

MSC CXC-US15WP

Intel® Atom™



Description

The design of the MSC CXC-US15WP module is based on Intel's ATOM™ CPU technology enabling to lower the power consumption for embedded applications to a minimum while maintaining good graphics performance.

The Z5x0 processor with its low power consumption is ideally suited for fanless designs. Besides an extensive set of interfaces and features, the MSC CXC-US15WP delivers hardware and BIOS based security that is compliant to the requirements of the TCG (Trusted Computing Group).

The CXC-US15WP is the first COM Express™ Compact form factor board from MSC available with all components qualified for an extended temperature range and therefore ideally suited for rough or outdoor environments.

95x95 
8 W 
Entry/Mid 

Highlights

- Intel® Atom™ Z5x0 (up to 1.6GHz)
- Mobile Intel® US15WP System Controller Hub with integrated Intel® GMA500
- Up to 2GB DDR2 SDRAM, soldered
- Optional PATA Flash SSD, 2 / 4 GB, bootable
- Two SATA-300 mass storage interfaces
- Two PCI Express™ x1 lanes
- LVDS interface (18 / 24) up to 1366 x 768
- SDVO interface up to 1920 x 1200
- Optional VGA, Dual Independent Display
- Eight USB 2.0 interfaces
- Extended temperature versions available

Technical Data – MSC CXC-US15WP

Core Logic, Memory

CPU: Intel® Atom Z510P/Z530P (commercial up to 1.6 GHz)
Intel® Atom Z510PT/Z530PT (ext. temp. up to 1.33 GHz)

Chipset: Intel® US15W SCH

Memory: up to 2GB DDR2-533 SDRAM, soldered

Drives

SATA: 2 x SATA-2 channels (up to 300 MB/s, commercial temp only)

EIDE: 1 x Enhanced IDE port (ATA/UDMA100), optional on board
NANDrive, 1.8GB/3.6GB bootable, ECC, 10 Million write cycles with advanced NAND management technology

Standard Interfaces

USB: 8 x USB 2.0

Bus Interfaces

COM Express™: Type 2 interface, fully compliant

PCI Express™: two channels PCI Express x1

PCI: 32 Bit, 33MHz standard interface (PCI 2.3)

LPC: Low Pin Count bus for legacy interfaces

Flat Panel / CRT Interface

Graphics Controller: Intel® Graphics Media Accelerator 500
(integrated in Intel® US15W SCH)

Video Memory: UMA, up to 384 MB

LCD Interface: LVDS 18/24 Bit up to 1366 x 768

SDVO/VGA Interface: up to 1920x1080

Miscellaneous

Watchdog Timer: Initiates system reset, (programmable, 1s ... 255h)

Fan Supply: 3-pin header (12V)

Battery: External

System Monitoring: Voltage, Temperature, Fan

LAN Interface

Ethernet: 10/100/1000Base-TX (Intel® 82574L)

Sound Interface

High Definition Audio

Security Device

Infineon Trusted Platform Mmodule 1.2 SLB 9635

Firmware, Software

Phoenix TrustedCore

Boot Options: Quick Boot, MultiBoot XP (FD, HD, CD, LAN, USB), Boot without keyboard, LAN Boot via PXE (RPL optional), Wake on LAN (WOL) supported

Security: Phoenix StrongROM technology TPM 1.2 support, Pre-Boot-Authentication, Phoenix SecureFlash for safe BIOS updates

Power Management: (S3 cold, S4, S5 supported), Enhanced Intel SpeedStep® technology supported, Active/passive cooling

USB: USB legacy support (Keyboard, Mouse, Hub)

Video: VGA BIOS with flat panel extensions (EPI)

HW Programming I/F: UspEpc (Universal board support package for embedded PCs)

Power Supply

Power: +12V +/-10%, 5V Stby optional

Power Consumption: 7W typ. (Z530, 1.6 GHz)

Environment

Ambient Temperatures:

0° ... 60° C (operating, commercial versions)
-40° ... 85° C (operating, extended temp. versions)
-40° ... 85° C (storage)

Humidity :

5 ... 95% (operating, non-condensing)
5 ... 95% (storage, non-condensing)

Mechanical

Dimensions: 95mm x 95mm x13mm

Order Reference – MSC CXC-US15WP

Order Number	Description	Reference
32416	Intel® Atom™ Z510P, 1.1Ghz, 1GB ,1GbE, 2xSATA, VGA, 2x PCIe x1	MSC CXC-US15WP-001
32453	Intel® Atom™ Z530P, 1.6 Ghz, 1GB,1GbE, 2xSATA, VGA, 2x PCIe x1	MSC CXC-US15WP-002
32448	Intel® Atom™ Z510PT, 1.1Ghz, 1,8GB FLASH, 1GB,1GbE, 2x PCIe x1, ext. Temp	MSC CXC-US15WP-101
32454	Intel® Atom™ Z520PT, 1.33 Ghz, 1GB, 1GbE, 2x PCIe x1, ext. Temp	MSC CXC-US15WP-102

Accessories

Order Number	Description	Reference
	Cooling	
36621	Heatspreader for CXC-US15WP, consisting of an aluminum plate with distance sleeves (2.7mm inner diameter), 2 mounting screws and two thermopads for the thermal contact between CPU/chipset to the heatspreader.	MSC CXC-US15WP-01 HSP-001
37905	Heatsink for CXC-US15WP, consisting of an aluminum plate with distance sleeves (2.7mm inner diameter), 2 mounting screws and two thermopads for the thermal contact between CPU/chipset to the heatsink. 19 fins, 10mm high, parallel to axis between CPU and chipset.	MSC CXC-US15WP-01 HSI-001
	SSD	
1086583	40GB Intel SSD; 2,5" MLC; KIT incl. frame &cable	SSDSA2CT040G3K5

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