**TABLE 2. Control Signals**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **opcode** | 000000 | | | | 100011 | 101011 | 000100 | 000110 | 001101 | 001001 | 000010 | 000011 |
| **func** | 100001 | 001000 | 000000 | 101010 | x | | | | | | | |
|  | addu | jr | sll | slt | lw | sw | beq | blez | ori | addiu | j | jal |
| NPC\_op | **000** | **011** | **000** | **000** | **000** | **000** | **001** | **001** | **000** | **000** | **010** | **010** |
| EXT\_op | **x** | **x** | **x** | **x** | **1** | **1** | **x** | **x** | **0** | **1** | **x** | **x** |
| RF\_wr | **1** | **0** | **1** | **1** | **1** | **0** | **0** | **0** | **1** | **1** | **0** | **1** |
| RF\_A3\_sel | **00** | **x** | **00** | **00** | **01** | **x** | **x** | **x** | **01** | **01** | **x** | **10** |
| RF\_WD\_sel | **00** | **x** | **00** | **00** | **01** | **x** | **x** | **x** | **00** | **00** | **x** | **10** |
| ALU\_B\_sel | **0** | **x** | **x** | **0** | **1** | **1** | **0** | **x** | **1** | **1** | **x** | **x** |
| DM\_wr | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **0** | **0** | **0** |
| ALU\_op | **0000** | **x** | **0010** | **0100** | **0000** | **0000** | **0011** | **0101** | **0110** | **0000** | **x** | **x** |
|  |  | **PC.PC** |  |  | **PC.PC** |  |  |  |  |  |  |  |
|  | **IM.Istr[25:0]** | **PC.PC** |  |  | **PC.PC** |  |  |  |  |  |  |  |
|  |  | **PC.PC** |  |  | **PC.PC** |  |  |  |  |  |  |  |
|  |  | **PC.PC** |  |  | **PC.PC** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |