

### 'Hidden' RAM - Part 2

Following in the footsteps of TN-0145 "Finding 'Hidden' RAM", this note includes the corresponding registers that may be used to "expand" RAM for the H8/320 series. While some 20 registers are possibly available for the H8/325, 324, 323 and 322, the H8/329 series has slightly fewer due to functional differences in the ports and one less SCI channel.

The following H8/32x series registers can be used as general purpose RAM.

#### H8/325 Series:

|            |          |
|------------|----------|
| P1DR       | H'FFB2   |
| P2DR       | H'FFB3   |
| P3DR       | H'FFB6   |
| P4DR       | H'FFB7   |
| P7DR       | H'FFBE   |
|            |          |
| FRC        | H'FF92,3 |
| OCRA       | H'FF94,5 |
| OCRB       | H'FF96,7 |
|            |          |
| TMR0_TCORA | H'FFCA   |
| TMR0_TCORB | H'FFCB   |
| TMR0_TCNT  | H'FFCC   |
|            |          |
| TMR1_TCORA | H'FFD2   |
| TMR1_TCORB | H'FFD3   |
| TMR1_TCNT  | H'FFD4   |
|            |          |
| SCI0_TDR   | H'FFDB   |
| SCI0_BRR   | H'FFD9   |
| SCI1_TDR   | H'FFE3   |
| SCI1_BRR   | H'FFE1   |

#### H8/329 Series:

|   |          |                                    |
|---|----------|------------------------------------|
| Same as H8/325, with the following additions (deletions). |          |                                    |
|   |          |                                    |
| (P4DR)  | H'FFB7   | This register has bit 6 read only. |
| P6DR  | H'FFBB   |                                    |
| (P7DR)  | H'FFBE   | This register is read only.        |
| (OCRB)  | H'FF96,7 |                                    |
| (SCI1_TDR)  | H'FFE3   |                                    |
| (SCI1_BRR)  | H'FFE1   |                                    |

Always keep in mind that if you are using a peripheral to perform its designated function, then you may not be allowed to use these registers for general purpose RAM. If the I/O ports are being used for inputs, for example, then writing to the data registers may affect the I/O pins by turning on and off the MOS pull-ups.

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