**RK3399pro Test to Evaluate Performance of CPU, GPU, FPS, Memory and Temperature**

**Benchmark Performance Test Score:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Benchmark Software** | **Geekbench 5** | **3DMark** | **AnTuTu** | **PassMark** |
| **CPU Score** | Single-Core 264 Multi-Core 706 | 1549 | 44590 | 853 |
| **GPU Score** | 523 | 1011 | 22909 | 2D Test: 12319  3D Test: 10445 |
| **Memory Score** |  |  | 24172 | 5919 |
| **UX Score** |  |  | 45871 |  |
| **Overall Score** |  | 1096 | 137542 |  |
| **GPU TEST 1 (FPS)** |  | 6.4 FPS |  | Simple Test: 22 FPS  Complex Test: 39.3 FPS |
| **GPU TEST 2 (FPS)** |  | 3.3 FPS |  | Open GL ES using Unity  8 FPS |
| **CPU TEST 1 (FPS)** |  | 30.3 FPS |  |  |
| **CPU TEST 2 (FPS)** |  | 16.6 FPS |  |  |
| **CPU TEST 3 (FPS)** |  | 8.3 FPS |  |  |
| **Overall Frame Rate** |  | 2 FPS to 31 FPS |  |  |

**CPU, GPU, FPS and Memory utilization, and temperature**

**(AiSdkDemo): Connecting two Cameras**

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| --- | --- | --- | --- | --- | --- | --- |
| **CPU Usage** | **Memory Usage (RAM)** | **GPU Usage** | **GPU Memory** | **APP FPS** | **Initial Temperature** | **Running APP Temperature** |
| APP: 54 % Total CPU: 73% | 237 MB | Non Fragment: 19%  Fragment: 59 % | Read: 82 MB  Write: 85 MB | 4 (FPS) | -SoC: 50.6 C -GPU: 51.1 C -CPU: 50.0 C | -SoC: 72.4 C -GPU: 69.3 C -CPU: 73 C |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **CPU Usage** | **Memory Usage (RAM)** | **Available**  **RAM** | **GPU Shader**  **Counter** | **GPU Usage** | **APP FPS** | **Initial Temperature** | **Running APP Temperature** |
| APP: 21 % Total CPU: 32%  Core 1: 31%  Core 2: 9%  Core 3: 14%  Core 4: 6%  Core 5: 47%  Core 1: 51% | 372 MB | 2842 MB | Pixel Throughput:  4 Cycles | Non Fragment  27%  Fragment  29% | 25 (FPS) | -SoC: 50.6 C -GPU: 51.1 C -CPU: 50.0 C | -SoC: 60.4 C -GPU: 69.3 C -CPU: 68 C |

**Testing Results:** 教 (教务系统): Connecting three cameras

**Note:** Chinese translation is given on next page.

**注：**中文翻译见下页。

**RK3399pro测试，用于评估CPU、GPU、FPS、内存和温度的性能**

**基准性能测试分数：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **基准软件** | **Geekbench 5** | **3DMark** | **AnTuTu** | **PassMark** |
| CPU分数 | 单核 264  多核 706 | 1549 | 44590 | 853 |
| GPU分数 | 523 | 1011 | 22909 | 二维测试: 12319  三维测试: 10445 |
| 记忆分数 |  |  | 24172 | 5919 |
| 用户体验分数 |  |  | 45871 |  |
| UX 分数 |  |  | 137542 |  |
| GPU测试1（FPS） |  | 6.4 FPS |  | 简易测试: 22 FPS  复杂的测试: 39.3 FPS |
| GPU测试1（FPS） |  | 3.3 FPS |  | Open GL ES (Unity)  8 FPS |
| CPU测试1（FPS） |  | 30.3 FPS |  |  |
| CPU测试2（FPS） |  | 16.6 FPS |  |  |
| CPU测试3（FPS） |  | 8.3 FPS |  |  |
| 总帧速率（FPS） |  | 2 FPS 至31 FPS |  |  |

**CPU、GPU、FPS和内存利用率以及温度**

**测试结果(AiSdkDemo): 连接两台摄像机**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CPU 使用率** | **内存使用情况** | **GPU 使用** | **GPU内存** | **APP FPS**  **帧速率** | **初温** | **运行应用程序温度** |
| APP: 54 % 总CPU使用率: 73% | 372 MB | 非碎片: 3%  碎片: 97 % | 读: 82 MB  写: 85 MB | 4 (FPS) | -SoC: 50.6 C -GPU: 51.1 C -CPU: 50.0 C | -SoC: 72.4 C -GPU: 69.3 C -CPU: 73 C |

**测试结果:** 教 (教**务系统)**

**三台摄像机连接**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **CPU 使用率** | **内存使用率（RAM）** | **可用**  **公羊 (RAM)** | **GPU着色器**  **柜台** | **GPU 使用** | **APP FPS**  **帧速率** | **初温** | **运行应用程序温度** |
| APP: 21 % 总CPU使用率: 32%  核心1: 31%  核心2: 9%  核心3: 14%  核心 4: 6%  核心 5: 47%  核心 6: 51% | 372 MB | 2842 MB | 像素吞吐量  4 Cycles  4个周期 | 非碎片 27%  碎片 29% | 25 (FPS) | -SoC: 50.6 C -GPU: 51.1 C -CPU: 50.0 C | -SoC: 60.4 C -GPU: 69.3 C -CPU: 68 C |