# **DVMB-554E** Intel<sup>®</sup> Core<sup>™</sup> 2 Duo Based Digital Video Main Board with 4 Channel Video Input

■ Supports Intel<sup>®</sup> Core<sup>™</sup> 2 Duo, Core<sup>™</sup> Solo and Celeron<sup>®</sup> M processors - Four channel PCIe based video input at 120/100 (NTSC/PAL) frames per

- Supports Windows® 2000/XP driver and MPEG4 encoder SDK



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#### **Description**

DVMB-554 is the first digital video main board to be built with the Intel Core 2 Duo platform, PCIe technology and four channel video input driven by the onboard video capture chip. Intel Core Duo technology offers great performance for video analysis or video compression. The new PCIe interface for four Video chips relieves the usual limitations on PCI bandwidth. The practical result is that the DVMB-554 can capture four channels of video data (D1) at full motion frame rates. The small MINI-ITX form factor and its low power CPU combine to establish the DVMB-554 as the ideal platform for POS integration DVRs, ATM integration DVRs, Vehicle computers and the intelligent video surveillance platforms.

**Features** 

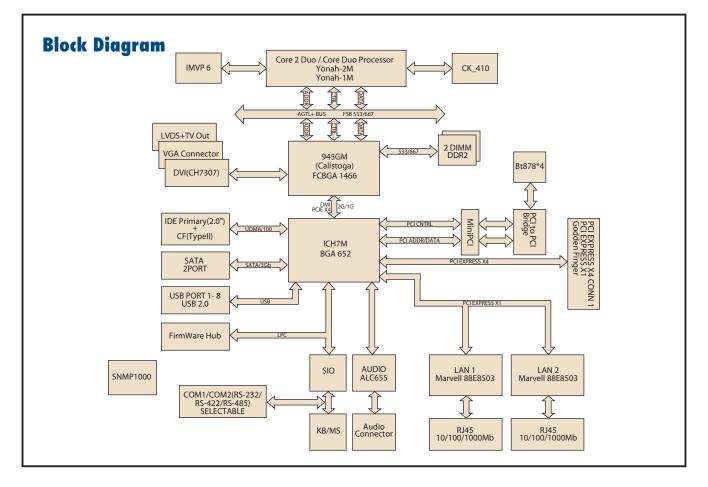
 Supports DDR2 Dual channel memory Dual display output, DVI + VGA, or LVDS + VGA

