# AdSpirit OpenRTB API Implementation

AdSpirit currently implemented the OpenRTB 2.4 specification as described under
http://www.iab.com/wp-content/uploads/2016/03/OpenRTB-API-Specification-Version-2-4-
FINAL.pdf . AdSpirit supports OpenRTB for both ways, buyside and sellside / requests and responses.
Also AdSpirit supports OpenRTB Dynamic Native Ads API V1.1 (http://www.iab.com/wp-
content/uploads/2016/03/OpenRTB-Native-Ads-Specification-1-1_2016.pdf) in both directions.

## 1.    Used extensions

OpenRTB allows adding new properties via the "ext" object. AdSpirit uses this object to add some in-
formation needed by AdSpirit and/or the bidder/seller. These extensions are:

- DEPRECTED. AdSpirit will add a property bidrequest → ext → ssl to the bid-request. The value
  of this property will either be 0 (no ssl is used) or 1 (creative will be shown on a ssl website). If
  the value is set to 1 the bidder may only answer with creatives that can be served over ssl. This
  means, all URLs within the creative itself and in additional scripts/iframes **must** use the https
  protocol instead of http.
  If you send bid requests to AdSpirit AdServer this property is **required**.
  Note: As from OpenRTB 2.2 on AdSpirit will use bidrequest → imp → secure instead.

- DEPRECTED. AdSpirit will add bidresponse → seatbid → bid → ext → landingpage to the bid-
  response. The landingpage property gives the URL of the product/company which is shown by
  the creative. It is used for advertiser blacklisting and therefore is **recommended** being send
  with each response. If the property is not present, responses may be blocked.
  Note: From 2.2 on AdSpirit will no longer send this property. Please refer to bidresponse →
  seatbid → bid → adomain instead.

- AdSpirit will add bidresponse → seatbid → bid → ext → advertiser to the bid-response. The ad-
  vertiser property gives the Brand-Name of the product/company which is shown by the crea-
  tive. It is used for advertiser blacklisting and therefore is **recommended** being send with each
  response. If the property is not present, responses may be blocked.

- AdSpirit will add bidresponse → seatbid → bid → ext → defaultpixel to the bid-response. The
  defaultpixel property can be used to transmit additional pixels (HTML markup) from the adver-
  tiser to the adserver to be served with the creative – <u>even if the advertiser does not win the
  auction the pixels shall be shown</u>. It is **recommended** that exchanges/publishers allow adver-
  tisers who use AdSpirit as their bidding adserver to transmit additional codes via this property.

Remember: If bidrequest → ext → ssl is set to 1, all pixels in this code **must** use https instead of http.

## 2. Limitations

AdSpirit supports all required OpenRTB objects and properties. Nevertheless AdSpirit will handle some things different as described in the OpenRTB specs:

- If the endpoint URL used by the publisher is a website-endpoint (uses &wsid=X as parameter instead of &pid=X) AdSpirit **requires** the properties bidrequest → imp → banner → w and bidrequest → imp → banner → h to be present.

- AdSpirit **requires** a publisher to send the creative markup via bidresponse → seatbid → bid → adm. It is not possible to send bid-responses without this property (nurl will **NOT** be used to transmit html-markup).
- If you want AdSpirit to send markup via nurl property instead of "adm", you **must** to add the parameter &usenurl=1 to the entpoint-URL (see Endpoint URL configuration). Otherwise AdSpirit will send all markup via "adm" property and pass a blank url (1x1 Pixel without any functionality) as value of "nurl".

  *This is only valid for the cases in which AdSpirit answers to bid requests – if AdSpirit is sending the bid request, it will always require to have "adm" present (see above).*

- AdSpirit **requires** the property bidresponse → seatbid → bid → nurl (if present) to be a 1x1 Pixel URL (no HTML markup allowed). The property itself is optional. If this URL is present and the bid is won, AdSpirit will integrate this URL into the markup output as a 1x1 <img …>. AdSpirit will **NOT** handle this URL as a Server2Server win notification URL and will **NOT** try to get markup via this url.

- AdSpirit does **not** support the macros ${AUCTION_CURRENCY} and ${AUCTION_PRICE:X} where X is the used encryption algorithm. If you like to get pricing information please only use ${AUCTION_PRICE} and set the encryption algorithm in the AdSpirit frontend.

## 3. Price encryption

AdSpirit prefers to use a SHA1 encrypted price transmission with a 32 byte encryption key and a 32 byte integrity key. If other encryption methods should be used, this can be set in the AdSpirit frontend.

