SHITOMASI detector.
BRIEF descriptor.
Figure: 0
 detector with n=1370 keypoints in 21.3101 ms
 descriptor extraction in 0.827308 ms
Figure: 1
 detector with n=1301 keypoints in 19.7524 ms
 descriptor extraction in 2.04455 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 115
Figure: 2
 detector with n=1361 keypoints in 18.656 ms
 descriptor extraction in 2.00257 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 111
Figure: 3
 detector with n=1358 keypoints in 22.313 ms
 descriptor extraction in 2.04487 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 104
Figure: 4
 detector with n=1333 keypoints in 22.867 ms
 descriptor extraction in 1.89563 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 101
Figure: 5
 detector with n=1284 keypoints in 20.7119 ms
 descriptor extraction in 1.94145 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 102
Figure: 6
 detector with n=1322 keypoints in 21.7352 ms
 descriptor extraction in 1.85453 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 102
Figure: 7
 detector with n=1366 keypoints in 22.5732 ms
 descriptor extraction in 1.76276 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 100
Figure: 8
 detector with n=1389 keypoints in 25.3913 ms
 descriptor extraction in 1.78482 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 109
Figure: 9
 detector with n=1339 keypoints in 20.8563 ms
 descriptor extraction in 1.91345 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 100

SHITOMASI detector.
FREAK descriptor.
Figure: 0
 detector with n=1370 keypoints in 20.4378 ms
 descriptor extraction in 60.2335 ms
Figure: 1
 detector with n=1301 keypoints in 20.4524 ms
 descriptor extraction in 51.5433 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 86
Figure: 2
 detector with n=1361 keypoints in 16.1341 ms
 descriptor extraction in 62.2702 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 90
Figure: 3
 detector with n=1358 keypoints in 25.3607 ms
 descriptor extraction in 64.5533 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 86
Figure: 4
 detector with n=1333 keypoints in 20.3821 ms
 descriptor extraction in 62.1187 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 88
Figure: 5
 detector with n=1284 keypoints in 21.952 ms
 descriptor extraction in 64.8103 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 86
Figure: 6
 detector with n=1322 keypoints in 26.0206 ms
 descriptor extraction in 62.7979 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 80
Figure: 7
 detector with n=1366 keypoints in 24.6415 ms
 descriptor extraction in 59.4254 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 81
Figure: 8
 detector with n=1389 keypoints in 20.4231 ms
 descriptor extraction in 63.2203 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 86
Figure: 9
 detector with n=1339 keypoints in 26.8279 ms
 descriptor extraction in 58.452 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 85

SHITOMASI detector.
BRISK descriptor.
Figure: 0
 detector with n=1370 keypoints in 21.6775 ms
 descriptor extraction in 1.7203 ms
Figure: 1
 detector with n=1301 keypoints in 21.0317 ms
 descriptor extraction in 2.79155 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 95
Figure: 2
 detector with n=1361 keypoints in 19.8279 ms
 descriptor extraction in 3.76928 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 88
Figure: 3
 detector with n=1358 keypoints in 25.6076 ms
 descriptor extraction in 2.48835 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 80
Figure: 4
 detector with n=1333 keypoints in 24.3642 ms
 descriptor extraction in 2.58052 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 90
Figure: 5
 detector with n=1284 keypoints in 30.4023 ms
 descriptor extraction in 2.53832 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 82
Figure: 6
 detector with n=1322 keypoints in 31.1375 ms
 descriptor extraction in 2.48777 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 79
Figure: 7
 detector with n=1366 keypoints in 30.9687 ms
 descriptor extraction in 2.61325 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 85
Figure: 8
 detector with n=1389 keypoints in 29.1606 ms
 descriptor extraction in 2.52125 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 86
Figure: 9
 detector with n=1339 keypoints in 30.8031 ms
 descriptor extraction in 2.41762 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 82