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#### **Specifications**

Bit Display Singer Milez System Chipset   Intel 9456M, Intel CH7M Minbond W83627HF-AW   Memory Dual channel memory architecture 2 x SODIMM. 2 GB DDR2 667/533/400 non-ECC, unbuffered memory   BIOS 4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, WIM2.0, SM BIOS 2.3   Werkory Dual channel memory architecture 2 x SODIMM. 2 GB DDR2 667/533/400 non-ECC, unbuffered memory   BIOS 4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, WIM2.0, SM BIOS 2.3   Wake-On-Eyst Reyboard Wake-On-Eyst Reyboard   - Wake-On-USB Keyboard - Wake-On-LAN   - Wake-On-LSB Keyboard - Wake-On-USB Keyboard   - Wake-On-USB Keyboard - Wake-On-USB Keyboard   - RC Inter to power-on the system - RC Inter to power-on the system   CPU stopped clock control - RTC Inter to power-on the system   Actipate Tabuter Ecowery - RTC Inter to power-on the system   HDD interface System power Management System power Manage	CPU	Supports Intel µFC-PGA 478/µFC-BGA 479 Core Duo with 65 nm process technology			
System Chipset   Intel 945GM, Intel ICH7M     I/O Chipset   Winbord W33627HF-AW     Memory   Dual channel memory architecture 2 x SODIMM. 2 GB DDR2 667/533/400 non-ECC, unbuffered memory     BIOS   4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, WIM2.0, SM BIOS 2.3     Supports ACPT specification and OS Directed Power Management   Wake-On-Events include: - Vake-On-USB Keyboard/Mouse - Vake-On-USB Keyboard     Power Management   System Dower management sported   Supports ACPT specification - Wake-On-USB Keyboard     Power Management   System Dower management sported   Supports ACPT specification - Wake-On-USB Keyboard     Power Management   System Dower management sported   Supports SM green mode Microsoft/Intel APM 12 compilant     Power Management   System Carcel IDE interface supported a ACPT v1.0 a specification AC power failure recovery   A Enhanced IDE interface supports up to 2 x IDE devices. Ultra DMA 100 mode up to 100 MB/sec.     2 x SATA ports support up to 150 MB/sec.   S x COM2: RS-232/422/485   S     Serial Ports   COM1: RS-232, COM2: RS-232/422/485   S     USB   2 x Dorts on board (with LAN connector)   X 2 ports on board (with CAN connector)     2 x 2 ports on board (with CAN connector)   X 2 ports in header (X set) S A 2, 2.0 mm in header w/ idioi-proof, front-end)     PS/2 <td></td> <td colspan="3"></td>					
I/O Chipset Winbond W83627HF-AW   Memory Dual channel memory architecture 2 x SODIMM. 2 GB DDR2 667/533/400 non-ECC, unbuffered memory   BIOS 4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, WIM2.0, SM BIOS 2.3   Supports ACPI specification and OS Directed Power Management Wake-On-Events include: - Wake-On-EVents include: - Wake-On-EVents include: - Wake-On-LSB Keyboard - Wake-On-LAN   Power Management System power management sported   System power management sported   System power supported > ACPI v1.0a specification AC power aliure recovery   HDD interface 1 x Enhanced IDE interface supports up to 2 x IDE devices. Ultra DMA 100 mode up to 100 MB/sec. 2 x SATA ports support up to 150 MB/sec.   Serial Ports COM1: RS-232, COM2: RS-232/422/485   BX USB board (with LAN connector) 2 x 2 ports pin header (2 x set: 5 x 2, 2.0 m pin header w/ idiot-proof, front-end)   PS/2 1 x (keyboard and mouse with Y cable)   I2C/SMBus 4-pin Water box 2.0 mm   VGALCD Interface Intel Graphics Media Accelerator 950   Display VGALVDS/DV/composite   Ethernet Interface <t< td=""><td></td><td colspan="3"></td></t<>					
Memory   Dual channel memory architecture 2 x SODIMM. 2 GB DDR2 667/533/400 non-ECC, unbuffered memory     BIOS   4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, VIIMZ.0, SM BIOS 2.3     BIOS   4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, VIIMZ.0, SM BIOS 2.3     Wake-On-Events include:   - Wake-On-EVENts include:     - Wake-On-LSB (keyboard)   - Wake-On-LSB (keyboard)     - Wake-On-LNN   - RTC timer to power-on the system     System power management sported   Supports SVE function     CPU stopped clock control   Hardware supports JSMI green mode     Microsott/Intel APM 1.2 compliant   Soft Power supported - ACPI v1.0 specification     AC power taiture recovery   HDD interface   St At ports support up to 150 MB/sec.     Serial Ports   COM1: RS-232, COM2: RS-232/422/485   Serial Ports     USB   2 x 2 ports on board (with LAN connector)   2 x 2 ports pin header (X set: 5 x 2, 2.0 mm pin header w/ idiot-proof, front-end)     PS/2   1 x (keyboard and mousew with Y cable) <td< td=""><td></td><td colspan="4"></td></td<>					
BIOS 4 MB Flash ROM, AWARD BIOS, PnP, DMI2.0, WIM2.0, SM BIOS 2.3   Supports ACP specification and OS Directed Power Management.   Wake-On-Events include: - Wake-On-PS/2 Keyboard/Mouse   - Wake-On-LAN - Wake-On-LAN   - RTC timer to power-on the system - RTC timer to power-on the system   System power management sported System power management sported   Supports PXE function CPU stopped clock control   Hardware supported ACPI v1.0 a specification AC power failure recovery   HDD interface 1 x Enhanced IDE interface supports up to 2 x IDE devices. Ultra DMA 100 mode up to 100 MB/sec.   2 x SATA ports support up to 150 MB/sec. 2 x SATA ports support up to 150 MB/sec.   Serial Ports CoMI : R6-232 xQ/22/485   USB 8 x USB host interfaces, USB 2.0/1.1 compliant   2 x 2 ports in header (2 x set 5 x 2, 2.0 com min header w/ idiol-proof, front-end)   PS/2 1 x (keyboard and mouse with Y cable)   U2/SMBus 4-pin Wafer box 2.0 mm   VGA/LOD Interface Dual Marvell B&EB00S PCIE Gigabit LAN Controller, featuring AI NET2   Audio Interface Dual Marvell B&EB00S PCIE Gigabit LAN Controller, featuring AI NET2   Audio Interface Dual Marvell B&EB00S PCIE Gigabit LAN Controller, featuring AI NET2   Audio In					
