POS-7551

NS Geode® Flex ATX SBC for POS Applications

On-board 16 MB DRAM (optional)

1 x DIMM SDRAM

Digital I/O

ATX power connector

CompactFlash™ socket (backside)

IrDA port

NS Geode™ GX1-233 embedded CPU

2 EIDE (40 pin & 44 pin)

ISA bus expansion

44 pin LCD connector

PCI expansion bus

2 USB/RJ-45

PS/2 keyboard/mouse

RS-232/parallel/CRT port

AC97 Audio (optional)
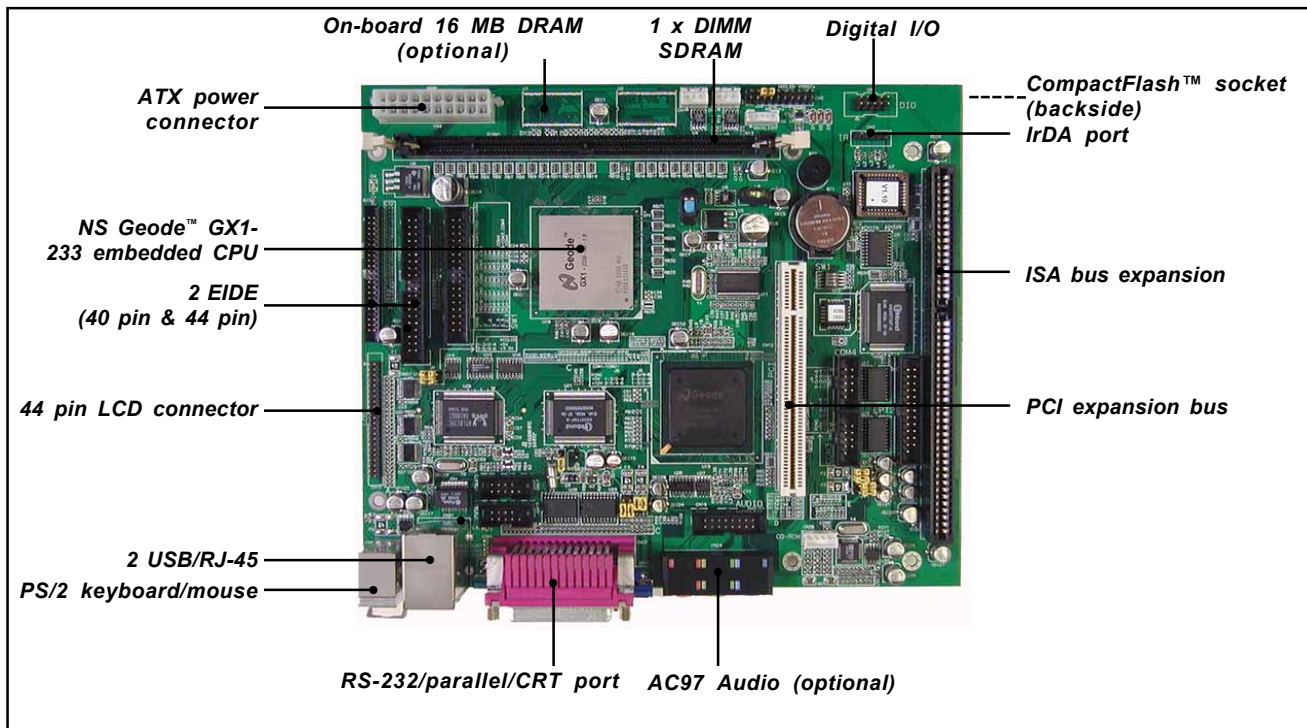
Introduction

The POS-7551 is a flex ATX, low cost, fanless Geode™ GX1-233 MHz CPU board specially designed for POS and other related applications that require many I/O connections on a rugged and affordable platform. This board is perfect for uses such as supermarkets, retail stores, hotels and restaurants, public transit systems, entertainment appliances and medical equipment to name a few.

The POS-7551 is made with industrial grade construction that can better withstand 24 hour a day use, high vibration, shock, exposure to humidity, moisture and heat. The GX1-233 processor allows for fanless operation that virtually eliminates heat buildup problems that has traditionally been the number one cause of failure in enclosed chassis POS systems.

