Rank-65899 over GF(64)

January 15, 2021

The equation

The equation of the surface is :

$$X_3^3 + X_0^2X_2 + X_0^2X_3 + X_1^2X_2 + X_0X_1X_2 = 0$$

(0, 0, 0, 1, 0, 1, 1, 0, 1, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0)
The point rank of the equation over GF(64) is -2130177979

General information

Number of lines	8
Number of points	4289
Number of singular points	3
Number of Eckardt points	2
Number of double points	6
Number of single points	498
Number of points off lines	3782
Number of Hesse planes	0
Number of axes	0
Type of points on lines	65^8
Type of lines on points	4, 3^2, 2^6, 1^{498}, 0^{3782}

Singular Points

The surface has 3 singular points:

$0: P_2 = \mathbf{P}(0,0,1,0) = \mathbf{P}(0,0,1,0)$
$1: P_{7747} = \mathbf{P}(1,\epsilon^{42},0,1) = \mathbf{P}(1,56,0,1)$
$2: P_{7811} = \mathbf{P}(1,\epsilon^{21},0,1) = \mathbf{P}(1,57,0,1)$

The 8 Lines

The lines and their Pluecker coordinates are:

$$\ell_0 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \end{bmatrix}_0 = \mathbf{Pl}(1,0,0,0,0,0)_0$$

$$\ell_1 = \begin{bmatrix} 1 & \epsilon^{42} & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{237112} = \begin{bmatrix} 1 & 56 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{237112} = \mathbf{Pl}(0,0,57,0,0,1)_{277640}$$

$$\ell_2 = \begin{bmatrix} 1 & \epsilon^{21} & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{241273} = \begin{bmatrix} 1 & 57 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{241273} = \mathbf{Pl}(0,0,56,0,0,1)_{277513}$$

$$\ell_3 = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{266304} = \begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \end{bmatrix}_{266304} = \mathbf{Pl}(1,0,0,1,0,0)_{130}$$

$$\ell_4 = \begin{bmatrix} 1 & \epsilon^{42} & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{503416} = \begin{bmatrix} 1 & 56 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{503416} = \mathbf{Pl}(0,57,57,0,0,1)_{277760}$$

$$\ell_5 = \begin{bmatrix} 1 & \epsilon^{21} & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{507577} = \begin{bmatrix} 1 & 57 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{bmatrix}_{507577} = \mathbf{Pl}(0,56,56,0,0,1)_{277632}$$

$$\ell_6 = \begin{bmatrix} 1 & 0 & \epsilon^{21} & \epsilon^{42} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{15150266} = \begin{bmatrix} 1 & 0 & 57 & 56 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{15150266} = \mathbf{Pl}(57,56,56,57,56,1)_{15185330}$$

$$\ell_7 = \begin{bmatrix} 1 & 0 & \epsilon^{42} & \epsilon^{21} \\ 0 & 1 & 1 & 1 \end{bmatrix}_{15412409} = \begin{bmatrix} 1 & 0 & 56 & 57 \\ 0 & 1 & 1 & 1 \end{bmatrix}_{15412409} = \mathbf{Pl}(56,57,57,56,57,1)_{15451252}$$

Rank of lines: (0, 237112, 241273, 266304, 503416, 507577, 15150266, 15412409)
Rank of points on Klein quadric: (0, 277640, 277513, 130, 277760, 277632, 15185330, 15451252)

Eckardt Points

The surface has 2 Eckardt points:
$0 : P_{7747} = \mathbf{P}(1, \epsilon^{42}, 0, 1) = \mathbf{P}(1, 56, 0, 1)$,
$1 : P_{7811} = \mathbf{P}(1, \epsilon^{21}, 0, 1) = \mathbf{P}(1, 57, 0, 1)$.

Double Points

The surface has 6 Double points:
The double points on the surface are:

$P_{61} = (57, 1, 0, 0) = \ell_0 \cap \ell_1$
$P_{60} = (56, 1, 0, 0) = \ell_0 \cap \ell_2$
$P_1 = (0, 1, 0, 0) = \ell_0 \cap \ell_3$
$P_{3652} = (1, 56, 1, 0) = \ell_1 \cap \ell_6$
$P_{3716} = (1, 57, 1, 0) = \ell_2 \cap \ell_7$
$P_{8322} = (0, 1, 1, 1) = \ell_6 \cap \ell_7$

Single Points

The surface has 498 single points:
The single points on the surface are:

$0 : P_0 = (1, 0, 0, 0)$ lies on line ℓ_0
$1 : P_5 = (1, 1, 0, 0)$ lies on line ℓ_0
$2 : P_6 = (2, 1, 0, 0)$ lies on line ℓ_0
$3 : P_7 = (3, 1, 0, 0)$ lies on line ℓ_0
$4 : P_8 = (4, 1, 0, 0)$ lies on line ℓ_0
$5 : P_9 = (5, 1, 0, 0)$ lies on line ℓ_0
$6 : P_{10} = (6, 1, 0, 0)$ lies on line ℓ_0
$7 : P_{11} = (7, 1, 0, 0)$ lies on line ℓ_0
$8 : P_{12} = (8, 1, 0, 0)$ lies on line ℓ_0
$9 : P_{13} = (9, 1, 0, 0)$ lies on line ℓ_0
$10 : P_{14} = (10, 1, 0, 0)$ lies on line ℓ_0
$11 : P_{15} = (11, 1, 0, 0)$ lies on line ℓ_0
$12 : P_{16} = (12, 1, 0, 0)$ lies on line ℓ_0
$13 : P_{17} = (13, 1, 0, 0)$ lies on line ℓ_0
$14 : P_{18} = (14, 1, 0, 0)$ lies on line ℓ_0
$15 : P_{19} = (15, 1, 0, 0)$ lies on line ℓ_0
$16 : P_{20} = (16, 1, 0, 0)$ lies on line ℓ_0
$17 : P_{21} = (17, 1, 0, 0)$ lies on line ℓ_0

