1：无信道噪声结果

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| EZF | 35.28999 | 37.62701 | 25.85268 | 10.34028 |
| RWMMSE | 36.71392 | 44.33429 | 45.11324 | 45.13666 |
| DUU\_DL | 36.06112 | 43.41765 | 44.28609 | 44.29969 |
| DL\_UW | 34.58623 | 38.69106 | 39.87007 | 41.64756 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 8 | 10 | 12 | 14 | 16 |
| EZF | 36.20335 | 37.62701 | 37.51610 | 36.25495 | 33.97404 |
| RWMMSE | 40.22295 | 44.33429 | 47.64301 | 50.44437 | 52.84297 |
| DUU\_DL | 39.52356 | 43.41765 | 46.52585 | 49.13227 | 51.30568 |
| DL\_UW | 35.24810 | 38.69106 | 40.31998 | 43.50746 | 46.17963 |

2：有信道噪声结果



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| EZF | 12.31344 | 10.02692 | 7.53525 | 5.47050 |
| RWMMSE | 12.44862 | 10.53920 | 8.57527 | 7.60237 |
| DUU\_DL | 13.04334 | 13.31149 | 13.24629 | 13.18464 |
| DL\_UW | 12.51037 | 12.01019 | 12.42555 | 12.56452 |



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 8 | 10 | 12 | 14 | 16 |
| EZF | 10.26582 | 10.02692 | 9.61217 | 9.05200 | 8.45807 |
| RWMMSE | 10.55928 | 10.53920 | 10.35930 | 10.12669 | 9.87811 |
| DUU\_DL | 12.56406 | 13.31149 | 13.86715 | 14.24130 | 14.62841 |
| DL\_UW | 11.63176 | 12.01019 | 12.14816 | 12.65290 | 12.58137 |

3：不同SNR结果

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | -5 | 0 | 5 | 10 | 15 |
| EZF | 17.32468 | 37.51610 | 67.05324 | 102.55030 | 140.81165 |
| RWMMSE | 26.44371 | 47.64301 | 76.84924 | 111.95805 | 149.62735 |
| DUU\_DL | 26.07988 | 46.53421 | 74.28740 | 107.68790 | 144.53784 |
| DL\_UW | 23.80750 | 40.32045 | 65.50490 | 96.91969 | 118.01130 |



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| EZF | 46.17922 | 53.43676 | 45.98616 | 34.22491 |
| RWMMSE | 46.96185 | 55.91096 | 50.36500 | 44.55602 |
| DUU\_DL | 46.37671 | 56.18110 | 57.40313 | 57.27047 |



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 8 | 10 | 12 | 14 | 16 |
| EZF | 49.98504 | 53.43676 | 55.23177 | 55.65630 | 54.95448 |
| RWMMSE | 51.49482 | 55.91096 | 58.85386 | 60.82302 | 61.95207 |
| DUU\_DL | 51.34570 | 56.18110 | 59.85729 | 62.92235 | 65.53207 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| EZF | 9.28938 | 11.17388 | 9.70141 | 4.58937 |
| RWMMSE | 9.29552 | 11.98312 | 13.69864 | 14.98069 |
| DUU\_DL | 9.29946 | 12.03369 | 13.49068 | 14.39866 |

目前flops

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |
| EZF | 220480 | 583680 | 1247680 | 2260480 |
| RWMMSE | 21875048 | 22203687 | 22570847 | 24205547 |
| DUU\_DL | 27362 | 1017534 | 3846794 | 8612854 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 8 | 10 | 12 | 14 | 16 |
| EZF | 382976 | 583680 | 832512 | 1132544 | 1486848 |
| RWMMSE | 17800075 | 22203687 | 26642139 | 31115431 | 35623563 |
| DUU\_DL | 406630 | 1017534 | 1922966 | 3129070 | 4641990 |

微小性能损失下的flops降低量