

IBM PowerPC 405 Embedded Processors



	405GP	405CR	NPe405H	NPe405L
Frequency	200, 266MHz	200, 266MHz	200, 266MHz	200, 266MHz
Technology (CMOS)	.25 μ m (.18 L _{eff})	.25 μ m (.18 L _{eff})	.25 μ m (.18 L _{eff})	.25 μ m (.18 L _{eff})
Performance (Dhrystone 2.1 MIPS)	282 @ 200MHz 375 @ 266MHz	282 @ 200MHz 375 @ 266MHz	282 @ 200MHz 375 @ 266MHz	282 @ 200MHz 375 @ 266MHz
Typical Power (est.)	1.1W	0.8W		
Voltage (logic / I/O)	2.5V / 3.3V	2.5V / 3.3V	2.5V / 3.3V	2.5V / 3.3V
Signal I/Os	301	223	360	206
Case Temp. Range	-40° C to 85° C	-40° C to 85° C	-40° C to 85° C	-40° C to 85° C
Package (mm x mm)	456-PBGA (37x37) 456-PBGA (27x27) 413-PBGA (25x25)	316-PBGA (27x27)	580-PBGA (35x35)	324-PBGA (23x23)
I-Cache / D-Cache	16K / 8K	16K / 8K	16K / 8K	16K / 8K
MMU	Yes	Yes	Yes	Yes
Timers	Yes	Yes	Yes	Yes
Interrupt Controller	Yes	Yes	Yes	Yes
DRAM Controller	Yes	Yes	Yes	Yes
DMA Controller	4-Channel	4-Channel	4-Channel	4-Channel
Serial Port(s)	2	2	1	1
PCI Interface	66MHz	No	66MHz	No
Ethernet	10/100 (1)	No	10/100 (4)	10/100 (2)
HDLC	No	No	32-Channel & 8-port	32-Channel
On-Chip Memory	4KB SRAM	No	No	No
CodePack™ Compression	Yes	Yes	No	No



IBM PowerPC 401 and 403 Embedded Processors



	401GF	403GA	403GB	403GC	403GCX
Frequency	50MHz	25, 33, 40MHz	28MHz	25, 33, 40MHz	50, 66, 80MHz
Technology (CMOS)	.5µm	.5µm	.5µm	.5µm	.45µm
Performance (Dhrystone 2.1 MIPS)	53 @ 50MHz	46 @ 33MHz	39 @ 28MHz	56 @ 40MHz	112 @ 80MHz
Typical Power (est.)	0.2W@50MHz	0.26W@33MHz	0.21W@28MHz	0.32W@40MHz	0.51W@80MHz
Voltage	3.3V	3.3V	3.3V	3.3V	3.3V
Signal I/Os	63	126	104	126	126
Case Temp. Range	0° C to 85° C	-40° C to 85° C	-40° C to 85° C	-40° C to 85° C	-40° C to 85° C
Package	80-PQFP	160-PQFP	128-TQFP	160-PQFP	160-PQFP 160-CBGA
I-Cache / D-Cache	2K / 1K	2K / 1K	2K / 1K	2K / 1K	16K / 8K
MMU	No	No	No	Yes	Yes
DRAM Controller	No	Yes	Yes	Yes	Yes
DMA Controller	No	4-Channel	2-Channel	4-Channel	4-Channel
Serial Port(s)	No	Yes	No	Yes	Yes
Interrupt Controller	Yes	Yes	Yes	Yes	Yes
Timers	4	4	4	4	4