






Intel® Celeron® Processor 1020E (2M Cache, 2.20 GHz)

Essentials	
Status	Launched
Launch Date	Q1'13
Processor Number	1020E
# of Cores	2
# of Threads	2
Clock Speed	2.2 GHz
Intel® Smart Cache	2 MB
DMI	5 GT/s
Instruction Set	64-bit
Instruction Set Extensions	SSE4.1, 4.2
Embedded Options Available	 Yes
Lithography	22 nm
Max TDP	35 W
Description	ECC on BGA only

Memory Specifications	
Max Memory Size (dependent on memory type)	16 GB
Memory Types	DDR3/L - 1333/1600
# of Memory Channels	2
Max Memory Bandwidth	25.6 GB/s
ECC Memory Supported	 Yes

Graphics Specifications

Processor Graphics	Intel® HD Graphics
Graphics Base Frequency	650 MHz
Graphics Max Dynamic Frequency	1 GHz
Graphics Output	eDP/DP/HDMI/SDVO/CRT
Intel® Quick Sync Video	No
Intel® InTru™ 3D Technology	No
Intel® Insider™	No
Intel® Wireless Display	 No
Intel® Clear Video HD Technology	No
# of Displays Supported	3

Expansion Options

PCI Express Revision	2.0
PCI Express Configurations	1x16, 2x8, 1x8 & 2x4
# of PCI Express Lanes	1

Package Specifications

Max CPU Configuration	1
T _{JUNCTION}	105C
Package Size	37.5mm x 37.5mm (rPGA988B); 31mm x 24mm (BGA1023)
Graphics and IMC Lithography	22 nm
Sockets Supported	FCBGA1023, FCPGA988
Low Halogen Options Available	See MDDS






Expansion Options

PCI Express Revision	2.0
PCI Express Configurations	1x16, 2x8, 1x8 & 2x4
# of PCI Express Lanes	1

Package Specifications

Max CPU Configuration	1
T _{JUNCTION}	105C
Package Size	37.5mm x 37.5mm (rPGA988B); 31mm x 24mm (BGA1023)
Graphics and IMC Lithography	22 nm
Sockets Supported	FCBGA1023, FCPGA988
Low Halogen Options Available	See MDDS

Advanced Technologies

Intel® vPro Technology	 No
Intel® Hyper-Threading Technology	 No
Intel® Virtualization Technology (VT-x)	 Yes
Intel® Virtualization Technology for Directed I/O (VT-d)	 No
Intel® Trusted Execution Technology	 No
AES New Instructions	 No
Intel® 64	 Yes
Intel® Anti-Theft Technology	No
Intel® My WiFi Technology	No
Idle States	Yes
Enhanced Intel SpeedStep® Technology	 Yes
Thermal Monitoring Technologies	Yes
Intel® Fast Memory Access	Yes
Intel® Flex Memory Access	Yes
Execute Disable Bit	Yes
Intel® VT-x with Extended Page Tables (EPT)	 Yes

ORDERING AND SPEC INFORMATION

Intel® Celeron® Processor 1020E (2M Cache, 2.20 GHz) FC-BGA12F, Tray

Socket	Step	TDP	Ordering Code	Spec Code	VT-x
FCBGA1023	P0	35 W	AV8063801276200	SR0VR	

Intel® Celeron® Processor 1020E (2M Cache, 2.20 GHz) FC-PGA12F , Tray

Socket	Step	TDP	Ordering Code	Spec Code	VT-x
FCPGA988	P0	35 W	AW8063801117700	SR10D	