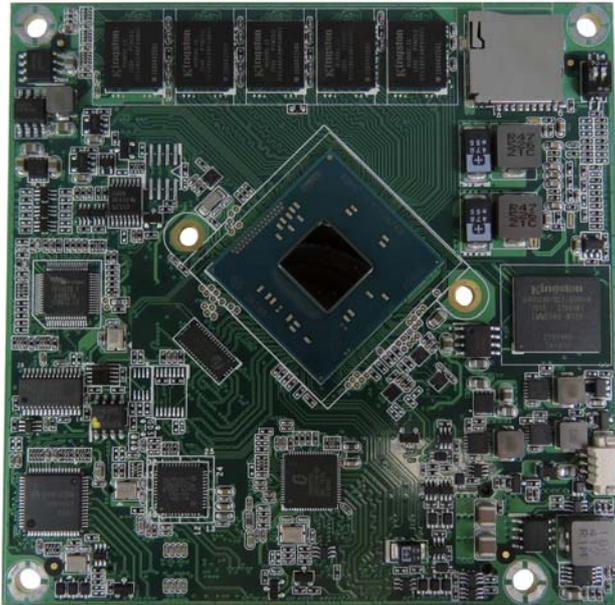# COMC-E380 Series

Extreme Temperature
COM Express® Compact Type 6 Module
with Intel® Atom™ E3825/E3845 Processor

- •• Intel® Atom™ E3825/E3845 Processor
- •• 2GB/4GB DDR3L ECC memory onboard
- •• 1x DDI, 1x VGA, 1x LVDS/DP for video output
- •• 16GB/32GB eMMC onboard, 2x SATA, 1x Micro SD card cage for storage
- •• 8x USB, 2x UART, I2C Bus, 8-bit GPIO for peripheral connection
- •• 1x LAN, 3x PCIex1 for data transmission
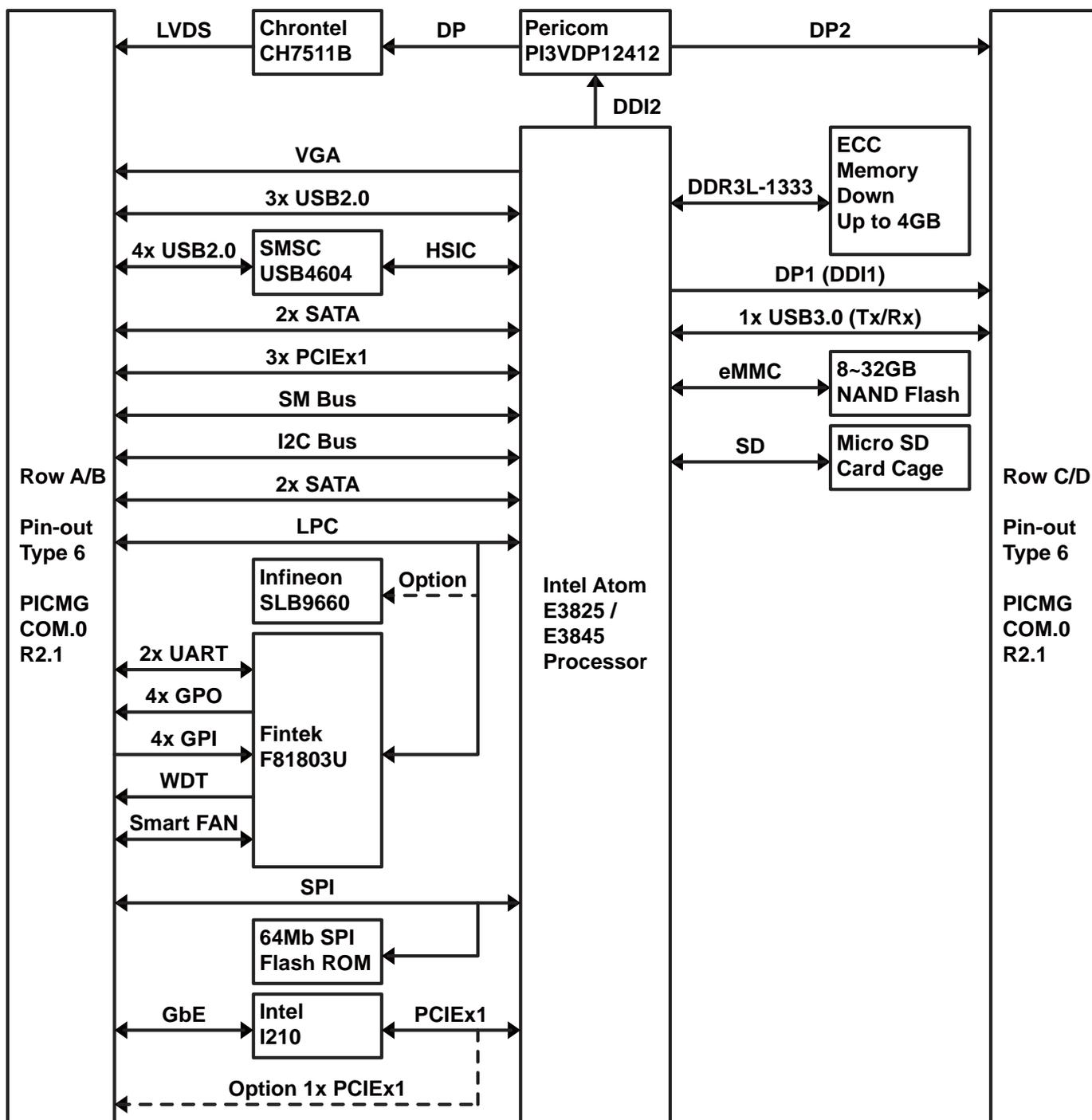- •• Extreme operating temperature range: -40°C ~ 85°C