18 : $P_{22} = (18, 1, 0, 0)$ lies on line ℓ_0
19 : $P_{23} = (19, 1, 0, 0)$ lies on line ℓ_0
20 : $P_{24} = (20, 1, 0, 0)$ lies on line ℓ_0
21 : $P_{25} = (21, 1, 0, 0)$ lies on line ℓ_0
22 : $P_{26} = (22, 1, 0, 0)$ lies on line ℓ_0
23 : $P_{27} = (23, 1, 0, 0)$ lies on line ℓ_0
24 : $P_{28} = (24, 1, 0, 0)$ lies on line ℓ_0
25 : $P_{29} = (25, 1, 0, 0)$ lies on line ℓ_0
26 : $P_{30} = (26, 1, 0, 0)$ lies on line ℓ_0
27 : $P_{31} = (27, 1, 0, 0)$ lies on line ℓ_0
28 : $P_{32} = (28, 1, 0, 0)$ lies on line ℓ_0
29 : $P_{33} = (29, 1, 0, 0)$ lies on line ℓ_0
30 : $P_{34} = (30, 1, 0, 0)$ lies on line ℓ_0
31 : $P_{35} = (31, 1, 0, 0)$ lies on line ℓ_0
32 : $P_{36} = (32, 1, 0, 0)$ lies on line ℓ_0
33 : $P_{37} = (33, 1, 0, 0)$ lies on line ℓ_0
34 : $P_{38} = (34, 1, 0, 0)$ lies on line ℓ_0
35 : $P_{39} = (35, 1, 0, 0)$ lies on line ℓ_0
36 : $P_{40} = (36, 1, 0, 0)$ lies on line ℓ_0
37 : $P_{41} = (37, 1, 0, 0)$ lies on line ℓ_0
38 : $P_{42} = (38, 1, 0, 0)$ lies on line ℓ_0
39 : $P_{43} = (39, 1, 0, 0)$ lies on line ℓ_0
40 : $P_{44} = (40, 1, 0, 0)$ lies on line ℓ_0
41 : $P_{45} = (41, 1, 0, 0)$ lies on line ℓ_0
42 : $P_{46} = (42, 1, 0, 0)$ lies on line ℓ_0
43 : $P_{47} = (43, 1, 0, 0)$ lies on line ℓ_0
44 : $P_{48} = (44, 1, 0, 0)$ lies on line ℓ_0
45 : $P_{49} = (45, 1, 0, 0)$ lies on line ℓ_0
46 : $P_{50} = (46, 1, 0, 0)$ lies on line ℓ_0
47 : $P_{51} = (47, 1, 0, 0)$ lies on line ℓ_0
48 : $P_{52} = (48, 1, 0, 0)$ lies on line ℓ_0
49 : $P_{53} = (49, 1, 0, 0)$ lies on line ℓ_0
50 : $P_{54} = (50, 1, 0, 0)$ lies on line ℓ_0
51 : $P_{55} = (51, 1, 0, 0)$ lies on line ℓ_0
52 : $P_{56} = (52, 1, 0, 0)$ lies on line ℓ_0
53 : $P_{57} = (53, 1, 0, 0)$ lies on line ℓ_0
54 : $P_{58} = (54, 1, 0, 0)$ lies on line ℓ_0
55 : $P_{59} = (55, 1, 0, 0)$ lies on line ℓ_0
56 : $P_{62} = (58, 1, 0, 0)$ lies on line ℓ_0
57 : $P_{63} = (59, 1, 0, 0)$ lies on line ℓ_0
58 : $P_{64} = (60, 1, 0, 0)$ lies on line ℓ_0
59 : $P_{65} = (61, 1, 0, 0)$ lies on line ℓ_0
60 : $P_{66} = (62, 1, 0, 0)$ lies on line ℓ_0
61 : $P_{67} = (63, 1, 0, 0)$ lies on line ℓ_0
62 : $P_{187} = (56, 1, 1, 0)$ lies on line ℓ_2
63 : $P_{188} = (57, 1, 1, 0)$ lies on line ℓ_1
64 : $P_{212} = (17, 2, 1, 0)$ lies on line ℓ_2
65 : $P_{214} = (19, 2, 1, 0)$ lies on line ℓ_1
66 : $P_{300} = (41, 3, 1, 0)$ lies on line ℓ_2
67 : $P_{301} = (42, 3, 1, 0)$ lies on line ℓ_1
68 : $P_{357} = (34, 4, 1, 0)$ lies on line ℓ_2
69 : $P_{361} = (38, 4, 1, 0)$ lies on line ℓ_1
70 : $P_{413} = (26, 5, 1, 0)$ lies on line ℓ_2
71 : $P_{418} = (31, 5, 1, 0)$ lies on line ℓ_1
72 : $P_{502} = (51, 6, 1, 0)$ lies on line ℓ_2
73 : $P_{504} = (53, 6, 1, 0)$ lies on line ℓ_1
74 : $P_{526} = (11, 7, 1, 0)$ lies on line ℓ_2
75 : $P_{527} = (12, 7, 1, 0)$ lies on line ℓ_1
76 : $P_{616} = (37, 8, 1, 0)$ lies on line ℓ_2
77 : $P_{624} = (45, 8, 1, 0)$ lies on line ℓ_1
78 : $P_{663} = (20, 9, 1, 0)$ lies on line ℓ_1
79 : $P_{672} = (29, 9, 1, 0)$ lies on line ℓ_2
80 : $P_{759} = (52, 10, 1, 0)$ lies on line ℓ_2
81 : $P_{769} = (62, 10, 1, 0)$ lies on line ℓ_1
82 : $P_{778} = (7, 11, 1, 0)$ lies on line ℓ_1
83 : $P_{783} = (12, 11, 1, 0)$ lies on line ℓ_2
84 : $P_{842} = (7, 12, 1, 0)$ lies on line ℓ_2
85 : $P_{846} = (11, 12, 1, 0)$ lies on line ℓ_1
86 : $P_{949} = (50, 13, 1, 0)$ lies on line ℓ_1
87 : $P_{962} = (63, 13, 1, 0)$ lies on line ℓ_2
88 : $P_{985} = (22, 14, 1, 0)$ lies on line ℓ_2
89 : $P_{987} = (24, 14, 1, 0)$ lies on line ℓ_1
90 : $P_{1060} = (33, 15, 1, 0)$ lies on line ℓ_1
91 : $P_{1073} = (46, 15, 1, 0)$ lies on line ℓ_2
92 : $P_{1134} = (43, 16, 1, 0)$ lies on line ℓ_2
93 : $P_{1150} = (59, 16, 1, 0)$ lies on line ℓ_1
94 : $P_{1157} = (2, 17, 1, 0)$ lies on line ℓ_1
95 : $P_{1174} = (19, 17, 1, 0)$ lies on line ℓ_2
96 : $P_{1259} = (40, 18, 1, 0)$ lies on line ℓ_1
97 : $P_{1277} = (58, 18, 1, 0)$ lies on line ℓ_2
98 : $P_{1285} = (2, 19, 1, 0)$ lies on line ℓ_2
99 : $P_{1300} = (17, 19, 1, 0)$ lies on line ℓ_1
100 : $P_{1356} = (9, 20, 1, 0)$ lies on line ℓ_2
101 : $P_{1376} = (29, 20, 1, 0)$ lies on line ℓ_1
102 : $P_{1447} = (36, 21, 1, 0)$ lies on line ℓ_1
103 : $P_{1460} = (49, 21, 1, 0)$ lies on line ℓ_2
104 : $P_{1489} = (14, 22, 1, 0)$ lies on line ℓ_1
105 : $P_{1499} = (24, 22, 1, 0)$ lies on line ℓ_2
106 : $P_{1571} = (32, 23, 1, 0)$ lies on line ℓ_2
107 : $P_{1594} = (55, 23, 1, 0)$ lies on line ℓ_1
108 : $P_{1617} = (14, 24, 1, 0)$ lies on line ℓ_2
109 : $P_{1625} = (22, 24, 1, 0)$ lies on line ℓ_1
110 : $P_{1714} = (47, 25, 1, 0)$ lies on line ℓ_1
111 : $P_{1721} = (54, 25, 1, 0)$ lies on line ℓ_2
112 : $P_{1736} = (5, 26, 1, 0)$ lies on line ℓ_1
113 : $P_{1762} = (31, 26, 1, 0)$ lies on line ℓ_2
114 : $P_{1834} = (39, 27, 1, 0)$ lies on line ℓ_2
115 : $P_{1855} = (60, 27, 1, 0)$ lies on line ℓ_1
116 : $P_{1903} = (44, 28, 1, 0)$ lies on line ℓ_2
117 : $P_{1907} = (48, 28, 1, 0)$ lies on line ℓ_1
118 : $P_{1932} = (9, 29, 1, 0)$ lies on line ℓ_1
119 : $P_{1943} = (20, 29, 1, 0)$ lies on line ℓ_2
120 : $P_{2022} = (35, 30, 1, 0)$ lies on line ℓ_1
121 : $P_{2048} = (61, 30, 1, 0)$ lies on line ℓ_2
122 : $P_{2056} = (5, 31, 1, 0)$ lies on line ℓ_2
123 : $P_{2077} = (26, 31, 1, 0)$ lies on line ℓ_1
124 : $P_{2138} = (23, 32, 1, 0)$ lies on line ℓ_1
125 : $P_{2170} = (55, 32, 1, 0)$ lies on line ℓ_2

