



## Intel® Xeon® E-2176G Processor

12M Cache, up to 4.70 GHz

Spec Code

SR3WS

Ordering Code

CM8068403380018

### Intel® Xeon® E-2176G Processor (12M Cache, up to 4.70 GHz)

|                                                |                          |
|------------------------------------------------|--------------------------|
| Code Name                                      | Coffee Lake              |
| <b><u>Essentials</u></b>                       |                          |
| Vertical Segment                               | Server                   |
| Processor Number                               | E-2176G                  |
| Status                                         | Launched                 |
| Launch Date                                    | Q3'18                    |
| Lithography                                    | 14 nm                    |
| Recommended Customer Price                     | \$362.00                 |
| Use Conditions                                 | PC/Client/Tablet         |
| <b><u>Performance</u></b>                      |                          |
| # of Cores                                     | 6                        |
| # of Threads                                   | 12                       |
| Processor Base Frequency                       | 3.70 GHz                 |
| Max Turbo Frequency                            | 4.70 GHz                 |
| Cache                                          | 12 MB SmartCache         |
| Bus Speed                                      | 8 GT/s DMI3              |
| TDP                                            | 80 W                     |
| <b><u>Supplemental Information</u></b>         |                          |
| Embedded Options Available                     | Yes                      |
| Datasheet                                      | <a href="#">Link</a>     |
| <b><u>Memory Specifications</u></b>            |                          |
| Max Memory Size (dependent on memory type)     | 64 GB                    |
| Memory Types                                   | DDR4-2666                |
| Max # of Memory Channels                       | 2                        |
| Max Memory Bandwidth                           | 41.6 GB/s                |
| ECC Memory Supported ‡                         | Yes                      |
| <b><u>Processor Graphics</u></b>               |                          |
| Processor Graphics <sup><small>‡</small></sup> | Intel® UHD Graphics P630 |

|                                                          |                                           |
|----------------------------------------------------------|-------------------------------------------|
| Graphics Base Frequency                                  | 350 MHz                                   |
| Graphics Max Dynamic Frequency                           | 1.20 GHz                                  |
| Graphics Video Max Memory                                | 64 GB                                     |
| Graphics Output                                          | eDP/DP/HDMI/DVI                           |
| 4K Support                                               | Yes, at 60Hz                              |
| Max Resolution (HDMI 1.4)‡                               | 4096x2160@24Hz                            |
| Max Resolution (DP)‡                                     | 4096x2304@60Hz                            |
| Max Resolution (eDP - Integrated Flat Panel)‡            | 4096x2304@60Hz                            |
| Max Resolution (VGA)‡                                    | N/A                                       |
| 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                                                | 0x3E96                                    |
| <b><u>Expansion Options</u></b>                          |                                           |
| Scalability                                              | 1S Only                                   |
| PCI Express Revision                                     | 3                                         |
| PCI Express Configurations ‡                             | 1x16,2x8,1x8+2x4                          |
| Max # of PCI Express Lanes                               | 16                                        |
| <b><u>Package Specifications</u></b>                     |                                           |
| Sockets Supported                                        | FCLGA1151                                 |
| Max CPU Configuration                                    | 1                                         |
| Package Size                                             | 37.5mm x 37.5mm                           |
| Low Halogen Options Available                            | See MDDS                                  |
| <b><u>Advanced Technologies</u></b>                      |                                           |
| Intel® Optane™ Memory Supported ‡                        | Yes                                       |
| Intel® Turbo Boost Technology                            | 2                                         |
| Intel® vPro™ Technology ‡                                | Yes                                       |
| Intel® Hyper-Threading Technology ‡                      | Yes                                       |
| 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                                            | Yes                                       |
| 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 |
| <b><u>Security &amp; Reliability</u></b>         |     |
| Intel® AES New Instructions                      | Yes |
| Secure Key                                       | Yes |
| Intel® Software Guard Extensions (Intel® SGX)    | Yes |
| Intel® Memory Protection Extensions (Intel® MPX) | Yes |
| Intel® OS Guard                                  | Yes |
| Intel® Trusted Execution Technology ‡            | Yes |
| Execute Disable Bit ‡                            | Yes |
| Intel® Boot Guard                                | Yes |

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