## 4. Response times

AdSpirit **requires** an answer bid within 100ms.

## 5. Pre-filtering & QPS

AdSpirit can pre-filter bid-requests before send to the advertiser's bidder. These filters include ad-sizes, geo, operating system, language and others as well as frequency-capping(s). Pre-filtering can be set via the AdSpirit frontend.

AdSpirit can also control the maximum queries per second (QPS) send from AdSpirit to the advertiser's bidder. The QPS are set on campaign and creative level. AdSpirit can also set minimum answer-rates and minimum win-rates as well as maximum error-rates. If the advertisers results are below/above these rates, the current QPS will be decreased.

## 6.   Additions to the IAB content categories

AdSpirit uses the IAB content categories (see IAB.net QAG) to transmit the categories for the overall site, subsection and/or current page (if possible). Nevertheless AdSpirit has added some own categories to the list. These categories will be named starting with "AS".

## 7.   Endpoint-URL configuration

AdSpirit will provide an endpoint URL in order to connect to the AdServer. This URL usually look like

> http://clientname.adspirit.de/rtb/getbid.php?...

The url can use the following parameters. Most parameters are optional:

| Parameter | Description |
|---|---|
| &wsid= (sometimes &pid= or &pnm= are used) | Integer. AdSpirits internal ID for this connection |
| &rtbprovider= or &rtb= | String. Description of the protocol used. For OpenRTB use "openrtb" as value |
| &useprenca= or &upa= | String. Description of which price encoding macro AdSpirit shall output with the code. (Value "&upa=-x-" can be used as a synonym for &useprenca=${AUCTION_PRICE} |
| &useprencmode= or &upm= | Char. Description of which price encryption mode is used by AdSpirit. |
| &dataid= | Integer. AdSpirits internal ID for the user-syncing database. |
| &asm= | Integer. AdSpirits internal ID for this client. This parameter is mandatory if you bidder is not able to send HTTP Host-Header. |
| &outputfilter= or &opf= | String. Description if the output generated by AdSpirit should be transformed in a certain way. |
| &oneline=1 | Integer. If present, indicates that the output code shall be in one single code-line. |
| &ignoremime=1 or &igm=1 | Integer. If present, indicates that AdSpirit shall ignore the mime-header send via OpenRTB blocklist. |
| &ignorebytpe=1 or | Integer. If present, indicates that AdSpirit shall ignore the |

| | |
|---|---|
| &igb=1 | btype-header send via OpenRTB blocklist. |
| &admnoenc=1 | Integer. If present, indicates that the "adm" output will NOT be urlencoded. |
| &usenurl=1 | Integer. If present, AdSpirit will send bid responses with a fully valid and functional "nurl" property. The URL provided with this property must then be used in order to receive the html-markup. If present, AdSpirit will not send the "adm" property. |
| &setseatid | String. If present, AdSpirit will set this value as "seat" object in bid response. |
| &noext=1 | Integer. If present, AdSpirit will not send "ext" objects in bid response. |
| &nonurl=1 or &nnu=1 | Integer. If present, AdSpirit will not send "nurl" property in bid response. |
| &nocid=1 | Integer. If present, AdSpirit will not send "cid" properties in bid response. |
| &nocrid=1 | Integer. If present, AdSpirit will not send crid |
| &nopixel=1 | Integer. If present, AdSpirit will not send ext -> defaultpixel. |
| &allowzerobid=1 | Integer. If present, AdSpirit will respond with HTML-codes ("adm") even in case the bid is 0.00 (Zero). |
| &add_advname=1 | Integer. If present, AdSpirit will add a property ext -> advname with the Advertisername in it. |
| &add_agencyname=1 | Integer. If present, AdSpirit will add a property ext -> agencyname with the Agencyname in it. |
| &add_avn=1 | Integer. If present, AdSpirit will add a property ext -> avn with the Advertisername in it. |
| &add_agn=1 | Integer. If present, AdSpirit will add a property ext -> agn with the Agencyname in it. |

## 8. Native Ads via OpenRTB

AdSpirit fully supports OpenRTB extension Native Ads V1.1 (as described in http://www.iab.com/wp-content/uploads/2016/03/OpenRTB-Native-Ads-Specification-1-1_2016.pdf) in both directions (buyer/seller). As the design of the native ads assetts are fully up to the seller, please make sure that both match their settings before using Native Ads.