**Table 1.** Comparative characteristics of processors including radiation resistance

| Produser | Processor | Fault tolerance | Scheme level of fault tolerance | System level of fault tolerance (liveness property[2]) | Resistance to heavy ions | Clock frequency, MHz | Floating point arithmetic | Consumption, W | Performance in DS2.1 test, MIPS DMIPS | Specific performance, MIPS/W | Architecture | Dose, mrd | SEL LETth, MeV·cm2/mg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BAE | RAD750 | + | + | | + | 132 | + | 5 | 266 | 53 | PowerPC 750 | 1 | 120 |
| Aeroflex | UT699 | + | | | + | 66 | + | 5,5 | 75 | 14 | SPARC V8 | 0,3 | 108 |
| Intel | 486DX | + | | | | 33 | + | 4,5 | 25 | 6 | | | |
| AMD | Am29200 | + | | | | 16 | | 1,1 | 7 | 6 | | | |
| Freescale | MPC555 | + | | | | 40 | + | 1 | 62,59 | 63 | | | |
| Motorola | MC68349 | + | | | | 25 | | 0,96 | 8 | 8 | | | |
| Freescale | MCF5272 | + | | | | 66 | | 0,9 | 63 | 70 | | | |
| ARM | ARM7500FE | + | | | | 40 | | 0,8 | 36,4 | 46 | | | |
| ARM | ARM7500 | + | | | | 33 | | 0,68 | 30 | 44 | | | |
| ARM | ARM7TDMI | + | | | | 20 | | 0,04 | 14 | 389 | | | |
| **MultiClet** | **MCp042L1** | **+** | **+** | **+** | **+** | **150** | **+** | **1,5** | **600** | **400** | **multicellular** | **>0,5[4]** | **>93[4,5]** |
| Atmel | AT697F | + | | | | | | 0,7 | 82 | 117 | SPARC V8 Leon 2 | 0,3[3] | 95 |
| eASIC Corp | Leon4 | + | | | | | | 5 | 340 | 68 | SPARC V8 | 0,3 | |
| Maxwell | 750FX | + | | | | | | 12 | 600 | 50 | PowerPC 750 | 0,1 | 92 |

The source of data comparison: A. Popovich. Protsessor RAD750 v sistemah s ogranichennim byudzhetom mosh'nosti (Processor RAD750 in systems with limited capacity sources)//Komponenti i technologii (Components and Technologies)- 2010 - № 8 - pages 122-123.

[1] Scheme level of fault tolerance – in case of one majorized blocks failure, system is no more fault tolerant , but continues to perform

[2] System level of fault tolerance – when from 1 to 3 cells get out of order, system with its full functionality continue to perform , thus with a gradual performance degradation

[3] Source: AT697F Rad-Hard 32 bit SPARC V8 ProcessorComplete/http://www.atmel.com/Images/doc7703.pdf

[4] Data are based on test results for special triple logic libraries, which will be included in the processor. Sign ">" (more than) is the expected parameter increase due to liveness property

[5] The maximum value at which the tests were conducted, thyristor effect attainment failed.