE02	Tilburg, NL Tilburg, NL	PEDE	Straubing, DE
CH	Impulse	27 44	Altishofen, CH Straubing, DE	N/A	N/A
DE	Impulse	44	Straubing, DE	N/A	N/A
ES	Impulse	29 78 43	Tarragona, ES Tarragona, ES Madrid, ES	81	Straubing, DE
FR	Impulse	21 82	Lomme, FR Lomme, FR	81	Straubing, DE
HU	Impulse	40 44	Fót, HU Straubing, DE	N/A	N/A
IT	Impulse	23 86	Settala, IT Settala, IT	81	Straubing, DE
NL	SAP	NL01 PE02	Tilburg, NL Tilburg, NL	PEDE	Straubing, DE
PT	Impulse	26	Sintra, PT	81	Straubing, DE
SE	Impulse	33 84	Rosersberg, SE Rosersberg, SE	81	Straubing, DE
UK	Impulse	20 85	Crick, UK Crick, UK	81	Straubing, DE

API Request

Item	Value
Production Endpoint URL	https://api.ingrammicro.com/resellers/v5/catalog/priceandavailability
Sandbox Endpoint URL	https://api.ingrammicro.com/sandbox/resellers/v5/catalog/priceandavailability
Method	POST
Accept HTTP header value	application/json
Content-Type HTTP header value	application/json
Authorization HTTP header value	Bearer<space> + <i>your access token</i> (e.g. Bearer ml3aA1Z62Yi1R6k634hI9Ga84lmz)

Field Descriptions

Name	Parent	Type	Data Type	Min,Max Occurrence	Description
servicerequest		Object		1,1	Service request container.
requestpreamble	servicerequest	Object		1,1	Request preamble container.
isocountrycode	requestpreamble	Parameter	String	1,1	Country Code.
customernumber	requestpreamble	Parameter	String	1,1	Ingram Micro customer account number.
priceandstockrequest	servicerequest	Object		1,1	Price and stock request container.
item	priceandstockrequest	Array		1,1	A collection of items to query. Maximum array size is 50.
ingrampartnumber	item	Parameter	String	Choose 1 of these part identifiers	Ingram Micro part number. Also referred to as SKU (stock keeping unit) or material number.
vendorpartnumber	Item	Parameter	String		Vendor part number.
upc	Item	Parameter	String		Universal Product Code or European Article Number.
customerpartnumber	Item	Parameter	String		Customer part number. A cross-reference must be present in Ingram Micro's ERP.
quantity	Item	Parameter	Integer	1,1	Ingram Micro SAP ERP countries only. Potential purchase quantity. This will trigger any available volume discounts in the returned price. The system will default to 1 if the property is omitted.
enduserid	Item	Parameter	String	0,1	The ID of an end-user in Ingram Micro's ERP. Pass this value to receive end-user specific pricing.
includeallsystems	priceandstockrequest	Parameter	Boolean	0,1	Query all ERP systems available to the customer account.

Sample Request

```
POST https://api.ingrammicro.com/resellers/v5/catalog/priceandavailability
```

```
{
  "servicerequest": {
    "requestpreamble": {
      "isocountrycode": "UK",
      "customernumber": "20-123456"
    },
    "priceandstockrequest": {
      "item": [
        {
          "ingrampartnumber": "479CN91",
          "quantity": 1
        },
        {
          "ingrampartnumber": "677Q673",
          "quantity": 1
        }
      ],
      "includeallsystems": true
    }
  }
}
```