126 : $P_{2194} = (15, 33, 1, 0)$ lies on line ℓ_2
127 : $P_{2225} = (46, 33, 1, 0)$ lies on line ℓ_1
128 : $P_{2247} = (4, 34, 1, 0)$ lies on line ℓ_1
129 : $P_{2281} = (38, 34, 1, 0)$ lies on line ℓ_2
130 : $P_{2337} = (30, 35, 1, 0)$ lies on line ℓ_2
131 : $P_{2368} = (61, 35, 1, 0)$ lies on line ℓ_1
132 : $P_{2392} = (21, 36, 1, 0)$ lies on line ℓ_2
133 : $P_{2420} = (49, 36, 1, 0)$ lies on line ℓ_1
134 : $P_{2443} = (8, 37, 1, 0)$ lies on line ℓ_1
135 : $P_{2480} = (45, 37, 1, 0)$ lies on line ℓ_2
136 : $P_{2503} = (4, 38, 1, 0)$ lies on line ℓ_2
137 : $P_{2533} = (34, 38, 1, 0)$ lies on line ℓ_1
138 : $P_{2590} = (27, 39, 1, 0)$ lies on line ℓ_1
139 : $P_{2623} = (60, 39, 1, 0)$ lies on line ℓ_2
140 : $P_{2645} = (18, 40, 1, 0)$ lies on line ℓ_2
141 : $P_{2685} = (58, 40, 1, 0)$ lies on line ℓ_1
142 : $P_{2694} = (3, 41, 1, 0)$ lies on line ℓ_1
143 : $P_{2733} = (42, 41, 1, 0)$ lies on line ℓ_2
144 : $P_{2758} = (3, 42, 1, 0)$ lies on line ℓ_2
145 : $P_{2796} = (41, 42, 1, 0)$ lies on line ℓ_1
146 : $P_{2835} = (16, 43, 1, 0)$ lies on line ℓ_1
147 : $P_{2878} = (59, 43, 1, 0)$ lies on line ℓ_2
148 : $P_{2911} = (28, 44, 1, 0)$ lies on line ℓ_1
149 : $P_{2931} = (48, 44, 1, 0)$ lies on line ℓ_2
150 : $P_{2955} = (8, 45, 1, 0)$ lies on line ℓ_2
151 : $P_{2984} = (37, 45, 1, 0)$ lies on line ℓ_1
152 : $P_{3026} = (15, 46, 1, 0)$ lies on line ℓ_1
153 : $P_{3044} = (33, 46, 1, 0)$ lies on line ℓ_2
154 : $P_{3100} = (25, 47, 1, 0)$ lies on line ℓ_2
155 : $P_{3129} = (54, 47, 1, 0)$ lies on line ℓ_1
156 : $P_{3167} = (28, 48, 1, 0)$ lies on line ℓ_2
157 : $P_{3183} = (44, 48, 1, 0)$ lies on line ℓ_1
158 : $P_{3224} = (21, 49, 1, 0)$ lies on line ℓ_1
159 : $P_{3239} = (36, 49, 1, 0)$ lies on line ℓ_2
160 : $P_{3280} = (13, 50, 1, 0)$ lies on line ℓ_2
161 : $P_{3330} = (63, 50, 1, 0)$ lies on line ℓ_1
162 : $P_{3337} = (6, 51, 1, 0)$ lies on line ℓ_1
163 : $P_{3384} = (53, 51, 1, 0)$ lies on line ℓ_2
164 : $P_{3405} = (10, 52, 1, 0)$ lies on line ℓ_1
165 : $P_{3457} = (62, 52, 1, 0)$ lies on line ℓ_2
166 : $P_{3465} = (6, 53, 1, 0)$ lies on line ℓ_2
167 : $P_{3510} = (51, 53, 1, 0)$ lies on line ℓ_1
168 : $P_{3548} = (25, 54, 1, 0)$ lies on line ℓ_1
169 : $P_{3570} = (47, 54, 1, 0)$ lies on line ℓ_2
170 : $P_{3610} = (23, 55, 1, 0)$ lies on line ℓ_2
171 : $P_{3619} = (32, 55, 1, 0)$ lies on line ℓ_1
172 : $P_{3708} = (57, 56, 1, 0)$ lies on line ℓ_2
173 : $P_{3771} = (56, 57, 1, 0)$ lies on line ℓ_1
174 : $P_{3797} = (18, 58, 1, 0)$ lies on line ℓ_1
175 : $P_{3819} = (40, 58, 1, 0)$ lies on line ℓ_2
176 : $P_{3859} = (16, 59, 1, 0)$ lies on line ℓ_2
177 : $P_{3886} = (43, 59, 1, 0)$ lies on line ℓ_1
178 : $P_{3934} = (27, 60, 1, 0)$ lies on line ℓ_2
179 : $P_{3946} = (39, 60, 1, 0)$ lies on line ℓ_1
180 : $P_{4001} = (30, 61, 1, 0)$ lies on line ℓ_1
181 : $P_{4006} = (35, 61, 1, 0)$ lies on line ℓ_2
182 : $P_{4045} = (10, 62, 1, 0)$ lies on line ℓ_2
183 : $P_{4087} = (52, 62, 1, 0)$ lies on line ℓ_1
184 : $P_{4112} = (13, 63, 1, 0)$ lies on line ℓ_1
185 : $P_{4149} = (50, 63, 1, 0)$ lies on line ℓ_2
186 : $P_{4163} = (1, 0, 0, 1)$ lies on line ℓ_3
187 : $P_{4227} = (1, 1, 0, 1)$ lies on line ℓ_3
188 : $P_{4291} = (1, 2, 0, 1)$ lies on line ℓ_3
189 : $P_{4355} = (1, 3, 0, 1)$ lies on line ℓ_3
190 : $P_{4419} = (1, 4, 0, 1)$ lies on line ℓ_3
191 : $P_{4483} = (1, 5, 0, 1)$ lies on line ℓ_3
192 : $P_{4547} = (1, 6, 0, 1)$ lies on line ℓ_3
193 : $P_{4611} = (1, 7, 0, 1)$ lies on line ℓ_3
194 : $P_{4675} = (1, 8, 0, 1)$ lies on line ℓ_3
195 : $P_{4739} = (1, 9, 0, 1)$ lies on line ℓ_3
196 : $P_{4803} = (1, 10, 0, 1)$ lies on line ℓ_3
197 : $P_{4867} = (1, 11, 0, 1)$ lies on line ℓ_3
198 : $P_{4931} = (1, 12, 0, 1)$ lies on line ℓ_3
199 : $P_{4995} = (1, 13, 0, 1)$ lies on line ℓ_3
200 : $P_{5059} = (1, 14, 0, 1)$ lies on line ℓ_3
201 : $P_{5123} = (1, 15, 0, 1)$ lies on line ℓ_3
202 : $P_{5187} = (1, 16, 0, 1)$ lies on line ℓ_3
203 : $P_{5251} = (1, 17, 0, 1)$ lies on line ℓ_3
204 : $P_{5315} = (1, 18, 0, 1)$ lies on line ℓ_3
205 : $P_{5379} = (1, 19, 0, 1)$ lies on line ℓ_3
206 : $P_{5443} = (1, 20, 0, 1)$ lies on line ℓ_3
207 : $P_{5507} = (1, 21, 0, 1)$ lies on line ℓ_3
208 : $P_{5571} = (1, 22, 0, 1)$ lies on line ℓ_3
209 : $P_{5635} = (1, 23, 0, 1)$ lies on line ℓ_3
210 : $P_{5699} = (1, 24, 0, 1)$ lies on line ℓ_3
211 : $P_{5763} = (1, 25, 0, 1)$ lies on line ℓ_3
212 : $P_{5827} = (1, 26, 0, 1)$ lies on line ℓ_3
213 : $P_{5891} = (1, 27, 0, 1)$ lies on line ℓ_3
214 : $P_{5955} = (1, 28, 0, 1)$ lies on line ℓ_3
215 : $P_{6019} = (1, 29, 0, 1)$ lies on line ℓ_3
216 : $P_{6083} = (1, 30, 0, 1)$ lies on line ℓ_3
217 : $P_{6147} = (1, 31, 0, 1)$ lies on line ℓ_3
218 : $P_{6211} = (1, 32, 0, 1)$ lies on line ℓ_3
219 : $P_{6275} = (1, 33, 0, 1)$ lies on line ℓ_3
220 : $P_{6339} = (1, 34, 0, 1)$ lies on line ℓ_3
221 : $P_{6403} = (1, 35, 0, 1)$ lies on line ℓ_3
222 : $P_{6467} = (1, 36, 0, 1)$ lies on line ℓ_3
223 : $P_{6531} = (1, 37, 0, 1)$ lies on line ℓ_3
224 : $P_{6595} = (1, 38, 0, 1)$ lies on line ℓ_3
225 : $P_{6659} = (1, 39, 0, 1)$ lies on line ℓ_3
226 : $P_{6723} = (1, 40, 0, 1)$ lies on line ℓ_3
227 : $P_{6787} = (1, 41, 0, 1)$ lies on line ℓ_3
228 : $P_{6851} = (1, 42, 0, 1)$ lies on line ℓ_3
229 : $P_{6915} = (1, 43, 0, 1)$ lies on line ℓ_3
230 : $P_{6979} = (1, 44, 0, 1)$ lies on line ℓ_3
231 : $P_{7043} = (1, 45, 0, 1)$ lies on line ℓ_3
232 : $P_{7107} = (1, 46, 0, 1)$ lies on line ℓ_3
233 : $P_{7171} = (1, 47, 0, 1)$ lies on line ℓ_3