SHITOMASI detector.
ORB descriptor.
Figure: 0
 detector with n=1370 keypoints in 20.7828 ms
 descriptor extraction in 1.09231 ms
Figure: 1
 detector with n=1301 keypoints in 22.1448 ms
 descriptor extraction in 1.43025 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 106
Figure: 2
 detector with n=1361 keypoints in 18.5484 ms
 descriptor extraction in 1.06318 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 102
Figure: 3
 detector with n=1358 keypoints in 23.1725 ms
 descriptor extraction in 1.1307 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 99
Figure: 4
 detector with n=1333 keypoints in 23.7316 ms
 descriptor extraction in 1.07844 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 102
Figure: 5
 detector with n=1284 keypoints in 24.4627 ms
 descriptor extraction in 1.09431 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 103
Figure: 6
 detector with n=1322 keypoints in 23.7018 ms
 descriptor extraction in 1.04973 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 97
Figure: 7
 detector with n=1366 keypoints in 22.7312 ms
 descriptor extraction in 1.07133 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 98
Figure: 8
 detector with n=1389 keypoints in 24.0528 ms
 descriptor extraction in 1.02942 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 104
Figure: 9
 detector with n=1339 keypoints in 22.4018 ms
 descriptor extraction in 1.03084 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 97

HARRIS detector.
BRIEF descriptor.
Figure: 0
 detector with n= 115 keypoints in 3.16536 ms
 descriptor extraction in 0.413835 ms
Figure: 1
 detector with n= 98 keypoints in 3.18623 ms
 descriptor extraction in 1.48137 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 14
Figure: 2
 detector with n= 113 keypoints in 3.35424 ms
 descriptor extraction in 1.45217 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 11
Figure: 3
 detector with n= 121 keypoints in 5.38596 ms
 descriptor extraction in 1.97766 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 15
Figure: 4
 detector with n= 160 keypoints in 4.00622 ms
 descriptor extraction in 1.4986 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 20
Figure: 5
 detector with n= 383 keypoints in 26.3695 ms
 descriptor extraction in 1.74103 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 24
Figure: 6
 detector with n= 85 keypoints in 2.92617 ms
 descriptor extraction in 2.3637 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 26
Figure: 7
 detector with n= 210 keypoints in 5.61441 ms
 descriptor extraction in 1.63693 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 16
Figure: 8
 detector with n= 171 keypoints in 6.5543 ms
 descriptor extraction in 1.92711 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 24
Figure: 9
 detector with n= 281 keypoints in 9.80305 ms
 descriptor extraction in 1.67026 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 23

HARRIS detector.
FREAK descriptor.
Figure: 0
 detector with n= 115 keypoints in 3.24323 ms
 descriptor extraction in 54.1652 ms
Figure: 1
 detector with n= 98 keypoints in 2.99845 ms
 descriptor extraction in 50.4666 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 13
Figure: 2
 detector with n= 113 keypoints in 3.10068 ms
 descriptor extraction in 58.9497 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 13
Figure: 3
 detector with n= 121 keypoints in 4.20486 ms
 descriptor extraction in 61.1912 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 15
Figure: 4
 detector with n= 160 keypoints in 7.56427 ms
 descriptor extraction in 62.7755 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 15
Figure: 5
 detector with n= 383 keypoints in 23.9874 ms
 descriptor extraction in 58.6977 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 17
Figure: 6
 detector with n= 85 keypoints in 6.31645 ms
 descriptor extraction in 63.0513 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 20
Figure: 7
 detector with n= 210 keypoints in 9.45153 ms
 descriptor extraction in 60.6925 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 12
Figure: 8
 detector with n= 171 keypoints in 7.13089 ms
 descriptor extraction in 65.6121 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 21
Figure: 9
 detector with n= 281 keypoints in 16.7464 ms
 descriptor extraction in 57.2587 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 18

HARRIS detector.
BRISK descriptor.
Figure: 0
 detector with n= 115 keypoints in 3.16144 ms
 descriptor extraction in 0.584251 ms
Figure: 1
 detector with n= 98 keypoints in 3.00653 ms
 descriptor extraction in 1.35719 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 12
Figure: 2
 detector with n= 113 keypoints in 3.30813 ms
 descriptor extraction in 1.45653 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 10
Figure: 3
 detector with n= 121 keypoints in 3.51606 ms
 descriptor extraction in 1.4631 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 14
Figure: 4
 detector with n= 160 keypoints in 4.08471 ms
 descriptor extraction in 1.53267 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 15
Figure: 5
 detector with n= 383 keypoints in 20.3377 ms
 descriptor extraction in 1.78177 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 16
Figure: 6
 detector with n= 85 keypoints in 4.34656 ms
 descriptor extraction in 1.41821 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 16
Figure: 7
 detector with n= 210 keypoints in 5.19703 ms
 descriptor extraction in 1.59256 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 15
Figure: 8
 detector with n= 171 keypoints in 5.35343 ms
 descriptor extraction in 1.51593 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 23
Figure: 9
 detector with n= 281 keypoints in 9.01159 ms
 descriptor extraction in 1.61372 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 21

