

|             |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
|-------------|----------|---------|---------|----------|----------|---------|---------|---------|-----------|---------|---------|---------|---------|--------------|----------|-----------|---------|-----------|---------|---------|---------|---------|-----------|---------|--------------|-----------|-----------|-------|--|-------|
| HTC8        | HTC7     |         |         |          |          |         |         |         |           |         |         |         | HTC10   | HTC9         |          |           |         |           |         |         |         | HTC12   | HTC11     |         |              |           |           |       |  |       |
|             | I_Cache7 |         |         |          |          |         |         |         |           |         |         |         |         | I_Cache9     |          |           |         |           |         |         |         |         | I_Cache11 |         |              |           |           |       |  |       |
|             | Decoder7 |         |         |          |          |         |         |         |           |         |         |         |         | Decoder9     |          |           |         |           |         |         |         |         | Decoder11 |         |              |           |           |       |  |       |
| I_Cache8    | Lane121  | Lane122 | Lane123 | Lane124  | Lane125  | Lane126 | Lane127 | Lane128 | I_Cache10 | Lane153 | Lane154 | Lane155 | Lane156 | Lane157      | Lane158  | Lane159   | Lane160 | I_Cache12 | Lane185 | Lane186 | Lane187 | Lane188 | Lane189   | Lane190 | Lane191      | Lane192   |           |       |  |       |
|             | Lane113  | Lane114 | Lane115 | Lane116  | Lane117  | Lane118 | Lane119 | Lane120 |           | Lane145 | Lane146 | Lane147 | Lane148 | Lane149      | Lane150  | Lane151   | Lane152 |           | Lane177 | Lane178 | Lane179 | Lane180 | Lane181   | Lane182 | Lane183      | Lane184   |           |       |  |       |
|             | Lane105  | Lane106 | Lane107 | Lane108  | Lane109  | Lane110 | Lane111 | Lane112 |           | Lane137 | Lane138 | Lane139 | Lane140 | Lane141      | Lane142  | Lane143   | Lane144 |           | Lane169 | Lane170 | Lane171 | Lane172 | Lane173   | Lane174 | Lane175      | Lane176   |           |       |  |       |
| Reg7        | Reg8     |         |         | D_Cache7 | D_Cache8 | Lane97  | Lane98  | Lane99  | Lane100   | Lane101 | Lane102 | Lane103 | Lane104 | Write_Back10 | D_Cache9 | D_Cache10 | Lane129 | Lane130   | Lane131 | Lane132 | Lane133 | Lane134 | Lane135   | Lane136 | Write_Back12 | D_Cache11 | D_Cache12 |       |  |       |
| ALU7        | ALU8     |         | ALU9    |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           | ALU10 |  | ALU11 |
| Write_Back8 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
| Write_Back7 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
| HTC2        | HTC1     |         |         |          |          |         |         |         |           |         |         |         | HTC4    | HTC3         |          |           |         |           |         |         |         | HTC6    | HTC5      |         |              |           |           |       |  |       |
|             | I_Cache1 |         |         |          |          |         |         |         |           |         |         |         |         | I_Cache3     |          |           |         |           |         |         |         |         | I_Cache5  |         |              |           |           |       |  |       |
|             | Decoder1 |         |         |          |          |         |         |         |           |         |         |         |         | Decoder3     |          |           |         |           |         |         |         |         | Decoder5  |         |              |           |           |       |  |       |
| I_Cache2    | Lane25   | Lane26  | Lane27  | Lane28   | Lane29   | Lane30  | Lane31  | Lane32  | I_Cache4  | Lane57  | Lane58  | Lane59  | Lane60  | Lane61       | Lane62   | Lane63    | Lane64  | I_Cache6  | Lane89  | Lane90  | Lane91  | Lane92  | Lane93    | Lane94  | Lane95       | Lane96    |           |       |  |       |
|             | Lane17   | Lane18  | Lane19  | Lane20   | Lane21   | Lane22  | Lane23  | Lane24  |           | Lane49  | Lane50  | Lane51  | Lane52  | Lane53       | Lane54   | Lane55    | Lane56  |           | Lane81  | Lane82  | Lane83  | Lane84  | Lane85    | Lane86  | Lane87       | Lane88    |           |       |  |       |
|             | Lane9    | Lane10  | Lane11  | Lane12   | Lane13   | Lane14  | Lane15  | Lane16  |           | Lane41  | Lane42  | Lane43  | Lane44  | Lane45       | Lane46   | Lane47    | Lane48  |           | Lane73  | Lane74  | Lane75  | Lane76  | Lane77    | Lane78  | Lane79       | Lane80    |           |       |  |       |
| Reg1        | Reg2     |         |         | D_Cache1 | D_Cache2 | Lane1   | Lane2   | Lane3   | Lane4     | Lane5   | Lane6   | Lane7   | Lane8   | Write_Back4  | D_Cache3 | D_Cache4  | Lane33  | Lane34    | Lane35  | Lane36  | Lane37  | Lane38  | Lane39    | Lane40  | Write_Back6  | D_Cache5  | D_Cache6  |       |  |       |
| ALU1        | ALU2     |         | ALU3    |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           | ALU4  |  | ALU5  |
| Write_Back2 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
| Write_Back1 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
| Write_Back3 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |
| Write_Back5 |          |         |         |          |          |         |         |         |           |         |         |         |         |              |          |           |         |           |         |         |         |         |           |         |              |           |           |       |  |       |

I2\_Cache1