234 : $P_{7235} = (1, 48, 0, 1)$ lies on line ℓ_3
235 : $P_{7299} = (1, 49, 0, 1)$ lies on line ℓ_3
236 : $P_{7363} = (1, 50, 0, 1)$ lies on line ℓ_3
237 : $P_{7427} = (1, 51, 0, 1)$ lies on line ℓ_3
238 : $P_{7491} = (1, 52, 0, 1)$ lies on line ℓ_3
239 : $P_{7555} = (1, 53, 0, 1)$ lies on line ℓ_3
240 : $P_{7619} = (1, 54, 0, 1)$ lies on line ℓ_3
241 : $P_{7683} = (1, 55, 0, 1)$ lies on line ℓ_3
242 : $P_{7875} = (1, 58, 0, 1)$ lies on line ℓ_3
243 : $P_{7939} = (1, 59, 0, 1)$ lies on line ℓ_3
244 : $P_{8003} = (1, 60, 0, 1)$ lies on line ℓ_3
245 : $P_{8067} = (1, 61, 0, 1)$ lies on line ℓ_3
246 : $P_{8131} = (1, 62, 0, 1)$ lies on line ℓ_3
247 : $P_{8195} = (1, 63, 0, 1)$ lies on line ℓ_3
248 : $P_{11842} = (1, 56, 1, 1)$ lies on line ℓ_4
249 : $P_{11906} = (1, 57, 1, 1)$ lies on line ℓ_5
250 : $P_{14916} = (3, 40, 2, 1)$ lies on line ℓ_6
251 : $P_{15108} = (3, 43, 2, 1)$ lies on line ℓ_7
252 : $P_{15938} = (1, 56, 2, 1)$ lies on line ℓ_4
253 : $P_{16002} = (1, 57, 2, 1)$ lies on line ℓ_5
254 : $P_{17475} = (2, 16, 3, 1)$ lies on line ℓ_6
255 : $P_{17603} = (2, 18, 3, 1)$ lies on line ℓ_7
256 : $P_{20034} = (1, 56, 3, 1)$ lies on line ℓ_4
257 : $P_{20098} = (1, 57, 3, 1)$ lies on line ℓ_5
258 : $P_{22278} = (5, 27, 4, 1)$ lies on line ℓ_6
259 : $P_{22470} = (5, 30, 4, 1)$ lies on line ℓ_7
260 : $P_{24130} = (1, 56, 4, 1)$ lies on line ℓ_4
261 : $P_{24194} = (1, 57, 4, 1)$ lies on line ℓ_5
262 : $P_{26885} = (4, 35, 5, 1)$ lies on line ℓ_6
263 : $P_{27141} = (4, 39, 5, 1)$ lies on line ℓ_7
264 : $P_{28226} = (1, 56, 5, 1)$ lies on line ℓ_4
265 : $P_{28290} = (1, 57, 5, 1)$ lies on line ℓ_5
266 : $P_{29384} = (7, 10, 6, 1)$ lies on line ℓ_6
267 : $P_{29576} = (7, 13, 6, 1)$ lies on line ℓ_7
268 : $P_{32322} = (1, 56, 6, 1)$ lies on line ℓ_4
269 : $P_{32386} = (1, 57, 6, 1)$ lies on line ℓ_5
270 : $P_{36039} = (6, 50, 7, 1)$ lies on line ℓ_6
271 : $P_{36167} = (6, 52, 7, 1)$ lies on line ℓ_7
272 : $P_{36418} = (1, 56, 7, 1)$ lies on line ℓ_4
273 : $P_{36482} = (1, 57, 7, 1)$ lies on line ℓ_5
274 : $P_{38282} = (9, 21, 8, 1)$ lies on line ℓ_7
275 : $P_{38730} = (9, 28, 8, 1)$ lies on line ℓ_6
276 : $P_{40514} = (1, 56, 8, 1)$ lies on line ℓ_4
277 : $P_{40578} = (1, 57, 8, 1)$ lies on line ℓ_5
278 : $P_{43337} = (8, 36, 9, 1)$ lies on line ℓ_6
279 : $P_{43849} = (8, 44, 9, 1)$ lies on line ℓ_7
280 : $P_{44610} = (1, 56, 9, 1)$ lies on line ℓ_4
281 : $P_{44674} = (1, 57, 9, 1)$ lies on line ℓ_5
282 : $P_{45516} = (11, 6, 10, 1)$ lies on line ℓ_7
283 : $P_{45964} = (11, 13, 10, 1)$ lies on line ℓ_6
284 : $P_{48706} = (1, 56, 10, 1)$ lies on line ℓ_4
285 : $P_{48770} = (1, 57, 10, 1)$ lies on line ℓ_5
286 : $P_{52619} = (10, 53, 11, 1)$ lies on line ℓ_6
287 : $P_{52802} = (1, 56, 11, 1)$ lies on line ℓ_4
288 : $P_{52866} = (1, 57, 11, 1)$ lies on line ℓ_5
289 : $P_{53259} = (10, 63, 11, 1)$ lies on line ℓ_7
290 : $P_{56590} = (13, 51, 12, 1)$ lies on line ℓ_7
291 : $P_{56898} = (1, 56, 12, 1)$ lies on line ℓ_4
292 : $P_{56962} = (1, 57, 12, 1)$ lies on line ℓ_5
293 : $P_{57294} = (13, 62, 12, 1)$ lies on line ℓ_6
294 : $P_{57805} = (12, 6, 13, 1)$ lies on line ℓ_6
295 : $P_{58061} = (12, 10, 13, 1)$ lies on line ℓ_7
296 : $P_{60994} = (1, 56, 13, 1)$ lies on line ℓ_4
297 : $P_{61058} = (1, 57, 13, 1)$ lies on line ℓ_5
298 : $P_{63568} = (15, 32, 14, 1)$ lies on line ℓ_7
299 : $P_{64528} = (15, 47, 14, 1)$ lies on line ℓ_6
300 : $P_{65090} = (1, 56, 14, 1)$ lies on line ℓ_4
301 : $P_{65154} = (1, 57, 14, 1)$ lies on line ℓ_5
302 : $P_{67087} = (14, 23, 15, 1)$ lies on line ℓ_6
303 : $P_{67215} = (14, 25, 15, 1)$ lies on line ℓ_7
304 : $P_{69186} = (1, 56, 15, 1)$ lies on line ℓ_4
305 : $P_{69250} = (1, 57, 15, 1)$ lies on line ℓ_5
306 : $P_{69906} = (17, 3, 16, 1)$ lies on line ℓ_7
307 : $P_{70866} = (17, 18, 16, 1)$ lies on line ℓ_6
308 : $P_{73282} = (1, 56, 16, 1)$ lies on line ℓ_4
309 : $P_{73346} = (1, 57, 16, 1)$ lies on line ℓ_5
310 : $P_{76497} = (16, 42, 17, 1)$ lies on line ℓ_6
311 : $P_{77378} = (1, 56, 17, 1)$ lies on line ℓ_4
312 : $P_{77442} = (1, 57, 17, 1)$ lies on line ℓ_5
313 : $P_{77521} = (16, 58, 17, 1)$ lies on line ℓ_7
314 : $P_{78100} = (19, 3, 18, 1)$ lies on line ℓ_6
315 : $P_{78932} = (19, 16, 18, 1)$ lies on line ℓ_7
316 : $P_{81474} = (1, 56, 18, 1)$ lies on line ℓ_4
317 : $P_{81538} = (1, 57, 18, 1)$ lies on line ℓ_5
318 : $P_{84627} = (18, 41, 19, 1)$ lies on line ℓ_7
319 : $P_{85570} = (1, 56, 19, 1)$ lies on line ℓ_4
320 : $P_{85634} = (1, 57, 19, 1)$ lies on line ℓ_5
321 : $P_{85779} = (18, 59, 19, 1)$ lies on line ℓ_6
322 : $P_{88470} = (21, 37, 20, 1)$ lies on line ℓ_7
323 : $P_{89174} = (21, 48, 20, 1)$ lies on line ℓ_6
324 : $P_{89666} = (1, 56, 20, 1)$ lies on line ℓ_4
325 : $P_{89730} = (1, 57, 20, 1)$ lies on line ℓ_5
326 : $P_{90709} = (20, 8, 21, 1)$ lies on line ℓ_6
327 : $P_{91989} = (20, 28, 21, 1)$ lies on line ℓ_7
328 : $P_{93762} = (1, 56, 21, 1)$ lies on line ℓ_4
329 : $P_{93826} = (1, 57, 21, 1)$ lies on line ℓ_5
330 : $P_{96408} = (23, 33, 22, 1)$ lies on line ℓ_6
331 : $P_{97752} = (23, 54, 22, 1)$ lies on line ℓ_7
332 : $P_{97858} = (1, 56, 22, 1)$ lies on line ℓ_4
333 : $P_{97922} = (1, 57, 22, 1)$ lies on line ℓ_5
334 : $P_{99351} = (22, 15, 23, 1)$ lies on line ℓ_7
335 : $P_{99991} = (22, 25, 23, 1)$ lies on line ℓ_6
336 : $P_{101954} = (1, 56, 23, 1)$ lies on line ℓ_4
337 : $P_{102018} = (1, 57, 23, 1)$ lies on line ℓ_5
338 : $P_{105434} = (25, 46, 24, 1)$ lies on line ℓ_7
339 : $P_{106010} = (25, 55, 24, 1)$ lies on line ℓ_6
340 : $P_{106050} = (1, 56, 24, 1)$ lies on line ℓ_4
341 : $P_{106114} = (1, 57, 24, 1)$ lies on line ℓ_5