HARRIS detector.
ORB descriptor.
Figure: 0
 detector with n= 115 keypoints in 3.22886 ms
 descriptor extraction in 0.976336 ms
Figure: 1
 detector with n= 98 keypoints in 4.97497 ms
 descriptor extraction in 1.49972 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 12
Figure: 2
 detector with n= 113 keypoints in 3.8333 ms
 descriptor extraction in 1.09892 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 12
Figure: 3
 detector with n= 121 keypoints in 3.21206 ms
 descriptor extraction in 0.969042 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 15
Figure: 4
 detector with n= 160 keypoints in 6.17835 ms
 descriptor extraction in 0.981724 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 18
Figure: 5
 detector with n= 383 keypoints in 21.67 ms
 descriptor extraction in 1.03727 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 24
Figure: 6
 detector with n= 85 keypoints in 4.1847 ms
 descriptor extraction in 1.02799 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 20
Figure: 7
 detector with n= 210 keypoints in 7.47862 ms
 descriptor extraction in 1.0209 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 15
Figure: 8
 detector with n= 171 keypoints in 4.01514 ms
 descriptor extraction in 1.02973 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 24
Figure: 9
 detector with n= 281 keypoints in 9.08458 ms
 descriptor extraction in 1.14379 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 22

FAST detector.
BRIEF descriptor.
Figure: 0
 detector with n= 1824 keypoints in 1.40252 ms
 descriptor extraction in 3.03336 ms
Figure: 1
 detector with n= 1832 keypoints in 1.33799 ms
 descriptor extraction in 2.6342 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 119
Figure: 2
 detector with n= 1810 keypoints in 1.26139 ms
 descriptor extraction in 2.15877 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 130
Figure: 3
 detector with n= 1817 keypoints in 1.74324 ms
 descriptor extraction in 1.4166 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 118
Figure: 4
 detector with n= 1793 keypoints in 1.36071 ms
 descriptor extraction in 1.33176 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 126
Figure: 5
 detector with n= 1796 keypoints in 1.2523 ms
 descriptor extraction in 8.60068 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 108
Figure: 6
 detector with n= 1788 keypoints in 1.21952 ms
 descriptor extraction in 1.4075 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 123
Figure: 7
 detector with n= 1695 keypoints in 1.26073 ms
 descriptor extraction in 2.63495 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 131
Figure: 8
 detector with n= 1749 keypoints in 1.36571 ms
 descriptor extraction in 1.29749 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 125
Figure: 9
 detector with n= 1770 keypoints in 1.45631 ms
 descriptor extraction in 1.24575 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 119

FAST detector.
FREAK descriptor.
Figure: 0
 detector with n= 1824 keypoints in 1.00821 ms
 descriptor extraction in 57.6403 ms
Figure: 1
 detector with n= 1832 keypoints in 0.934139 ms
 descriptor extraction in 58.8521 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 98
Figure: 2
 detector with n= 1810 keypoints in 1.11113 ms
 descriptor extraction in 58.8188 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 99
Figure: 3
 detector with n= 1817 keypoints in 1.33397 ms
 descriptor extraction in 59.9799 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 91
Figure: 4
 detector with n= 1793 keypoints in 1.37938 ms
 descriptor extraction in 62.8024 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 98
Figure: 5
 detector with n= 1796 keypoints in 1.20124 ms
 descriptor extraction in 69.1002 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 85
Figure: 6
 detector with n= 1788 keypoints in 1.25112 ms
 descriptor extraction in 65.4634 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 99
Figure: 7
 detector with n= 1695 keypoints in 1.25375 ms
 descriptor extraction in 65.4845 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 102
Figure: 8
 detector with n= 1749 keypoints in 1.21751 ms
 descriptor extraction in 65.0736 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 101
Figure: 9
 detector with n= 1770 keypoints in 1.35163 ms
 descriptor extraction in 65.7906 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 105