API Response

Field Descriptions

Name	Parent	Type	Data Type	Min,Max Occurrence	Description
serviceresponse		Object		1,1	Service response container.
responsepreamble	serviceresponse	Object		1,1	Response preamble container.
responsestatus	responsepreamble	Parameter	String	1,1	Response status.
statuscode	responsepreamble	Parameter	String	1,1	Response status code.
responsemessage	responsepreamble	Parameter	String	1,1	Response message.
priceandstockresponse	serviceresponse	Object		1,1	Price and stock container.
Details	priceandstockresponse	Array		1,1	Collection of item responses (up to 50).
itemstatus	Details	Parameter	String	1,1	Status of the requested item.
statusmessage	Details	Parameter	String	1,1	Status message of the requested item.
ingrampartnumber	Details	Parameter	String	0,1	Ingram Micro part number.
vendorpartnumber	Details	Parameter	String	0,1	Vendor part number.
globalskuid	Details	Parameter	String	0,1	Ingram Micro's global SKU identifier. This consists of the Ingram Micro ERP ID and the Ingram Micro part number.
customerprice	Details	Parameter	Decimal	0,1	Customer purchase price.
partdescription1	Details	Parameter	String	0,1	Item description line 1.
partdescription2	Details	Parameter	String	0,1	Item description line 2.
vendornumber	Details	Parameter	String	0,1	Ingram Micro's internal vendor number.
vendorname	Details	Parameter	String	0,1	Vendor name.
substitutepartnumber	Details	Parameter	String	0,1	Will be populated with an Ingram Micro part number if a substitution is available.
cpucode	Details	Parameter	String	0,1	Ingram Micro's internal CPU code. X-REF files describing these codes are available via the FTP service. Contact your local ecommerce representative for information.
class	Details	Parameter	String	0,1	Item classification. See Impulse Classifications .
skustatus	Details	Parameter	String	0,1	Item status.

itemtype	Details	Parameter	String	0,1	Item type; C = Constrained, T = Specialized handling (requires end-user name and phone number). All other values can be ignored.
mediacpu	Details	Parameter	String	0,1	Ingram Micro's internal media and CPU codes. The first code represents the media code and the second code represents the CPU code. X-REF files describing these codes are available via the FTP service. Contact your local ecommerce representative for information.
categorysubcategory	Details	Parameter	String	0,1	Ingram Micro's internal category/sub-category code. The first pair of digits represents the category and the second pair represents the sub-category – Not used in Europe.
retailprice	Details	Parameter	Decimal	0,1	MSRP/RRP. Will be zero if unavailable.
newmedia	Details	Parameter	String	0,1	Ingram Micro's internal new media code. Not used in all countries. X-REF files describing these codes are available via the FTP service. Contact your local ecommerce representative for information.
reserveinventoryflag	Details	Parameter	String	0,1	Indicates if reserved inventory is available to the customer; Y or N.
enduserrequired	Details	Parameter	String	0,1	Indicates if end-user details must be provided when ordering the item; Y or N.
backorderflag	Details	Parameter	String	0,1	Indicates if Ingram Micro will accept backorders for the item; Y or N.
salescurrency	Details	Parameter	String	0,1	Currency Code related to customer price. Not used in Europe.
specialpromoflag	Details	Parameter	String	0,1	Special Price/Promotion flag; S = Special Pricing, P = Promotion.
specialpromoeffdate	Details	Parameter	Date	0,1	Special Price/Promotion effective date.
specialpromoexpdate	Details	Parameter	Date	0,1	Special Price/Promotion expiry date.
specialpromoprice	Details	Parameter	Decimal	0,1	Promotional price.
promominquantity	Details	Parameter	Integer	0,1	Minimum purchase quantity to qualify for promotion
promofreequantity	Details	Parameter	Integer	0,1	number of free items (of promofreesku) related to the promotion.

