SIM7100_SIM7500_SIM7600 Series_GPIO_Application Note

LTE Module
GENERAL NOTES

SIMCOM OFFERS THIS INFORMATION AS A SERVICE TO ITS CUSTOMERS, TO SUPPORT APPLICATION AND ENGINEERING EFFORTS THAT USE THE PRODUCTS DESIGNED BY SIMCOM. THE INFORMATION PROVIDED IS BASED UPON REQUIREMENTS SPECIFICALLY PROVIDED TO SIMCOM BY THE CUSTOMERS. SIMCOM HAS NOT UNDERTAKEN ANY INDEPENDENT SEARCH FOR ADDITIONAL RELEVANT INFORMATION, INCLUDING ANY INFORMATION THAT MAY BE IN THE CUSTOMER’S POSSESSION. FURTHERMORE, SYSTEM VALIDATION OF THIS PRODUCT DESIGNED BY SIMCOM WITHIN A LARGER ELECTRONIC SYSTEM REMAINS THE RESPONSIBILITY OF THE CUSTOMER OR THE CUSTOMER’S SYSTEM INTEGRATOR. ALL SPECIFICATIONS SUPPLIED HEREIN ARE SUBJECT TO CHANGE.

COPYRIGHT

THIS DOCUMENT CONTAINS PROPRIETARY TECHNICAL INFORMATION WHICH IS THE PROPERTY OF SIMCOM WIRELESS SOLUTIONS LIMITED. COPYING, TO OTHERS AND USING THIS DOCUMENT, ARE FORBIDDEN WITHOUT EXPRESS AUTHORITY BY SIMCOM. OFFENDERS ARE LIABLE TO THE PAYMENT OF INDEMNIFICATIONS. ALL RIGHTS RESERVED BY SIMCOM IN THE PROPRIETARY TECHNICAL INFORMATION, INCLUDING BUT NOT LIMITED TO REGISTRATION GRANTING OF A PATENT, A UTILITY MODEL OR DESIGN. ALL SPECIFICATIONS SUPPLIED HEREIN ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.

SIMCom Wireless Solutions Limited
Building B, SIM Technology Building, No.633 Jinzhong Road, Changning District, Shanghai P.R. China
Tel: +86 21 31575100
Email: simcom@simcom.com

For more information, please visit:
https://www.simcom.com/download/list-863-en.html

For technical support, or to report documentation errors, please visit:
https://www.simcom.com/ask/ or email to: support@simcom.com

Copyright © 2020 SIMCom Wireless Solutions Limited All Rights Reserved.
About Document

Version History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Owner</th>
<th>What is new</th>
</tr>
</thead>
<tbody>
<tr>
<td>V2.00</td>
<td>2020.8.6</td>
<td>HZC</td>
<td>Update the format</td>
</tr>
</tbody>
</table>
Contents

About Document .................................................................................................................................................. 3
  Version History ................................................................................................................................................. 3

Contents ............................................................................................................................................................. 4

1. Document Overview ....................................................................................................................................... 5

2. GPIO Managed ................................................................................................................................................. 6
  2.1 GPIO supplied by Module .......................................................................................................................... 6
  2.2 GPIO AT Operations .................................................................................................................................... 6
1. Document Overview

This document describes how to use GPIO supplied by SIMCOM SIM7100 SIM7500 SIM7600 modules. This document can be used for SIMCom SIM7100 SIM7500 SIM7600 modules.

This document will depict the usage of GPIO functions supplied by SIMCom SIM7100 SIM7500 SIM7600 module. User can get useful information about the SIMCom SIM7100 SIM7500 SIM7600 Module’s GPIO function quickly through this document.

Each GPIO can be used as:
- General Purpose Input/Output pin.
- Interrupt pin
- Special function pin.
2. GPIO Managed

2.1 GPIO supplied by Module

Currently the following pins can be used as a function on SIM7100:

<table>
<thead>
<tr>
<th>PIN name</th>
<th>GPIO function</th>
<th>Function1</th>
<th>Function2</th>
<th>Default Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPIO_40</td>
<td>GPIO</td>
<td>PCM_MCLK</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_41</td>
<td>GPIO</td>
<td>WAKEUP_HOST</td>
<td>SYS_APP</td>
<td>2</td>
</tr>
<tr>
<td>GPIO_42</td>
<td>GPIO</td>
<td>USIM_DET</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_43</td>
<td>GPIO</td>
<td>WAKEUP_ME</td>
<td>SYS_APP</td>
<td>2</td>
</tr>
<tr>
<td>GPIO_44</td>
<td>GPIO</td>
<td>SD_DET</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_40</td>
<td>GPIO</td>
<td>PCM_MCLK</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_41</td>
<td>GPIO</td>
<td>WAKEUP_HOST</td>
<td>SYS_APP</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 1 GPIO supplied by SIM7100

Currently the following pins can be used as a function on SIM7500/SIM7600:

<table>
<thead>
<tr>
<th>PIN name</th>
<th>GPIO function</th>
<th>Function1</th>
<th>Function2</th>
<th>Default Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPIO_40</td>
<td>GPIO</td>
<td>STATUS</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>GPIO_41</td>
<td>GPIO</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_43</td>
<td>GPIO</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>GPIO_44</td>
<td>GPIO</td>
<td>SD_DET</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2 GPIO supplied by SIM7500/SIM7600

2.2 GPIO AT Operations

Currently the following Functions can be used by special GPIO on SIM7X00 module,
1) AT+CGFUNC is used to set GPIO function.
Example 1:

- **AT+CGFUNC=40, 1** // set gpio-40 to function 1
- **AT+CGFUNC=41, 2** // set gpio-41 to function 2.

2) **AT+ CGDRT** is used to configure GPIO pin as output/input, before must be set the GPIO to GPIO function.

3) **AT+ CGSETV** is used to set GPIO HIGH/LOW, before must be set the GPIO to GPIO function.

4) **AT+ CGGETV** is used to get GPIO HIGH/LOW, before must be set the GPIO to GPIO function.

**AT+CGISR** set interrupt trigger condition and start this interruption. When the interruption happened, the following URC will be sent to host.