FAST detector.
BRISK descriptor.
Figure: 0
 detector with n= 1824 keypoints in 0.963999 ms
 descriptor extraction in 3.07992 ms
Figure: 1
 detector with n= 1832 keypoints in 0.929073 ms
 descriptor extraction in 2.94731 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 97
Figure: 2
 detector with n= 1810 keypoints in 0.832097 ms
 descriptor extraction in 2.91373 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 104
Figure: 3
 detector with n= 1817 keypoints in 1.31062 ms
 descriptor extraction in 1.97681 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 101
Figure: 4
 detector with n= 1793 keypoints in 1.2509 ms
 descriptor extraction in 1.95552 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 98
Figure: 5
 detector with n= 1796 keypoints in 1.2157 ms
 descriptor extraction in 2.16881 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 85
Figure: 6
 detector with n= 1788 keypoints in 1.20618 ms
 descriptor extraction in 1.9972 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 107
Figure: 7
 detector with n= 1695 keypoints in 1.33063 ms
 descriptor extraction in 1.95661 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 107
Figure: 8
 detector with n= 1749 keypoints in 1.41038 ms
 descriptor extraction in 1.81197 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 100
Figure: 9
 detector with n= 1770 keypoints in 1.297 ms
 descriptor extraction in 1.86682 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 100

FAST detector.
ORB descriptor.
Figure: 0
 detector with n= 1824 keypoints in 0.997211 ms
 descriptor extraction in 1.79983 ms
Figure: 1
 detector with n= 1832 keypoints in 1.13652 ms
 descriptor extraction in 1.47868 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 118
Figure: 2
 detector with n= 1810 keypoints in 0.823127 ms
 descriptor extraction in 1.10825 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 123
Figure: 3
 detector with n= 1817 keypoints in 1.24735 ms
 descriptor extraction in 1.8405 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 112
Figure: 4
 detector with n= 1793 keypoints in 1.33551 ms
 descriptor extraction in 2.50482 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 126
Figure: 5
 detector with n= 1796 keypoints in 1.23345 ms
 descriptor extraction in 1.82809 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 106
Figure: 6
 detector with n= 1788 keypoints in 1.298 ms
 descriptor extraction in 1.80867 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 122
Figure: 7
 detector with n= 1695 keypoints in 1.25449 ms
 descriptor extraction in 1.81826 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 122
Figure: 8
 detector with n= 1749 keypoints in 1.36714 ms
 descriptor extraction in 1.90231 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 123
Figure: 9
 detector with n= 1770 keypoints in 1.26675 ms
 descriptor extraction in 1.96487 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 119

BRISK detector.
BRIEF descriptor.
Figure: 0
 detector with n= 2757 keypoints in 52.4977 ms
 descriptor extraction in 3.47881 ms
Figure: 1
 detector with n= 2777 keypoints in 46.4617 ms
 descriptor extraction in 2.07 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 178
Figure: 2
 detector with n= 2741 keypoints in 46.8567 ms
 descriptor extraction in 2.44536 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 205
Figure: 3
 detector with n= 2735 keypoints in 45.5153 ms
 descriptor extraction in 1.82839 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 185
Figure: 4
 detector with n= 2757 keypoints in 46.1601 ms
 descriptor extraction in 2.13414 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 179
Figure: 5
 detector with n= 2695 keypoints in 46.1181 ms
 descriptor extraction in 1.90619 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 183
Figure: 6
 detector with n= 2715 keypoints in 45.488 ms
 descriptor extraction in 2.03155 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 195
Figure: 7
 detector with n= 2628 keypoints in 44.3932 ms
 descriptor extraction in 1.96373 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 207
Figure: 8
 detector with n= 2639 keypoints in 45.0946 ms
 descriptor extraction in 1.94185 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 189
Figure: 9
 detector with n= 2672 keypoints in 45.3752 ms
 descriptor extraction in 1.78682 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 183

BRISK detector.
FREAK descriptor.
Figure: 0
 detector with n= 2757 keypoints in 48.555 ms
 descriptor extraction in 55.974 ms
Figure: 1
 detector with n= 2777 keypoints in 46.4021 ms
 descriptor extraction in 56.2847 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 160
Figure: 2
 detector with n= 2741 keypoints in 45.1345 ms
 descriptor extraction in 59.953 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 177
Figure: 3
 detector with n= 2735 keypoints in 45.9594 ms
 descriptor extraction in 59.1629 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 155
Figure: 4
 detector with n= 2757 keypoints in 46.0887 ms
 descriptor extraction in 57.9386 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 173
Figure: 5
 detector with n= 2695 keypoints in 45.349 ms
 descriptor extraction in 57.3357 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 161
Figure: 6
 detector with n= 2715 keypoints in 45.911 ms
 descriptor extraction in 60.3875 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 183
Figure: 7
 detector with n= 2628 keypoints in 44.1204 ms
 descriptor extraction in 60.8163 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 169
Figure: 8
 detector with n= 2639 keypoints in 45.1074 ms
 descriptor extraction in 58.3393 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 178
Figure: 9
 detector with n= 2672 keypoints in 44.9666 ms
 descriptor extraction in 57.8599 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 168

