1 Industrial Computing Solutions
2 Embedded Computing Solutions
3 Industrial Data Collector and Controller
4 Video Capture Solutions
5 I/O Communication Solutions
6 Panel Solutions
7 ORing Network Communication
8 Power Supply/ Peripherals

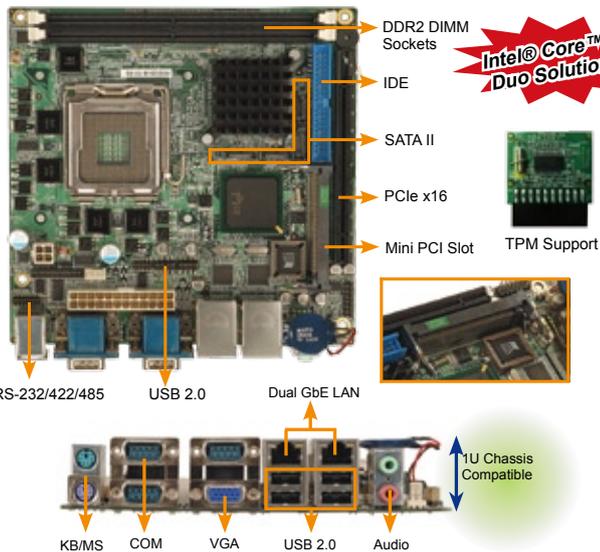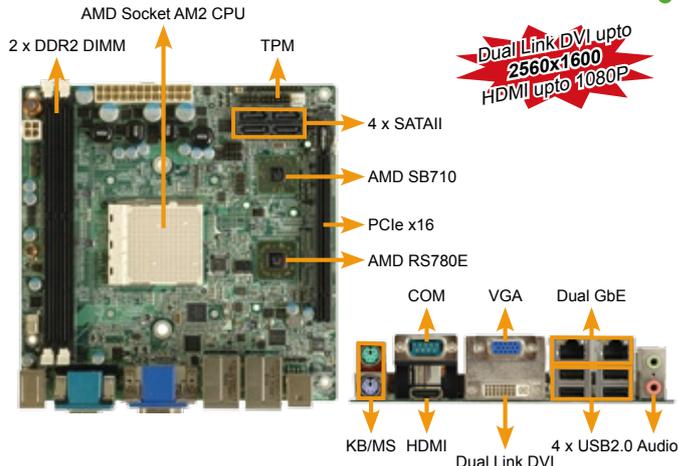# KINO-9454-R20

Intel® Core™2 Duo/Pentium® 4/Pentium® D 1066/800/533 MHz CPU Mini-ITX Motherboard with, SATA II, Dual PCIe GbE, USB 2.0 and Audio

One Key Recovery

DDR2 DIMM Sockets — IDE — SATA II — PCIe x16 — Mini PCI Slot — TPM Support

Intel® Core™2 Duo Solution

RS-232/422/485 — USB 2.0 — Dual GbE LAN

1U Chassis Compatible

KB/MS — COM — VGA — USB 2.0 — Audio

Features

1. Intel® Core™2 Duo, Pentium® 4/ Pentium® D FSB 1066/800/533 MHz processor
2. VGA integrated in the Intel® 945G
3. DDR2 667/533/400 MHz DIMM socket supports up to 4GB
4. Dual PCIe Broadcom BCM5787M GbE chipset
5. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

◆ **CPU**
LGA 775 Intel® Core™2 Duo, Pentium® D/4/ Celeron® D with a 533/800/1066 MHz FSB
◆ **System Chipset**
Intel® 945G + ICH7
◆ **BIOS**
AMI BIOS
◆ **System Memory**
Two 240-pin 2GB (maximum) 400/533/667 MHz dual-channel DDR2 DIMM supported (maximum system memory of 4 GB)
◆ **Ethernet**
Dual PCIe Broadcom BCM5787M GbE chipset with ASF2.0 remote control support.
◆ **I/O Interface**
8 x USB 2.0
4 x SATA II
1 x IDE
3 x RS-232
1 x RS-232/422/485
2 x PS/2 for KB/MS
1 x 20-pin LPC (TPM Module)
◆ **Expansions**
1 x PCIe x16
1 x Mini PCI
◆ **Infrared Interface**
One infrared Interface by pin header

◆ **Super I/O**
ITE 8712F
◆ **Digital I/O**
8-bit digital I/O, 4-bit input/ 4-bit output by super I/O
◆ **Audio**
Realtek ALC655 with AC'97 codec
◆ **SSD**
N/A
◆ **Display Interface**
VGA integrated in the Intel® 945G
◆ **Watchdog Timer**
Software programable 1-255 sec. by supper I/O
◆ **Power Supply**
ATX support
◆ **Power Consumption**
5V@1.8A, 12V@5.81A, 3.3V@3.49A, 5VSB@0.37A
(3.06GHz Intel® Pentium® 4 CPU with a 533 MHz 1GB DDR2 DIMM)
◆ **Temperature**
Operating: 0°C ~ 60°C (32 ~ 140° F)
◆ **Humidity**
Operating: 5% ~ 95% non-condensing
◆ **Dimensions**
170 mm x 170 mm
◆ **Weight:** GW: 1100 g; NW: 400 g

Packing List

1 x KINO-9454 single board computer	
1 x IDE cable (P/N: 32200-000052-RS)	
1 x SATA power cable (P/N: 32102-000100-100/200-RS)	
2 x SATA cable (P/N: 32000-062800-RS)	
1 x I/O shielding (P/N: 41003-0186C0-00-RS)	
1 x Mini jumper pack	
1 x Utility CD	1 x QIG

