

# COMM-E380 Series

Extreme Temperature

COM Express® Mini Type 10 Module

with Intel® Bay Trail Processor, Atom™ E3825 / E3845



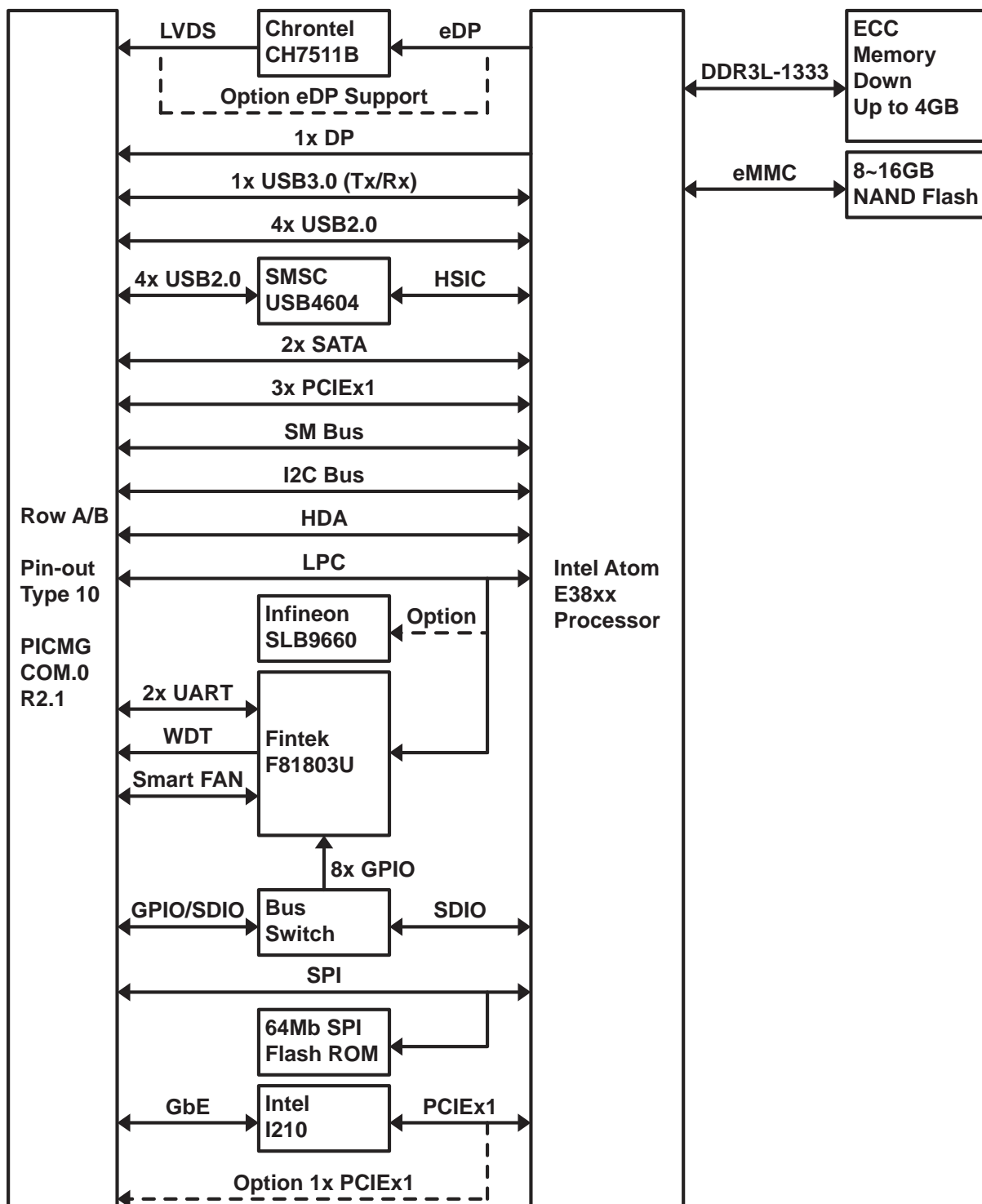
- Intel® Bay Trail Processor, Atom™ E3824 / E3845
- 2GB/4GB DDR3L memory onboard
- 1x DP, 1x LVDS / eDP for video output
- 16GB/32GB eMMC onboard, 2x SATA for storage
- 8x USB, 2x COM, I2C Bus, 8-bit GPIO / SDIO 3.0 for peripherals
- 1x LAN, 3x PCIe1 for network and expansion
- Extreme operating temperature range: -40°C ~ 85°C

## Product Overview

COMM-E380 Series is a COM Express® Mini Module with extreme temperature support and thus it can help developers efficiently and flexibly realize a robust, ultra-small embedded device for extreme industrial and harsh environment applications. Equipped with Intel® Bay Trail processor, Atom™ E3825 / E3845, it is also a power-saving platform for high performance.