BRISK detector.
BRISK descriptor.
Figure: 0
 detector with n= 2757 keypoints in 48.6437 ms
 descriptor extraction in 4.27328 ms
Figure: 1
 detector with n= 2777 keypoints in 46.5606 ms
 descriptor extraction in 3.47008 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 171
Figure: 2
 detector with n= 2741 keypoints in 47.0899 ms
 descriptor extraction in 3.43175 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 176
Figure: 3
 detector with n= 2735 keypoints in 46.7036 ms
 descriptor extraction in 3.3869 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 157
Figure: 4
 detector with n= 2757 keypoints in 47.2351 ms
 descriptor extraction in 3.71476 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 176
Figure: 5
 detector with n= 2695 keypoints in 45.0705 ms
 descriptor extraction in 3.39753 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 174
Figure: 6
 detector with n= 2715 keypoints in 44.8667 ms
 descriptor extraction in 3.28658 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 188
Figure: 7
 detector with n= 2628 keypoints in 44.7291 ms
 descriptor extraction in 3.40381 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 173
Figure: 8
 detector with n= 2639 keypoints in 44.325 ms
 descriptor extraction in 3.26345 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 171
Figure: 9
 detector with n= 2672 keypoints in 44.7412 ms
 descriptor extraction in 3.11047 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 184

BRISK detector.
ORB descriptor.
Figure: 0
 detector with n= 2757 keypoints in 48.3505 ms
 descriptor extraction in 9.3453 ms
Figure: 1
 detector with n= 2777 keypoints in 47.2151 ms
 descriptor extraction in 7.07484 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 162
Figure: 2
 detector with n= 2741 keypoints in 47.1069 ms
 descriptor extraction in 6.75377 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 175
Figure: 3
 detector with n= 2735 keypoints in 44.6421 ms
 descriptor extraction in 6.58361 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 158
Figure: 4
 detector with n= 2757 keypoints in 45.5645 ms
 descriptor extraction in 6.78965 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 167
Figure: 5
 detector with n= 2695 keypoints in 45.8119 ms
 descriptor extraction in 6.67361 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 160
Figure: 6
 detector with n= 2715 keypoints in 44.945 ms
 descriptor extraction in 6.66456 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 182
Figure: 7
 detector with n= 2628 keypoints in 44.5349 ms
 descriptor extraction in 7.36716 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 167
Figure: 8
 detector with n= 2639 keypoints in 45.4007 ms
 descriptor extraction in 6.55236 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 171
Figure: 9
 detector with n= 2672 keypoints in 44.5455 ms
 descriptor extraction in 6.44579 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 172

ORB detector.
BRIEF descriptor.
Figure: 0
 detector with n= 500 keypoints in 14.7246 ms
 descriptor extraction in 1.91318 ms
Figure: 1
 detector with n= 500 keypoints in 9.32135 ms
 descriptor extraction in 0.691791 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 49
Figure: 2
 detector with n= 500 keypoints in 8.53666 ms
 descriptor extraction in 0.631429 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 43
Figure: 3
 detector with n= 500 keypoints in 12.1274 ms
 descriptor extraction in 1.47949 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 45
Figure: 4
 detector with n= 500 keypoints in 13.8928 ms
 descriptor extraction in 0.669509 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 59
Figure: 5
 detector with n= 500 keypoints in 12.5114 ms
 descriptor extraction in 1.01422 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 53
Figure: 6
 detector with n= 500 keypoints in 16.3217 ms
 descriptor extraction in 1.18559 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 78
Figure: 7
 detector with n= 500 keypoints in 14.5585 ms
 descriptor extraction in 1.66246 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 68
Figure: 8
 detector with n= 500 keypoints in 17.1145 ms
 descriptor extraction in 3.19675 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 84
Figure: 9
 detector with n= 500 keypoints in 12.8701 ms
 descriptor extraction in 1.44318 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 66