Ordering Information

Part No.	Description
KINO-9454-R20	Intel® Core™2 Duo/Pentium® D 1066 MHz CPU Mini-ITX Motherboard with, Dual PCIe GbE, SATA II and audio
19800-000110-RS	RS-232/422/485 cable
CB-USB02-RS	Dual USB cable
19800-000100-200-RS	Four USB cable
CF-520-RS	CPU cooler
CF-775A-RS	CPU cooler
TPM-WI01-R10	20-pin WINBOND TPM module, S/W management tool
TPM-IN01-R10	20-pin INFINEON TPM module, S/W management tool

KINO-780AM2

Mini-ITX SBC with Socket AM2 for AMD Althon™ 64, Althon™ 64 X2, Sempron™ CPU, VGA/Dual link DVI/HDMI, SPIDF Dual PCIe GbE, USB2.0, SATAII, and Audio

One Key Recovery

AMD Socket AM2 CPU — 2 x DDR2 DIMM — TPM — 4 x SATAII — AMD SB710 — PCIe x16 — AMD RS780E

Dual Link DVI upto 2560x1600 HDMI upto 1080P

COM — VGA — Dual GbE — KB/MS — HDMI — Dual Link DVI — 4 x USB2.0 Audio

Features

1. AMD RS780E integrated Radeon HD3200 graphic core for UVD, MPEG2, and H.264/AVC Full HD Decoder
(Notes: Video decoding needs driver support and player enable function. After PowerDVD 7.0, you can find ATI function option in PowerDVD video field)
2. DDR2 667/800MHz memory dual-cahnnel DDR2 DIMMs support up to 4GB
3. Dual Display support by VGA + DVI-D/HDMI + VGA
4. AMD Socket AM2 Althon™64, Althon™64 X2, Sempron™ CPU with 2600MHz Hyper Transport 3.0 support
5. ATI Radeon™ HD3200 Graphic core for DX10 support
6. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

◆ **CPU**
AMD Socket AM2 Althon™64, Althon™64 X2, Sempron™ CPU with 2600MHz Hyper Transport 3.0 support
AMD Socket AM3 Phenom II, Athlon II, Sempron CPU up to 3.2GHz
AM3 processors are backwards compatible with today's AM2 platforms
◆ **System Chipset**
AMD RS780E + SB710
◆ **BIOS**
AMI BIOS
◆ **Memory**
Two 240-pin 667/800 DDR2 dual-channel SDRAM DIMMs supported (system max. 4GB)
◆ **Ethernet**
Dual Realtek PCIe RTL8111CP GbE Chipsets
◆ **I/O Interface**
8 x USB2.0   4 x SATAII with RAID 0, 1, 10
1 x RS-232   2 x PS2 for KB/MS
1 x TPM
◆ **Graphic**
ATI Radeon™ HD3200 Graphic core for DX10 support
Graphic Memory share system memory up to 512MB (system 2GB)
◆ **Expansion**
1 x PCIe x16

◆ **Display Output**
VGA integrated in the AMD RS780E (Max. resolution 2560x1600@32bpp)
Support HDMI resolution up to 1080p integrated in the AMD RS780E
Dual link DVI-D integrated in the AMD RS780E (Resolution 2560x1600)
◆ **Digital I/O**
8-bit digital I/O, 4-bit input/ 4-bit output
◆ **Super IO**
Fintek F71859
◆ **Audio**
Realtek ALC888 HD Codec
◆ **Watchdog Timer**
Software Programmable support 1~255 sec. System reset by Fintek F75111R
◆ **Power Supply**
ATX power supply
◆ **Power Consumption**
5V@4.8A, 12V@0.22A, Vcore_12V@12.69A, 3.3V@0.54A (AMD Phenom X4 9950 CPU) Vcore_12V by CPU
◆ **Temperature**
Operation: 0°C ~ 60°C (32°F ~ 140°F)
◆ Humidity Operation: 5% ~95% non-condensing
◆ Dimension: 170mm x 170mm
◆ Weight: GW: 1000g / NW: 450 g

Packing List

1 x KINO-780AM2 single board computer	1 x Mini jumper pack
1 x I/O shielding (P/N: 45014-0028C0-00-RS)	4 x SATA cable (P/N: 32000-062800-RS)
1 x Utility CD	1 x QIG (Quick Installation Guide)

Ordering Information

Part No.	Description
KINO-780AM2-R10	Mini-ITX SBC with Socket AM2 for AMD Althon™ 64, Althon™ 64 X2, Sempron™ CPU, VGA/Dual link DVI/HDMI, SPDIF Dual PCIe GbE, USB2.0, SATAII, and Audio
TPM-WI01-R10	20-pin WINBOND TPM module, S/W management tool
TPM-IN01-R10	20-pin INFINEON TPM module, S/W management tool
CB-USB02-RS	Dual Ports USB cable
32102-000100-100-RS 32102-000100-200-RS	SATA Power cable
24105-000077-RS	AMD Athlon™ 64 X2 Dual Core 4200+, 2.2GHz, 512KBx2, 1000MHz, TDP 35W, Socket AM2(940-pin), RoHS
24105-000078-RS	AMD Athlon™ 64 X2 Dual Core 3600+, 1.9GHz, 512KBx2, 1000MHz, TDP 35W, Socket AM2(940-pin), RoHS
CF-478D-RS-R11	1U CPU cooler for 65W
CF-478E-RS-R11	2U CPU cooler for 120W