



InvoiceAPI v5

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Document Revision

Date	Version	Description
07/12/2020	1.0	Initial draft

API Description

A real-time request that allows a customer to query Ingram Micro for Invoice information for a specific open or shipped order in the past 9 months. Invoice information is returned by querying an Ingram Micro sales order number or invoice number.

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 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/invoices
Sandbox Endpoint URL	https://api.ingrammicro.com/sandbox/resellers/v5/invoices
Method	GET
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 7b7888117cb72c437a3748554734fe2bd8b8c795)

Query Parameters

Name	Description
customernumber	Your unique Ingram Micro customer number
isocountrycode	Country Code.
invoiceNumber	Ingram Micro Invoice Number.
priceandstockrequest	Price and stock request container.

Sample Request

```
GET
https://api.ingrammicro.com/resellers/v5/invoices/20-12345-11?isoCountryCode=UK&customerNumber=20-123456
```


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.
invoicedetailresponse	serviceresponse	Object		1,1	Invoice response container
invoicenumbr	invoicedetailresponse	Parameter	String	1,1	Ingram Micro invoice number.
invoicedate	invoicedetailresponse	Parameter	Date	0,1	Invoice date for invoiced orders
customerordernumber	invoicedetailresponse	Parameter	String	1,1	Customer purchase order reference.
customerfreightamount	invoicedetailresponse	Parameter	Decimal	1,1	Freight amount – Please note that freight amounts are usually shown as miscellaneous charge lines
customerforeignfrightamt	invoicedetailresponse	Parameter	Decimal	1,1	Foreign freight amount (when invoice currency and Ingram Micro company currency differs) – Please note that freight amounts are usually shown as miscellaneous charge lines
totaltaxamount	invoicedetailresponse	Parameter	Decimal	1,1	Total invoice tax amount
totalamount	invoicedetailresponse	Parameter	Decimal	1,1	Gross invoice amount inclusive of tax (amount to pay)
shiptosuffix	invoicedetailresponse	Parameter	String	1,1	Ingram Micro Ship To ID
billtosuffix	invoicedetailresponse	Parameter	String	1,1	Ingram Micro Bill To ID
billto	invoicedetailsresponse	Object	Array	1,1	Bill-to address container.
attention	billto	Parameter	String	0,1	Bill-to attention
name1	billto	Parameter	String	0,1	Bill-to name 1
name2	billto	Parameter	String	0,1	Bill-to name 2
addressline1	billto	Parameter	String	0,1	Bill-To address line 1.
addressline2	billto	Parameter	String	0,1	Bill-To address line 2.
addressline3	billto	Parameter	String	0,1	Bill-To address line 3.

city	billto	Parameter	String	0,1	Bill-To city.
state	billto	Parameter	String	0,1	Bill-To state.
postalcode	billto	Parameter	String	0,1	Bill-To postal code.
countrycode	billto	Parameter	String	0,1	Bill-To country code.
paymentterms	invoicedetailresponse	Parameter	String	1,1	Ingram Micro payment terms code
orderdate	invoicedetailresponse	Parameter	Date	0,1	Order entry date
carrier	invoicedetailresponse	Parameter	String	1,1	Ingram Micro carrier code
carrierdescription	invoicedetailresponse	Parameter	String	1,1	Carrier description
discountamount	invoicedetailresponse	Parameter	Decimal	1,1	Invoice discount amount
enduserponumber	invoicedetailresponse	Parameter	String	1,1	End user order number
freightforwardercode	invoicedetailresponse	Parameter	String	1,1	Freight forwarder code. Used for some export orders
creditmemoreasoncode	invoicedetailresponse	Parameter	String	1,1	Reason code if document is credit memo – See Credit Memo Reason Codes table
holdreason	invoicedetailresponse	Parameter	String	1,1	Hold reason code for open orders – See Hold Reason Codes table
shipcomplete	invoicedetailresponse	Parameter	String	1,1	Ship complete indicator
shipdate	invoicedetailresponse	Parameter	Date	0,1	Order ship date for shipped orders
companycurrency	invoicedetailresponse	Parameter	String	1,1	Ingram Micro company currency code
currencycode	invoicedetailresponse	Parameter	String	1,1	Invoice currency code
currencyrate	invoicedetailresponse	Parameter	Decimal	1,1	Exchange rate between Ingram Micro company currency and invoice currency
globalorderid	invoicedetailresponse	Parameter	String	1,1	Ingram Micro’s global sales order number.
originalshipcode	invoicedetailresponse	Parameter	String	1,1	Original shipment number
orderstatus	invoicedetailresponse	Parameter	String	1,1	Order status code – See Order Status Codes table
shiptoaddress	invoicedetailresponse	Object		0,1	Ship to address container
attention	shiptoaddress	Parameter	String	0,1	Ship to attention
name1	shiptoaddress	Parameter	String	1,1	Ship to name
addressline1	shiptoaddress	Parameter	String	0,1	Ship to address line 1
addressline2	shiptoaddress	Parameter	String	0,1	Ship to address line 2
city	shiptoaddress	Parameter	String	1,1	Ship to city
state	shiptoaddress	Parameter	String	0,1	Ship to state
postalcode	shiptoaddress	Parameter	String	1,1	Ship to postal code