ORB detector.
FREAK descriptor.
Figure: 0
 detector with n= 500 keypoints in 9.5563 ms
 descriptor extraction in 55.4407 ms
Figure: 1
 detector with n= 500 keypoints in 9.5342 ms
 descriptor extraction in 56.2455 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 42
Figure: 2
 detector with n= 500 keypoints in 7.45944 ms
 descriptor extraction in 59.0714 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 36
Figure: 3
 detector with n= 500 keypoints in 13.8395 ms
 descriptor extraction in 56.4836 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 44
Figure: 4
 detector with n= 500 keypoints in 11.2987 ms
 descriptor extraction in 62.6983 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 47
Figure: 5
 detector with n= 500 keypoints in 15.5485 ms
 descriptor extraction in 60.3667 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 44
Figure: 6
 detector with n= 500 keypoints in 12.8215 ms
 descriptor extraction in 63.0418 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 51
Figure: 7
 detector with n= 500 keypoints in 14.292 ms
 descriptor extraction in 64.9178 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 52
Figure: 8
 detector with n= 500 keypoints in 11.098 ms
 descriptor extraction in 64.3875 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 48
Figure: 9
 detector with n= 500 keypoints in 17.2888 ms
 descriptor extraction in 60.5382 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 56

ORB detector.
BRISK descriptor.
Figure: 0
 detector with n= 500 keypoints in 9.74617 ms
 descriptor extraction in 2.2633 ms
Figure: 1
 detector with n= 500 keypoints in 10.5635 ms
 descriptor extraction in 1.48654 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 73
Figure: 2
 detector with n= 500 keypoints in 8.3425 ms
 descriptor extraction in 1.5033 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 74
Figure: 3
 detector with n= 500 keypoints in 13.7403 ms
 descriptor extraction in 1.57746 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 79
Figure: 4
 detector with n= 500 keypoints in 10.5822 ms
 descriptor extraction in 1.53601 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 85
Figure: 5
 detector with n= 500 keypoints in 14.9624 ms
 descriptor extraction in 1.76559 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 79
Figure: 6
 detector with n= 500 keypoints in 12.7098 ms
 descriptor extraction in 1.7612 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 92
Figure: 7
 detector with n= 500 keypoints in 11.4208 ms
 descriptor extraction in 1.82795 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 90
Figure: 8
 detector with n= 500 keypoints in 19.6939 ms
 descriptor extraction in 1.787 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 88
Figure: 9
 detector with n= 500 keypoints in 13.5106 ms
 descriptor extraction in 1.78259 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 91

ORB detector.
ORB descriptor.
Figure: 0
 detector with n= 500 keypoints in 12.007 ms
 descriptor extraction in 8.85529 ms
Figure: 1
 detector with n= 500 keypoints in 10.7693 ms
 descriptor extraction in 6.899 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 67
Figure: 2
 detector with n= 500 keypoints in 8.82259 ms
 descriptor extraction in 6.77432 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 70
Figure: 3
 detector with n= 500 keypoints in 12.8406 ms
 descriptor extraction in 5.30432 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 72
Figure: 4
 detector with n= 500 keypoints in 12.7601 ms
 descriptor extraction in 5.71866 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 84
Figure: 5
 detector with n= 500 keypoints in 12.9161 ms
 descriptor extraction in 9.39163 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 91
Figure: 6
 detector with n= 500 keypoints in 11.1956 ms
 descriptor extraction in 6.50822 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 101
Figure: 7
 detector with n= 500 keypoints in 13.9398 ms
 descriptor extraction in 7.33501 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 92
Figure: 8
 detector with n= 500 keypoints in 14.1991 ms
 descriptor extraction in 6.88205 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 93
Figure: 9
 detector with n= 500 keypoints in 15.8785 ms
 descriptor extraction in 7.05077 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 93

AKAZE detector.
AKAZE descriptor.
Figure: 0
 detector with n= 1351 keypoints in 115.977 ms
 descriptor extraction in 104.874 ms
Figure: 1
 detector with n= 1327 keypoints in 101.716 ms
 descriptor extraction in 92.8401 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 138
Figure: 2
 detector with n= 1311 keypoints in 103.098 ms
 descriptor extraction in 107.096 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 138
Figure: 3
 detector with n= 1351 keypoints in 113.849 ms
 descriptor extraction in 110.431 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 133
Figure: 4
 detector with n= 1360 keypoints in 115.275 ms
 descriptor extraction in 105.483 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 127
Figure: 5
 detector with n= 1347 keypoints in 118.453 ms
 descriptor extraction in 105.094 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 129
Figure: 6
 detector with n= 1363 keypoints in 114.002 ms
 descriptor extraction in 108.391 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 146
Figure: 7
 detector with n= 1331 keypoints in 116.724 ms
 descriptor extraction in 105.28 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 147
Figure: 8
 detector with n= 1357 keypoints in 115.708 ms
 descriptor extraction in 107.689 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 151
Figure: 9
 detector with n= 1331 keypoints in 116.309 ms
 descriptor extraction in 110.836 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 150

