

••• 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 ECC memory onboard
- 1x DDI 1x LVDS / eDP for video output
- 16GB/32GB eMMC onboard, 2x SATA for storage
- 8x USB, 2x UART, 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

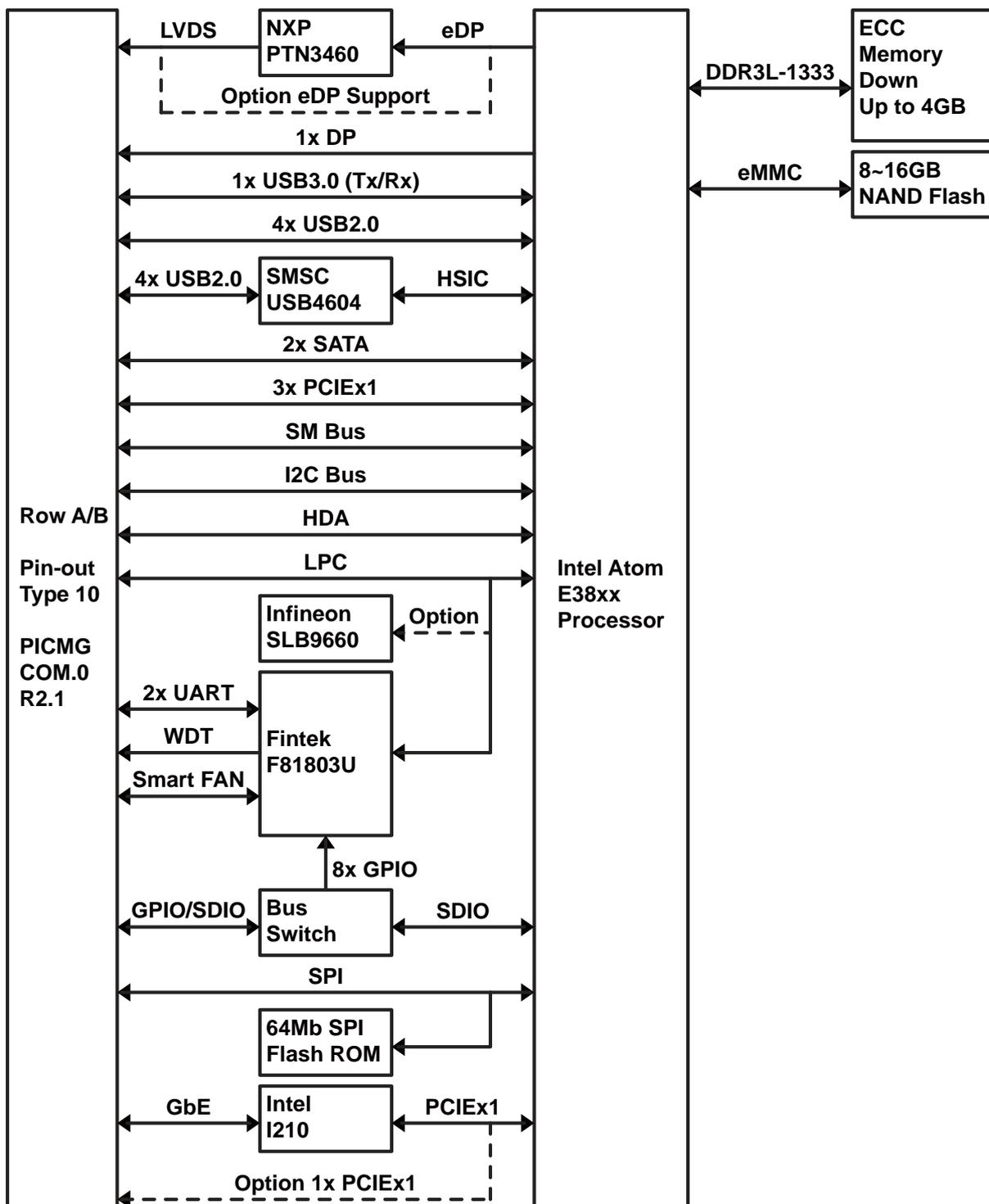


Product Overview

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 DDI, 1x LVDS / eDP for video putout, 1x LAN, 3x PCIe1 for network / expansion, and 8x USB, 2x UART, I2C Bus, GPIO/SDIO for peripheral connection.

Block Diagram



Technical Information

Processor COMM-E380T: Intel® Atom™ E3825 (Dual Core, 1M Cache, 1.33 GHz, FCBGA1170, 6W TDP) COMM-E381T: Intel® Atom™ E3845 (Quad Core, 2M Cache, 1.91 GHz, FCBGA1170, 10W TDP)	Storage & Expansion 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)
Memory 2GB DDR3L 1067 ECC memory onboard (COMM-E380T) 4GB DDR3L 1333 ECC memory onboard (COMM-E381T)	Power Supply Type: Single Supply Power, ATX Input Voltage: DC 5V ~ 20V (Single Supply Power), DC 5VSB/12V (ATX)
Graphics Controller Intel® HD Graphics	Firmware 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)
Display Interfaces 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 DDI (via Pin-out, 2560 x 1600 @ 60Hz)	Cooling 1x Smart Fan (via Pin-out)
Multiple Display Dual	OS Support Windows 7, Windows 8, Windows 10, Linux
Audio Intel® HD Audio (via Pin-out)	Dimension (L x W) COM Express® Mini (84 x 55 mm / 3.31" x 2.17")
Ethernet 1x GbE LAN (via Pin-out, Intel® I210, replaceable by PCIe1 for option)	Pin-out Type COM Express® R2.1 Type 10
USB 1x USB3.0 (via Pin-out, 1x USB2.0 included) 7x USB2.0 (via Pin-out, 3x from CPU, 4x from HSIC Hub)	Environmental Characteristics 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%
Serial Port 2x UART (via Pin-out)	Certification CE, FCC Class A
Other I/Os 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	Description
 COMM-E380T	COM Express® Mini Type 10, Intel® E3825, 2GB DDR3L, 1x DDI, 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	COM Express® Mini Type 10, Intel® E3845, 4GB DDR3L, 1x DDI, 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	Description
CRRB-COM1 *	COM Express® Carrier Board, Mini module size, Pin out Type-10

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