Thank you for your valued patronage and best wished for your continued success in business. It turned out that there are some restrictions on Group-A priority control of the 12-bit A/D converter (144/120/112/100pin packages). We would like to inform you of the restrictions and countermeasures.

**Usage Notes**

(1) When operating under group-A priority control in the group-scan mode, specify the frequency ratio between the peripheral module clock (PCLKB) and A/D conversion clock, ADCLK (=PCLKD) as indicated below.
   a) PCLKB = PCLKD (Set the same value to the SCKCR. PCKB [3:0] and SCKCR. PCKD[3:0])
   b) PCLKB/2 = PCLKD (Set a value which +1 is added to the one set to the SCKCR. PCKB [3:0] to the SCKCR. PCKD[3:0])

(2) When operating under the setting other than those mentioned in (1), write 1 to the PGSC bit of the newly-released ADGSPMR register before use.
   Specifications of the ADGSPMR register are shown in the next page.
A/D Group Scan Priority Control Register (ADGSPMR)

Address S12AD: ADGSPMR 0008 90FCh

<table>
<thead>
<tr>
<th>Value after reset</th>
<th>b15</th>
<th>b14</th>
<th>b13</th>
<th>b12</th>
<th>b11</th>
<th>b10</th>
<th>b9</th>
<th>b8</th>
<th>b7</th>
<th>b6</th>
<th>b5</th>
<th>b4</th>
<th>b3</th>
<th>b2</th>
<th>b1</th>
<th>b0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit</th>
<th>Symbol</th>
<th>Bit name</th>
<th>Description</th>
<th>R/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>b14-b0</td>
<td>—</td>
<td>Reserved</td>
<td>These bits are read as 0. The write value should be 0.</td>
<td>R/W</td>
</tr>
</tbody>
</table>
| b15   | PGSC   | Clock frequency setting bit when operating under group-A priority control | 0: When operating under group-A priority control, frequency ratio between PCLK and ADCLK is 2:1 or 1:1.  
1: When operating under group-A priority control, frequency ratio between PCLK and ADCLK is 4:1 or over. | R/W |

ADGSPMR should always be accessed in 16-bits.

Adhere to the above-mentioned restriction; otherwise the following errors may occur.

(1) Under group-A priority control, if a group-A trigger is input during A/D conversion for group B, A/D conversion for group B is discontinued and A/D conversion for group A proceeds. In this case, on the completion of the A/D conversion, S12GBADI interrupt request may be generated instead of generating S12ADI interrupt request.

(2) While double-trigger mode is selected in group-scan mode, if a group-A trigger is input during A/D conversion for group B under group-A priority control, A/D conversion for group B is discontinued and A/D conversion for group A proceeds. In this case, on the completion of the A/D conversion, S12GBADI interrupt request may be generated and a wrong data register as a storage destination may be selected, instead of generating S12ADI interrupt request.