

## 1 REST List of API Operations

### 1.1 V2 Specific Operations

#### 1.1.1 V2 Jurisdiction Determination Operations

Operation	API URL Reference	Description
POST	<a href="/api/v2/geo/Geocode">/api/v2/geo/Geocode</a>	Geocodes one or multiple addresses and/or lat/long coordinates.

#### 1.1.2 V2 Tax Calculation and Commit

Operation	API URL Reference	Description
POST	<a href="/api/v2/afc/CalcTaxes">/api/v2/afc/CalcTaxes</a>	Performs tax calculations on all invoices and line items.
POST	<a href="/api/v2/afc/Commit">/api/v2/afc/Commit</a>	Commits or un-commits a document code.

### 1.2 Common Operations

#### 1.2.1 Application Operations

Operation	API URL Reference	Description
GET	<a href="/api/v1/Application/ServerTime">/api/v1/Application/ServerTime</a>	Get server time
GET	<a href="/api/v1/Application/AFCEngineVersion">/api/v1/Application/AFCEngineVersion</a>	Get the version of the AFC tax engine
GET	<a href="/api/v1/Application/RESTVersion">/api/v1/Application/RESTVersion</a>	Get the version of the Rest APIs
GET	<a href="/api/v1/Application/AFCDatabaseEngineVersion">/api/v1/Application/AFCDatabaseEngineVersion</a>	Get the AFC tax engine database version

## 1.2.2 Taxing Jurisdiction Operations

Operation	API URL Reference	Description
POST	/api/v1/CalculateJurisdiction	Determine taxing jurisdiction for transaction

## 1.2.3 Location Operations

Operation	API URL Reference	Description
POST	/api/v1/Location/PCode	Determine PCode for a location
GET	/api/v1/Location/PCodeToFips/{pCode}	Convert a PCode to FIPS code
GET	/api/v1/Location/Address/{pCode}	Get address information for a jurisdiction
POST	/api/v1/Location/ZipAddressLookup	Lookup jurisdictions by location name and/or postal code
GET	/api/v1/Location/Address	Lookup all countries in AFC
GET	/api/v1/Location/Address/{countryIso}	Lookup all states in a given country
GET	/api/v1/Location/Address/{countryIso}/{stateCode}	Lookup all cities for a given country and state/province/region.
GET	/api/v1/Location/Address/All	List of all addresses raw.

## 1.2.4 Tax Lookup Operations

Operation	API URL Reference	Description
GET	/api/v1/TaxLookup/Category/{taxType}	Get tax category for a tax type
GET	/api/v1/TaxLookup/Description/{taxType}	Get the tax description for a tax type
GET	/api/v1/TaxLookup/TaxRates/{pCode}	Get tax rates for a jurisdiction
GET	/api/v1/TaxLookup/TransactionServices	Get list of all Transaction-Service pairs.

## 1.3 V1 Specific Operations

### 1.3.1 V1 Calculate Taxes and Commit Operations

\*Note that the V1 calculation and commit API's have been replaced by the v2 calculation and commit API's and are no longer being updated.

Operation	API URL Reference	Description
POST	/api/v1/BridgeConference/Taxes*	Calculate taxes on a bridge conference transaction
POST	/api/v1/BridgeConference/Adjustments*	Calculate tax adjustments on a bridge conference transaction
POST	/api/v1/CalculateTaxes*	Calculate taxes on a transaction
POST	/api/v1/CalculateTaxesMulti*	Calculates taxes on a transaction batch.
POST	/api/v1/CalculateTaxInclusive/Adjustments*	Perform a tax-inclusive tax adjustment
POST	/api/v1/CalculateTaxInclusive/Taxes*	Perform a tax-inclusive tax calculation
POST	/api/v1/CalculateWithOverrides/Taxes*	Calculate taxes using overrides
POST	/api/v1/CalculateWithOverrides/Adjustments*	Calculate tax adjustments using overrides
POST	/api/v1/CustMode/CalcTaxesInCustMode*	Process transactions and adjustments in customer mode
POST	/api/v1/CalculateAdjustments*	Calculate tax adjustments on transaction
POST	/api/v1/CalculateProRated/Taxes*	Calculate taxes for a pro-rated transaction
POST	/api/v1/CalculateProRated/Adjustments*	Calculate tax adjustments for a pro-rated transaction
POST	/api/v1/CommitTransactions*	Calculate taxes on a transaction

## 2 API Details

### 2.1 api/v2/geo/Geocode

Supports a list of geo code addresses. Actual limit varies depending on message size and client timeout values, but standard recommendation is to process no more than 1000 entries per request.

