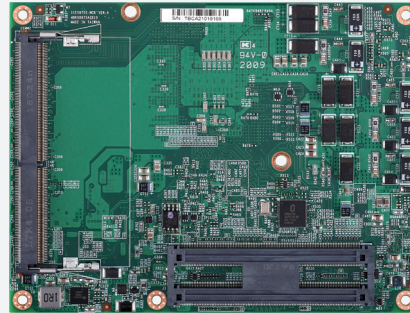
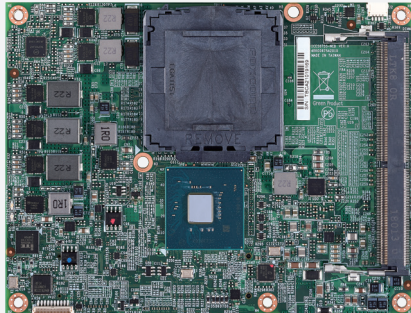


# ICES 675S

COM Express Type 6-Pinouts  
8/9th Gen Intel® Core™/Xeon® Processors



## Main Features

- 8/9th Gen Intel® Core™ processors, socket 1151, PCH C246
- 2-Channel DDR4 with ECC or non-ECC SO-DIMM 2666MHZ up to 32GB
- Support triple display VGA, 2 x DP, eDP/LVDS 24bit dual channel
- PCI express lane x16 (configurable: "1 x 16"; "2 x 8"; "1 x 8 + 2 x 4")
- PCI express lane x1 (Gen 3), 8 x (can be configured x1, x 4)
- IO: 2 x UART (RX/TX), 8 Bit DIO, WDT, TPM (optional)

## Product Overview

The ICES 675S series is a COM express type 6-pinouts basic module which featuring Intel® C240 series PCH chipset supports Intel® 8/9th Generation Intel® Core™ processors, socket 1151, DDR4 with ECC or non-ECC SO-DIMM 2666MHZ up to 32GB. The ICES 675S-NCB integrated Intel® HD graphics engines support or expands via PCI express graphic 1 x16 lanes and support three DDI (Digital Display Interface) to follow the standard of PICMG COM 2.0 specification. It allows type 6-pinout carrier board to implement DDI and legacy VGA interface.

The high performance ICES 675 COM express basic module supports 1 x GBE LAN, 4 x USB 3.1 GEN1, 8 x USB 2.0, 4 x SATA 3.0, 2 x UART (TX/RX), HD audio, 8 bit DIO, TPM (optional) ICEB 8060 as well as customized solution for your embedded projects.

## Specifications

### CPU Support

- 8/9th Intel® (Coffee Lake-S) Xeon® and Core™ i7/ i5 /i3 processor and LGA1151 socket, TDP max 65W
- CPU support list
  - 35W: Xeon® E-2278GEL (8C) (with ECC)
  - 65W: i7-8700 (6c)/i5-8500 (6c)/i3-8100 (4c) (with ECC)
  - 35W: i7-8700T (6c)/i5-8500T (6c)/i3-8100T (4c) (with ECC)
  - 35W: i7-9700TE (8c)/i5-9500TE (6c)/i3-9100TE (4c) (with ECC)
- PCH C246

### Main Memory

- Dual channel DDR4 SO-DIMM memory socket with non-ECC support, up to 32GB 2666MHZ, ECC support as option with Intel® i3-8100, i3-8100T, i3-9100TE

### Display

- Integrated Intel® Gen9 Graphics graphic engine
- 1 x VGA connector (resolution up to 1920 x 1080 @60Hz)
- 1 x LVDS connector (resolution up to 1920 x 1080 @60Hz)
- DDI 1/2 port configurable to HDMI 1.4/DVI/Display port 1.4 HDMI up to 4096 x 2160 @30Hz/24bpp, DVI up to 1920 x 1200 @60Hz, DP up to 4096 x 2304 @60Hz

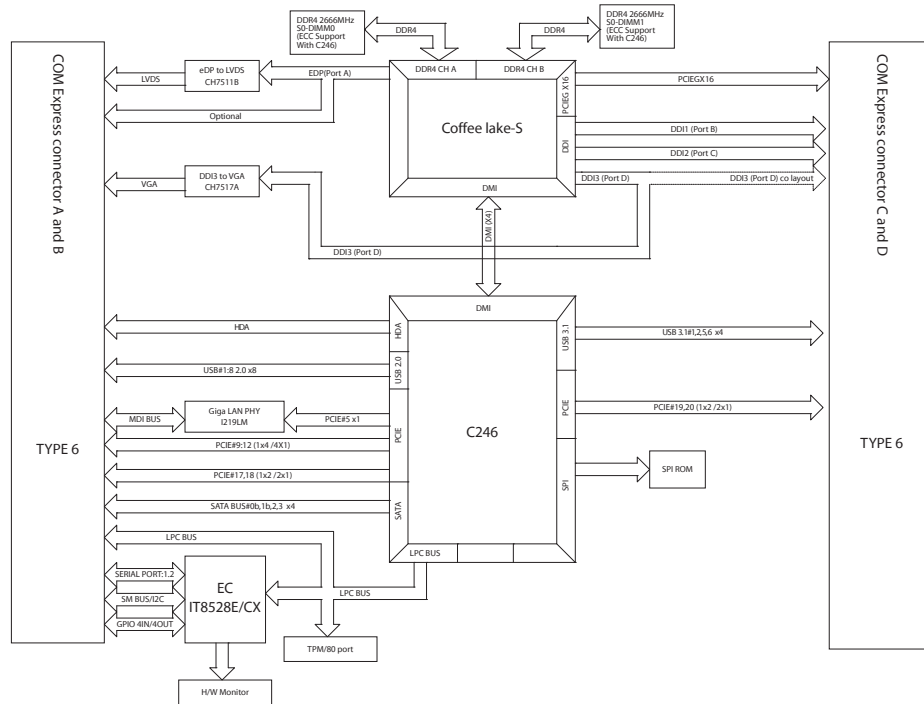
### BIOS

- AMI (UEFI)

### COM Express Connector

- AB: LVDS: (LVDS/eDP co-lay), VGA: (VGA/DDI port3 co-lay), 1 x GbE LAN, 6 x PCIe x1, HD Audio, 4 x SATA III, 8 x USB 2.0, LPC Bus, SM Bus/I2C, 2 x COM, GPIO 8-bit
- CD: DDI1, DDI2, 1 x PCIe x16, 2 x PCIe x1, 4 x USB 3.0

## Block Diagram



### Power Requirement

- +12VDC, +5Vsb
- Support both AT and ATX power supply mode

### Dimensions

- 125 mm x 95 mm

### Environment

- Board level operation temperature: -0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity
  - 10% to 95% (operating, non-condensing)
  - 5% to 95% (non-operating, non-condensing)

### Certifications

- Meet CE/FCC Class B

## Ordering Information

### Barebone

- **ICES 675S (P/N: 10K00067508X0)**

COM express type 6, basic module, 8/9th Generation Intel® Core™ LGA1151 processor, C246 PCH with 6 core support, support dual channel DDR4 with ECC and non-ECC SO-DIMM 2666MHZ up to 32 GB, support 1 PCIe x16/8 PCIe x1/4 x USB 3.1/8 x USB 2.0/4 SATA 3.0 and GBE, LVDS (eDP optional)/VGA (DDI3 optional)/DDI 1/DDI 2

### Optional Accessories

- **CPU Cooler (P/N: 5050200161X00)**
- **TPM 2.0 module KIT (P/N: 79E00TPM01X00)**

# A SMARTER SOLUTION starts from inside

## Main offices

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