

# JetBox 8220

## Industrial Communication Computer



- **High performance with low power consumption:**
  1. AMD GEODE LX800 500MHz,
  2. System memory 256MB, 64MB VGA
- **Plentiful interfaces:**

Dual Ethernet, 8 DI/DO, 4 COM, 4 USB, VGA, TV out, Audio
- **Reliable robust form factor:**
  1. 5g Anti-vibration and 50g shock resistant
  2. Operating Temperature: -15~70°C, Fanless
- **Ready to use:**
  1. Embedded Linux/Win CE/XPe OS ready
  2. System Management Utility
  3. Application Development Environment
  4. Modbus, Modbus/TCP

### Overview

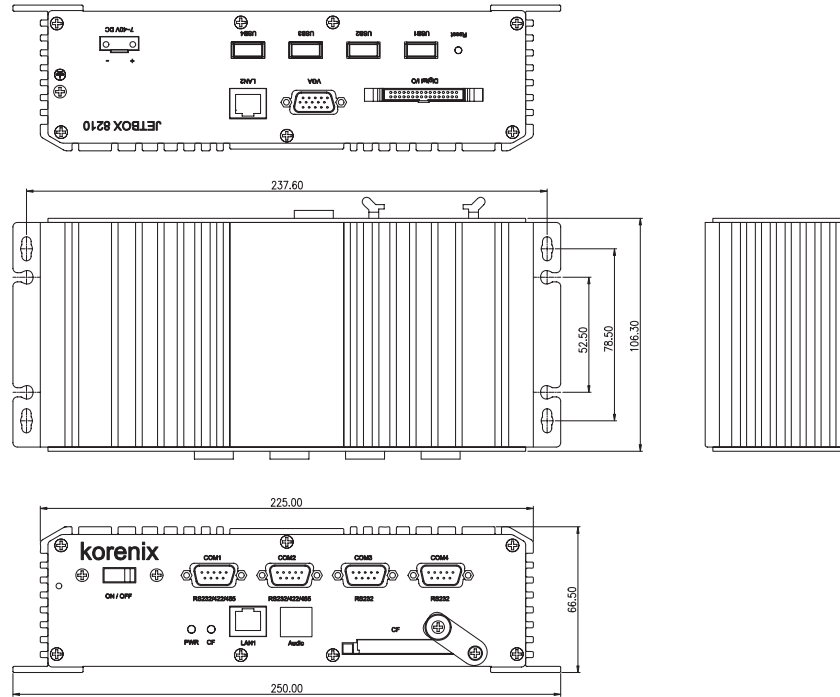
The advantage of adopting Korenix JetBox series is ready-to-use. Korenix is devoted to improve the usability of embedded computer in industrial domain. Besides operating system (Linux/ WinCE/ Windows XP embedded), Korenix provides device drivers, protocol stacks, system utilities, supporting services and daemons in one CompactFlash card to make system integration simple. Further, Korenix provides application development toolkits for users to build up their own applications easily.

JetBox 8220 is an AMD Geode LX800 500MHz based embedded computer with more system memory, 256MB SDRAM default (512MB optional). It focuses on VGA processing more with increased memory resource, 64MB of 256MB system memory, and built-in TV-out function. In operating system, besides Linux and WinCE, JetBox 8210 also supports Windows XP embedded to provide more userfriendly development

environment. It's a high performance, robust and stable device. All-in-one device with small volume, fanless design and a capability to withstand a wide range of temperatures is suitable for industrial severe environment. For better expansibility, it carries four USB2.0 ports, two RS-232 ports and two RS-232/422/485 ports for versatile peripheral and interfaces and one CompactFlash slot for system integration. It also supports VGA and audio output to give users much flexibility in industrial applications. In addition, it is equipped with two RJ-45 ports and supports daemons and web server services to accommodate to the network communication environment today.

With complete SW solution and excellent HW design, JetBox series is the best choice of embedded computer.

