
		All-in-One Gaming Boards			Gaming Security & I/O Card
System		MB-80210	MB-62000	MB-64000	IP-90560
CPU		AMD® AM2+ Phenom / Athlon X2 / Athlon	Intel® Pentium® M Intel® Celeron™ M	VIA® Nano 1.6GHz VIA® Eden™ ULV 1G VIA® Eden™ ULV 500MHz	-
Chipset		AMD 780E + SB710	Intel® 915GME chipset + ICH6-M Intel® 910GML E	North Bridge: VIA® - CN700 South Bridge: VIA® - VT8237R+	-
Memory		DDRII 533/667/800 up to 4GB	SO-DIMM DDRII 400/533 up to 2GB	DDRII 400/533 DIMM up to 1GB	-
BIOS		AMI	AMI	AMI	-
Watchdog Timer		Programmable. 255levels, 0~255sec	Programmable. 255levels, 0~255sec	Programmable. 255levels, 0~255sec	Programmable. 255 levels, 0~255sec
Storage	SSD	CF Type II slot Onboard 1GB NANDrive (Optional 4GB)	CF Type II slot Onboard 1GB NANDrive (Optional 4GB)	CF type I/II slot Onboard 1GB NANDrive (Optional 4GB)	-
	HDD	2 x SATA	1 x PATA (40pin) 2 x SATA	1 x PATA (44pin) 2 x SATA	-
Software	O/S	Window XP(e) / Linux	Window XP(e) / Linux	Windows CE 6.0 / Window XP(e) / Linux	Window XP(e) / Linux
Security	Intrusion Detection	By battery powered single chip microcontroller Operates with and without system power 6x Intrusion detection inputs Logs date/time of last 32 events Events include door status, system resets/brownouts On-chip EEPROM backup	By battery powered single chip microcontroller Operates with and without system power 6x Intrusion detection inputs Logs date/time of last 32 events Events include door status, system resets/brownouts On-chip EEPROM backup	Optional module with 6x Intrusion detection inputs Logs date/time of last 32 events Events include door status, system resets / brownouts	By battery powered single chip microcontroller Operates with and without system power 6x Intrusion detection inputs Logs date/time of last 32 events Events include door status, system resets/brownouts On-chip EEPROM backup
	TPM	TPM 1.2 on LPC	TPM 1.2 on LPC	TPM 1.2 on LPC	-
	FPGA	Locking Security	-	Locking Security	Locking Security
	Authenticate Chip	Yes	No	Yes	Yes
	CPU Security	No	No	Processor built-in security engine support AES, RNG and Security Hash	-
ROM	2MB Flash ROM	2MB Flash ROM	2MB Flash ROM	2MB Flash ROM	
Display	Graphic Chipset	AMD® 780E ~ with ATI Radeon™ HD3200	Intel® GMA900	VIA® UniChrome™ Pro	-
	Video Interface	VGA: up to 2560 x 1440 (16:9) DVI: up to 2560 x 1600	Primary - Analog RGB Secondly - dual channel LVDS 18-bit	Dual VGA 1600 x 1200 (UXGA)	-
Audio	Audio Chipset	HDA 7.1	AC97	AC97	-
	Audio Interface	Front, Surround, Side, CEN/SUB, Line in, Mic in	Mic in/ Line in/ Line out and 15W+15W power amplifier output	6W+6W amplifier output thru golden finger	-
Gaming	NVRAM	Onboard 1MB SRAM Optional 4MB NVRAM module	Onboard 1MB SRAM Optional 4MB NVRAM module	Battery backup 512KB CMOS SRAM	Onboard 1MB SRAM Optional 4MB NVRAM module
	Timers	Programmable timer with timeout interrupt	Programmable timer with timeout interrupt	Programmable timer with timeout interrupt	Programmable timer with timeout interrupt
	I/O	24x photo-couple isolated input 32x 500mA current sink output	40x photo-couple isolated input 24x 500mA current sink output 4x 1A current sink output 4x MOSFET 30V/2A current sink output	24x photo coupler protected input 26x 500mA current sink output 6x doors input	32x photo-couple isolated input 32x 500mA current sink output
Expansion	Slot	2 x PCI-E x 16 1 x PCI	1 x PCI-E x16 slot (915GME version only) 1 x PCI	-	-
Ethernet	Ethernet Interface	2 x GbE	2 x GbE	1 x FE	-
I/O Connectors	Parallel Port	-	1 x Parallel port (pin header)	-	-
	COM Port	DB9: 1 x RS-232; 1 x RS-232/422/485 selectable Pin Header: 2 x RS-232; 2 x ccTalk/Simple RS-232 selectable	DB9: 3 x RS-232; 1 x RS-232/422/485 selectable Pin Header: 2 x ccTalk / TTL	DB9: 2 x RS-232 Pin Header: 2 x ccTalk	-
	KB/MS Port	1 x PS2 KB/MS pin header	1 x PS2 KB/MS pin header	1 x PS2 KB/MS pin header	-
	USB Port	4 x USB2.0 4 x USB2.0 pin header	4 x USB 2.0 3 x USB 2.0 pin header	2 x USB 2.0 4 x USB 2.0 pin header	-
	IrDA	1 x IrDA	1 x IrDA	-	-
Power Supply	Power Voltage	-	Single DC+12V power input for logics: Separated DC +5V/+12V/+24V for gaming I/O	Max: DC+12V/3A, DC+5V/4A required only for the board	-
Mechanical & Environmental	System Health Monitoring	Measurement of CPU core, system temperature with thermal trip. Speed monitoring for CPU fan & 2 system fan	Measurement of CPU core and system temperature with thermal trip. Speed monitoring for CPU fan and 2 system fans	-	-
	Environmental Compliance	Operating Temperature: 0~60°C Storage Temperature: -20~80°C Humidity: 10~85% non-condensing	Operating Temperature: 0~60°C Storage Temperature: -20~80°C Humidity: 10~85% non-condensing	Operating Temperature: 0~60°C Storage Temperature: -20~80°C Humidity: 10~85% non-condensing	Operating Temperature: 0~60°C Storage Temperature: -20~80°C Humidity: 10~85% non-condensing
	Dimension	244mm(L) x 244mm(W) (9.6"L x 9.6"W)	295mm (L) x 220mm (W) (11.6"L x 8.7"W)	170 x 200mm (7"L x 8"W)	163mm(L) x 107mm(W) (6.5"L x 4.2"W)
	Applications	Video slot machines (Class II/III) Video lottery terminals Amusement game machines Master unit for roulette machine Downloadable gaming terminal Multi player gaming machines	Video slot machines (Class II/III) Video lottery terminals Amusement game machines Master unit of roulette machine Downloadable gaming terminal Kiosks	Video slot machine Fruit machine Video lottery terminal Amusement game machine Slave unit for roulette machine	Video slot machines (Class II/III) Video lottery terminals Amusement game machines Downloadable gaming terminal