Besides onboard eMMC Flash and two SATA sockets for storage, COMM-E380 Series supports a variety of I/O and expansion interfaces, including 1x DP, 1x LVDS / eDP for video putout, 1x LAN, 3x PCIe1 for network / expansion, and 8x USB, 2x COM, I2C Bus, GPIO/SDIO for peripheral connection.

## Block Diagram



## Technical Information



<b>Processor</b> <b>COMM-E380T:</b> Intel® Atom™ E3825 (Dual Core, 1M Cache, 1.33 GHz, FCBGA1170, 6W TDP) <b>COMM-E381T:</b> Intel® Atom™ E3845 (Quad Core, 2M Cache, 1.91 GHz, FCBGA1170, 10W TDP)	<b>Storage &amp; Expansion</b> 16GB eMMC onboard (COMM-E380T) 32GB eMMC onboard (COMM-E381T) 2x SATA2 (via Pin-out) 3x PCIe1 (via Pin-out, +1 when LAN is replaced by an optional PCIe1)
<b>Memory</b> 2GB DDR3L 1067 memory onboard (COMM-E380T) 4GB DDR3L 1333 memory onboard (COMM-E381T)	<b>Power Supply</b> Type: Single Supply Power, ATX Input Voltage: DC 8.5V ~ 20V (Single Supply Power), DC 5VSB/12V (ATX)
<b>Graphics Controller</b> Intel® HD Graphics	<b>Firmware</b> BIOS: AMI uEFI BIOS w/ 64Mb SPI Flash (Boot from external SPI/FWH flash) Watchdog: Programmable WDT to generate system reset event H/W Monitor: Voltages, Temperatures Real Time Clock: Processor integrated RTC TPM: Optional (Infineon SLB9660 v1.2)
<b>Display Interfaces</b> 1x LVDS / eDP (via Pin-out, default LVDS: 18/24-bit, 1/2-ch, 1920 x 1200 @ 60Hz, optional eDP: 2560 x 1600 @ 60Hz) 1x DP (via Pin-out, 2560 x 1600 @ 60Hz)	<b>Cooling</b> 1x Carrier Smart Fan (via Pin-out)
<b>Multiple Display</b> Dual	<b>OS Support</b> Windows 7, Windows 8, Windows 10, Linux
<b>Audio Chipset</b> Realtek ALC888	<b>Dimension (L x W)</b> COM Express® Mini (84 x 55 mm / 3.31" x 2.17")
<b>Ethernet</b> 1x LAN (via Pin-out, Intel® I210, replaceable by PCIe1 for option)	<b>Pin-out Type</b> COM Express® R2.1 Type 10
<b>USB</b> 1x USB3.0 (via Pin-out, 1x USB2.0 included) 7x USB2.0 (via Pin-out, 3x from CPU, 4x from HSIC Hub)	<b>Environmental Characteristics</b> Operating Temperature: -40°C ~ 85°C / -40°F ~ 185°F (Extreme) Storage Temperature: -55°C ~ 85°C / -67°F ~ 185°F (Extreme) Humidity: 0% ~ 95%
<b>Serial Port</b> 2x Tx/Rx (via Pin-out)	<b>Certification</b> CE, FCC Class A
<b>Other I/Os</b> 1x 8-bit GPIO (via Pin-out, shared w/ SDIO) 1x SDIO3.0 (via Pin-out, shared w/ GPIO) 1x LPC (via Pin-out) 1x I2C Bus (via Pin-out)	

## COMM-E380 Series Pin-out



Type 10 Pin-out

## Ordering Information

Article	Part No.	Description
 COMM-E380T	BEMME38T-000000T	COM Express® Mini Type 10, Intel® E3825, 2GB DDR3L, 1x DP, 1x LVDS/eDP, 1x LAN, 1x USB3.0, 7x USB2.0, 16GB eMMC, 2x SATA, 3x PCIe1, Op. temp.: -40°C ~ 85°C
 COMM-E381T	BEMME38T-010000T	COM Express® Mini Type 10, Intel® E3845, 4GB DDR3L, 1x DP, 1x LVDS/eDP, 1x LAN, 1x USB3.0, 7x USB2.0, 32GB eMMC, 2x SATA, 3x PCIe1, Op. temp.: -40°C ~ 85°C

## Accessories

Article	Part No.	Description
CRRB-COM1 *	0W0CRRBCOM10B100	COM Express® Carrier Board, Mini module size, Pin out Type-10

(Note: the asterisk (\*) means that this item is optional.)