promofreesku	Details	Parameter	String	0,1	The Ingram Micro part number for the free item related to the promotion.
nocancelSKU	Details	Parameter	String	0,1	Indicates if Ingram Micro will accept order/line cancellations for the item; Y or N.
availableRebateQuantity	Details	Parameter	Integer	0,1	Quantity remaining where rebate is available.
quantityBreaks	Details	Array		0,1	Collection of available volume purchasing discounts.
quantity	quantityBreaks	Parameter	Decimal	1,1	Minimum purchase quantity to qualify for pricing.
amount	quantityBreaks	Parameter	Decimal	1,1	Price if minimum quantity is met.
SKUauthorized	Details	Parameter	String	0,1	Indicates if the customer is authorized to purchase the item; Y or N .
warehouseDetails	Details	Array		0,1	Collection of warehouses that stock the item.
warehouseid	warehouseDetails	Parameter	String	1,1	Warehouse ID (see Ingram Micro Warehouse Identifiers).
warehouseDescription	warehouseDetails	Parameter	String	0,1	Warehouse physical location
availableQuantity	warehouseDetails	Parameter	Integer	1,1	Available stock.
onOrderQuantity	warehouseDetails	Parameter	Integer	1,1	Stock quantity on order.
onHoldQuantity	warehouseDetails	Parameter	Integer	1,1	Stock quantity on hold. Reserved inventory quantities will be included in this number. These are not available to order unless the customer is authorised for the reserved inventory.
etadate	warehouseDetails	Parameter	Date	0,1	Estimated arrival date in the Ingram Micro warehouse for the "on order" quantity.

Sample Response

```
{
  "serviceresponse": {
    "responsepreamble": {
      "responsesstatus": "SUCCESS",
      "statuscode": "200",
      "responsemessage": "Data Found"
    },
    "priceandstockresponse": {
      "details": [
        {
          "itemstatus": "SUCCESS",
          "statusmessage": "3000-TRANSACTION COMPLETE",
          "ingrampartnumber": "479CN91",
          "vendorpartnumber": "MJ1L2ZM/A",
          "globalskuid": "A300-479CN91",
          "customerprice": 56.84,
          "partdescription1": "ADAPTER USB-C VGA MULTIPORT CABL",
          "partdescription2": ".",
          "vendornumber": "4466",
          "vendorname": "APPLE",
          "cpucode": "NMS",
          "class": "D",
          "skustatus": "*",
          "itemtype": "I",
          "mediacpu": "CABL NMS",
          "categorysubcategory": "00 99",
          "retailprice": 49.0,
          "backorderflag": "N",
          "skuauthorized": "Y",
          "warehouseid": [
            {
              "warehouseid": "33",
              "warehouseiddescription": "Rosersberg, Sweden",
              "availablequantity": 10000,
              "onorderquantity": 0,
              "onholdquantity": 0
            }
          ]
        }
      ]
    }
  }
}
```

```
    },
    {
      "warehouseid": "23",
      "warehousedescription": "Settala, Italy",
      "availablequantity": 2,
      "onorderquantity": 0,
      "onholdquantity": 0
    },
    {
      "warehouseid": "44",
      "warehousedescription": "Straubing, Germany",
      "availablequantity": 6,
      "onorderquantity": 10,
      "onholdquantity": 0,
      "etadate": "2019-10-29"
    },
    {
      "warehouseid": "21",
      "warehousedescription": "Lomme, France",
      "availablequantity": 57,
      "onorderquantity": 50,
      "onholdquantity": 0,
      "etadate": "2019-10-29"
    },
    {
      "warehouseid": "20",
      "warehousedescription": "Crick, United Kingdom",
      "availablequantity": 36,
      "onorderquantity": 0,
      "onholdquantity": 0
    }
  ]
},
{
  "itemstatus": "SUCCESS",
  "statusmessage": "3000-TRANSACTION COMPLETE",
  "ingrampartnumber": "677Q673",
  "vendorpartnumber": "SG500X-48P-K9-G5",
```

```
"globalskuid": "A300-677Q673",
"customerprice": 2103.75,
"partdescription1": "CSB 48-PORT GIG POE WITH 4-PORTCPNT",
"partdescription2": "10-GIG STACKABLE MANAGED SWITCH IN",
"vendornumber": "S842",
"vendorname": "CISCO",
"cpucode": "NMS",
"class": "A",
"skustatus": "ACTIVE",
"itemtype": "A",
"mediacpu": "CPNT NMS",
"categorysubcategory": "00 99",
"retailprice": 3530.89,
"enduserrequired": "Y",
"backorderflag": "Y",
"skuauthorized": "Y",
"warehouseidetails": [
  {
    "warehouseid": "44",
    "warehousedescription": "Straubing, Germany",
    "availablequantity": 5,
    "onorderquantity": 0,
    "onholdquantity": 0
  },
  {
    "warehouseid": "81",
    "warehousedescription": "Straubing, Germany",
    "availablequantity": 15,
    "onorderquantity": 0,
    "onholdquantity": 0
  },
  {
    "warehouseid": "85",
    "warehousedescription": "Crick, United Kingdom",
    "availablequantity": 9,
    "onorderquantity": 0,
    "onholdquantity": 0
  }
],
```

```
{
  {
    "warehouseid": "20",
    "warehousedescription": "Crick, United Kingdom",
    "availablequantity": 0,
    "onorderquantity": 0,
    "onholdquantity": 0
  }
}
}
```