		COM Express Module	ETX CPU Module	3.5 Inch Embedded Board
System		MB-73150 / MB-80040	MB-8005A	MB-80190
CPU		Intel® Core™ 2 Duo Pentium® M Intel® Single Core™ Celeron® M	Intel® Core™ 2 Duo processor	Intel® Atom Pineview D510, D410, N450
Chipset		Intel® 945GME ICH7M-DH	Intel® 965GME ICH8-M	Intel® Pineview + ICH8M
Memory		SO-DIMM DDR2, DDR 00/533/667MHz up to 2GB	SO-DIMM DDR2, DDR 533/667MHz up to 2GB	SO-DIMM DDRII 667/800 up to 2GB
BIOS		AMI	AMI	AMI
Watchdog Timer		-	-	Programmable. 255levels, 0~255sec
Storage	SSD			CF Type II slot 2 x SATA
Software	O/S	-	-	-
Security	Intrusion Detection	-	-	-
	FPGA	-	-	-
	Authenticate Chip	-	-	-
	ROM	-	-	-
Display	Graphic Chipset	Intel® 945GME Integrated	Intel® 965GME Integrated	Intel® Pineview Integrated
	Video Interface	Dual SDVO, dual 18-bit LVDS channels, Analog VGA and TV-out	CRT, 18-bit TTL LCD, Dual 18/24-bit LVDS	VGA ~ up to 1400 x 1050 (Pineview M) VGA ~ up to 2048 x 1536 (Pineview D) LVDS 18-bit ~ up to 1280 x 800 (Pineview M) LVDS 18-bit ~ up to 1366 x 768 (Pineview D)
Audio	Audio Chipset	AC97	AC97	
Gaming	NVRAM	-	-	-
	Timers	-	-	-
	I/O	-	-	8 x programmable GPIO
Expansion	Slot	5 x PCI-Express x 1, PCI 2.3 32-bit 33MHz supports up to two Req/Gnt pairs	1 x PCI 1 x ISA	1 x Mini PCI
Ethernet	Ethernet Interface	1 x GbE	1 x FE	2 x GbE 2 x RJ45
I/O Connectors	Parallel Port	-	1 x SPP/EPP/ECP	-
	COM Port	-	2 x RS-232	2 x RS-232
	KB/MS Port	-	PS2 KB/MS	1 x PS2 KB/MS pin header
	USB Port	8 x USB 2.0	4 x USB 2.0	2 x USB 2.0 4 x USB 2.0 pin header
	IrDA	-	115kpv	-
Power Supply	Power Voltage	+12V	4.75-5.25V	Lithium 3V/220mAH +12V DC
Mechanical & Environmental	Environmental	-	-	Operating Temperature: 0~60°C Storage Temperature: -20~80°C Humidity: 10~85% non-condensing FCC/CE
	Dimensions	95mm (L) x 125mm (W) (3.8"L x 5"W)	114mm(L) x 940mm(W) (4.5"L x 3.7"W)	145mm(L) x 102mm(W) (5.7"L x 4"W)
Applications	Main Application	-	-	-