totalsales	invoicedetailresponse	Parameter	Decimal	1,1	Net invoice amount (excluding tax)
weight	invoicedetailresponse	Parameter	Decimal	1,1	Shipment weight
lines	invoicedetailsresponse	Array		0,1	Product line item collection
linenumber	lines	Parameter	String	1,1	Ingram Micro line number
globallinenumber	lines	Parameter	String	1,1	Customer line number
partnumber	lines	Parameter	String	1,1	Ingram Micro part number
vendorpartnumber	lines	Parameter	String	1,1	Vendor part number
partdescription	lines	Parameter	String	1,1	Product description
shipfrombranch	lines	Parameter	String	1,1	Ingram Micro warehouse code
shippedquantity	lines	Parameter	Integer	1,1	Shipped quantity
orderedquantity	lines	Parameter	Integer	1,1	Ordered quantity
backorderquantity	lines	Parameter	Integer	0,1	Back ordered quantity for open orders
backorderetadate	lines	Parameter	Date	0,1	Back order ETA for open orders
extendedprice	lines	Parameter	Decimal	1,1	Line amount for allocated items
specialbidnumber	lines	Parameter	String	1,1	Special bid number
ordersuffix	lines	Parameter	String	1,1	Ingram Micro order suffix
unitprice	lines	Parameter	Decimal	1,1	Unit price
unitofmeasure	lines	Parameter	String	1,1	Unit of measurement
serialnumberdetails	lines	Array		0,1	Serial number collection
serialnumber	serialnumberdetails	Parameter	String	1,1	Product serial number
trackingnumberdetails	lines	Array		0,1	Tracking number collection
trackingnumber	trackingnumberdetails	Parameter	String	1,1	Tracking number (shipment package ID)
productextendedspecs	lines	Array		0,1	Product extended specifications collection
attributename	productextendedspecs	Parameter	String	1,1	Product extended specification name
attributevalue	productextendedspecs	Parameter	String	1,1	Product extended specification value
extendedspecs	invoicedetailresponse	Array		0,1	Extended specifications collection
attributename	extendedspecs	Parameter	String	1,1	Extended specifications name
attributevalue	extendedspecs	Parameter	String	1,1	Extended specifications value
miscfeeline	invoicedetailresponse	Array		0,1	Miscellaneous fee lines collection
code	miscfeeline	Parameter	String	1,1	Fee code
description	miscfeeline	Parameter	String	1,1	Code description
chargeamount	miscfeeline	Parameter	Decimal	1,1	Charge amount

Sample Response

```
{
  "servicerresponse": {
    "responsepreamble": {
      "responsesstatus": "SUCCESS",
      "statuscode": "200",
      "responsemessage": "Invoice Found"
    },
    "invoicedetailresponse": {
      "invoicenum": "12345-11",
      "invoicedate": "2020-12-10",
      "customerordernumber": "PON123456",
      "customerfreightamount": "0.00",
      "customerforeignfrightamt": "0.00",
      "totaltaxamount": "900.00",
      "totalamount": "5400.00",
      "shiptosuffix": null,
      "billtosuffix": "000",
      "billto": {
        "name1": "VIHU LTD",
        "addressline1": "INNOVATION HOUSE",
        "addressline2": "96 HIGH ST",
        "addressline3": "BARNHAM",
        "city": "THORRINGTON",
        "postalcode": "CO7 4GY"
      },
      "paymentterms": "300",
      "orderdate": "2020-12-02",
      "carrier": "FN",
      "carrierdescription": "NEXT DAY PARCELFORCE",
      "discountamount": "0.00",
      "enduserponumber": null,
      "freightforwardercode": null,
      "creditmemoreasoncode": null,
      "holdreason": null,
    }
  }
}
```

```
"shipcomplete": null,
"shipdate": "2020-12-01",
"companycurrency": "GBP",
"currencycode": "GBP",
"currencyrate": "1.000000",
"globalorderid": "20-12345-11",
"originalshipcode": null,
"orderstatus": "B",
"shiptoaddress": {
  "attention": "JAMES EDWARDS",
  "name1": "97 PETWORTH ROAD",
  "addressline1": "RAINFORD",
  "city": "DUNSTER",
  "postalcode": "TA24 1JQ"
},
"totalsales": "4500.00",
"weight": "13.00",
"lines": [
  {
    "linenumber": "1",
    "globallinenumber": "0",
    "partnumber": "5234585",
    "vendorpartnumber": "MJJY-87654",
    "partdescription": "MYTECH 665B DIGITAL CAMERA 110MP",
    "shipfrombranch": "20",
    "shippedquantity": "6",
    "orderedquantity": "6",
    "backorderquantity": "0",
    "extendedprice": "4500.00",
    "specialbidnumber": null,
    "ordersuffix": "11",
    "unitprice": "750.00",
    "unitofmeasure": "EA",
    "serialnumberdetails": [
      {
        "serialnumber": "0016083588"
      }
    ],
  }
]
```

```
    "serialnumber": "0268852524"  
  },  
  {  
    "serialnumber": "0197009077"  
  },  
  {  
    "serialnumber": "0501024596"  
  },  
  {  
    "serialnumber": "0241830403"  
  },  
  {  
    "serialnumber": "0453527854"  
  }  
],  
"trackingnumberdetails": [  
  {  
    "trackingnumber": "PBVS0043876860"  
  },  
  {  
    "trackingnumber": "PBVS0043876861"  
  },  
  {  
    "trackingnumber": "PBVS0043876862"  
  },  
  {  
    "trackingnumber": "PBVS0043876863"  
  },  
  {  
    "trackingnumber": "PBVS0043876864"  
  },  
  {  
    "trackingnumber": "PBVS0043876865"  
  }  
]  
]  
}
```

```
}
}
```

