# **DVS-350M**

## **Embedded/Mobile Digital Video Platform** with 2.5" HDD



#### **Features**

- Up to 16 channel composite inputs that can share a total frame rate of 120/100 fps
- Anti-vibration, anti-shock design to ensure maximum reliability
- Fanless design within sealed construction
- x86 architecture for easy application development & integration
- TV-out and WLAN module support
- Wide power source (9 ~ 30 V DC)
- CardBus interface for optional mobile communication module
- Supports Windows® 2000/XP with driver and SDK

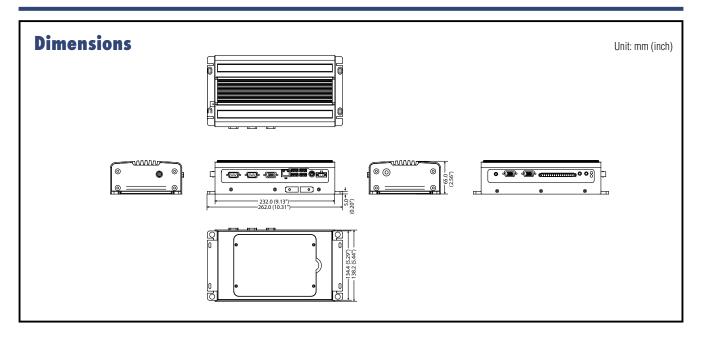


## Introduction

The DVS-350 series provide the digital video market with a perfect solution for applications in harsh environments. The DVS-350 series are the smallest industrial grade PC-based systems that support 4-16 camera inputs. The x86 open platform eases application software integration. They are designed for installation in any mission-critical environment with their fanless, anti-vibration and anti-shock protection. A wide power range of 9 to 30 V DC can protect these systems from power surges while used on vehicles. Among the whole series, the DVS-350M comes with the highest cost/performance value. These features combined with TV-out, WLAN, isolated DI and relay DO, make the DVS-350 series the best solution for embedded/mobile applications.