#### 2.1.1 Request Fields

Name	Long name	Type	Description
<b>ref</b>	Reference	String	User supplied reference string which ties results in response back to request
<b>cass</b>	ReturnCass	Boolean	True = return CASS certified address False = do not return CASS certified address
<b>lat</b>	Latitude	Double	Latitude value for lat/long geocode search (requires long value be supplied)
<b>long</b>	Longitude	Double	Longitude value for lat/long geocode search (requires lat value be supplied)
<b>addr</b>	StreetAddress	String	Street address for geocode search
<b>city</b>	CityName	String	City name for geocode search
<b>st</b>	StateAbbreviation	String	State abbreviation for geocode search
<b>zip</b>	Zip Code	String	5 digit (USA) zip code for geocode search

#### 2.1.2 Response Fields

Name	Long name	Type	Description
<b>ref</b>	Reference	String	User supplied reference string which ties results in response back to request
<b>cass</b>	<a href="#">CassAddress</a>	Object	Cass certified address from geo database
<b>cBlk</b>	CensusBlock	Integer	Census block for address
<b>cTrc</b>	CensusTract	Integer	Census tract for address
<b>cnty</b>	County	String	County for address
<b>feat</b>	FeatureId	Integer	Feature id for address

<b>fips</b>	FipsCode	String	10 digit USA FIPs code for address. Special taxing jurisdictions will start with “99” and do not represent an actual FIPs code.
<b>inc</b>	Incorporated	Boolean	True = address is within city limits False = address is outside city limits (unincorporated)
<b>jur</b>	JurisdictionName	String	FIPs place name for jurisdiction
<b>lat</b>	Latitude	Double	Latitude for street location associated with the address
<b>long</b>	Longitude	Double	Longitude for street location associated with the address
<b>pcd</b>	PCode	Unsigned Integer	Avalara for communications geocode identifying the taxing jurisdiction associated with the address or lat/long lookup
<b>scr</b>	Score	Double	Confidence score for lookup. 1.01 = fallback lookup on State/County/City/zip used.
<b>err</b>	Error	String	Error message on lookup failures

### 2.1.2.1 Address Fields

Name	Long name	Type	Description
<b>addr</b>	StreetAddress	String	CASS certified street address
<b>city</b>	CityName	String	CASS certified City name
<b>st</b>	StateAbbreviation	String	CASS certified State abbreviation
<b>zip</b>	Zip Code	String	CASS certified 9 digit (USA) zip code

## 2.2 api/v2/afc/CalcTaxes

Supports a list of transactions and override options. Actual limit varies depending on message size and client timeout values, but standard recommendation is to process no more than 1000 entries per request.

### 2.2.1 Request Fields

Name	Long name	Type	Description
<b>cmpn</b>	<a href="#">CompanyData</a>	Object	Flags, settings and exclusions that applies to Seller

<b>inv</b>	<a href="#">Invoice</a>	List	List of Invoices to be taxed
<b>ovr</b>	<a href="#">TaxOverride</a>	List	List of overrides to be applied
<b>sovr</b>	<a href="#">SafeHarborOverride</a>	List	List of Safe Harbor Traffic Study overrides to be applied

### 2.2.1.1 [CompanyData](#) Fields – Object

Name	Long name	Type	Description
<b>bscl</b>	BusinessClass	Integer	0 = ILEC 1=CLEC (or not an ILEC)
<b>svcl</b>	ServiceClass	Integer	0 = Primary Local, 1 = Primary Long Distance
<b>fclt</b>	Facilities	Boolean	true = seller is facilities based, false = seller is not facilities based
<b>frch</b>	Franchise	Boolean	true = seller has franchise agreement, false = franchise taxes do not apply to seller
<b>reg</b>	Regulated	Boolean	true = seller is regulated, false = seller is not regulated
<b>excl</b>	<a href="#">Exclusion</a>	List	List of Countries and states/provinces/territories to be excluded
<b>idnt</b>	CompanyIdentifier	String	20 byte alpha-numeric reporting field for Company Identifier

#### 2.2.1.1.1 [Exclusion](#) Fields

Name	Long name	Type	Description
<b>ctry</b>	Country	String	3 Byte Country ISO for exclusion
<b>st</b>	State	String	State abbreviation for exclusion
<b>excl</b>	ExclusionOn	Boolean	true = enable exclusion, false = disable exclusion

