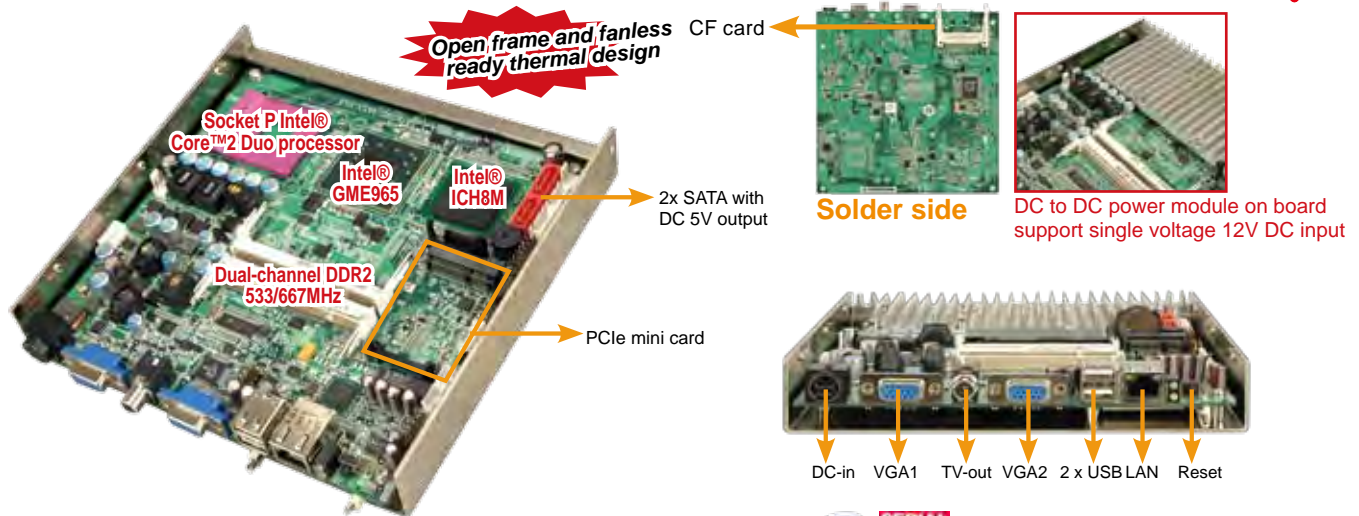


# KINO-9653

Intel® Core™2 Duo CPU Mini-ITX Motherboard  
with dual VGA, 12V DC input, Intel PCIe Lan



## Specifications

- ◆ CPU
  - Socket P 45nm Intel® Core™2 Duo processor with 800MHz FSB (Penryn Code), 65nm Intel® Core™2 Duo processor with a 800 MHz FSB, Intel® Celeron® M 533 MHz FSB (Merom Core)
- ◆ System Chipset
  - Intel® GME965 + ICH8M
- ◆ BIOS
  - AMI BIOS
- ◆ Memory
  - Two 200-pin DDR2 533/667MHz dual-channel SDRAM SO-DIMM supported (system max. 4GB)
- ◆ Ethernet
  - Intel® 82566MM PCIe GbE Ethernet controller (KINO-9653G-R10)
  - Intel® 82562V PCIe 10/100 Ethernet controller (KINO-9653E-R10)
- ◆ I/O Interface
  - 6 x USB2.0 (2port in Rear IO, 4port in pinheader)
  - 2 x SATA II
  - 1 x 6pin box header (2.0mm pitch) for KB/MS
- ◆ Display Output
  - Dual VGA connector on rear I/O
  - 1st VGA Integrated in Intel®GME965
  - 2nd VGA provided by Chrontel CH7317A (SDVO to VGA)
  - RCA jack for TV out
- ◆ Expansion
  - 1x PCIe mini card
- ◆ Digital I/O
  - 8-bit digital I/O, 4-bit input/ 4-bit output
- ◆ Super IO
  - ITE IT8718F
- ◆ Audio
  - HD Audio with Realtek ALC888 codec
- ◆ SSD
  - CompactFlash Type II
- ◆ Watchdog Timer
  - Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
  - Single voltage 12V DC input
  - 1 x external DIN 4pin DC jack
  - 1 x internal 2 x 2pin power connector
- ◆ DC connector
  - 2pcs 1x4pin power connector for 5V output (Major for 2.5" HDD used)
- ◆ Power Consumption
  - 12V@3.77A (Intel® Core™2 Duo T7500 2.2GHz with 2\*1GB DDR2 800MHz)
- ◆ Temperature
  - operation: 0°C ~ 60°C ( 32°F ~ 140°F)
- ◆ Humidity
  - Operation: 5% ~95% non-condensing
- ◆ Dimensions : 170mm x 170mm