Product Overview

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

Besides onboard eMMC Flash, two SATA sockets and one micro SD card cage for storage, COMC-E380 Series supports a variety of I/O and expansion interfaces, including 1x DDI, 1x VGA, 1x LVDS/DP for video putout, 1x LAN, 3x PCIex1 for data transmission, and 8x USB, 2x UART, I2C Bus, GPIO for peripheral connection.

Block Diagram

Technical Information

Processor
COMC-E380T: Intel® Atom™ E3825 onboard
(Dual Core, 1M Cache, 1.33 GHz, FCBGA1170, 6W TDP)
COMC-E381T: Intel® Atom™ E3845 onboard
(Quad Core, 2M Cache, 1.91 GHz, FCBGA1170, 10W TDP)

Memory
2GB DDR3L-1067 ECC memory onboard (COMC-E380T)
4GB DDR3L-1333 ECC memory onboard (COMC-E381T)

Graphics Controller
Intel® HD Graphics

Display Interfaces
1x LVDS/DP (via Pin-out, 18/24-bit, 1/2-ch, 1920 x 1200 @ 60Hz)
1x DDI (via Pin-out, 2560 x 1600 @ 60Hz)
1x VGA (via Pin-out, 2560 x 1600 @ 60Hz)

Multiple Display
Dual

Audio
Intel® HD Audio (via Pin-out)

Ethernet
1x GbE LAN (via Pin-out, Intel® I210, replaceable by PCIex1 for option)

USB
1x USB3.0 (via Pin-out, 1x USB2.0 included)
7x USB2.0 (via Pin-out, 3x from CPU, 4x from HSIC Hub)

Serial Port
2x UART (via Pin-out)

Other I/Os
1x 8-bit GPIO (via Pin-out)
1x LPC (via Pin-out)
1x I2C Bus (via Pin-out)

Storage & Expansion
16GB eMMC onboard (COMC-E380T)
32GB eMMC onboard (COMC-E381T)
2x SATA2.0 (via Pin-out)
1x Micro SD Cage
3x PCIex1 (via Pin-out, +1 when LAN is replaced by an optional PCIex1)

Power Supply
Type: Single Supply Power, ATX
Input Voltage: 5V ~ 20V (Single Supply Power), 5VSB/12V (ATX)

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)

Cooling
2x Smart Fan (1x by wafer, 1x via Pin-out)

OS Support
Windows 7, Windows 8, Windows 10, Linux

Dimension (L x W)
COM Express® Compact (95 x 95 mm / 3.74" x 3.74")

Pin-out Type
COM Express® R2.1 Type 6

Environmental Characteristics
Operating Temperature: -40℃ ~ 85℃ / -40°F ~ 185°F
Storage Temperature: -55℃ ~ 85℃ / -67°F ~ 185°F
Humidity: 0% ~ 95%

Certification
CE, FCC Class A

COMC-E380 Series I/O Ports

Type 6 Pin-out

Ordering Information

Article	Description
COMC-E380T	COM Express® Compact Type 6, Intel® E3825, DDR3L 2GB, eMMC 16GB, 2x SATA, 1x DDI, 1x VGA, 1x LVDS/DP, 8x USB, 2x UART, 1x LAN, 3x PCIex1, Op. temp.: -40 ~ 85°C
COMC-E381T	COM Express® Compact Type 6, Intel® E3845, DDR3L 4GB, eMMC 32GB, 2x SATA, 1x DDI, 1x VGA, 1x LVDS/DP, 8x USB, 2x UART, 1x LAN, 3x PCIex1, Op. temp.: -40 ~ 85°C

Accessories

Article	Description
CRRB-COM0	COM Express® Carrier Board, Basic / Compact module size, Pin out Type-6