SIFT detector.
SIFT descriptor.
Figure: 0
 detector with n= 1438 keypoints in 169.401 ms
 descriptor extraction in 122.638 ms
Figure: 1
 detector with n= 1371 keypoints in 123.972 ms
 descriptor extraction in 95.3553 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 82
Figure: 2
 detector with n= 1380 keypoints in 126.348 ms
 descriptor extraction in 111.204 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 81
Figure: 3
 detector with n= 1335 keypoints in 141.544 ms
 descriptor extraction in 117.571 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 85
Figure: 4
 detector with n= 1305 keypoints in 140.268 ms
 descriptor extraction in 109.89 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 95
Figure: 5
 detector with n= 1370 keypoints in 140.233 ms
 descriptor extraction in 106.765 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 90
Figure: 6
 detector with n= 1396 keypoints in 140.034 ms
 descriptor extraction in 113.233 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 82
Figure: 7
 detector with n= 1382 keypoints in 138.503 ms
 descriptor extraction in 105.464 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 83
Figure: 8
 detector with n= 1463 keypoints in 139.109 ms
 descriptor extraction in 104.946 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 103
Figure: 9
 detector with n= 1422 keypoints in 134.858 ms
 descriptor extraction in 104.329 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 105

SHITOMASI detector.
SIFT descriptor.
Figure: 0
 detector with n=1370 keypoints in 22.329 ms
 descriptor extraction in 29.4969 ms
Figure: 1
 detector with n=1301 keypoints in 12.2992 ms
 descriptor extraction in 23.678 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 112
Figure: 2
 detector with n=1361 keypoints in 14.0591 ms
 descriptor extraction in 32.4684 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 109
Figure: 3
 detector with n=1358 keypoints in 23.8839 ms
 descriptor extraction in 36.3856 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 104
Figure: 4
 detector with n=1333 keypoints in 28.7258 ms
 descriptor extraction in 29.222 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 103
Figure: 5
 detector with n=1284 keypoints in 19.7561 ms
 descriptor extraction in 24.7219 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 99
Figure: 6
 detector with n=1322 keypoints in 17.1674 ms
 descriptor extraction in 23.9 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 101
Figure: 7
 detector with n=1366 keypoints in 28.9359 ms
 descriptor extraction in 30.2299 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 97
Figure: 8
 detector with n=1389 keypoints in 17.4298 ms
 descriptor extraction in 27.661 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 107
Figure: 9
 detector with n=1339 keypoints in 17.9127 ms
 descriptor extraction in 23.1462 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 97

HARRIS detector.
SIFT descriptor.
Figure: 0
 detector with n= 115 keypoints in 4.80729 ms
 descriptor extraction in 29.3304 ms
Figure: 1
 detector with n= 98 keypoints in 3.25767 ms
 descriptor extraction in 25.1526 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 14
Figure: 2
 detector with n= 113 keypoints in 3.16432 ms
 descriptor extraction in 34.9156 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 11
Figure: 3
 detector with n= 121 keypoints in 4.77923 ms
 descriptor extraction in 33.1338 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 16
Figure: 4
 detector with n= 160 keypoints in 5.83062 ms
 descriptor extraction in 29.9921 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 19
Figure: 5
 detector with n= 383 keypoints in 21.8556 ms
 descriptor extraction in 25.3034 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 22
Figure: 6
 detector with n= 85 keypoints in 2.79603 ms
 descriptor extraction in 31.8591 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 22
Figure: 7
 detector with n= 210 keypoints in 7.09365 ms
 descriptor extraction in 24.3494 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 13
Figure: 8
 detector with n= 171 keypoints in 4.00672 ms
 descriptor extraction in 35.1545 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 24
Figure: 9
 detector with n= 281 keypoints in 12.3656 ms
 descriptor extraction in 31.8839 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 22

