

Features

- EBX-compatible SBC with single core 1.66GHz Intel® Atom™ N455 processor
- Up to 2GB of DDR3 SODIMM system memory
- CompactFlash socket
- Supports simultaneous 18-bit LVDS and CRT video
- LED backlights supported
- Full-featured I/O includes
 - One PATA channel and two SATA channels
 - Eight USB 2.0 ports
 - Four serial RS-232/422/485 ports
 - Two Gigabit Ethernet channels
 - 48 lines of GPIO
 - LPT, PS/2 keyboard and mouse controller
 - MiniPCI, PC/104, and PC/104-Plus connectors
 - WDT, RTC, LPT, status LEDs, and beeper
 - Hi-definition audio
- Requires only +5V for operation
- Fanless operation



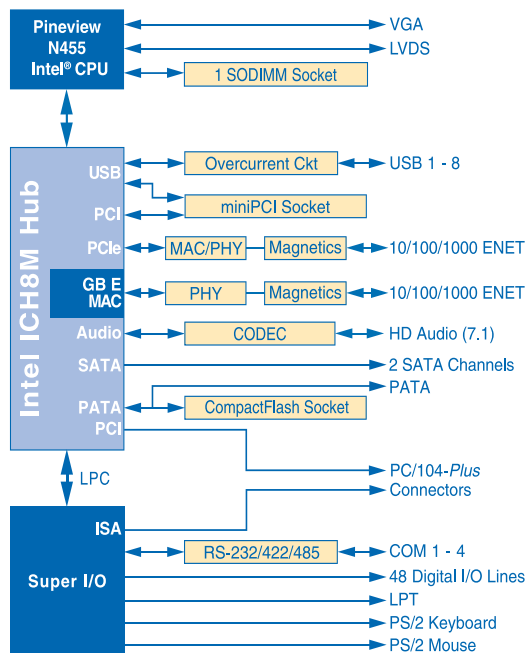
Product Description

WinSystems' EBC-C384-S is an EBX-compatible Single Board Computer (SBC) which uses Intel's Atom N455 single core 1.66GHz processor paired with the ICH8M I/O controller hub. It includes one SODIMM sockets for DDR3 system memory and one CompactFlash socket.

This SBC is a full-featured unit with onboard I/O that supports CRT/LVDS video simultaneously, dual Gigabit Ethernet ports, eight USB 2.0 ports, four serial RS-232/422/485 COM channels, 48 digital I/O lines, HD audio, watchdog timer, PS/2 keyboard and mouse controllers, and LPT. Plus it has a MiniPCI socket, both PC/104 and PC/104-Plus connectors for additional I/O expansion by plugging modules on the board.

The EBC-C384-S supports Linux, Windows® Embedded Standard 7 (WES7), and other x86-compatible real-time operating systems. Drivers are available from the WinSystems' website.

The EBC-C384-S is designed for long-term availability. This board replaces and is a performance upgrade to WinSystems' EBC-855 and EBC-C3Plus. It is designed for high-performance industrial, medical, communications, and Mil/COTS applications.



EBC-C384-S Block Diagram

EBC-C384-S: EBX Single Core N455 Single Board Computer

Technical Specifications

Processor

Intel Atom N455 single core @ 1.66GHz

Memory

512KB of L2 cache
One SODIMM memory socket for up to 2GB of DDR3
CompactFlash Type II memory socket

Display

VGA supports up to SXGA 1400 x 1050 @ 60Hz
LVDS supports 18-bit single channel and up to
WXGA 1366 x 768 or 1280 x 800

Network Interface

One Intel ICH8M and 82567V (PHY) Gigabit Ethernet port
with Wake-on-LAN (WOL)
One Intel 82583V Gigabit Ethernet port

Onboard I/O

One PATA channel shared with CompactFlash socket
Two SATA 2.0 channels
Eight USB 2.0 ports with overcurrent protection
Four 16C550-compatible RS-232/422/485 serial channels
with speeds up to 115.2kbps
48 lines of general purpose digital I/O
LPT interface with EPP support
High definition audio (7.1)
PS/2 keyboard and mouse controller
Speaker output for beep tones
Status LEDs on both Ethernet controllers plus
a status activity LED
RTC with optional battery back up
Watchdog timer adjustable from 1 second to 255 minutes

Expansion Bus

PC/104 and PC/104-Plus connectors
One MiniPCI connector

Power

	Typical	Maximum	Standby (S3)
5V @	2.1A	2.6A	300mA

Software

Phoenix BIOS in SPI Flash device
Compatible with Linux, Windows Embedded Standard 7
(WES7), and most x86 operating systems as
well as DOS

Environmental

Operational from -40° to +85°C
Random Vibration Testing MIL-STD-202G, Method 214A,
Condition D, 0.1g/Hz (11.95g rms), 20 minutes per axis, 3 axis
Mechanical Shock Testing MIL-STD-202G, Method 213B,
Condition A, 50g half-sine, 11ms duration per axis, 3 axis
RoHS compliant

Mechanical

Dimensions 5.75 x 8.00 inches (146 x 203 mm)
Weight 16 oz (453.6 gm) with heatsink
PC Board thickness 0.078 inches



Front and Back Picture of EBC-C384-S2-0

Ordering Information

(See website for complete ordering information and accessories.)

EBC-C384-S2-0 1.66GHz N455 single core EBX Single Board Computer without fan

Cables

CBL-SET-384-2 EBC-C384-S cable and accessories set, includes:
ADP-IO-USB-001 Dual 8-pin, 2mm, four USB ports
BAT-LTC-E-36-16-1 External 3.6V, 1650 mAH battery with plug-in connector
CBL-173-G-1-1.0 Serial COM3 and COM4 cable
CBL-234-G-1-1.375 Video CRT cable
CBL-236-G-2-1.5 EBC power cable
CBL-247-G-1-1.0 Multi-I/O cable
CBL-343-G-1-1.375 PS/2 cable
CBL-AUDIO2-102-12 Audio 2x 15 cable
CBL-RST-402-18 Reset harness
CBL-USB4-002-12 Four USB ports with two, 8-pin 2mm connectors

Optional Battery

BAT-LTC-E-36-16-1 External 3.6V, 1650 mAH
BAT-LTC-E-36-27-1 External 3.6V, 2700 mAH

CompactFlash (CF)

CF-DC-A-xG-I 1 - 16GB High Speed CF cards
CFLASH-G-xxx-I 128MB - 8GB CF cards
Please visit www.IndustrialCompactFlash.com for details

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