



# ProductSearchAPI v5

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## Document Revision

Date	Version	Description
21/10/2020	1.0	Initial draft

## API Description

ProductSearchAPI is a RESTful API for searching for product identifiers such as Ingram Micro part number, manufacturer part number and UPC/EAN.

## 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	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 your local/central warehouse are available for you 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
Sandbox Endpoint URL	https://api.ingrammicro.com/sandbox/resellers/v5/catalog
Method	GET
Accept HTTP header value	application/json
Authorization HTTP header value	Bearer<space> + <i>your access token</i> (e.g. Bearer ml3aA1Z62Yi1R6k634hI9Ga84lmz)

### Query Parameters

Name	Description
isoCountryCode	ISO country code
customerNumber	Ingram Micro account number
partNumber	The part reference to search. This can be Ingram Micro part number, manufacturer part number or UPC/EAN code



## Sample Request

```
GET https://api.ingrammicro.com/resellers/v5/catalog?isoCountryCode=UK&customerNumber=20-123456&partNumber=0175383775750
```

## 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.
requeststatus	responsepreamble	Parameter	String	1,1	Response status.
returncode	responsepreamble	Parameter	String	1,1	Response code.
returnmessage	responsepreamble	Parameter	String	1,1	Response message.
productsearchresponse	serviceresponse	Array		0,1	Product search response collection
responseflag	productsearchresponse	Parameter	Integer	1,1	Number of results found.
partnumbers	productsearchresponse	Array		0,n	Part number collection
ingrampartnumber	partnumbers	Parameter	String	1,1	Ingram Micro part number. Also referred to as SKU (stock keeping unit) or material number.
manufacturerpartnumber	partnumbers	Parameter	String	1,1	Manufacturer part number
upcode	partnumbers	Parameter	String	0,1	Universal Product Code or European Article Number.
productdescription	partnumbers	Parameter	String	1,1	Product description
currency	partnumbers	Parameter	String	1,1	Purchase currency. This is the currency between Ingram Micro and the manufacturer/vendor
haswarranty	partnumbers	Parameter	Boolean	1,1	Indicates if warranties are available for the product in IM-Online

## Sample Response

```

{
  "servicerresponse": {
    "responsepreamble": {
      "requeststatus": "SUCCESS",
      "returncode": "200",
      "returnmessage": "Data Available"
    },
  },
  "productsearchresponse": [
    {
      "responseflag": "4",
      "partnumbers": [
        {
          "ingrampartnumber": "Z010866",
          "manufacturerpartnumber": "TV-NVR416- 6TB",
          "upccode": "0175383775750",
          "productdescription": "16CHANNEL 4K UHD POE+ NVR/W 6TB 16 CHANNEL 4K UHD POE+ NVR      IN",
          "currency": "GBP",
          "haswarranty": "false"
        },
        {
          "ingrampartnumber": "Z010877",
          "manufacturerpartnumber": "TV-NVR416- 6TB",
          "upccode": "0175383775750",
          "productdescription": "16CHANNEL 4K UHD POE+ NVR/W 6TB 16 CHANNEL 4K UHD POE+ NVR      IN",
          "currency": "GBP",
          "haswarranty": "false"
        },
        {
          "ingrampartnumber": "Z010878",
          "manufacturerpartnumber": "TV-NVR416- 6TB",
          "upccode": "0175383775750",
          "productdescription": "16CHANNEL 4K UHD POE+ NVR/W 6TB 16 CHANNEL 4K UHD POE+ NVR      IN",
          "currency": "GBP",
          "haswarranty": "false"
        }
      ]
    }
  ]
}
    
```

```
"ingrampartnumber": "Z010881",  
"manufacturerpartnumber": "TV-NVR416- 6TB",  
"upccode": "0175383775750",  
"productdescription": "16CHANNEL 4K UHD POE+ NVR/W 6TB 16 CHANNEL 4K UHD POE+ NVR      IN",  
"currency": "GBP",  
"haswarranty": "false"
```

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

## Recommended Tests

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

Scenario	Context
Invalid Access token	Always test this scenario.
Search for valid Ingram Micro part number	Test if you intend to use this option.
Search for valid manufacturer part number	Test if you intend to use this option.
Search for valid manufacturer part number with multiple matches in the Ingram Micro catalogue	Test if you intend to use this option.
Search for valid UPC/EAN code	Test if you intend to use this option.
Search for valid UPC/EAN code with multiple matches in the Ingram Micro catalogue	Test if you intend to use this option.
Search for invalid Ingram Micro part number	Test if you intend to use this option.
Search for invalid manufacturer part number	Test if you intend to use this option.
Search for invalid UPC/EAN code	Test if you intend to use this option.

### 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 within a given amount of time ("rate limiting").	None required but no more requests will be allowed within the allotted 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 Statuses

requeststatus	returncode	returnmessage	Reason	Remedial Action
SUCCESS	200	Data Available	Search returned 1 or more matches	
FAILED	200	Data not Found	Search returned 0 matches for requested part number	Check requested part number value and repost API request.