Recommended Tests

Scenario	Context
Request an invoice for an open order	Always test this scenario
Request an invoice for an invoiced order	Always test this scenario
Request an invoice for an open credit memo	Always test this scenario
Request an invoice for an invoiced credit memo	Always test this scenario
Request an invoice for an invalid invoice number	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
200	SUCCESS	Invoice Found	Invoice data found	None required.
EO	FAILED	Invalid Invoice Number	Invoice data not found	Check the invoice number value provided in your request

Hold Reason Codes

Code	Description
blank	No hold
AC	Adjusted cost hold
BA	Bad address hold
BL	Special bid hold
BO	Bill only hold
C3	Credit hold
C4	Credit hold
C5	Credit hold
C8	Credit hold
CC	Credit card hold
CH	Credit check hold
CL	Credit check hold
EA	ACOP hold
EH	ACOP hold
ER	Final review hold
ES	End-user rejected/missing
EU	End-user data missing
EX	Export hold
FL	Flooring hold
GM	Margin hold
IC	All orders set to hold (customer setting)
IM	Customer hold
IN	Fulfilment (dropship) value hold

LM	Margin hold
LT	Margin hold
MN	Pricing hold
PC	Credit check hold
PD	Credit check hold
R1	Export hold
RP	Export hold
S2	Combined SM/SP hold
SB	Special bid hold
SE	Special product hold
SF	Freight hold
SH	Sales hold
SM	Waive minimum order fee hold
SP	Price change hold
TV	Transmit to vendor hold (awaiting a response)
VO	Deleted order
VR	Vendor required information missing
WT	Weight hold
ZS	IM-Online offline hold

Credit Memo Reason Codes

Code	Description
BB	Box closed (selected customers)
BO	Box open (selected customers)
BS	Backorder shipped in error
BU	Box incomplete (selected customers)
BW	Unopened but transit wear (selected customers)
DF	Defective
DI	Direct/Vendor credit
DM	Damaged in transit - POD endorsed
DO	Demo (sale or return)
DS	Duplicate shipment
IN	Incomplete product
LQ	Broken or Defective (selected customers)
LS	Lost shipment (carrier claim)
NR	Non-Resalable
OS	Over Shipment (shipped but not charged for)
RB	Rebill (Credit & Rebill)
RF	Refusal return
RP	Repair
RT	Returns write off
SB	Stock balance (no restocking fee)
SC	Customer error (with restocking fee)
SI	Misc. return (where no other code applies)
SL	Short shipment (warehouse claim - consignment vendors)
SS	Short shipment (warehouse claim)
VE	Vendor Error
WP	Wrong purchasing (impulse spec error)
WS	Wrong sales (error by sales dept)
WT	Wrong technical (website spec error)
WW	Wrong pick by warehouse

Order Status Codes

Code	Description
blank	In progress/Open order
C	Credit hold
D	Shipment hold
E	Billing error
F	Invoiced
I or B	Billed
O	Ecommerce Hold
R	Released to the warehouse management system
P	Paid
S	Sales Hold
V	Deleted order
W	Order not released to the warehouse management system