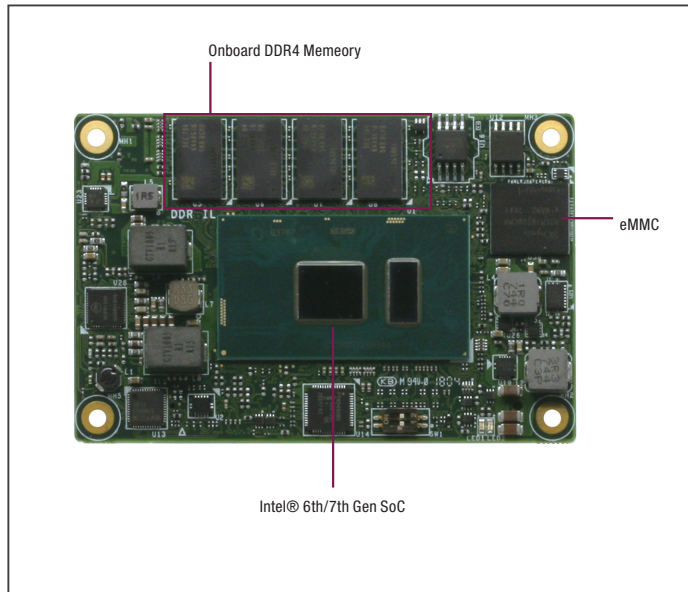


# NanoCOM-KBU-A20

COM Express Type 10 with 7th Generation Intel® Core™ ULT Series Processor



## Features

- 7th Generation Intel® Core™ U- Series SoC Processor
- Onboard 8GB DDR4 2133 Memory
- Onboard 64 GB eMMC Support
- Intel® I219LM Gigabit Ethernet x 1
- 18/24-bit Single-Channel LVDS LCDs (Option : eDP), DDI x 1
- High Definition Audio Interface
- SATA3 x 2
- USB 3.2 Gen 1 x 2, USB 2.0 x 8
- PCI-Express [x1] x 4
- GPIO x 8, SMBus, I2C, LPC
- COM Express Type 10, Mini Size, 84 mm x 55 mm
- Supports Industrial Grade Temperature

## Specifications

System	
Form Factor	COM Express Mini size, Type 10
CPU	Onboard 7th Generation Intel® Core™ U- Series SoC Processor
CPU Frequency	Up to i7-7600U 2C / 2.8 GHz
Chipset	Onboard 7th Generation Intel® Core™ U-series SoC
Memory Type	Onboard Non-ECC DDR4-2133
Max. Memory Capacity	8GB DDR4
BIOS	AMI BIOS, Legacy free
Wake on LAN	Yes
Watchdog Timer	255 Levels
Power Requirement	Standard: +12V
Power Supply Type	AT/ATX
Power Consumption (Typical)	i7-7600U, Onboard 8GB DDR4, full loading 1.83A@12V during 100% loading burn in test
Dimension (L x W)	3.31" x 2.17" (84 mm x 55 mm)
Operating Temperature	32 °F ~ 140 °F (0 °C ~ 60 °C) -40 °F ~ 185 °F (-40 °C ~ 85 °C) Option for NANOCOM-SKU series
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	80,000
Certification	CE/FCC Class A
Display	
VGA/LCD Controller	Intel® HD Graphics 620/610
Video Output	LVDS LCD (eDP Optional), DDI x 1
LVDS Interface	Supports 18-bit and 24-bit Single channel
I/O	
Ethernet	Intel® I219-LM
Audio	High Definition Audio Interface
USB port	USB 2.0 x 8, USB 3.2 Gen 1 x 2
Serial Port	2-Wire UART (TX/RX) x 2
HDD Interface	SATA3 x 2
Onboard Storage	eMMC Optional
Expansion Slot	PCIe [x1] x 4 (up to 4 devices) LPC SMBus I2C
GPIO	8-bit
TPM	fTPM Supported