## **Specifications**

Part Number			
Video Input         4 - 16 Channels share a lotal of 120 fps           Encoding         Up to 120 fps @C Fresolution with software encoding           Capture Resolution         Up to 120 fps @C Fresolution with software encoding           Total Capture Frame Rate (NTSC/PAL)         120/100 fps           Image Processing         120/100 fps           Jaal Output Format         VLY2 planar formats supported           Operating System         Supports Microsoft Windows XP with SP2, Windows XP Embedded and Windows 2000 with SP4           DirectX Support         Version 9 or above           Demo Program         Complete demo program with VC++ sample code for reference           Function         Video capture, preview, DIO control, encoding and decoding           Processor System         CPU         Intel® Pentium® M.I.V 1.4 GHz         Intel Celeron® M ULV 600 MHz           Processor System         Chipset         Intel® Pentium® M.I.V 1.4 GHz         Intel Celeron® M ULV 600 MHz           Memory         Max. Capacity         1 GB         512 KB           BIOS         AWARDO® A Mibit BIOS         512 KB           Graphic         Max. Capacity         1 GB           Graphic         Memory Size         Shared system memory up to 64 MB           Memory Size         Shared system memory up to 64 MB           Memory Size			
Video System		Video Standard	
Video System		Video Input	
Video System		Encoding	Up to 120 fps @ CIF resolution with software encoding
Total Capture Frame Rate (NTSC/PAL)   120/100 fps   Image Processing   Hardware adjustment of hue, contrast, saturation, and brightness   Data Output Format   YUV2 planar formats supported	Video System	Capture Resolution	Up to D1 resolution: 720 x 480 (NTSC)/768 x 576 (Full PAL)
Image Processing   Hardware adjustment of hue, contrast, saturation, and brightness		Total Capture Frame Rate (NTSC/PAL)	120/100 fps
Operating System   Supports Microsoft Windows XP with SP2, Windows XP Embedded and Windows 2000 with SP4			Hardware adjustment of hue, contrast, saturation, and brightness
DirectX Support		Data Output Format	YUY2 planar formats supported
Demo Program   Complete demo program with VC++ sample code for reference		Operating System	Supports Microsoft Windows XP with SP2, Windows XP Embedded and Windows 2000 with SP4
Defin Program   Complete Gento program with v++ sample code for Peterence	Coffware Davidonment Kit	DirectX Support	Version 9 or above
Function	Sultware Development Kit	Demo Program	Complete demo program with VC++ sample code for reference
Processor System			Video capture, preview, DIO control, encoding and decoding
L2 Cache   BIOS   AWARD@ 4 Mbit BIOS		CPU	Intel® Pentium® M LV 1.4 GHz Intel Celeron® M ULV 600 MHz
L2 Cacrie	Dragger Cyptom	Chipset	Intel 852GME/ICH4
Technology	Processor System	L2 Cache	
Memory         Max. Capacity Socket         1 GB 200-pin SODIMM           Graphic         Chipset Chipset integrated VGA controller           Memory Size         Shared system memory up to 64 MB           Resolution         Up to 1600 x 1200 @ 85 Hz and 2048 x 536 @ 75 Hz           TV-out         Composite out (BNC type)           Interface         10/100Base-T           Controller         Intel 82551QM           Connector         1 x RJ-45           WLAN         802.11b/g           Storage         IDE-0         2.5" HDD Tray           IDE-1         Type I/II CompactFlash socket           TV-out         1 x Composite Out with BNC connector           VGA         1 x D-sub 15-pin           LAN         1 x RJ-45           USB         4 x USB 2.0, 480 Mbps           I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-232; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		BIOS	
Memory         Max. Capacity Socket         1 GB 200-pin SODIMM           Graphic         Chipset Chipset integrated VGA controller           Memory Size         Shared system memory up to 64 MB           Resolution         Up to 1600 x 1200 @ 85 Hz and 2048 x 536 @ 75 Hz           TV-out         Composite out (BNC type)           Interface         10/100Base-T           Controller         Intel 82551QM           Connector         1 x RJ-45           WLAN         802.11b/g           Storage         IDE-0         2.5" HDD Tray           IDE-1         Type I/II CompactFlash socket           TV-out         1 x Composite Out with BNC connector           VGA         1 x D-sub 15-pin           LAN         1 x RJ-45           USB         4 x USB 2.0, 480 Mbps           I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-232; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		Technology	DDR 200/266/333 modules, ECC support
Chipset   Chipset integrated VGA controller	Memory	Max. Capacity	
Graphic         Memory Size         Shared system memory up to 64 MB           Resolution         Up to 1600 x 1200 @ 85 Hz and 2048 x 536 @ 75 Hz           TV-out         Composite out (BNC type)           Ethernet         Interface         10/100Base-T           Controller         Intel 82551QM           Connector         1 x RJ-45           WLAN         802.11b/g           Storage         IDE-0         2.5" HDD Tray           IDE-1         Type I/II CompactFlash socket           VGA         1 x Composite Out with BNC connector           VGA         1 x D-sub 15-pin           LAN         1 x RJ-45           USB         4 x USB 2.0, 480 Mbps           I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-23; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control	,	Socket	200-pin SODIMM
Graphic         Memory Size         Shared system memory up to 64 MB           Resolution         Up to 1600 x 1200 @ 85 Hz and 2048 x 536 @ 75 Hz           TV-out         Composite out (BNC type)           Ethernet         Interface         10/100Base-T           Controller         Intel 82551QM           Connector         1 x RJ-45           WLAN         802.11b/g           Storage         IDE-0         2.5" HDD Tray           IDE-1         Type I/II CompactFlash socket           VGA         1 x Composite Out with BNC connector           VGA         1 x D-sub 15-pin           LAN         1 x RJ-45           USB         4 x USB 2.0, 480 Mbps           I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-23; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		Chipset	Chipset integrated VGA controller
TV-out   Composite out (BNC type)	Craphia		Shared system memory up to 64 MB
TV-out   Composite out (BNC type)	Стартис		Up to 1600 x 1200 @ 85 Hz and 2048 x 536 @ 75 Hz
Ethernet         Controller         Intel 82551QM           Connector         1 x RJ-45           WLAN         802.11b/g           Storage         IDE-0         2.5" HDD Tray           IDE-1         Type I/II CompactFlash socket           TV-out         1 x Composite Out with BNC connector           VGA         1 x D-sub 15-pin           LAN         1 x RJ-45           USB         4 x USB 2.0, 480 Mbps           Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-23; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control			Composite out (BNC type)
Connector			
Connector	Etharnat	Controller	Intel 82551QM
IDE-0   2.5" HDD Tray   IDE-1   Type I/II CompactFlash socket	Ethernet	Connector	
IDE-1   Type I/II CompactFlash socket     TV-out		WLAN	802.11b/g
TV-out	Ctorogo		
VGA	Storage	IDE-1	Type I/II CompactFlash socket
VGA		TV-out	1 x Composite Out with BNC connector
USB		VGA	
I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-232; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		LAN	
I/O Interface         Audio         AC97: LINE-OUT, MIC-IN           Serial         COM1: RS-232; COM2: RS-485/RS-422           PS/2         1 x keyboard and mouse with Y cable           DIO         5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		USB	4 x USB 2.0, 480 Mbps
Serial COM1: RS-232; COM2: RS-485/RS-422 PS/2 1 x keyboard and mouse with Y cable DIO 5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control	I/O Interface		AC97: LINE-OUT, MIC-IN
DIO 5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		Serial	
DIO 5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control		PS/2	1 x keyboard and mouse with Y cable
			5 x Isolated DI, 2 x Relay DO, 1 x Remote SW control
		MiniPCI	



