



# Intel® Celeron® Processor G5900E

2M Cache, 3.20 GHz

Spec Code

SRH7T

Ordering Code

CM8070104424111

| Intel® Celeron® Processor G5900E (2M Cache, 3.20 GHz) |                                       |
|---|---------------------------------------|
| <b>Essentials</b>                                     |                                       |
| Product Collection                                    | Intel® Celeron® Processor G Series    |
| Code Name   | Products formerly Comet Lake          |
| Vertical Segment                                      | Embedded                              |
| Processor Number                                      | G5900E                                |
| Status  | Launched                              |
| Launch Date   | Q2'20                                 |
| Lithography   | 14 nm                                 |
| Use Conditions  | Embedded Broad Market Commercial Temp |
| Recommended Customer Price                            | \$44.00                               |
| <b>Performance Specifications</b>                     |                                       |
| # of Cores  | 2                                     |
| # of Threads  | 2                                     |
| Processor Base Frequency                              | 3.20 GHz                              |
| Cache   | 2 MB Intel® Smart Cache               |
| Bus Speed   | 8 GT/s                                |
| TDP   | 58 W                                  |
| <b>Supplemental Information</b>                       |                                       |
| Embedded Options Available                            | Yes                                   |
| <b>Memory Specifications</b>                          |                                       |
| Max Memory Size (dependent on memory type)            | 128 GB                                |
| Memory Types  | DDR4-2400                             |
| Max # of Memory Channels                              | 2                                     |
| Max Memory Bandwidth                                  | 37.5 GB/s                             |
| ECC Memory Supported ‡                                | No                                    |
| <b>Processor Graphics</b>                             |                                       |
| Processor Graphics ‡                                  | Intel® UHD Graphics 610               |
| Graphics Base Frequency                               | 350 MHz                               |
| Graphics Max Dynamic Frequency                        | 1.00 GHz                              |
| Graphics Video Max Memory                             | 64 GB                                 |
| 4K Support  | Yes, at 60Hz                          |
| Max Resolution (HDMI 1.4)‡                            | 4096x2160@30Hz                        |

|  |                              |
|--|------------------------------|
| 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  | 0x9BA8                       |
| <b>Expansion Options</b>                                   |                              |
| Scalability  | 1S Only                      |
| PCI Express Revision                                       | 3                            |
| PCI Express Configurations ‡                               | Up to 1x16, 2x8, 1x8+2x4     |
| Max # of PCI Express Lanes                                 | 16                           |
| <b>Package Specifications</b>                              |                              |
| Sockets Supported  | FCLGA1200                    |
| Max CPU Configuration                                      | 1                            |
| Thermal Solution Specification                             | PCG2015C                     |
| TJUNCTION  | 100°C                        |
| Package Size   | 37.5mm x 37.5mm              |
| <b>Advanced Technologies</b>                               |                              |
| Intel® Turbo Boost Technology ‡                            | No                           |
| Intel vPro® Platform Eligibility ‡                         | 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® 64 ‡  | Yes                          |
| Instruction Set  | 64-bit                       |
| Instruction Set Extensions                                 | Intel® SSE4.1, Intel® SSE4.2 |
| Idle States  | Yes                          |
| Enhanced Intel SpeedStep® Technology                       | Yes                          |
| Thermal Monitoring Technologies                            | Yes                          |
| Intel® Identity Protection Technology ‡                    | Yes                          |
| Intel® Stable Image Platform Program (SIPP)                | No                           |
| <b>Security &amp; Reliability</b>                          |                              |
| Intel® AES New Instructions                                | Yes                          |
| Secure Key   | Yes                          |
| Intel® Software Guard Extensions (Intel® SGX)              | Yes with Intel® ME           |
| Intel® OS Guard  | Yes                          |
| Intel® Trusted Execution Technology ‡                      | No                           |
| Execute Disable Bit ‡                                      | Yes                          |
| Intel® Boot Guard  | Yes                          |