### 2.2.1.2 [Invoice](#) Fields

Name	Long name	Type	Description
<b>doc</b>	DocumentCode	String	Unique document code to be applied to invoice for Commit
<b>cmmt</b>	Commit	Boolean	False = uncommitted, True = committed

<b>bill</b>	<a href="#">Location</a>	Location	BillTo location information
<b>cust</b>	CustomerType	Integer	0 = Residential, 1 = Business, 2 = Senior Citizen, 3 = Industrial
<b>lfln</b>	Lifeline	Boolean	false = customer is not a lifeline participant, true = customer is a lifeline participant
<b>date</b>	InvoiceDate	Date	Date to be used to get tax rates and logic. Historical dates supported.
<b>exms</b>	<a href="#">TaxExemption</a>	List	List of tax exemptions to be applied to invoice
<b>itms</b>	<a href="#">LineItem</a>	List	List of line items for invoice
<b>lnvm</b>	InvoiceMode	Boolean	false = line items are unrelated, true = line items are part of a single invoice
<b>dtl</b>	ReturnDetail	Boolean	If lnvm = true: false = disable tax details true = enable tax details If lnvm = false: will always return tax details
<b>summ</b>	ReturnSummary	Boolean	If lnvm = true: false = disable tax summary, true = enable tax summary If lnvm = false: summary of tax data not available
<b>opt</b>	OptionalField	List	Optional fields for reporting

#### 2.2.1.2.1 [TaxExemption](#) Fields

Name	Long name	Type	Description
<b>frc</b>	Force	Boolean	false = apply level exemption allowed logic, true = ignore level exemption allowed logic
<b>loc</b>	<a href="#">Location</a>	Object	Location for exemption to be applied
<b>tpe</b>	TaxType	Integer	Tax Type for Tax Type Exemption
<b>lvl</b>	TaxLevel	Integer	Tax Level for Tax Type Exemption
<b>cat</b>	TaxCategory	Integer	Tax Category for Tax Category Exemptions

#### 2.2.1.2.2 [Location](#) Fields

Name	Long name	Type	Description
<b>ctry</b>	Country	String	3 Byte Country ISO
<b>st</b>	State	String	Location for exemption to be applied
<b>cnty</b>	County	String	County Name

<b>city</b>	City	String	City Name or Special Tax Jurisdiction Name
<b>zip</b>	PostalCode	String	Zip or Postal Code
<b>int</b>	Incorporated	Boolean	True = address is within city limits False = address is outside city limits (unincorporated)
<b>pcd</b>	PCode	Unsigned Integer	Avalara for communications geocode identifier for location
<b>npa</b>	NpaNxx	Unsigned Integer	First 6 digits of phone number
<b>fips</b>	FipsCode	String	10 digit USA FIPs code for location
<b>geo</b>	Geocode	Boolean	alse = do not use geo lookup, true = use geo lookup
<b>addr</b>	StreetAddress	String	Street address for location (used with geo = true)

#### 2.2.1.2.3 OptionalField Fields

Name	Long name	Type	Description
<b>key</b>	Key	Integer	Numeric value 1-10 (Index)
<b>val</b>	Value	String	Alpha-numeric value up to 150 bytes

#### 2.2.1.2.4 Lineltem Request Fields

Name	Long name	Type	Description
<b>ref</b>	Reference	String	Reference to tie line item to tax details
<b>from</b>	<a href="#">Location</a>	Object	Origination or From location
<b>to</b>	<a href="#">Location</a>	Object	Destination or To location
<b>chg</b>	Charge	Double	Charge to be applied to line item
<b>line</b>	Lines	Integer	Line count to be applied to line item
<b>loc</b>	Locations	Integer	Number of locations to be applied to line item
<b>min</b>	Minutes	Double	Minutes to be applied to line item
<b>sale</b>	SaleType	Integer	0 = wholesale, 1 = retail, [SAU ONLY 2 = consumed, 3 = vendor use ]
<b>plsp</b>	PrivateLineSplit	Double	% of private line split A point (p2p) [ 0.25 = 25% point A - 75% point Z ]
<b>incl</b>	TaxInclusive	Boolean	false = not tax inclusive, true = is tax inclusive
<b>pror</b>	ProRatedPct	Double	% for pro-rated calculation of fixed taxes [ 0.5 = 50% ]



