

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.

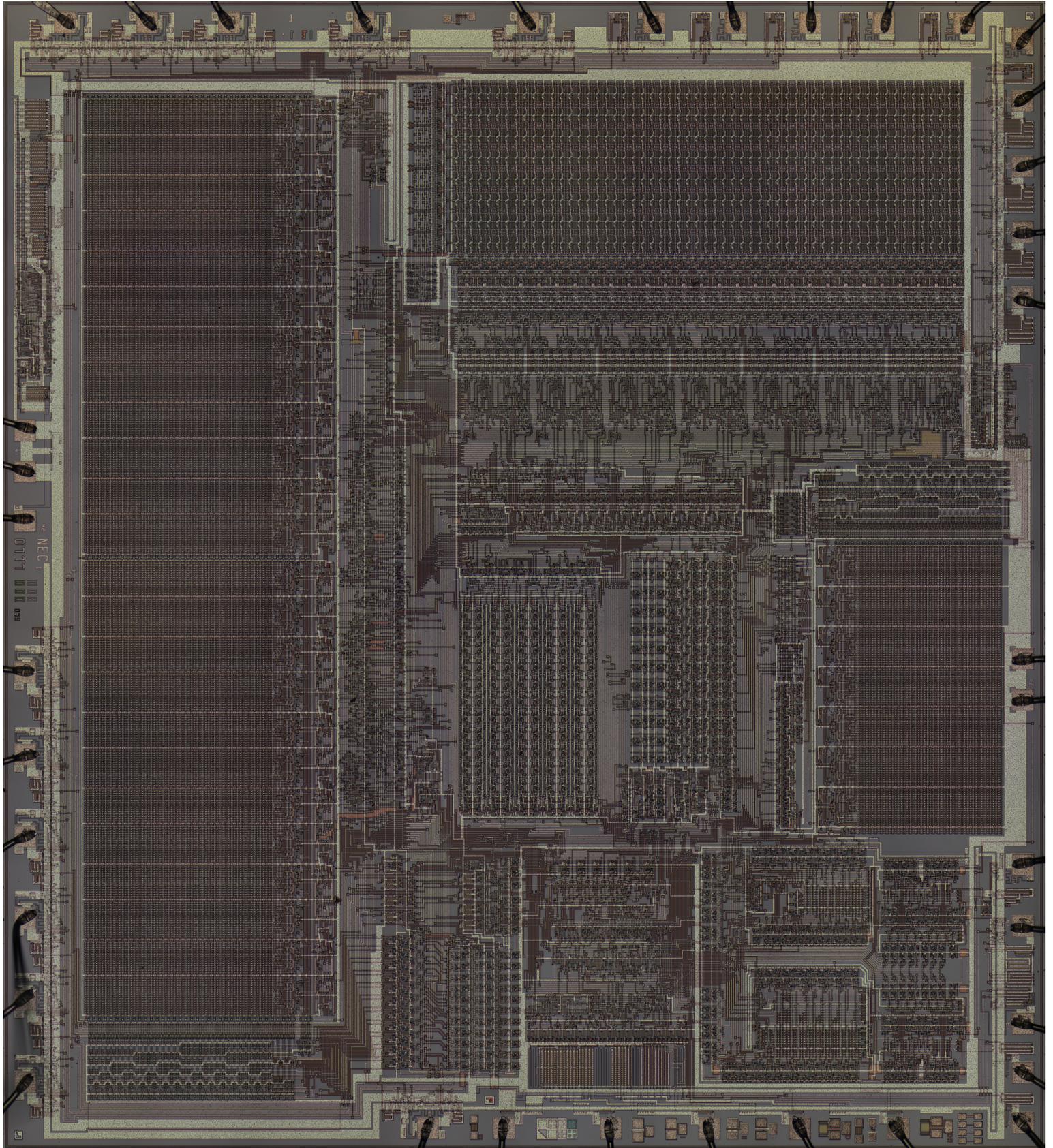
When zooming die micrograph using a smart phone or tablet, you possibly experience limited maximum available zoom factor (up to 2x), slow zooming speed, and sometimes freeze because of the factors such as slow CPU, insufficient main memory capacity, and simplified PDF viewer installed.

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