

30. Ordering Information

30.1 ATmega48P

Speed (MHz)	Power Supply	Ordering Code ⁽²⁾	Package ⁽¹⁾	Operational Range
10 ⁽³⁾	1.8 - 5.5	ATmega48PV-10AU ATmega48PV-10MMU ATmega48PV-10MU ATmega48PV-10PU	32A 28M1 32M1-A 28P3	Industrial (-40°C to 85°C)
20 ⁽³⁾	2.7 - 5.5	ATmega48P-20AU ATmega48P-20MMU ATmega48P-20MU ATmega48P-20PU	32A 28M1 32M1-A 28P3	Industrial (-40°C to 85°C)

- Note:
1. This device can also be supplied in wafer form. Please contact your local Atmel sales office for detailed ordering information and minimum quantities.
 2. Pb-free packaging complies to the European Directive for Restriction of Hazardous Substances (RoHS directive). Also Halide free and fully Green.
 3. See [Figure 26-1 on page 317](#) and [Figure 26-2 on page 317](#).

Package Type	
32A	32-lead, Thin (1.0 mm) Plastic Quad Flat Package (TQFP)
28M1	28-pad, 4 x 4 x 1.0 body, Lead Pitch 0.45 mm Quad Flat No-Lead/Micro Lead Frame Package (QFN/MLF)
32M1-A	32-pad, 5 x 5 x 1.0 body, Lead Pitch 0.50 mm Quad Flat No-Lead/Micro Lead Frame Package (QFN/MLF)
28P3	28-lead, 0.300" Wide, Plastic Dual Inline Package (PDIP)