

## 2.2.F Atmega-Peripherie/Timer – Ergänzungen und Bilder

### 2.2.F.1 Prinzipaufbau des Timers 0

| Name  | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      | Adresse |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| TIMSK | Bit   | OCIE2  | TOIE2  | TICIE1 | OCIE1A | OCIE1B | TOIE1  | –      | TOIE0  | SFR 57  |
|       | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|       | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|       | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TIFR  | Bit   | OCF2   | TOV2   | ICF1   | OCF1A  | OCF1B  | TOV1   | –      | TOV0   | SFR 56  |
|       | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|       | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|       | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TCCR0 | Bit   | –      | –      | –      | –      | –      | CS02   | CS01   | CS00   | SFR 51  |
|       | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|       | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|       | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TCNT0 | Bit   | TCNT07 | TCNT06 | TCNT05 | TCNT04 | TCNT03 | TCNT02 | TCNT01 | TCNT00 | SFR 50  |
|       | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|       | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|       | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |

Tabelle 1: Register für Timer 0 (ATmega 8, 16, 32)

| Name   | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      | Adresse |
|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| TIMSK0 | Bit   | –      | –      | –      | –      | –      | OCIE0B | OCIE0A | TOIE0  | RAM 110 |
|        | R/W   | R      | R      | R      | R      | R      | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TIFR0  | Bit   | –      | –      | –      | –      | –      | OCF0B  | OCF0A  | TOV0   | SFR 21  |
|        | R/W   | R      | R      | R      | R      | R      | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TCCR0A | Bit   | COM0A1 | COM0A0 | COM0B1 | COM0B0 | –      | –      | WGM01  | WGM00  | SFR 36  |
|        | R/W   | R/W    | R/W    | R/W    | R/W    | R      | R      | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TCCR0B | Bit   | FOC0A  | FOC0B  | –      | –      | WGM02  | CS02   | CS01   | CS00   | SFR 37  |
|        | R/W   | W      | W      | R      | R      | R/W    | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| TCNT0  | Bit   | TCNT07 | TCNT06 | TCNT05 | TCNT04 | TCNT03 | TCNT02 | TCNT01 | TCNT00 | SFR 38  |
|        | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| OCR0A  | Bit   | OCR0A7 | OCR0A6 | OCR0A5 | OCR0A4 | OCR0A3 | OCR0A2 | OCR0A1 | OCR0A0 | SFR 39  |
|        | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |
| OCR0B  | Bit   | OCR0B7 | OCR0B6 | OCR0B5 | OCR0B4 | OCR0B3 | OCR0B2 | OCR0B1 | OCR0B0 | SFR 40  |
|        | R/W   | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    | R/W    |         |
|        | Init. | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |         |
|        | Bit   | 7      | 6      | 5      | 4      | 3      | 2      | 1      | 0      |         |

Tabelle 2: Register für Timer 0 (ATmega164, 324, 644, 1284p)

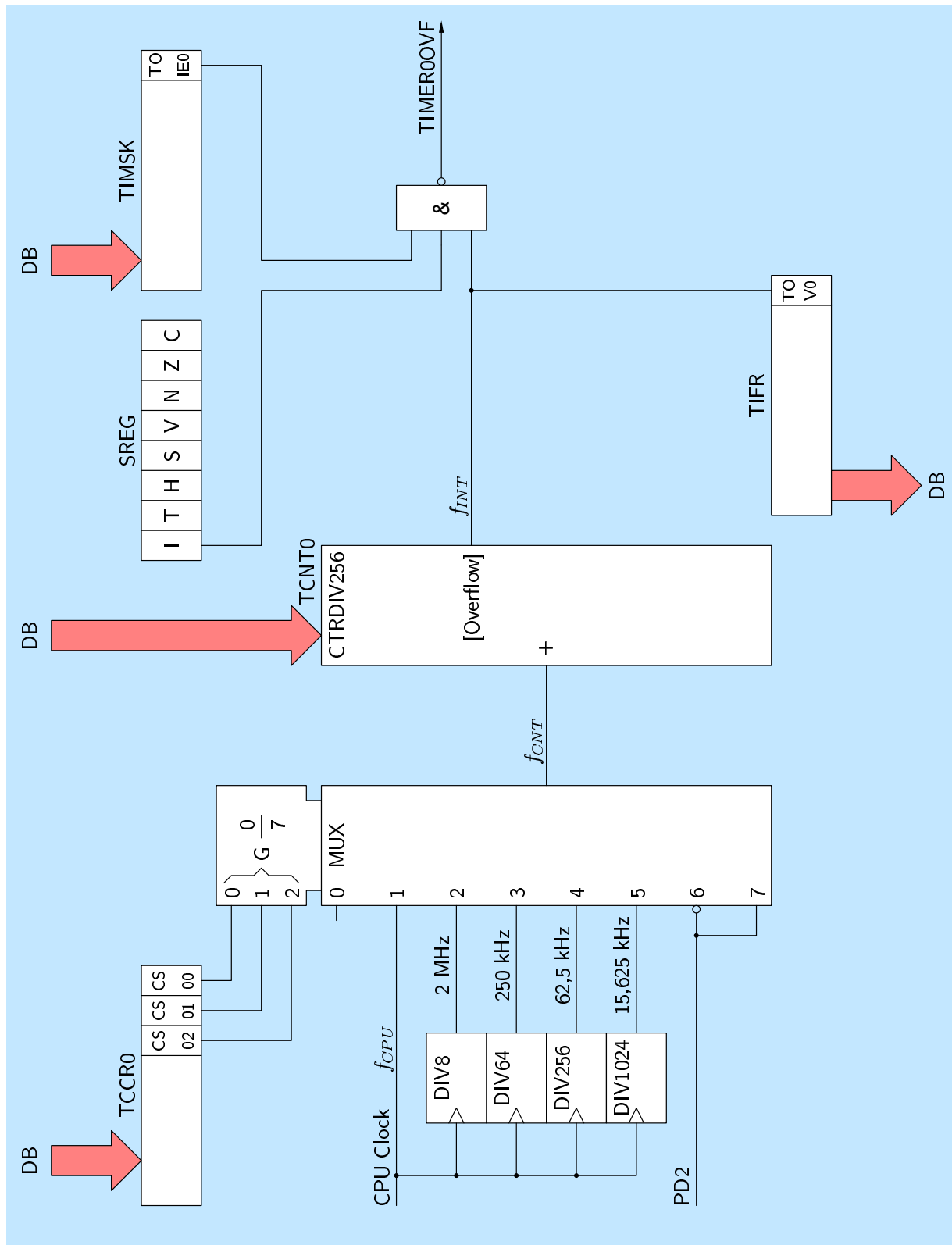


Abbildung 1: Prinzipaufbau des Timers 0