TOP

|  |  |  |  |
| --- | --- | --- | --- |
| Signal Name | I/O | Width | Simple Description |
| Num\_generator | I |  |  |
| Self\_energy | I |  |  |
| Interact\_energy | I |  |  |
| latticeLength | I |  |  |
| Num\_particle | I | 1 |  |
| Pop\_size | I |  |  |
| Sigma\_max | I |  |  |
| Sigma\_min | I |  |  |
| clk | I | 1 |  |
| reset | I | 1 |  |
| In\_valid | I | 1 |  |
| Min\_fit | O |  |  |
| done | O | 1 |  |
| Best\_ind | O |  |  |
|  |  |  |  |

Evaluate\_fit

|  |  |  |  |
| --- | --- | --- | --- |
| Signal Name | I/O | Width | Simple Description |
| Self\_energy | I |  |  |
| Interact\_energy | I |  |  |
| latticeLength | I |  |  |
| Num\_particle | I |  |  |
| Ind\_state | I |  |  |
| Ind\_mutaterate | I |  |  |
| Sigma\_min | I |  |  |
| clk | I | 1 |  |
| reset | I | 1 |  |
| In\_valid | I | 1 |  |
| start | I |  |  |
| Ind\_fit | O |  |  |
| Out\_valid | O | 1 |  |
|  |  |  |  |

Generate\_ind

|  |  |  |  |
| --- | --- | --- | --- |
| Signal Name | I/O | Width | Simple Description |
| Num\_generator | I |  |  |
| latticeLength | I |  |  |
| Num\_particle | I |  |  |
| Ind\_state | I |  |  |
| clk | I | 1 |  |
| reset | I | 1 |  |
| start | I | 1 |  |
| Ind\_state | O |  |  |
| Ind\_mutate\_rate | O |  |  |
| Out\_valid | O | 1 |  |
|  |  |  |  |

POP\_RF

|  |  |  |  |
| --- | --- | --- | --- |
| Signal Name | I/O | Width | Simple Description |
| Num\_generator | I |  |  |
| latticeLength | I |  |  |
| Num\_particle | I |  |  |
| Ind\_state | I |  |  |
| Ind\_mutate\_rate |  |  |  |
| Sigma\_max |  |  |  |
| Sigma\_min |  |  |  |
| clk | I | 1 |  |
| reset | I | 1 |  |
| In\_valid | I | 1 |  |
| start | I | 1 |  |
| Out\_valid | O | 1 |  |
| Best\_ind | O |  |  |
| done | O | 1 |  |
| Ind\_out | O |  |  |