

Main Specifications of NEC Electronics' 78K0R/Ix3 Microcontrollers

		78K0R/IB3	78K0R/IC3			78K0R/ID3	78K0R/IE3
Pin count and package		30 pin SSOP	38 pin SSOP	44 pin LQFP	48 pin TQFP	52 pin LQFP	64 pin LQFP (10x10mm, 12x12mm)
Internal memory	Flash memory	16K/32K	16K/32K	16K/32K	16K/32K / 48K/64K	32K/48K/64K	32K/48K/64K
	RAM	1K/1.5K	1K/1.5K	1K/1.5K	1K/1.5K/2K/3K	1.5K/2K/3K	1.5K/2K/3K
Main system clock	External oscillator or clock input	2 ~ 20MHz					
	High-speed internal oscillator	8MHz, 20MHz/40MHz*(Typ.) *40MHz for only for 16-bit timers					
Low speed internal oscillator		30KHz for watchdog timers (Typ.)					
Sub clock		-	32.768KHz				
Min. instruction execution time		0.05µS@20MHz					
I/O ports	Total	23	31	37	42	47	57
	CMOS I/O	21	27	33	36	40	50
	CMOS input	2	4	4	4	4	4
	CMOS output	-	-	-	-	1	1
	N-ch open drain	-	-	-	2	2	2
Timers	16-bit timers	12ch					
	Watchdog timers	1ch					
	Real-time counters	-	1ch				
Serial interface	CSI x 2ch/UART	-	-	1ch	1ch	1ch	1ch
	CSI/UART/simplified I2C	1ch	1ch	1ch	1ch	1ch	1ch
	UART	1ch	1ch	-	-	-	-
	Multi-master I2C	-	-	-	1ch	1ch	1ch
Multiplier / divider		16-bit x 16-bit = 32-bit (multiplication) 32-bit / 32-bit = 32-bit (division)					
Analog circuits	10-bit A/D converters	6ch	8ch	10ch	11ch	11ch	12ch
	Programmable gain amplifier	1ch (gain selectable from 1, 4, 6, 8, 10, 12)					
	Comparators	2ch					
DMA controllers		2ch					
Power on clear (POC)		Supported					
Low voltage indicator (LVI)		Supported					
Power supply voltage		2.7V ~ 5.5V					