

Pin association of next page die photo exactly reflects the die position mounted on the island of the base ribbon.

14 1f	29 2f	44 3f	59 4f	74 5f	89 6f	104 7f	119 8f	134 9f
13 1e	28 2e	43 3e	58 4e	73 5e	88 6e	103 7e	118 8e	133 9e
12 1d	27 2d	42 3d	57 4d	72 5d	87 6d	102 7d	117 8d	132 9d
11 1c	26 2c	41 3c	56 4c	71 5c	86 6c	101 7c	116 8c	131 9c
10 1b	25 2b	40 3b	55 4b	70 5b	85 6b	100 7b	115 8b	130 9b
9 1a	24 2a	39 3a	54 4a	69 5a	84 6a	99 7a	114 8a	129 9a
8 19	23 29	38 39	53 49	68 59	83 69	98 79	113 89	128 99
7 18	22 28	37 38	52 48	67 58	82 68	97 78	112 88	127 98
6 17	21 27	36 37	51 47	66 57	81 67	96 77	111 87	126 97
5 16	20 26	35 36	50 46	65 56	80 66	95 76	110 86	125 96
4 15	19 25	34 35	49 45	64 55	79 65	94 75	109 85	124 95
3 14	18 24	33 34	48 44	63 54	78 64	93 74	108 84	123 94
2 13	17 23	32 33	47 43	62 53	77 63	92 73	107 83	122 93
1 12	16 22	31 32	46 42	61 52	76 62	91 72	106 82	121 92
0 11	15 21	30 31	45 41	60 51	75 61	90 71	105 81	120 91
Stack# vs. Coordinate (18 MP x 135 (9 x 15) Sectional Photos)								

Micrograph Library

I am introducing total 25 die micrographs I made.

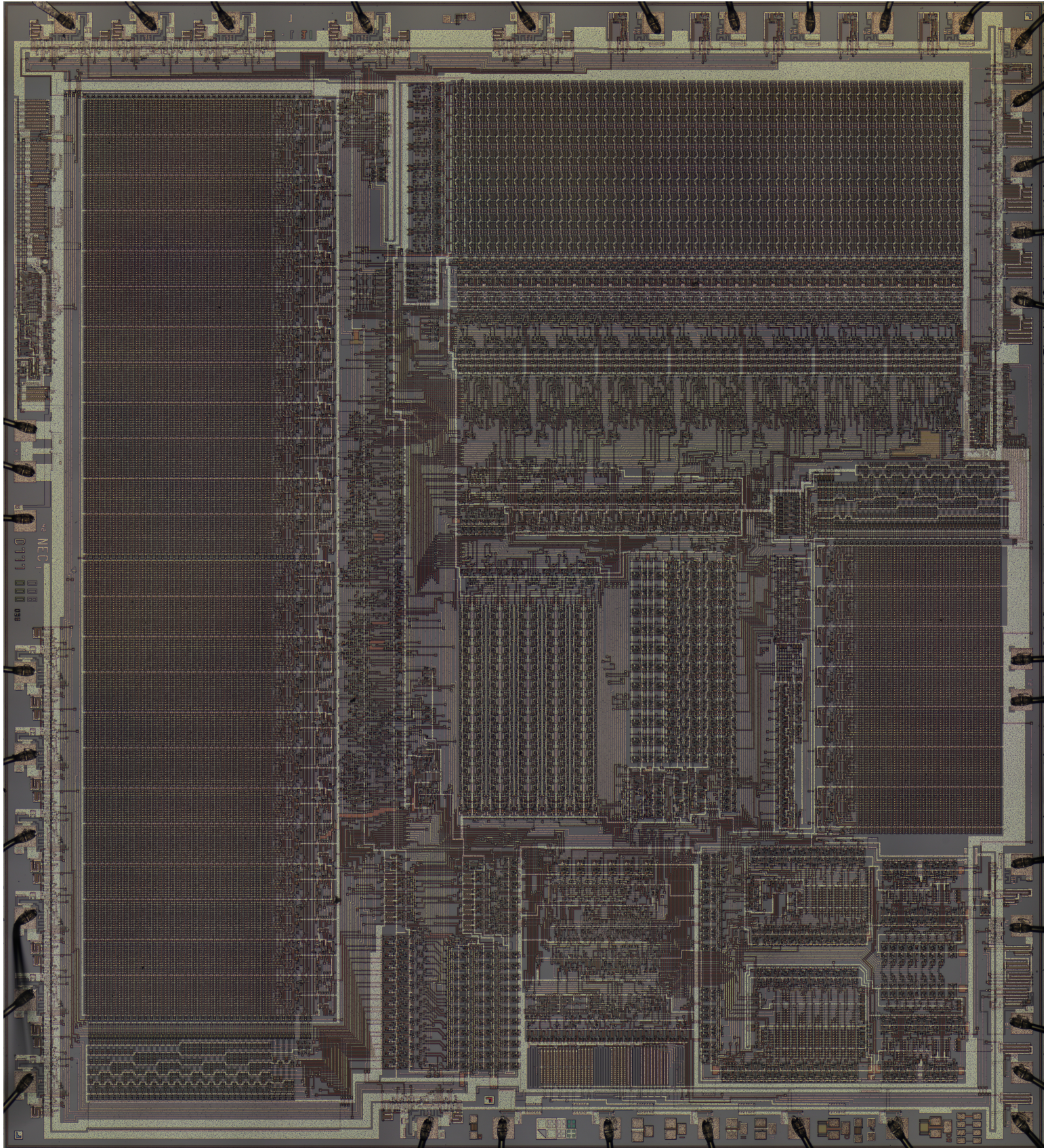
When zooming die micrograph using a smart phone or tablet, you possibly experience limited maximum available zoom factor (up to 2x), slow zooming speed, and sometimes freeze because of the factors such as slow CPU, insufficient main memory capacity, and simplified PDF viewer installed.