<b>brdg</b>	BridgeData	Object	Beta – Contact Avalara if you need information on this functionality
<b>tran</b>	TransactionType	Integer	Transaction Type (1 <sup>st</sup> part of the t/s pair that defines the product to be taxed)
<b>serv</b>	ServiceType	Integer	Service Type (2 <sup>nd</sup> part of the t/s pair that defines the product to be taxed)
<b>dbt</b>	Debit	Boolean	false = not a debit card transaction, true = apply debit card logic to transaction
<b>adj</b>	IsAdjustment	Boolean	false = not a credit/adjustment, true = is a credit/adjustment
<b>adjm</b>	AdjustmentMethod	Integer	0 = Default, 1 = Least favorable rate to customer, 2 = Most favorable rate to customer
<b>disc</b>	DiscountType	Integer	Refer to manual for valid discount types and descriptions
<b>opt</b>	<a href="#">OptionalField</a>	List	Optional fields for reporting

### 2.2.1.3 *TaxOverride Fields*

Name	Long name	Type	Description
<b>loc</b>	<a href="#">Location</a>	Object	Location the override applies to
<b>scp</b>	Scope	Integer	Scope for override 0 = Country, 1 = State, 2 = County, 3 = City
<b>tid</b>	TaxType	Integer	Tax Type id for override
<b>lvl</b>	TaxLevel	Integer	Tax Level for override 0 = Federal, 1 = State, 2 = County, 3 = City
<b>lvlExm</b>	LevelExemptible	Boolean	false = not level exemptible, true = is level exemptible
<b>brkt</b>	<a href="#">TaxBracket</a>	List	Tax Bracket(s)

#### 2.2.1.3.1 *TaxBracket Fields*

Name	Long name	Type	Description
<b>rate</b>	Rate	Double	Tax rate for tax bracket
<b>max</b>	MaxBase	Integer	Maximum base for tax bracket (2147483647 = unlimited)

### 2.2.1.4 *SafeHarborOverride Fields*

Name	Long name	Type	Description
------	-----------	------	-------------

<b>sh</b>	SafeHarborType	Integer	1 = Cellular, 2 = VoIP, 4 = Paging
<b>old</b>	OriginalFederalTam	Double	Original Federal TAM. 0.649 = 64.9% State = (1.0 - Federal TAM)
<b>new</b>	NewFederalTam	Double	New Federal TAM. 0.371 = 37.1% State = (1.0 - Federal TAM)

## 2.2.2 Response Fields

Name	Long name	Type	Description
<b>inv</b>	<a href="#">InvoiceResults</a>	List	List of invoices with tax results
<b>err</b>	<a href="#">Error</a>	List	Error message(s) related to request processing

### 2.2.2.1 *InvoiceResults* Fields

Name	Long name	Type	Description
<b>doc</b>	DocumentCode	String	Unique document code applied to invoice for Commit
<b>itms</b>	<a href="#">DetailedTax</a>	List	Detailed list of line item tax results
<b>summ</b>	<a href="#">SummarizedTax</a>	List	Summarized taxes for invoice
<b>err</b>	<a href="#">Error</a>	List	Error message(s) related to invoice calculation processing

#### 2.2.2.1.1 *DetailedTax* Fields

Name	Long name	Type	Description
<b>ref</b>	Reference	String	Reference from request to tie line item to tax details
<b>base</b>	BaseSaleAmount	Double	Value for tax inclusive calls that represents the charge minus billable taxes
<b>txs</b>	<a href="#">Taxes</a>	List	List of taxes for line item
<b>brdg</b>	BridgeParticipantResult	List	Beta – Contact Avalara if you need information on this functionality
<b>err</b>	<a href="#">Error</a>	List	Error message(s) related to line item calculation processing