342 : $P_{107545} = (24, 15, 25, 1)$ lies on line ℓ_6
343 : $P_{108057} = (24, 23, 25, 1)$ lies on line ℓ_7
344 : $P_{110146} = (1, 56, 25, 1)$ lies on line ℓ_4
345 : $P_{110210} = (1, 57, 25, 1)$ lies on line ℓ_5
346 : $P_{113116} = (27, 38, 26, 1)$ lies on line ℓ_6
347 : $P_{114242} = (1, 56, 26, 1)$ lies on line ℓ_4
348 : $P_{114306} = (1, 57, 26, 1)$ lies on line ℓ_5
349 : $P_{114588} = (27, 61, 26, 1)$ lies on line ℓ_7
350 : $P_{115035} = (26, 4, 27, 1)$ lies on line ℓ_7
351 : $P_{116699} = (26, 30, 27, 1)$ lies on line ℓ_6
352 : $P_{118338} = (1, 56, 27, 1)$ lies on line ℓ_4
353 : $P_{118402} = (1, 57, 27, 1)$ lies on line ℓ_5
354 : $P_{119390} = (29, 8, 28, 1)$ lies on line ℓ_7
355 : $P_{120222} = (29, 21, 28, 1)$ lies on line ℓ_6
356 : $P_{122434} = (1, 56, 28, 1)$ lies on line ℓ_4
357 : $P_{122498} = (1, 57, 28, 1)$ lies on line ℓ_5
358 : $P_{125853} = (28, 45, 29, 1)$ lies on line ℓ_6
359 : $P_{126109} = (28, 49, 29, 1)$ lies on line ℓ_7
360 : $P_{126530} = (1, 56, 29, 1)$ lies on line ℓ_4
361 : $P_{126594} = (1, 57, 29, 1)$ lies on line ℓ_5
362 : $P_{127328} = (31, 4, 30, 1)$ lies on line ℓ_6
363 : $P_{128800} = (31, 27, 30, 1)$ lies on line ℓ_7
364 : $P_{130626} = (1, 56, 30, 1)$ lies on line ℓ_4
365 : $P_{130690} = (1, 57, 30, 1)$ lies on line ℓ_5
366 : $P_{133343} = (30, 34, 31, 1)$ lies on line ℓ_7
367 : $P_{134722} = (1, 56, 31, 1)$ lies on line ℓ_4
368 : $P_{134786} = (1, 57, 31, 1)$ lies on line ℓ_5
369 : $P_{135007} = (30, 60, 31, 1)$ lies on line ℓ_6
370 : $P_{136162} = (33, 14, 32, 1)$ lies on line ℓ_6
371 : $P_{138274} = (33, 47, 32, 1)$ lies on line ℓ_7
372 : $P_{138818} = (1, 56, 32, 1)$ lies on line ℓ_4
373 : $P_{138882} = (1, 57, 32, 1)$ lies on line ℓ_5
374 : $P_{140769} = (32, 22, 33, 1)$ lies on line ℓ_7
375 : $P_{142817} = (32, 54, 33, 1)$ lies on line ℓ_6
376 : $P_{142914} = (1, 56, 33, 1)$ lies on line ℓ_4
377 : $P_{142978} = (1, 57, 33, 1)$ lies on line ℓ_5
378 : $P_{145444} = (35, 31, 34, 1)$ lies on line ℓ_6
379 : $P_{147010} = (1, 56, 34, 1)$ lies on line ℓ_4
380 : $P_{147074} = (1, 57, 34, 1)$ lies on line ℓ_5
381 : $P_{147300} = (35, 60, 34, 1)$ lies on line ℓ_7
382 : $P_{147875} = (34, 5, 35, 1)$ lies on line ℓ_7
383 : $P_{150051} = (34, 39, 35, 1)$ lies on line ℓ_6
384 : $P_{151106} = (1, 56, 35, 1)$ lies on line ℓ_4
385 : $P_{151170} = (1, 57, 35, 1)$ lies on line ℓ_5
386 : $P_{152230} = (37, 9, 36, 1)$ lies on line ℓ_7
387 : $P_{154470} = (37, 44, 36, 1)$ lies on line ℓ_6
388 : $P_{155202} = (1, 56, 36, 1)$ lies on line ℓ_4
389 : $P_{155266} = (1, 57, 36, 1)$ lies on line ℓ_5
390 : $P_{157029} = (36, 20, 37, 1)$ lies on line ℓ_6
391 : $P_{158821} = (36, 48, 37, 1)$ lies on line ℓ_7
392 : $P_{159298} = (1, 56, 37, 1)$ lies on line ℓ_4
393 : $P_{159362} = (1, 57, 37, 1)$ lies on line ℓ_5
394 : $P_{161512} = (39, 26, 38, 1)$ lies on line ℓ_7
395 : $P_{163394} = (1, 56, 38, 1)$ lies on line ℓ_4
