

cExpress-SL

COM Express Compact Size Type 6 Module with 6th Gen Intel® Core™ and Celeron® Processors

NEW



Features

- 6th Generation Intel® Core™ and Celeron® Processors
- Up to 32GB Dual Channel non-ECC DDR4 at 1867/2133MHz
- Two DDI channels, one LVDS (build option 4 lanes eDP), supports up to 3 independent displays
- Up to 6 PCIe x1 (build option) GbE
- Up to three SATA 6 Gb/s, four USB 3.0 and four USB 2.0
- Supports Smart Embedded Management Agent (SEMA) functions
- Extreme Rugged™ operating temperature: -40°C to +85°C (build option)

Specifications

Core System

CPU	6th Generation Intel® Core™ and Celeron® Processors - Mobile 14nm process (formerly "Skylake-U") Core™ i7-6600U 2.6/3.4GHz (Turbo), 4M, 15W (7.5W cTDP) (2C/GT2) Core™ i5-6300U 2.4/3.0GHz (Turbo), 3M, 15W (7.5W cTDP) (2C/GT2) Core™ i3-6100U 2.3GHz, 3M, 15W (7.5W cTDP) (2C/GT2) Celeron® 3955U 2GHz, 2M, 15W (10W cTDP) (2C/GT1) Supports: Intel® VT, Intel® TXT, Intel® SSE4.2, Intel® HT Technology, Intel® 64 Architecture, Execute Disable Bit, Intel® Turbo Boost Technology 2.0, Intel® AVX2, Intel® AES-NI, PCLMULQDQ Instruction, Intel® Secure Key and Intel® TSX. Note: Availability of features may vary between processor SKUs.
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Dual channel 1867/2133 MHz non-ECC DDR4 memory up to 32GB in dual SODIMM socket

Memory

Embedded BIOS

Cache

Expansion Busses

SEMA Board Controller

Debug Headers

Video

GPU Feature Support

Digital Display Interface

Audio

Chipset

Note: "Build option" indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product. Be aware that part numbers for SKUs with "build options" will need to be created and may cause production lead times.

Ethernet

Intel® MAC/PHY	i219LM with AMT 11.0 support
Interface	10/100/1000 GbE connection

I/O Interfaces

USB	4x USB 1.1/2.0/3.0 (USB 0,1,2,3) and 4x USB 1.1/2.0 (USB 4,5,6,7)
SATA	Up to three ports SATA 6 Gb/s (SATA 0,1,2; Celeron® supports two ports only)
Serial	2 UART ports with console redirection
GPIO	4 GPO and 4 GPI from BMC

Super I/O

Supported on carrier if needed (standard support for W83627DHG-P)

TPM

Chipset	Atmel AT97SC3204
Type	TPM 1.2

Power

Standard Input	ATX = 12V±5% / 5Vsb ±5% or AT = 12V±5%
Wide Input	ATX = 5-20V / 5Vsb ±5% or AT = 5-20V
Management	ACPI 5.0 compliant, Smart Battery support
Power States	C1-C6, S0, S1, S3, S4, S5 , S5 ECO mode (Wake on USB S3/S4, WOL S3/S4/S5)
ECO mode	support deep S5 mode for power saving