I recommend using a desk-top PC with large monitor TV (40"), fast CPU (i7), big capacity of main memory (32/16 GB), and fast GPU (8 GB) if possible.

Design company	Manufacturing company	Product name	Function
NEC		μPD282D	12 Digit Desk-top Calculator (ALU, Registers, etc.) <Tetsuji Oguchi>
		μPD941C	Single-chip 8 Digit 0 memory Desk-top Calculator <Tetsuji Oguchi>
		μPD946C	Single-chip 8 Digit 1 memory Desk-top Calculator
		μPD1201C	Single-chip 12 Digit 1 memory Desk-top Calculator with Printer Control <Tetsuji Oguchi>
		μPD777D	Single-chip Television Game Processor <Tetsuji Oguchi & Toshio Oura>
		μPD777C	
		μPD7220AD	Graphics Display Controller (GDC) <Tetsuji Oguchi>
NEC	Intel	iD82720	Graphics Display Controller (GDC) - License manufacturing (Second source) of μPD7220
NEC		μPD72120L	Advanced Graphics Display Controller (AGDC) <Tetsuji Oguchi, et al.>
		μPD765C	Floppy Disk Controller {NEC Fuchu Peripheral Equipment Division}
		μPD7720AD	Signal Processor {NEC Central Research}
		μPD277	Single-chip 8 Digit 1 memory Desk-top Calculator <Toshio Oura>
Casio	NEC	μPD977	Single-chip 8 Digit 1 memory Desk-top Calculator
		μPD871B	Digital watch
		μPD873G	
Intel		8080A	8 bit Microprocessor
		8085A	
		iD8086	16 bit Microprocessor
Intel	NEC	μPD8086D	16 bit Microprocessor - Reverse engineering of iD8086
	Oki	80C86A	16 bit Microprocessor - License manufacturing (Second source) of iD8086
Zilog		84C00	8 bit Microprocessor (Z80)
Nintendo	Ricoh	RP2C02	Television Game Processor (Family Computer with RP2A03)
Motorola	Ricoh	RP2A03	8 bit Microprocessor - Reverse engineering of Motorola 6800
	Motorola	68000	16 bit Microprocessor (Apple Macintosh)
TI		TMS9918A	Television Game Processor (Multiple chips)

{ }; Architectural design by

<>; Architectural & Logic design by



μPD777D 20x 13000 x 14352 (187 MP) 6400% (64x) Tolerant Synthesized by Hugin