

# Technical Specifications

## Essentials

Code Name

Products formerly Coffee Lake

Vertical Segment

Desktop

Processor Number

i3-8100

Status

Launched

Launch Date

Q4'17

Lithography

14 nm

## Performance

# of Cores

4

# of Threads

4

Processor Base Frequency

3.60 GHz

Cache

6 MB SmartCache

Bus Speed

8 GT/s DMI3

TDP

65.0 W

## Supplemental Information

Embedded Options Available

No

Conflict Free

Yes

## Memory Specifications

Max Memory Size (dependent on memory type)

64 GB

Memory Types

DDR4-2400

Max # of Memory Channels

2

ECC Memory Supported ‡

Yes

## Graphics Specifications

Graphics Base Frequency

350.0 MHz

Graphics Max Dynamic Frequency

1.10 GHz

Graphics Video Max Memory

64 GB

4K Support

Yes, at 60Hz

Max Resolution (HDMI 1.4)‡

4096x2304@24Hz

Max Resolution (DP)‡

4096x2304@60Hz

Max Resolution (eDP - Integrated Flat Panel)‡

4096x2304@60Hz

DirectX\* Support

12

OpenGL\* Support

4.5

Intel® Quick Sync Video

Yes

Intel® InTru™ 3D Technology

Yes

Intel® Clear Video HD Technology

Yes

Intel® Clear Video Technology

Yes

# of Displays Supported ‡

3

Device ID

0x3E91/x92

## Expansion Options

Scalability

1S Only

PCI Express Revision

3.0

PCI Express Configurations ‡

Up to 1x16, 2x8, 1x8+2x4

Max # of PCI Express Lanes  
16

## Package Specifications

Sockets Supported  
FCLGA1151  
Max CPU Configuration  
1  
Thermal Solution Specification  
PCG 2015C (65W)  
T<sub>JUNCTION</sub>  
100°C  
Package Size  
37.5mm x 37.5mm  
Low Halogen Options Available  
See MDDS

## Advanced Technologies

Intel® Optane™ Memory Supported ‡  
Yes  
Intel® Turbo Boost Technology ‡  
No  
Intel® vPro Technology ‡  
No  
Intel® Hyper-Threading Technology ‡  
No  
Intel® Virtualization Technology (VT-x) ‡  
Yes  
Intel® Virtualization Technology for Directed I/O (VT-d) ‡  
Yes  
Intel® VT-x with Extended Page Tables (EPT) ‡  
Yes  
Intel® TSX-NI  
No  
Intel® 64 ‡  
Yes  
Instruction Set  
64-bit  
Instruction Set Extensions  
Intel® SSE4.1, Intel® SSE4.2, Intel® AVX2  
Idle States  
Yes  
Enhanced Intel SpeedStep® Technology  
Yes

Thermal Monitoring Technologies

Yes

Intel® Identity Protection Technology ‡

Yes

Intel® Stable Image Platform Program (SIPP)

No

## **Security & Reliability**

Intel® AES New Instructions

Yes

Secure Key

Yes

Intel® Software Guard Extensions (Intel® SGX)

Yes

Intel® Memory Protection Extensions (Intel® MPX)

Yes

OS Guard

Yes

Trusted Execution Technology ‡

No

Execute Disable Bit ‡

Yes

Intel® Device Protection Technology with Boot Guard

Intel® Device Protection Technology with Boot Guard helps protect the system's pre-OS environment from viruses and malicious software attacks.

Yes