## Packing List

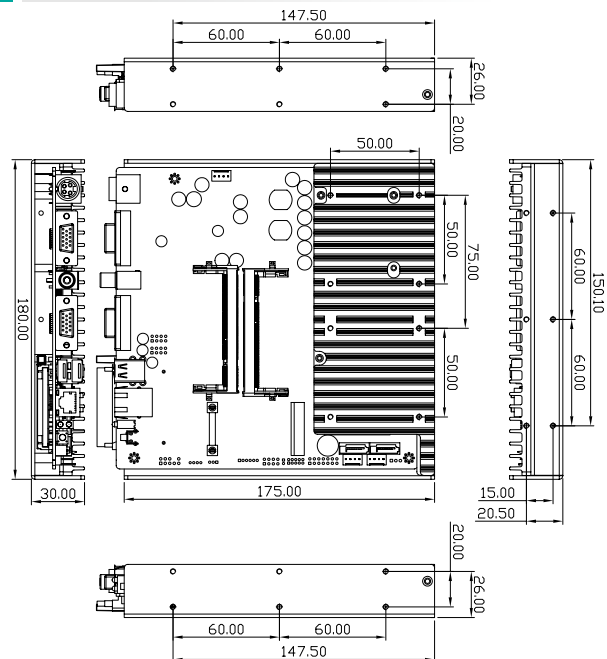
- 1 x KINO-9653 single board computer
- 2 x SATA with 5V power cable Kits (P/N:32000-106100-RS)
- 1 x Audio cable (P/N: 32000-072103-RS)
- 1 x KB/MS Y cable (P/N:32000-023800-RS)
- 1 x Heatsink Enclosure
- 1 x Dual USB cable(P/N:32000-070301-RS)
- 1 x Mini Jumper Pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)



## Features

1. Socket P Intel® Core™2 Duo processor with 800/667/533MHz FSB
2. Support dual-channel DDR2 533/667MHz up to 4GB
3. Single voltage 12VDC input
4. Support dual VGA, TV display output
5. Integrated Intel® GMA X3100 high performance Graphic Core

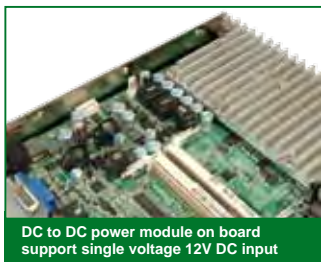
## Dimensions (mm)



## Ordering Information

Part No.	Description
KINO-9653G-R10	Intel® Core™2 Duo CPU Mini-ITX Motherboard with dual VGA, 12V DC input, Intel® PCIe GbE Lan, USB2.0, SATAII and audio
KINO-9653E-R10	Intel® Core™2 Duo CPU Mini-ITX Motherboard with dual VGA, 12V DC input, Intel® PCIe 10/100 Lan, USB2.0, SATAII and audio
CF-479B-RS	CPU cooler (50mm x 50mm x 26mm, 50W)
WMPcie-V01-R10	PCIe Mini card wireless LAN module
63000-FSP096AHB-RS	96W/12V power adaptor 90VAC~260VAC, DIN 4 PIN
32100-192900-RS	One 4-pin(2x2) to one 4-pin(1x4) DC power cable with terminal block