Supports ACPI specification and OS Directed Power Management Wake-On-Events include: 		Dual channel memory architecture 2 x SODIMM. 2 GB DDH2 667/533/400 non-ECC, unbuffered memory			
Wake-On-Events include: - Wake-On-EVR   - Wake-On-LSB Keyboard - Wake-On-LAN   - Wake-On-LAN - RTC timer to power-on the system   Power Management System power management spooted   Supports PXE function CPU stopped clock control   Hardware supports SMI green mode Microsoft/Intel APM 1.2 compliant   Soft Power supported - ACPI v1.0a specification AC power failure recovery   HDD interface 1 x Enhanced IDE interface supports up to 2 x IDE devices. Ultra DMA 100 mode up to 100 MB/sec.   2 x SATA ports support up to 150 MB/sec. 2 x SATA ports support up to 150 MB/sec.   Serial Ports COM1: RS-232, COM2: RS-232/422/485   USB 8 x USB host interfaces. USB 2.0/1.1 compliant   2 x 2 ports in header (2 x set: 5 x 2, 2.0 mm pin header w/ idiol-proof, front-end)   PS/2 1 x (keyboard and mouse with Y cable)   12/SMBus 4-pin Wafer box 2.0 mm   VGA/LCD Interface Intel Graphics Media Accelerator 950   Display VGA/LVDS/DVI/composite   Ethernet Interface Dual wrell 888053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface CAGP 2.3 compliant   Audio Interface Self accelerator 950   Display VGA/LO S/DVI/composite	BIOS				
HDD Interface 2 x SATA ports support up to 150 MB/sec.   Serial Ports COM1: RS-232, COM2: RS-232/422/485   USB 8 x USB host interfaces, USB 2.0/1.1 compliant   2 x 2 ports on board (with LAN connector) 2 x 2 ports pin header (2 x set: 5 x 2, 2.0 mm pin header w/ idiot-proof, front-end)   PS/2 1 x (keyboard and mouse with Y cable)   I2C/SMBus 4-pin Wafer box 2.0 mm   VGA/LCD Interface Intel Graphics Media Accelerator 950   Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface 5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	Power Management	Wake-On-Events include: - Wake-On-PS/2 Keyboard/Mouse - Wake-On-USB Keyboard - Wake-On-LAN - RTC timer to power-on the system System power management spported Supports PXE function CPU stopped clock control Hardware supports SMI green mode Microsoft/Intel APM 1.2 compliant Soft Power supported - ACPI v1.0a specification AC power failure recovery			
8 x USB host interfaces, USB 2.0/1.1 compliant   2 x 2 ports on board (with LAN connector)   2 x 2 ports pin header (2 x set: 5 x 2, 2.0 mm pin header w/ idiot-proof, front-end)   PS/2 1 x (keyboard and mouse with Y cable)   I2C/SMBus 4-pin Wafer box 2.0 mm   VGA/LCD Interface Intel Graphics Media Accelerator 950   Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface 5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	HDD interface				
USB2 x 2 ports on board (with LAN connector) 2 x 2 ports pin header (2 x set: 5 x 2, 2.0 mm pin header w/ idiot-proof, front-end)PS/21 x (keyboard and mouse with Y cable)I2C/SMBus4-pin Wafer box 2.0 mmVGA/LCD InterfaceIntel Graphics Media Accelerator 950DisplayVGA/LVDS/DVI/compositeEthernet InterfaceDual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2Audio Interface5.1 Channel audio supported (internal connector) (Pin assignment will provide later)CFOptional CF socket on the solder side accepts Type I/II CF CardMini PCI1	Serial Ports				
PS/2 1 x (keyboard and mouse with Y cable)   I2C/SMBus 4-pin Wafer box 2.0 mm   VGA/LCD Interface Intel Graphics Media Accelerator 950   Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface 5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	USB	2 x 2 ports on board (with LAN connector)			
VGA/LCD Interface Intel Graphics Media Accelerator 950   Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface AC97 2.3 compliant   5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	PS/2				
Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface AC97 2.3 compliant   5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	I2C/SMBus	4-pin Wafer box 2.0 mm			
Display VGA/LVDS/DVI/composite   Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface AC97 2.3 compliant   5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1	VGA/LCD Interface	Intel Graphics Media Accelerator 950			
Ethernet Interface Dual Marvell 88E8053 PCIe Gigabit LAN Controller, featuring AI NET2   Audio Interface AC97 2.3 compliant   5.1 Channel audio supported (internal connector) (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1					
Ac97 2.3 compliant   5.1 Channel audio supported (internal connector)   (Pin assignment will provide later)   CF Optional CF socket on the solder side accepts Type I/II CF Card   Mini PCI 1					
Mini PCI 1	Audio Interface	AC97 2.3 compliant 5.1 Channel audio supported (internal connector) (Pin assignment will provide later)			
	-	Optional CF socket on the solder side accepts Type I/II CF Card			
PCIe PCIe (x1) Gold finger + PCIe (x4)		1			
	PCle	PCle (x1) Gold finger + PCle (x4)			

	2 x connectors for 4 additional USB 2.0/1.1 ports
Internal I/O Connector	1 x LVDS LCD panel connector
	1 x LCD/inverter power connectors
	1 x Digital I/O connector
	1 x CD Audio-in connector
	1 x IrDA connector
	1 x 44-pin IDE 1 connector
Internal I/O Connector	1 x ATX power supply connector
	1 x front panel connector
	3 x fan connectors
	2 x SATA connectors
	1 x video input connectors (optional)
	1 x video loop through connectors (optional)
	1 x VGA
	2 x COM
External I/O Connector	1 x PS/2 keyboard and mouse Y cable
	1 x Audio I/O
	2 x RJ-45
	4 x USB 2.0/1.1
	1 x DVI
	1 x composite
Digital Video	4 x BT-878 on board with box header
Operating Temperature	0° C ~ 60° C (32° F ~ 140° F)
External Power Terminal	ATX power connector



### **Ordering Information**

Part Number F	Form Factor	Description	Chipset
DVMB-554E r	mini-ITX (170 x 170 mm)	Socket 479 Intel Core Duo/Core Solo processor based with 4 channels video capture/PCI-E/Dual Giga LAN	Intel 945GM