Signature process

- Combine message parameter All parameter must be by ASCII sequential order, except sign and body. Take the “ parameter number 1 = parameter value 1, parameter number 2 = parameter value 2” to connect all parameters.
- Combine mwMacKey Sign in KEY will place to the last parameter with agreed key “KEY=xxxxx”. Before downloadKey，we do not have mwMacKey，so we use assigned key when invoke downloadKey. Before signin，we do not have mwMacKey，so we use mwTmk when invoke signin.
- Signature Sign in value calculate per MD5-32 encryption and then converted to HEX in capital letter, named Sign-in value, as sign parameter.
- PS when parameter value is null or blank, the parameter is not required to stated

example


```
{
   "action" : "inquiry",
   "deviceNo" : "POS01",
   "shopNo" : "CN123456",
   "brand" : "663",
   "body" :
"ewogICAgICAgICAidHJhY2VObyI6ICI5OTAwMDAwOTEwMDAxMDEwMTczMjEyMyIsCiAgICAgICAgICJvcmlnaW5hbFRyYWNlTm8iOiAiOTkwMDAwMDkxMDAwMTAxMDE3MzIxMjQiCiAgICAgfQ==",
   "mwVersion" : "20161010",
   "ptlVersion" : "20161010",
   "posVersion" : "20161010",
   "timestamp" : "1483372334",
   "sign" : "F38545F4D74B5C10A9EBBC053ED9D1CF"
}
```


mwMacKey


```
94365019BBF9CEEAB0DF658E67754A70
```


Combine message parameter


```
action=inquiry&body=ewogICAgICAgICAidHJhY2VObyI6ICI5OTAwMDAwOTEwMDAxMDEwMTczMjEyMyIsCiAgICAgICAgICJvcmlnaW5hbFRyYWNlTm8iOiAiOTkwMDAwMDkxMDAwMTAxMDE3MzIxMjQiCiAgICAgfQ==&brand=663&de
```

viceNo=POS01&mwVersion=20161010&posVersion=20161010&ptlVersion=20161010&shopNo=CN123456&tim
estamp=1483372334

Combine KEY

action=inquiry&body=ewogICAgICAgICAidHJhY2VObyI6ICI5OTAwMDAwOTEwMDAxMDEwMTczMjEyMyIsCiAgICAgI
CAgICJvcmlnaW5hbFRyYWNlTm8iOiAiOTkwMDAwMDkxMDAwMTAxMDE3MzIxMjQiCiAgICAgfQ==&brand=663&de
viceNo=POS01&mwVersion=20161010&posVersion=20161010&ptlVersion=20161010&shopNo=CN123456&tim
estamp=1483372334&KEY=94365019BBF9CEEAB0DF658E67754A70

Signature F38545F4D74B5C10A9EBBC053ED9D1CF

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