# Open Frame Thermal Solution Module



DC to DC power module on board support single voltage 12V DC input

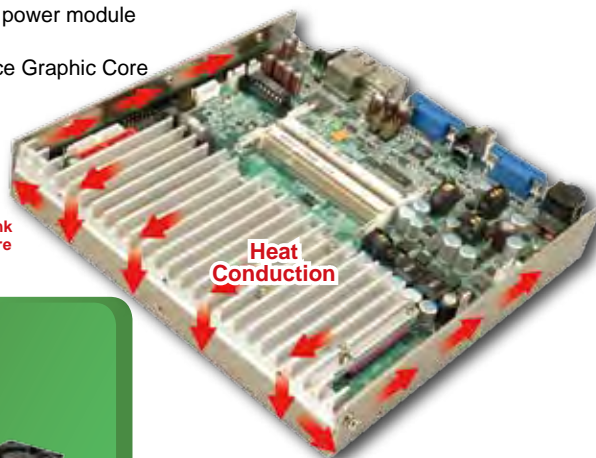
## Features

- Open frame and fanless ready thermal design
- Socket P Intel® Core™2 Duo processor with 800/667/533 MHz FSB
- Support dual-channel DDR2 533/667 MHz up to 4 GB
- Single voltage 12V DC input with onboard DC power module
- Support dual VGA, TV display output
- Integrated Intel® GMA X3100 high performance Graphic Core

## Open Frame and Fanless ready

IEI unique design, the heatsink housing is included in the standard packing list.

KINO-9653 spread major heat though heat sink to the whole enclosure and chassis. The entire system case can help to spread out heat.



Heat Conduction

## Flexible thermal solutions

Highly compatible heat sink design provides users flexibility to customize thermal solution or chassis for different environments.



## Flexible Mounting

The KINO-9653 mounting holes compliant with the VESA mounting standard (75 mm x 75 mm / 100 mm x 100 mm) on the bottom of enclosure for standard mounting and other mounting methods.



Both side have mounting holes for system side mount and drawer design.

Flexibility screw mounting holes for all directional thermal solutions.

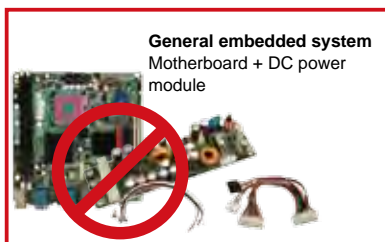


VESA100 mounting hole

VESA75 mounting hole

## DC power module on board

KINO-9653 integrated DC to DC power module on board supports single voltage 12V DC input. No extra DC power board needed for entire system integration.



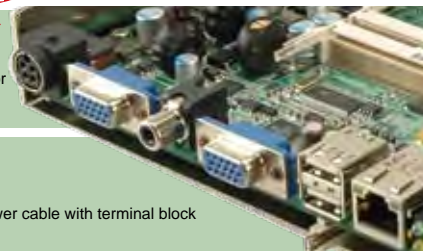
General embedded system Motherboard + DC power module



**Option 1**  
AC in by power adaptor  
90VAC~264VAC; 12V; 96W Power Adaptor  
63000-FSP096AHB-RS



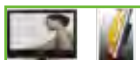
**Option 2**  
DC in by terminal block  
One 4-pin(2x2) to one 4-pin(1x4) DC power cable with terminal block  
32100-192900-RS



## Flat I/O interface design



• Power interface: 12V DC power jack input or terminal block input



• VGA+TV or VGA+VGA with dual-display output



• CompactFlash slot opening on the side of chassis



• SATA with 5V DC power output

30mm

• Compliant with 1U chassis height



• User friendly reset bottom design on the rear side