I/O Interface	CardBus	1 slot
I/O Interface	Power Switch	External Power Switch Connector
	Management	APM 1.2, ACPI supported
Power Requirement	Power Consumption	Average 15 W
	Power Adapter	9 ~ 30 V DC, Typical 9 V DC @ 5.4 A, 19 V DC @ 2.9 A
Watchdog Timer	Output	Interrupt, system reset
Watchdog Tillel	Interval	Programmable 1 ~ 255 sec.
	Construction	Aluminum housing
Physical Characteristics	Mounting	Din-Rail mounting and desk/wall mounting
1 Hysical Gharacteristics	Dimensions (W x H x D)	232.0 x 65.0 x 138.4 mm (9.1" x 2.5" x 5.4")
	Weight	2.3 kg (5.06 lb)
	Temperature	Operating: -10 ~ 50° C
	Temperature (with industrial grade components)	Operation: -15 ~ 55° C
Environment	Relative Humidity	Operating: 95% @ 40° C (non-condensing)
	Vibration Resistance	Operating: 1 Grms, IEC 60068-2-64, Random, 5 ~ 500 Hz, 1 oct/min, 1 hr/axis
	Shock Resistance	Operating: 40 G, IEC 60068-2-27, half sine, 11 ms

# **Ordering Information**

Part Number	HDD Support	Video Inputs	CPU	Memory	L2 Cache
DVS-350-25S4E	2.5" HDD Tray	4 ~ 16 channels	Intel Pentium M LV 1.4 GHz	N/A	2 MB

<sup>\*</sup> DVS-350-25M0E; Intel Celeron M ULV 600 MHz with 512 MB L2 cache is available upon request

## **Optional Items**

#### 2.5" Hard Drive Options

Part Number	RPM	Туре	Capacity
96ND40G-I-HI4K	4200	IDE Parallel-ATA	40 GB
96ND60G-I-FJ4K1	4200	IDE Parallel-ATA	60 GB
96ND80G-I-HI4K	4200	IDE Parallel-ATA	80 GB

### **Power Adapter Options**

Part Numb	Description	
1757000222	AC-to-DC Adapter DC 19 V/3.42 A/65 W, with Pt Power Plug	noenix

#### **Power Cord Options**

Part Number	Description
1700001947	2-pin 180 cm, USA
1700001948	2-pin 180 cm, Europe
1700001949	2-pin 180 cm, UK

#### **Industrial-grade CompactFlash Card Options**

Part Number		Capacity	Operation Temperature
	96FMCFI-512M-ET-AP	512 MB	-40° C (-40° F) ~ 85° C (185° F)
	96FMCFI-1G-ET-AP	1 GB	-40° C (-40° F) ~ 85° C (185° F)

## **Packing List**

Part Number	Description	Qty
2013000000	2 year warranty card	X 1
2062S35000	Driver CD	X 1
1700001394	DC Jack with 2-pin pluggable terminal block	X 1
1652000209	Pluggable terminal block for DI and DO	X 1
1700060202	Y cable of KB and PS/2 Mouse	X 1
1700001618	Video Cable (D-sub 15P to BNC)	X 2