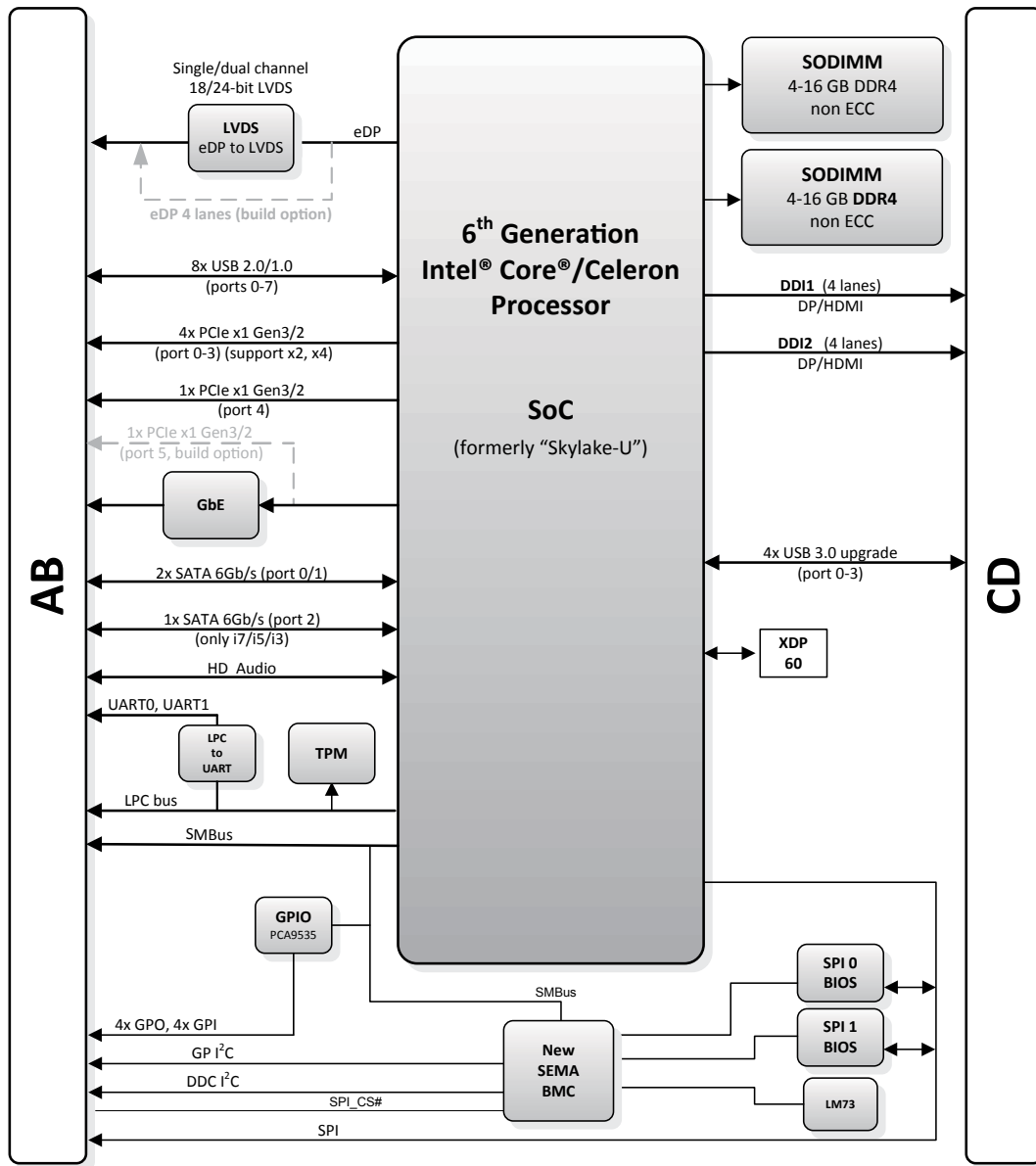
Mechanical and Environmental

Form Factor	PICMG COM.0: Rev 2.1 Type 6
Dimension	Compact size: 95 mm x 95 mm
Operating Temperature	Standard: 0°C to 60°C Extreme Rugged™: -40°C to +85°C (build option)
Humidity	5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating)
Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D
HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

Operating Systems

Standard Support	Windows 7 32/64-bit, Windows 10/8.1 64-bit, Linux 64-bit
Extended Support (BSP)	WES7 32/64-bit, Linux 64-bit

Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
cExpress-SL-i7-6600U	Compact COM Express® Type 6 module with Intel® Core™ i7-6600U and GT2 graphics
cExpress-SL-i5-6300U	Compact COM Express® Type 6 module with Intel® Core™ i5-6300U and GT2 graphics
cExpress-SL-i3-6100U	Compact COM Express® Type 6 module with Intel® Core™ i3-6100U and GT2 graphics
cExpress-SL-3955U	Compact COM Express® Type 6 module with Intel® Celeron® 3955U and GT1 graphics

Starter Kit

Model Number	Description/Configuration
COM Express Type 6 Starter Kit Plus	Starter kit for cExpress-SL

Accessories

Model Number	Description/Configuration
Heat Spreaders	
HTS-cSL-B	Heatspreader for cExpress-SL with threaded standoffs for bottom mounting
HTS-cSL-BT	Heatspreader for cExpress-SL with through hole standoffs for top mounting
Passive Heatsinks	
THS-cSL-B	Low profile heatsink for cExpress-SL with threaded standoffs for bottom mounting
THS-cSL-BT	Low profile heatsink for cExpress-SL with through hole standoffs for top mounting
THSH-cSL-B	High profile heatsink for cExpress-SL with threaded standoffs for bottom mounting
Active Heatsink	
THSF-cSL-B	High profile heatsink with Fan for cExpress-SL with threaded standoffs for bottom mounting

Note: All specifications are subject to change without further notice.