## 2.2.2.1.1.1 Taxes Fields

Name	Long name	Type	Description
<b>bill</b>	Billable	Boolean	false = non-billable tax, true = standard billable tax
<b>cmpl</b>	Compliance	Boolean	false = non-compliance tax, true = standard compliance tax
<b>tm</b>	TaxableMeasure	Double	Taxable Measure applicable to tax (can include tax-on-tax additions)
<b>calc</b>	CalculationType	Integer	1 = Rate, 2 = Fixed, 3 = PerMinute, 4 = PerLine, 5 = SelfTaxingRate, 6 = PerBracket, 7 = FixedOnTier
<b>cat</b>	CategoryName	String	Tax Category Name
<b>cid</b>	CategoryID	Integer	Tax Category Numerical ID
<b>name</b>	TaxName	String	Tax Name
<b>exm</b>	ExemptSaleAmount	Double	Exempt Sale Amount
<b>lns</b>	Lines	Integer	Number of lines taxed
<b>pcd</b>	PCode	Unsigned Integer	PCode representing reporting tax jurisdiction
<b>rate</b>	Rate	Double	Applicable tax rate
<b>sur</b>	Surcharge	Boolean	false = not a surcharge, true = surcharge rules apply
<b>tax</b>	TaxAmount	Double	Tax Amount
<b>lvl</b>	TaxLevel	Integer	Tax Level 0 = Federal, 1 = State, 2 = County, 3 = City, 4 = Unincorporated
<b>tid</b>	TaxType	Integer	Tax Type ID

## 2.2.2.1.2 SummarizedTax Fields

Name	Long name	Type	Description
<b>max</b>	MaxBase	Integer	Maximum base for tax bracket
<b>min</b>	MinBase	Integer	Minimum base for tax bracket
<b>tchg</b>	TotalCharge	Double	Total charge amount for invoice
<b>calc</b>	CalculationType	Integer	1 = Rate, 2 = Fixed, 3 = PerMinute, 4 = PerLine, 5 = SelfTaxingRate, 6 = PerBracket, 7 = FixedOnTier
<b>cat</b>	CategoryName	String	Tax Category Name

<b>cid</b>	CategoryID	Integer	Tax Category Numerical ID
<b>name</b>	TaxName	String	Tax Name
<b>exm</b>	ExemptSaleAmount	Double	Summarized Exempt Sale Amount
<b>lns</b>	Lines	Integer	Summarized Number of lines taxed
<b>pcd</b>	PCode	Unsigned Integer	PCode representing reporting tax jurisdiction
<b>rate</b>	Rate	Double	Applicable tax rate
<b>sur</b>	Surcharge	Boolean	false = not a surcharge, true = surcharge rules apply
<b>tax</b>	TaxAmount	Double	Summarized Tax Amount
<b>lvl</b>	TaxLevel	Integer	Tax Level 0 = Federal, 1 = State, 2 = County, 3 = City, 4 = Unincorporated
<b>tid</b>	TaxType	Integer	Tax Type ID

#### 2.2.2.2 *Error Fields*

Name	Long name	Type	Description
<b>code</b>	ErrorCode	Integer	Numeric code associated with error
<b>msg</b>	ErrorMessage	String	Message associated with error

## Quick Reference Links

1	REST List of API Operations .....	1
1.1	<b>V2 Specific Operations</b> .....	1
1.1.1	V2 Jurisdiction Determination Operations .....	1
1.1.2	V2 Tax Calculation and Commit .....	1
1.2	<b>Common Operations</b> .....	1
1.2.1	Application Operations .....	1
1.2.2	Taxing Jurisdiction Operations .....	2
1.2.3	Location Operations .....	2
1.2.4	Tax Lookup Operations .....	2
1.3	V1 Specific Operations .....	3
1.3.1	V1 Calculate Taxes and Commit Operations .....	3
2	API Details .....	4
2.1	api/v2/geo/Geocode .....	4
2.1.1	Request Fields .....	4
2.1.2	Response Fields .....	4
2.1.2.1	Address Fields .....	5
2.2	api/v2/afc/CalcTaxes .....	5
2.2.1	Request Fields .....	5
2.2.1.1	CompanyData Fields – Object .....	6
2.2.1.1.1	Exclusion Fields .....	6
2.2.1.2	Invoice Fields .....	6
2.2.1.2.1	TaxExemption Fields .....	7
2.2.1.2.2	Location Fields .....	7
2.2.1.2.3	OptionalField Fields .....	8
2.2.1.2.4	LineItem Request Fields .....	8
2.2.1.3	TaxOverride Fields .....	9
2.2.1.3.1	TaxBracket Fields .....	9
2.2.1.4	SafeHarborOverride Fields .....	9
2.2.2	Response Fields .....	10
2.2.2.1	InvoiceResults Fields .....	10
2.2.2.1.1	DetailedTax Fields .....	10
2.2.2.1.1.1	Taxes Fields .....	11
2.2.2.1.2	SummarizedTax Fields .....	11

## Quick Reference Links

2.2.2.2	Error Fields .....	12
---------	--------------------	----