## Dimensions (Unit = mm)



(preliminary)

## Hardware Specifications

### System

**Processor:** AMD GEODE LX800 500MHz  
**System Memory:** SDRAM 256MB, Max. 512MB (Optional)  
**VGA:** Up to 64MB sharing system memory, DB-15 connector  
**Ethernet:** 10/100 Based-TX RJ-45 connector x 2,  
 Built-in 15 KV ESD protection for all signals  
**SSD:** Type II CompactFlash slot x 1  
**Serial Port:** RS-232x2, RS-232/422/485x2  
**Audio:** AC97, mini-DIN connector x 1  
**TV-Out:** S-video  
**USB:** USB 2.0 x 4  
**Digital I/O:** 8 in & 8 out Digital IO  
**System Control:** Power on/off switch x1, Reset button x1  
**Watchdog Timer:** Generates a time-out system reset, 1.6 sec  
**Power Supply:**  
 DC input: 10~36VDC  
 AC input: 100VAC ~ 240VAC@50-60Hz  
**OS support:** Windows CE 5.0, Embedded Linux 2.6.18, Windows XP embedded

### Mechanical

**Construction:** Rugged Aluminum Alloy Chassis  
**Color:** Aluminum  
**Mounting:** Wallmount (Default), DIN Rail  
**Dimension:** 250(W) x 66.5(H) x 106.3(D) mm  
**Net weight:** 1.07 kg  
**Gross weight:** 1.5 kg

### Environment

**Operating Temp:** 5 ~ 158°F (-15 ~ 70°C ), 5 ~ 95% RH  
**Storage Temp:** -4 ~ 176°F (-20 ~ 80°C ), 5 ~ 95% RH  
**Anti-Vibration:** 5g / 5 ~ 500Hz / random operation  
**Anti-Shock:** 50g peak acceleration  
**EMC:** CE/FCC class A, UL  
**Warranty:** 5 years

## Software Specifications

**Embedded Linux:** Linux Version 2.6.18

**Protocol Stack:** TCP, UDP, IPv4, SNMP, ICMP, IGMP, ARP, HTTP, CHAP, PAP, SSH 1.0/ 2.0, SSL, DHCP, NTP, NFS, SMTP, Telnet, FTP, PPP, PPPoE

**System Utilities:** bash, busybox, tinylogin, telnet, ftp,

**Supporting Services and Daemons:**

telnetd: Telnet Server daemon

ftpd: FTP server daemon

sshd: Secure shell server

Apache: Web server daemon, supports PHP and XML

MySQL: Database Server and Client

OpenVPN: Virtual private network service manager

iptables: Firewall service manager

pppd: dial in/out over serial port daemon

snmpd: snmpd agent daemon

inetd: TCP server manager program

**Application Development Environment:**

Korenix Linux API Library

Linux Tool Chain: Gcc, Glibc

**Device Drivers:** CF Card, USB, Watchdog Timer, UART, VGA, Audio

**Windows CE 5.0**

**Protocol Stack:** TCP, UDP, IPv4, SNMP, ICMP, IGMP, ARP, HTTP, CHAP, PAP, SSL, DHCP, SNTP, SMTP\*, Telnet, FTP, PPP

**System Utilities:** Windows command shell, telnet, ftp, web-based administration manager

**Supporting Services and Daemons:**

Telnet Server: Allows remote administration through a standard telnet client

FTP Server: Used for transferring files to and from remote computer systems via a network.

Web Server (httpd): WinCE IIS, offer ASP, ISAPI Secure Socket Layer support, SSL 2, SSL 3, and Transport Layer Security (TLS/SSL 3.1) public key-based protocols, and Web Administration ISAPI Extensions.

Dial-up Networking Service: RAS client API and PPP, support Extensible Authentication Protocol (EAP) and RAS scripting

**Application Development Environment:**

WinCE 5.0 SDK

C Libraries and Run-times

Component Services (COM and DCOM)

Microsoft Foundation Classes (MFC)

Microsoft® .NET Compact Framework

XML, including DOM, XQL, XPATH, XSLT, SAX2

SOAP Toolkit

Winsock 2.2

**Device Drivers:** CF Card, USB, Watchdog Timer, UART, VGA, Audio

\*Supported by WinCE professional

## Ordering Information

**JetBox 8220d AMD GEODE 500MHz, 10~36VDC, 256MB SDRAM**

**JetBox 8220a AMD GEODE 500MHz, 100~240VAC, 256MB SDRAM**

All items include:

- JetBox 8220 AMD GEODE 500MHz industrial communication computer
- Quick installation guide
- Documentation and software CD-ROM

## Optional Accessories

- System on CompactFlash: CompactFlash card capacity is 2G

Part number: CF2G-x	L	LM	CC	CP	CCM	CPM	P	PM
Linux	•	•						
WinCE	Core		•		•			
	Professional			•		•		
Windows XP embedded							•	•
Modbus, Modbus/TCP		•			•	•		•
System management utility	•	•	•	•	•	•	•	•

Ex: Part number CF2G-CCM is CF card (capacity 2G) with WinCE Core version OS, Modbus and Modbus/TCP.

- DIN Rail kits