## Packing List

- NanoCOM-KBU-A20

## Optional Accessories

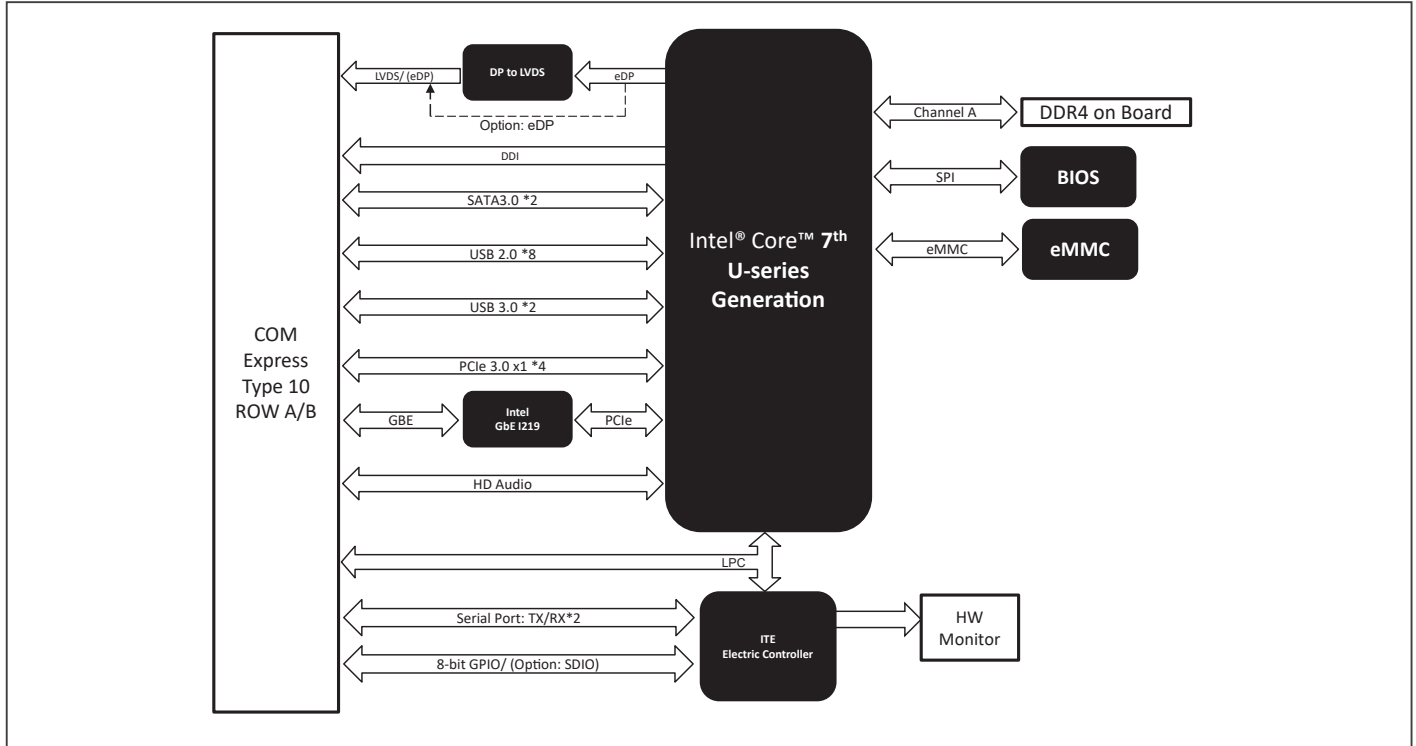
- **ECB-920A-A10-0001**  
COM Type 1/6/10 Carrier Board, ATX, GbE, 8 USB, 2 COM, 4 SATA, PCIe, AT/ATX, Legacy Free, Rev. A1.0
- **NanoCOM-SKU-HSP01**  
Heat Spreader, 84 x 55 x 11 mm, Black, NanoCOM-SKU
- **NanoCOM-FAN01**  
CPU Cooler, 84 x 55 x 22.2 mm, Silver use w/ HSP
- **NanoCOM-KBU-FAN01**  
CPU Cooler, 84 x 55 x 18 mm, Black, NanoCOM-KBU

## CPU Support Chart

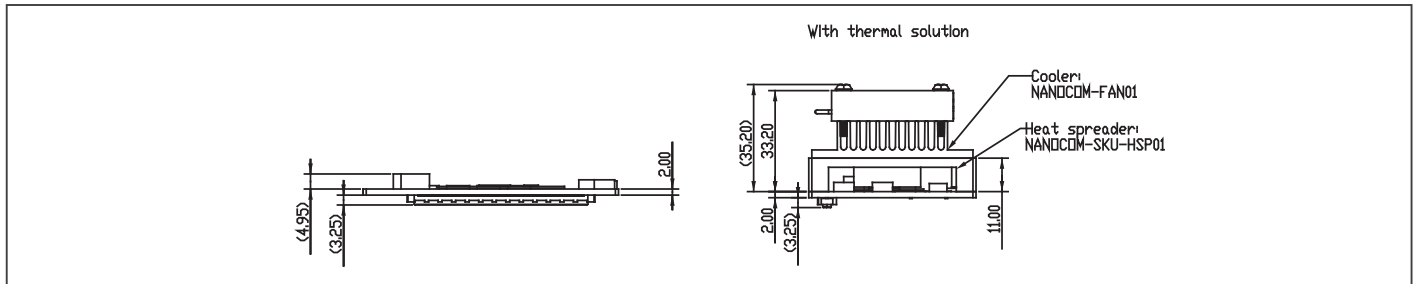
CPU Kabylake	Base Frequency/Turbo Boost GHz	Core/Thread	Graphic
i7-7600U	2.8/3.9	2/4	i7-7600U / HD620
i5-7300U	2.6/3.5	2/4	i5-7300U / HD620
i3-7100U	2.4	2/4	i3-7100U / HD620
C-3965U	2.2	2/2	C3965U / HD610

\* 6xxxU SoC supported as option

### Block Diagram Unit: mm



### Dimension Unit: mm



### Ordering Information

Standard Part Number	COM Express Type	CPU	Memory	Display	LVDS	Storage	LAN	USB	UART	Expansion Slot	Power	Temp	Others
NanoCOM-KBU-A20-0001	10 (COM.0 Rev 3.0)	7th Gen. Intel® Core™ i7-7600U 2.8 GHz	8GB DDR4	LVDS (Option : eDP), DDI x 1	18/24b 1CH (LVDS share with eDP)	SATA3 x 2 eMMC 64GB	GbE x 1	USB 3.2 Gen 1 x 2 USB 2.0 x 8	2-wire (Tx/Rx) x 2	PCIe (x1) x 4	+12V	0°C~60°C	LPC, GPIO 8 bit, I2C, SMBus