396 : $P_{163458} = (1, 57, 38, 1)$ lies on line ℓ_5
397 : $P_{163752} = (39, 61, 38, 1)$ lies on line ℓ_6
398 : $P_{164263} = (38, 5, 39, 1)$ lies on line ℓ_6
399 : $P_{166183} = (38, 35, 39, 1)$ lies on line ℓ_7
400 : $P_{167490} = (1, 56, 39, 1)$ lies on line ℓ_4
401 : $P_{167554} = (1, 57, 39, 1)$ lies on line ℓ_5
402 : $P_{168170} = (41, 2, 40, 1)$ lies on line ℓ_7
403 : $P_{170794} = (41, 43, 40, 1)$ lies on line ℓ_6
404 : $P_{171586} = (1, 56, 40, 1)$ lies on line ℓ_4
405 : $P_{171650} = (1, 57, 40, 1)$ lies on line ℓ_5
406 : $P_{173353} = (40, 19, 41, 1)$ lies on line ℓ_6
407 : $P_{175682} = (1, 56, 41, 1)$ lies on line ℓ_4
408 : $P_{175746} = (1, 57, 41, 1)$ lies on line ℓ_5
409 : $P_{175913} = (40, 59, 41, 1)$ lies on line ℓ_7
410 : $P_{177324} = (43, 17, 42, 1)$ lies on line ℓ_7
411 : $P_{179778} = (1, 56, 42, 1)$ lies on line ℓ_4
412 : $P_{179842} = (1, 57, 42, 1)$ lies on line ℓ_5
413 : $P_{179948} = (43, 58, 42, 1)$ lies on line ℓ_6
414 : $P_{180459} = (42, 2, 43, 1)$ lies on line ℓ_6
415 : $P_{182891} = (42, 40, 43, 1)$ lies on line ℓ_7
416 : $P_{183874} = (1, 56, 43, 1)$ lies on line ℓ_4
417 : $P_{183938} = (1, 57, 43, 1)$ lies on line ℓ_5
418 : $P_{185006} = (45, 9, 44, 1)$ lies on line ℓ_6
419 : $P_{186734} = (45, 36, 44, 1)$ lies on line ℓ_7
420 : $P_{187970} = (1, 56, 44, 1)$ lies on line ℓ_4
421 : $P_{188034} = (1, 57, 44, 1)$ lies on line ℓ_5
422 : $P_{190381} = (44, 29, 45, 1)$ lies on line ℓ_7
423 : $P_{191661} = (44, 49, 45, 1)$ lies on line ℓ_6
424 : $P_{192066} = (1, 56, 45, 1)$ lies on line ℓ_4
425 : $P_{192130} = (1, 57, 45, 1)$ lies on line ℓ_5
426 : $P_{194160} = (47, 24, 46, 1)$ lies on line ℓ_6
427 : $P_{196144} = (47, 55, 46, 1)$ lies on line ℓ_7
428 : $P_{196162} = (1, 56, 46, 1)$ lies on line ℓ_4
429 : $P_{196226} = (1, 57, 46, 1)$ lies on line ℓ_5
430 : $P_{197615} = (46, 14, 47, 1)$ lies on line ℓ_7
431 : $P_{198767} = (46, 32, 47, 1)$ lies on line ℓ_6
432 : $P_{200258} = (1, 56, 47, 1)$ lies on line ℓ_4
433 : $P_{200322} = (1, 57, 47, 1)$ lies on line ℓ_5
434 : $P_{202098} = (49, 20, 48, 1)$ lies on line ℓ_7
435 : $P_{203186} = (49, 37, 48, 1)$ lies on line ℓ_6
436 : $P_{204354} = (1, 56, 48, 1)$ lies on line ℓ_4
437 : $P_{204418} = (1, 57, 48, 1)$ lies on line ℓ_5
438 : $P_{206769} = (48, 29, 49, 1)$ lies on line ℓ_6
439 : $P_{207793} = (48, 45, 49, 1)$ lies on line ℓ_7
440 : $P_{208450} = (1, 56, 49, 1)$ lies on line ℓ_4
441 : $P_{208514} = (1, 57, 49, 1)$ lies on line ℓ_5
442 : $P_{209460} = (51, 7, 50, 1)$ lies on line ℓ_7
443 : $P_{212340} = (51, 52, 50, 1)$ lies on line ℓ_6
444 : $P_{212546} = (1, 56, 50, 1)$ lies on line ℓ_4
445 : $P_{212610} = (1, 57, 50, 1)$ lies on line ℓ_5
446 : $P_{213875} = (50, 12, 51, 1)$ lies on line ℓ_6
447 : $P_{216642} = (1, 56, 51, 1)$ lies on line ℓ_4
448 : $P_{216706} = (1, 57, 51, 1)$ lies on line ℓ_5
449 : $P_{217075} = (50, 62, 51, 1)$ lies on line ℓ_7

