|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Resource Utilization Table** | | | | | |
|  | **Matlab Function** | **Madgwick\_qDot** | **Madgwick\_normalize** | **Madgwick\_correction** | **Madgwick\_update** |
| **Resource Sharing = 1** | **Multipliers** | 12 | 12 | 124 | 4 |
| **Adders** | 9 | 2 | 133 | 8 |
| **Registers** | 4 | 4 | 4 | 4 |
| **RAMs** | 0 | 0 | 0 | 0 |
| **Multiplexers** | 0 | 18 | 14 | 0 |
| **Output Latency** | 1 cycle | 1 cycle | 1 cycle | 1 cycle |
| **Resource Sharing = 4** | **Multipliers** | 4 | 7 | 45 | 4 |
| **Adders** | 14 | 6 | 167 | 8 |
| **Registers** | 36 | 40 | 605 | 4 |
| **RAMs** | 0 | 0 | 0 | 0 |
| **Multiplexers** | 20 | 32 | 208 | 0 |
| **Output Latency** | 2 cycles | 3 cycles | 9 cycles | 1 cycle |