FAST detector.
SIFT descriptor.
Figure: 0
 detector with n= 1824 keypoints in 1.39017 ms
 descriptor extraction in 40.523 ms
Figure: 1
 detector with n= 1832 keypoints in 1.24505 ms
 descriptor extraction in 46.3999 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 118
Figure: 2
 detector with n= 1810 keypoints in 1.496 ms
 descriptor extraction in 47.2528 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 123
Figure: 3
 detector with n= 1817 keypoints in 1.33496 ms
 descriptor extraction in 47.3329 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 112
Figure: 4
 detector with n= 1793 keypoints in 1.25668 ms
 descriptor extraction in 51.9646 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 120
Figure: 5
 detector with n= 1796 keypoints in 1.27937 ms
 descriptor extraction in 54.0261 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 114
Figure: 6
 detector with n= 1788 keypoints in 1.28572 ms
 descriptor extraction in 50.4979 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 119
Figure: 7
 detector with n= 1695 keypoints in 1.25641 ms
 descriptor extraction in 55.6571 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 123
Figure: 8
 detector with n= 1749 keypoints in 1.24382 ms
 descriptor extraction in 46.3899 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 117
Figure: 9
 detector with n= 1770 keypoints in 1.19732 ms
 descriptor extraction in 51.2374 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 103

BRISK detector.
SIFT descriptor.
Figure: 0
 detector with n= 2757 keypoints in 48.7565 ms
 descriptor extraction in 78.3833 ms
Figure: 1
 detector with n= 2777 keypoints in 45.8119 ms
 descriptor extraction in 67.809 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 184
Figure: 2
 detector with n= 2741 keypoints in 45.4894 ms
 descriptor extraction in 82.7201 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 193
Figure: 3
 detector with n= 2735 keypoints in 45.3513 ms
 descriptor extraction in 84.542 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 171
Figure: 4
 detector with n= 2757 keypoints in 45.8643 ms
 descriptor extraction in 86.0296 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 183
Figure: 5
 detector with n= 2695 keypoints in 45.6234 ms
 descriptor extraction in 83.7677 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 173
Figure: 6
 detector with n= 2715 keypoints in 46.099 ms
 descriptor extraction in 89.1475 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 196
Figure: 7
 detector with n= 2628 keypoints in 44.9837 ms
 descriptor extraction in 82.5916 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 196
Figure: 8
 detector with n= 2639 keypoints in 46.2875 ms
 descriptor extraction in 84.5005 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 178
Figure: 9
 detector with n= 2672 keypoints in 45.0037 ms
 descriptor extraction in 76.9023 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 185

ORB detector.
SIFT descriptor.
Figure: 0
 detector with n= 500 keypoints in 11.8584 ms
 descriptor extraction in 79.33 ms
Figure: 1
 detector with n= 500 keypoints in 8.27516 ms
 descriptor extraction in 74.399 ms
Matching keypoints of figures 1 and 0:
keypoints matches = 67
Figure: 2
 detector with n= 500 keypoints in 7.92188 ms
 descriptor extraction in 88.2112 ms
Matching keypoints of figures 2 and 1:
keypoints matches = 79
Figure: 3
 detector with n= 500 keypoints in 10.9227 ms
 descriptor extraction in 92.5223 ms
Matching keypoints of figures 3 and 2:
keypoints matches = 78
Figure: 4
 detector with n= 500 keypoints in 19.1723 ms
 descriptor extraction in 84.4461 ms
Matching keypoints of figures 4 and 3:
keypoints matches = 80
Figure: 5
 detector with n= 500 keypoints in 11.7456 ms
 descriptor extraction in 100.115 ms
Matching keypoints of figures 5 and 4:
keypoints matches = 82
Figure: 6
 detector with n= 500 keypoints in 18.5716 ms
 descriptor extraction in 99.3792 ms
Matching keypoints of figures 6 and 5:
keypoints matches = 95
Figure: 7
 detector with n= 500 keypoints in 15.0146 ms
 descriptor extraction in 102.713 ms
Matching keypoints of figures 7 and 6:
keypoints matches = 95
Figure: 8
 detector with n= 500 keypoints in 21.1104 ms
 descriptor extraction in 100.97 ms
Matching keypoints of figures 8 and 7:
keypoints matches = 94
Figure: 9
 detector with n= 500 keypoints in 13.2575 ms
 descriptor extraction in 97.0669 ms
Matching keypoints of figures 9 and 8:
keypoints matches = 94