Recommended Tests

Contact your local ecommerce representative for part numbers to use for these tests.

Scenario	Context
Invalid Access token	Always test this scenario.
Invalid Ingram Micro Part number	Test if you intend to use this item identifier.
Invalid Customer Part number	Test if you intend to use this item identifier.
Invalid Vendor Part number	Test if you intend to use this item identifier.
Invalid UPC	Test if you intend to use this item identifier.
Vendor Part number that matches multiple Ingram Micro Part Number	Test if you intend to use this item identifier.
UPC that matches multiple Ingram Micro Part Number	Test if you intend to use this item identifier.
Discontinued item	Always test this scenario.
Unauthorized item	Always test this scenario.
Quantity break item	Always test this scenario.
Multiple valid items in request	Always test this scenario.
Multiple items in request; mixed valid and invalid	Always test this scenario.

API HTTP Response Codes

HTTP Code	HTTP Code Description	Reason	Remedial Action
200	OK	Successful transaction.	None required.
400	Bad Request	The server could not understand the request due to invalid syntax.	Check that your request is correctly formed.
401	Unauthorized	The request was unauthenticated.	Check App ID and Client Secret values are valid and request a new token.
403	Forbidden	The client does not have access rights to the content.	Check you are using the correct endpoint and that you have been granted access to the requested API.
404	Not Found	The server cannot find the requested resource.	Check you are using the correct endpoint.
429	Too Many Requests	The user has sent too many requests in a given amount of time ("rate limiting").	None required but no more requests will be allowed within the set time period.
500	Internal Server Error	The server has encountered a situation it doesn't know how to handle.	Retry the transaction. If the error persists, contact your local ecommerce representative.
502	Bad Gateway	This error response means that the server, while working as a gateway to get a response needed to handle the request, got an invalid response.	Retry the transaction. If the error persists, contact your local ecommerce representative.
503	Service Unavailable	The server is not ready to handle the request.	Retry the transaction. If the error persists, contact your local ecommerce representative.
504	Gateway Timeout	This error response is given when the server is acting as a gateway and cannot get a response in time.	Retry the transaction. If the error persists, contact your local ecommerce representative.

Response Preamble Status Codes

statuscode	responsestatus	responsemessage	Reason	Remedial Action
046	SUCCESSWITHERROR	Partial Data Found	One or more items encountered an issue	Check itemstatus values.
200	SUCCESS	Data Found	Success with all requested items	None required.
500	FAILED	Data Not Found	Data could not be found for any requested items	Check itemstatus values.