System		PL-64000	PL-80320	PL-80190	PS-2060/2040	PL-8027A
CPU		VIA® Nano 1.6GHz VIA® Eden™ ULV 1G Hz VIA® Eden™ ULV 500MHz	VIA® Nano 1.3G Plus VIA® Eden™ ULV 1G Hz VIA® Eden™ ULV 500MHz	Intel® Atom Pineview D510 / N450 / D410	Intel® Atom™ E640 1.0G Intel® Atom™ E620 600MHz	MAP-100
Chipset		North Bridge: VIA® ~ CN700 South Bridge: VIA®~VT8237R+	VIA VX900	Intel® Pineview + ICH8M	EG20T	-
Memory		DDRII 400/533 up to 1GB	SO-DIMM DDRIII 800/1066 up to 4GB	SO-DIMM DDRII 667/800 up to 2GB	Onboard DDRII 800 up to 1GB	128MB SDRAM
Storage	SSD	CF type I/II slot Onboard 1GB NANDrive (Optional 4GB)	CF Type II slot	CF Type II slot	1 x Cfast 1 x SATA DOM	1 x SD 128MB NAND Flash
	HDD	1 x PATA (44pin) 2 x SATA	1 x SATA	2 x SATA	1 x SATA	-
Software	O/S	Windows CE 6.0 / Window XP(e)/ Linux	Windows CE 6.0 / Window XP(e)/ Linux	Windows CE 6.0 / Window XP(e)/ Linux	Window XP(e)/ Linux	Windows CE 6.0 / Android
Security	Intrusion Detection	6x ESD protected door switch input	-	-	-	-
	TPM	TPM 1.2	-	-	-	-
	FPGA	Locking Security	-	-	-	-
	Authenticate Chip	Yes	-	-	-	-
	CPU Security	Processor built-in security engine support AES, RNG and Security Hash	Processor built-in security engine support AES, RNG and Security Hash	-	-	-
Boot ROM	2MB Flash ROM	-	-	-	-	
Display	Graphic Chipset	VIA® UniChrome™ Pro	VIA® Chrome9 HD DX9	Intel® GMA3150	TBD	MAP-100
Gaming	NVRAM	512KB SRAM	-	-	-	-
	Timers	Programmable timer with timeout interrupt	-	-	-	Timer
	I/O	24x photo coupler protected input 26x 500mA current sink output 6x doors input	8 x programmable GPIO	8 x programmable GPIO	8x GPI 8x GPO	2 x photo coupler protected input 2 x dry contact relay output 5x GPIO
Expansion	Slot	-	1 x Mini PCIe 1 x PCI 104	1 x Mini PCI	1 x Mini PCIe	-
Connectors	COM Port	2 x RS232	3 x RS232 1 x RS232 / 422 / 485	1 x RS232	4 x RS232 3 x simple 232 1 x RS232 / 422 / 485	2 x RS232 1 x simple 232
	USB Port	2 x USB2.0	6 x USB2.0	2 x USB2.0 (rear) x USB2.0 (front)	4 x USB 2.0	1 x USB2.0
	Audio Output Port	-	1 x Mic in / 1 x Line in / 1 x Audio out	1 x Mic in / 1 x Line in / 1 x Audio out	Front, Surround, Side, CEN/SUB, Line in, Mic in	-
	Video Output Port	2 x VGA (D-SUB)	1 x VGA (D-SUB)	1 x VGA (D-SUB)	-	-
	Ethernet Port	1 x Gigabit (RJ45)	2 x Gigabit (RJ45)	2 x Gigabit (RJ45)	2 x Gigabit (RJ45)	1 x Fast Ethernet (RJ45)
Gaming I/O Connector	Game I/O	20pin + 72pin fruit machine golden finger (Front) 56pin JAMMA standard golden finger (Front)	-	-	-	-
Mechanical & Environmental	Dimensions	229mm(L) x 186mm(W) x 48mm(H) (9"L x 7.3"W x 2"H)	217mm (W) x 141mm (D) x 69mm (H) (8.6"W x 5.6"D x 2.7"H)	195mm(W) x 105mm(D) x 51mm(H) (7.7"W x 4.2"D x 2"H)	235mm (W) x 130mm (D) x 57mm (H) (9.3" W x 5.2" D x 2.3" H)	102mm(L) x 149mm(W) x 36mm(H) (4"L x 5.9"W x 1.5"H)