450 : $P_{217654} = (53, 7, 52, 1)$ lies on line ℓ_6
451 : $P_{220406} = (53, 50, 52, 1)$ lies on line ℓ_7
452 : $P_{220738} = (1, 56, 52, 1)$ lies on line ℓ_4
453 : $P_{220802} = (1, 57, 52, 1)$ lies on line ℓ_5
454 : $P_{222005} = (52, 11, 53, 1)$ lies on line ℓ_7
455 : $P_{224834} = (1, 56, 53, 1)$ lies on line ℓ_4
456 : $P_{224898} = (1, 57, 53, 1)$ lies on line ℓ_5
457 : $P_{225333} = (52, 63, 53, 1)$ lies on line ℓ_6
458 : $P_{226808} = (55, 22, 54, 1)$ lies on line ℓ_6
459 : $P_{227512} = (55, 33, 54, 1)$ lies on line ℓ_7
460 : $P_{228930} = (1, 56, 54, 1)$ lies on line ℓ_4
461 : $P_{228994} = (1, 57, 54, 1)$ lies on line ℓ_5
462 : $P_{231031} = (54, 24, 55, 1)$ lies on line ℓ_7
463 : $P_{232439} = (54, 46, 55, 1)$ lies on line ℓ_6
464 : $P_{233026} = (1, 56, 55, 1)$ lies on line ℓ_4
465 : $P_{233090} = (1, 57, 55, 1)$ lies on line ℓ_5
466 : $P_{233594} = (57, 0, 56, 1)$ lies on line ℓ_6
467 : $P_{237122} = (1, 56, 56, 1)$ lies on line ℓ_4
468 : $P_{237186} = (1, 57, 56, 1)$ lies on line ℓ_5
469 : $P_{237242} = (57, 57, 56, 1)$ lies on line ℓ_7
470 : $P_{237689} = (56, 0, 57, 1)$ lies on line ℓ_7
471 : $P_{241218} = (1, 56, 57, 1)$ lies on line ℓ_4
472 : $P_{241273} = (56, 56, 57, 1)$ lies on line ℓ_6
473 : $P_{241282} = (1, 57, 57, 1)$ lies on line ℓ_5
474 : $P_{242876} = (59, 17, 58, 1)$ lies on line ℓ_6
475 : $P_{244476} = (59, 42, 58, 1)$ lies on line ℓ_7
476 : $P_{245314} = (1, 56, 58, 1)$ lies on line ℓ_4
477 : $P_{245378} = (1, 57, 58, 1)$ lies on line ℓ_5
478 : $P_{247099} = (58, 19, 59, 1)$ lies on line ℓ_7
479 : $P_{248507} = (58, 41, 59, 1)$ lies on line ℓ_6
480 : $P_{249410} = (1, 56, 59, 1)$ lies on line ℓ_4
481 : $P_{249474} = (1, 57, 59, 1)$ lies on line ℓ_5
482 : $P_{251966} = (61, 31, 60, 1)$ lies on line ℓ_7
483 : $P_{252158} = (61, 34, 60, 1)$ lies on line ℓ_6
484 : $P_{253506} = (1, 56, 60, 1)$ lies on line ℓ_4
485 : $P_{253570} = (1, 57, 60, 1)$ lies on line ℓ_5
486 : $P_{255741} = (60, 26, 61, 1)$ lies on line ℓ_6
487 : $P_{256509} = (60, 38, 61, 1)$ lies on line ℓ_7
488 : $P_{257602} = (1, 56, 61, 1)$ lies on line ℓ_4
489 : $P_{257666} = (1, 57, 61, 1)$ lies on line ℓ_5
490 : $P_{258944} = (63, 12, 62, 1)$ lies on line ℓ_7
491 : $P_{261440} = (63, 51, 62, 1)$ lies on line ℓ_6
492 : $P_{261698} = (1, 56, 62, 1)$ lies on line ℓ_4
493 : $P_{261762} = (1, 57, 62, 1)$ lies on line ℓ_5
494 : $P_{262975} = (62, 11, 63, 1)$ lies on line ℓ_6
495 : $P_{265663} = (62, 53, 63, 1)$ lies on line ℓ_7
496 : $P_{265794} = (1, 56, 63, 1)$ lies on line ℓ_4
497 : $P_{265858} = (1, 57, 63, 1)$ lies on line ℓ_5