Item Status Codes

itemstatus	statusmessage	Reason	Remedial Action
SUCCESS	3000- *ALLOCATED SKU*	Constrained or reserved part	
SUCCESS	3000- *CONSTRAINED*	Constrained part	
SUCCESS	3000-ACTION 23 - TO VIEW ACOPS	An ACOP (Automated Cost Override) is available for this part	
SUCCESS	3000-CALL *	Internal message	This status message can be ignored
SUCCESS	3000-CONTACT *	Internal message	This status message can be ignored
SUCCESS	3000-CUST NOT AUTH/ALLOCATED	Constrained or reserved part where authorization is required to purchase	Contact your sales representative if you should be authorized to purchase the item.
SUCCESS	3000-EXCLUSIVE	Item is exclusive to Ingram Micro	
SUCCESS	3000-NOT AUTH/CONSTRAINED	Constrained part where authorization is required to purchase	Contact your sales representative if you should be authorized to purchase the item.
SUCCESS	3000-ONLY LOCAL DATABASE SHOWN	Internal message	This status message can be ignored
SUCCESS	3000-PART HAS NO STOCKING BR	Part not found in any warehouse	
SUCCESS	3000-RESTRICTED *	Part is restricted and authorization is required to purchase	Contact your sales representative if you should be authorized to purchase the item.
SUCCESS	3000-TRANSACTION COMPLETE for IPN/VPN Number: XXXXXXXX	Part inquiry was successful	Where XXXXXXXX is the requested part.

SUCCESS	A-No qty breaks availa for IPN/VPN Number: XXXXXXXX	Indicates that volume purchasing discounts are not available for the part	Where XXXXXXXX is the requested part.
SUCCESS	Data found for the Sku	Part inquiry was successful	
SUCCESS	X-CUSTOMER NOT AUTHORIZED for IPN/VPN Number: XXXXXXXX	Part is restricted and authorization is required to purchase	Where XXXXXXXX is the requested part.
SUCCESS	pcg 2	Internal message	This status message can be ignored
FAILED	3000-TRANSACTION COMPLETE for IPN/VPN Number: XXXXXXXX	Part inquiry failed	Where XXXXXXXX is the requested part. Repost API request. If error persists, contact your local ecommerce support representative.
FAILED	BW-HTTP-100001-The Http Server replied with a 5XX status code	Part inquiry failed	Repost API request. If error persists, contact your local ecommerce support representative.
FAILED	Entered Vendor Part Number not Found in Database for Item No: XXXXXXXX	Part not found	
FAILED	Material XXXXXXXX not extended to any plant	Part not found in any warehouse	Where XXXXXXXX is the requested part.
FAILED	Material Determination failed for Item No: XXXXXXXX	Invalid part	Where XXXXXXXX is the requested part.
FAILED	Material is not valid	Invalid part	
FAILED	N-PART NOT ON FILE for IPN/VPN Number: XXXXXXXX	Invalid part	Where XXXXXXXX is the requested part.
FAILED	SOAP-ENV:9950-Call timed out - companyCd: XX subject: INGRAM.PNAPLUS.INQUIRY*	Part inquiry timed out	Where XX is the Ingram Micro company code. Repost API request. If error persists, contact your local ecommerce support representative.
FAILED	User is not Authorized to Purchase the Material for Item No: XXXXXXXX	Part is restricted and authorization is required to purchase	Where XXXXXXXX is the requested part. Contact your sales representative if you should be authorized to purchase the item.
FAILED	SOAP-ENV:9999-The region you are attempting to run the transaction in appears to be offline. Company Cd: XX	Ingram Micro's ERP is not available to service the request	Where XX is the Ingram Micro company code. Ensure you are posting your transaction within the times defined in

			the System Availability table. If within defined times, repost your API request. If error persists, contact your local ecommerce support representative.
--	--	--	--

Impulse Product Classifications

Class code	Description
0-9	Excess and/or obsolete item with price reduction.
A	High velocity run-rate item.
B	Medium velocity run-rate item.
C	Low velocity run-rate item.
D	Discontinued item.
F	Demo stock item.
H	Item has traded accounts <=3 in the last 20 Days (few traded customers).
I	Broker stock item.
K	Kit (bundle) item.
N	New item in the last 20 days.
P	Refurbished or repaired item.
Q	Outsourced item (contract warehousing).
R	Specially stocked item (one off purchase against deal/specific promotion).
S	Special order item (not normally stocked).
W	Item that is in decline or has never had a run rate.
X	Item that is shipped direct to the customer from the vendor on behalf on Ingram Micro.