System		PL-61000	PL-80210	PL-62000
CPU		Intel® Core 2 Duo Intel® Celeron® M	AMD® AM2+ Phenom™ / Athlon X2 / Athlon	Intel® Pentium® M Intel® Celeron® M
Chipset		Intel® GM45 + ICH9M	AMD® 780E + SB710	Intel® 915GME chipset + ICH6-M Intel® 910GML
Memory		DDRIII 800/1066 up to 8GB	DDRII 533/667/800 up to 4GB	SO-DIMM DDRII 400/533 up to 2GB
Storage	SSD	2 x SATA DOM Onboard SATA storage	CF Type II slot Onboard 1GB NANDrive (Optional 4GB)	CF Type II slot Onboard 1GB NANDrive (Optional 4GB)
	HDD	2 x SATA	2 x SATA	1 x PATA (40pin) 2 x SATA
Software	O/S	Window XP(e)/ Linux	Window XP(e)/ Linux	Window XP(e)/ Linux
Security	Intrusion Detection	Battery powered 6 x Intrusion detection	Battery powered 6 x Intrusion detection	Battery powered 6 x Intrusion detection
	TPM	TPM 1.2	TPM 1.2	TPM 1.2
	FPGA	Locking Security	Locking Security	Locking Security
	Authenticate Chip		Yes	-
	CPU Security	-	-	-
Display	Graphic Chipset	Intel® 4500MHD	AMD® 780E ~ with ATI Radeon™ HD3200	Intel® GMA900
Gaming	NVRAM	Onboard 1MB SRAM Optional 4MB NVRAM module	Onboard 1MB SRAM Optional 4MB NVRAM module	Onboard 1MB SRAM Optional 4MB NVRAM module
	Timers	Programmable timer with timeout interrupt	Programmable timer with timeout interrupt	Programmable timer with timeout interrupt
	I/O	20x photo-couple isolated input 20x ESD protected input 40x 1A current sink output	24x photo-couple isolated input 500mA current sink output	40x photo-couple isolated input 500mA current sink output 4x 1A current sink output 8x 500mA current source output 4x MOSFET 30V/2A current sink output 16x spared bi-direction general purpose I/O
Expansion	Slot	1 x MXM 3.0 1 x Mini PCIe	2 x PCI-E 1 x PCI	1 x PCI-E x16 slot (915GME version only) 1 x PCI
I/O Connectors	COM Port	4 x RS232 3 x simple RS232 2 x ccTalk 1 x RS422/485	3 x RS232 1 x RS232 / 422 / 485 (jumper selectable) 2 x simple RS232 (Tx,Rx)	3 x RS232 1 x RS232 / 422 / 485 (jumper selectable)
	USB Port	8 x USB2.0	4 x USB2.0	4 x USB2.0
	Audio Output Port	Front, Surround, Side, CEN/SUB, Line in, Mic in	Front, Surround, Side, CEN/SUB, Line in, Mic in	1 x Mic in / 1 x Line in / 1 x Audio out 2 x Speaker out
	Video Output Port	1 x VGA (D-SUB) / 2 x DVI	1 x VGA (D-SUB) / 1 x DVI	1 x VGA (D-SUB) / 1 x DVI
	Ethernet Port	2 x Gigabit (RJ45)	2 x Gigabit (RJ45)	2 x Gigabit (RJ45)
Gaming I/O Connector	Game I/O	IP-90560	72pin fruit machine golden finger (Front)	3 x Game I/O (Top or Front)
Mechanical & Environment	Dimension	327mm(L) x 285mm(W) x 194mm(H) (12.9"L x 11.3"W x 7.7"H)	266mm(L) x 268mm(W) x 148mm(H) (10.5"L x 10.6"W x 5.8"H)	314mm(L) x 251mm(W) x 88mm(H) (12.4"L x 9.9"W x 3.5"H)



