# **GPIO** Control User Guide

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Prepared by

Approved by

| Model Name             | SD-5210  | Re     | port Date | 2021/03/15 |  |
|------------------------|----------|--------|-----------|------------|--|
| <b>GPIO Pin Define</b> | e        |        |           |            |  |
| DB 15 Male pin de      | finition |        |           |            |  |
|                        | Pin      | Signal | Pin       | Signal     |  |
|                        | 1        | DO_1   | 2         | DO_2       |  |
|                        | 3        | DO_3   | 4         | DO_4       |  |
|                        | 5        | GND    | 6         | GND        |  |
|                        | 7        | DI_1   | 8         | DI_2       |  |
|                        | 9        | DI_3   | 10        | DI_4       |  |
|                        | 11       | DI_5   | 12        | DI_6       |  |
|                        | 13       | DI_7   | 14        | DI_8       |  |
|                        | 15       | GND    |           |            |  |

# **Register Definitions**

## GPO Data Register – 0x31

| BIT | Name      | R/W | DESCRIPTION        |
|-----|-----------|-----|--------------------|
| 7   | GPIO8_OUT | R/W | GPIO8 output data. |
| 6   | GPIO7_OUT | R/W | GPIO7 output data. |
| 5   | GPIO6_OUT | R/W | GPIO6 output data. |
| 4   | GPIO5_OUT | R/W | GPIO5 output data  |
| 3   | GPIO4_OUT | R/W | GPIO4 output data. |
| 2   | GPIO3_OUT | R/W | GPIO3 output data. |
| 1   | GPIO2_OUT | R/W | GPIO2 output data. |
| 0   | GPIO1_OUT | R/W | GPIO1 output data. |

# GPI Status Register – 0x30

| BIT | Name     | R/W | DESCRIPTION       |
|-----|----------|-----|-------------------|
| 7   |          |     |                   |
| 6   |          |     |                   |
| 5   |          | .1  |                   |
| 4   | 80       |     |                   |
| 3   | GPIO4_IN | R   | GPIO4 pin status. |
| 2   | GPIO3_IN | R   | GPIO3 pin status. |
| 1   | GPIO2_IN | R   | GPIO2 pin status. |
| 0   | GPIO1_IN | R   | GPIO1 pin status. |

# **Pseudo Code**

```
Example 1. Read from GPI
SMB_Address:
                              0xF040
                                                          // SMB base address
Device_Address:
                              0x94
                                                          // Device register
GPI_Register:
                              0x30
                                                          // GPI data register
  ######### Read GPI Status #########
  IOWriteByte(SMB_Address, 0xFF)
  Delay(10ms)
                                                            // delay 10ms
  IOWriteByte(SMB_Address + 0x04, Device_Address +1)
  Delay(10ms)
  IOWriteByte(SMB_Address + 0x03, GPI_Register)
                                                            // Read GPI port status
  Delay(10ms)
  IOWriteByte(SMB_Address + 0x02, 0x48)
  Delay(10ms)
  DATA = IOReadByte(SMB_Address + 0x05)
```

| ample 2. Write to GPO  |                              |                              |
|--|------------------------------|------------------------------|
| SMB_Address:   | 0xF040                       | // SMB base address          |
| Device_Address:  | 0x94                         | // Device register           |
| GPO_Register:  | 0x31                         | // GPO data register         |
| ######################################   | SDO ##########               |                              |
| ######### Write to C<br>DATA = 0x0F  | 320 ##########               | // Sat Do at Do a all bird   |
| IOWriteByte(SMB_Addr   | eace OvEE\                   | // Set DO_1 to DO_4 all high |
|  | ess, oxer)                   | // delay 10ms                |
| Delay(10ms)  | ress + 0x04, Device_Address) | // delay forms               |
| The state of the s | ess + 0x04, Device_Address)  |                              |
| Delay(10ms)  | ress + 0x03, GPO_Register)   |                              |
| Delay(10ms)  | ess + 0x05, GPO_Register)    |                              |
| IOWriteByte(SMB_Addr   | PACS + OVOE DATA)            |                              |
| Delay(10ms)  | ess + 0x05, DAIA)            |                              |
|  |                              |                              |
| IOWriteByte(SMB_Addr   | ress + 0x02, 0x48)           |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |
|  |                              |                              |