The single points on the surface are:

Points on surface but on no line

The surface has 3782 points not on any line:
Too many to print.

Line Intersection Graph

	0	1	2	3	4	5	6	7
0	0	1	1	1	0	0	0	0
1	1	0	1	0	1	1	1	0
2	1	1	0	0	1	1	0	1
3	1	0	0	0	1	1	1	1
4	0	1	1	1	0	1	0	1
5	0	1	1	1	1	0	1	0
6	0	1	0	1	0	1	0	1
7	0	0	1	1	1	0	1	0

Neighbor sets in the line intersection graph:
Line 0 intersects

Line	ℓ_1	ℓ_2	ℓ_3
in point	P_{61}	P_{60}	P_1

Line 1 intersects

Line	ℓ_0	ℓ_2	ℓ_4	ℓ_5	ℓ_6
in point	P_{61}	P_2	P_2	P_2	P_{3652}

Line 2 intersects

Line	ℓ_0	ℓ_1	ℓ_4	ℓ_5	ℓ_7
in point	P_{60}	P_2	P_2	P_2	P_{3716}

Line 3 intersects

Line	ℓ_0	ℓ_4	ℓ_5	ℓ_6	ℓ_7
in point	P_1	P_{7747}	P_{7811}	P_{7811}	P_{7747}

Line 4 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_5	ℓ_7
in point	P_2	P_2	P_{7747}	P_2	P_{7747}

Line 5 intersects

Line	ℓ_1	ℓ_2	ℓ_3	ℓ_4	ℓ_6
in point	P_2	P_2	P_{7811}	P_2	P_{7811}

Line 6 intersects

Line	ℓ_1	ℓ_3	ℓ_5	ℓ_7
in point	P_{3652}	P_{7811}	P_{7811}	P_{8322}

Line 7 intersects

Line	ℓ_2	ℓ_3	ℓ_4	ℓ_6
in point	P_{3716}	P_{7747}	P_{7747}	P_{8322}

The surface has 4289 points:
Too many to print.