Graphic Performance Comparison

	MB-6400A	MB-6400B	MB-6400C	MB-6200B	MB-6200A	MB-6200A	MB-80210				SGA-5200	SGA-5200	SGA-5200	SGA-5200
CPU	VIA® NANO 1.6G	VIA® EDEN™ 1G	VIA® EDEN™ 500MHz	Intel® Celeron® 600MHz	Intel® Celeron M® 1.5GHz	Intel® Pentium® M 1.8GHz	AMD® Processor Phenom™ II Q45L 2.2GHz	AMD® Processor Athlon™ II V66C 2.8GHz	AMD® Processor Athlon™ 64 X2 3600+	AMD® Athlon™ 64 processor 2600+ 1.6GHz	Intel® T9400 Core 2 Duo 2.53GHz	Intel® P8400 Core 2 Duo 2.26GHz	Intel® Celeron® T3100 Dual Core 1.9GHz	Intel® Celeron® 575 2.0GHz
Chipset	CN700	CN700	CN700	Intel® 910GML \ 915GME	Intel® 910GML \ 915GME	Intel® 910GML \ 915GME	AMD® 780E+SB710	AMD® 780E+SB710	AMD® 780E+SB710	AMD® 780E+SB710	GM45 + ICH9M	GM45 + ICH9M	GM45 + ICH9M	GM45 + ICH9M
Graphic	IGP - S3 UniChrome Pro	IGP - S3 UniChrome Pro	IGP - S3 UniChrome Pro	IGP - Intel® GMA 900	IGP - Intel® GMA 900	IGP - Intel® GMA 900	ATI- HD3200	ATI- HD3200	ATI- HD3200	ATI- HD3200	Intel® 4500MHD	Intel® 4500MHD	Intel® 4500MHD	Intel® 4500MHD
Memory	Transcend 1GB DDR2 667	Transcend 1GB DDR2 667	Transcend 1GB DDR2 667	1GB DDR2	1GB DDR2	1GB DDR2	DDR2 800Mhz 4G	DDR2 800Mhz 4G	DDR2 800Mhz 4G	DDR2 800Mhz 4G	DDR3 1066MHz 4G	DDR3 1066MHz 4G	DDR3 1066MHz 4G	DDR3 1066MHz 4G
HDD	Seagate 250GB	Seagate 250GB	Seagate 250GB	Seagate 250GB	Seagate 250GB	Western digital 80GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB	Western Digital 320GB
Resolution	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit	1024 x 768 32bit


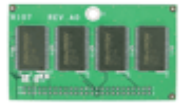


WINDOWS XP	3DMark 2001	2208	971	521	2132	3753	2315	10825	10710	8507	6680	8069	7723	6712	6120
	3D Mark 2003	147	60	25	563	999	624	3476	3451	2927	2354	2351	2341	2319	2112
	3D Mark 2005	x	x	x	x	194	161	3049	3042	2389	1715	1540	1538	1481	1395
	3D Mark 2006	x	x	x	x	x	45	1806	1788	1529	879	903	902	873	808
	Performance Test V6.1 CPU Mark	295	111	57.6	x	377	160	2048	1296	778.4	331	1645	1450	1198	576

Gaming Board and Platform Accessories


Riser Card

Item Number	Model
 TCB-GA2K-01 PCI-E x16 riser card	MB-62000 / PL-62000


Modules

Item Number	Model
 TCB-GA3K-04 DK kit for 4MB NVRAM module	MB-62000/PL-62000
 TCB-GA3K-03 4MB FRAM module	MB-62000 /PL-62000
 TCB-GA2K-02 PCI-E x16 interface 24-bit LVDS	MB-62000 / PL-62000
 TCB-GA2K-03 PCI-E x16 interface DVI module	MB-62000 / PL-62000


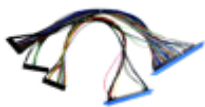

Evaluation Board

Item Number	Model
 IP-90460 Gaming I/O testing board	MB-62000/ PL-62000/MB-64000

HDD shelf bracket

Item Number	Model
 KT-GA3K-02 DK kit for 2.5" HDD shelf accessory 8 x Screw (M3*0.5*L4) 4 x Standoffs RoHS 1 x HDD-BKT/ RoHS 1 x Power cable 15cm /RoHS 1 x SATA cable 15cm/ RoHS	PL-62000

Cables

Item Number	Model
 CB-JAM002-00 Power Cable	MB-64000
 CB-JAM001-00 Cable, connects MB-64000 to Gaming I/O test board IP-90460 (EDGE Conn.(72p+56p)?2 *25p(2.54mm)*3 50cm cable/RoHS)	MB-64000
 CB-ICOM27-00 I/O Cable	MB-80210