The POS-7551 has one ISA and one PCI expansion slot and four digital I/Os plus four on-board serial ports each with +5 V/+12 V power. Supported peripherals range from bar code scanners, card readers, printers, cash drawers etc. The POS-7551 uses a standardized layout based on the Flex ATX form factor. It is 100 % PC compatible and is ready for use with any existing PC software or hardware.

Other on-board industrial features not found on conventional motherboards include a watchdog timer for dependability during unmanned operations, and CMOS backup to Flash ROM. An on-board CompactFlash™ socket can support up to 256 MB.

Features

- NS Geode™ GX1-233 processor on board
- Fanless operation
- VGA/LCD controller with Universal Memory Architecture
- Supports 18 bit TFT display
- 10/100 Mbps PCI ethernet interface with wake-on-LAN support
- 4 COM ports with power line support
- Digital I/O (2 in & 2 out)
- 2 parallel ports
- 2 x USB
- 4 Mbps FIR
- Socket for CompactFlash™
- AC97 audio interface
- 16 MB onboard DRAM
- ATX power connector

ADVANTECH
Embedded Computing

Specifications

Standard SBC Functions

- **CPU:** Embedded low power NS Geode GX1-233

- **BIOS:** 2 Mbit Flash BIOS, supports Plug & Play, APM 1.2, Supports Ethernet boot ROM, boot from CD-ROM* and boot from LS-120 ZIP Drive, Optional customer icon available.

- **Chipset:** CX 5530A

- **System memory:** One DIMM socket accepts 8 ~ 128 MB SDRAM (8/16/32/64/128 MB)

  16 MB onboard DRAM (POS-7551F only)

- **Enhanced IDE interface:** Supports up to four EIDE devices. BIOS auto-detect, PIO Mode 3 or Mode 4 transfer, Ultra DMA33 mode (ATA-4) up to 33 MB/sec

- **FDD interface:** Supports 360K/1.2M/720K/ 1.44MB/2.88MB up to two FDDs

- **Serial ports:** Four serial RS-232 ports, COM1,2, 3, 4, all provide power support

- **Parallel port:** Two parallel ports, supports EPP/ ECP mode

- **Infrared port:** Shared with COM4. Transfer rates up to 4 Mbps

- **Keyboard/mouse connector:** Supports standard PS/2 keyboard and a PS/2 mouse

- **Power management:** Supports power saving modes including Normal/Standby modes. APM 1.1 compliant

- **USB:** Two universal serial bus ports

Solid State Disk

- Supports one 50-pin socket for CompactFlash™ (POS-7551F only)

VGA/LCD Interface

- **Chipset:** CX5530A LCD/CRT controller

- **Interface:** 16-bit graphic accelerator with 1 ~ 2 MB VRAM display memory

- **VGA:** supports CRT and LCD display

- **Display mode:** supports 18-bit TFT LCD panel.

Ethernet Interface

- **Chipset:** RTL 8139C

- **Ethernet interface:** PCI 10/100 Mbps Ethernet. IEEE 802.3 U protocol compatible

- **Connection:** On-board RJ-45 connector

- I/O address switchless setting

- Built-in boot ROM

Audio Function (POS-7551F only)

- **Audio controller:** AC97 version 2.0 compliant interface

- **Audio interface:** Microphone in, line in, CD audio in, line out, speaker L and Speaker R

Mechanical and Environmental

- **Dimensions (L x W)**: 228.6 x 190.5 mm (9.0" x 7.5")

- **Power supply voltage:** +5 V ±5 %

- **Power requirements:** typical 5 V@1.86 A (w/ GX1-233 MHz CPU & 128 MB RAM)

- **Operating temperature:** 0 ~ 60° C (32 ~ 140° F)

- **Weight:** 0.5 kg (1.1 lb)

Ordering Information

- ❑ **POS-7551-00A1:**
  NS Geode Flex ATX POS SBC w/ VGA,LCD and Ethernet

- ❑ **POS-7551F-00A1:**
  NS Geode Flex ATX POS SBC w/ VGA, LCD, Ethernet, Audio, CFC &16 MB DRAM onboard

- ❑ **POS-7815:**
  Flex ATX chassis for POS-7551

Note: All features and specifications are subject to change without notice.

Geode™ is a registered trademark of National Semiconductor® Corporation