



WonderMedia SoC Product Roadmap

2009/4/13

WonderMedia SoC Key Features – PRIZM Application Platform

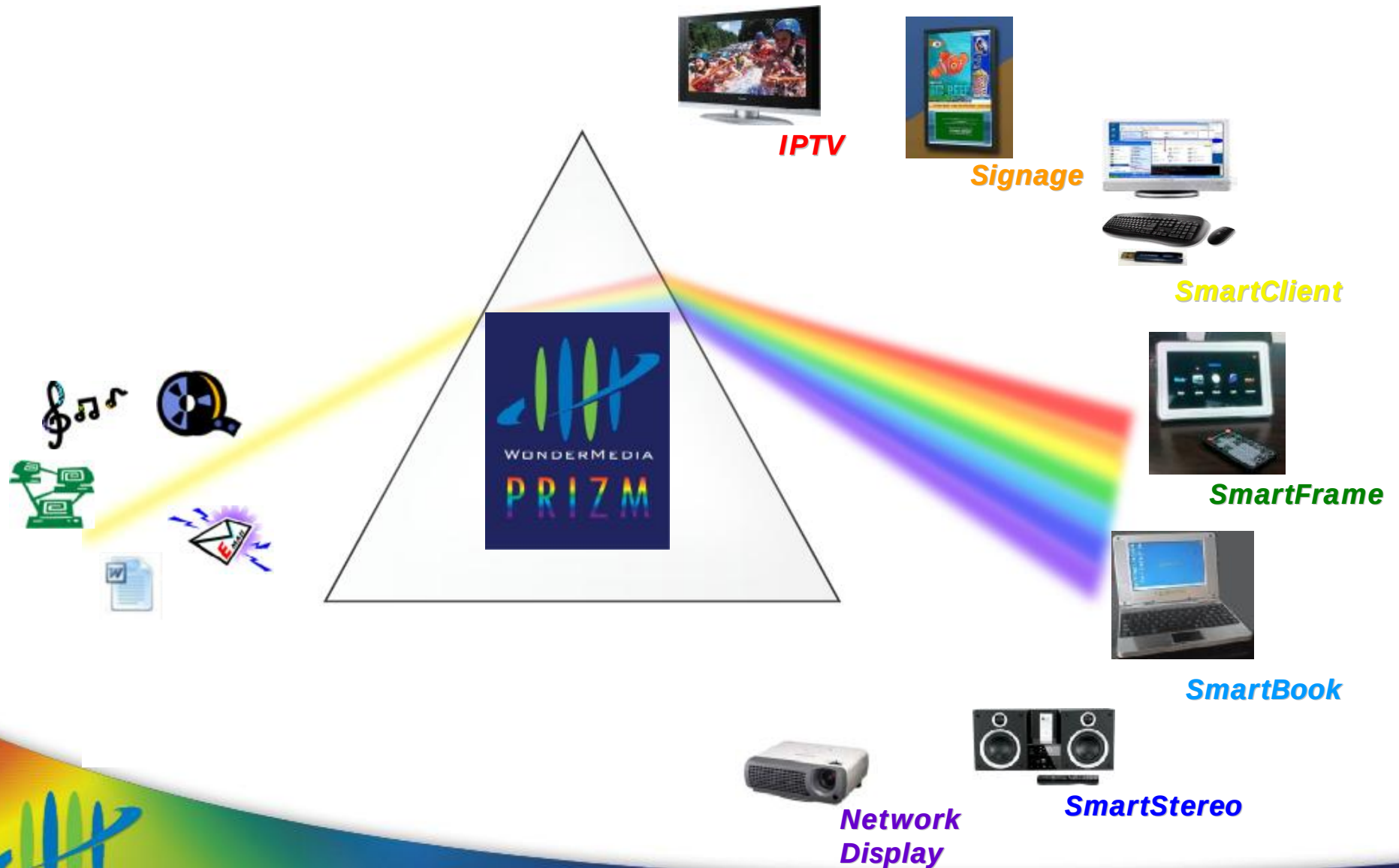
- ARM Processor (ARM926-EJ & ARM1176JZF)
- uDSP+MMX* optimized for Multimedia Applications
- H/W Video Decoder* - H.264, VC-1, MPEG2/4, and RMVB
- 2D Graphics and Video/Graphics Processing
- 3D GPU* compliant with OpenVG ES 2.0 & OpenVG 1.1
- High Performance DDR/DDR2 DRAM Controller
- High Display Resolution up to 1600x1200@60Hz
- Native Networking (Built-in GE/FE Ethernet MAC, Interface with Wifi, 3+G and Bluetooth)
- High Integration and Flexible Peripheral and AV Interface
- WinCE and Linux Platform with strong BSP, SDK and RDK support



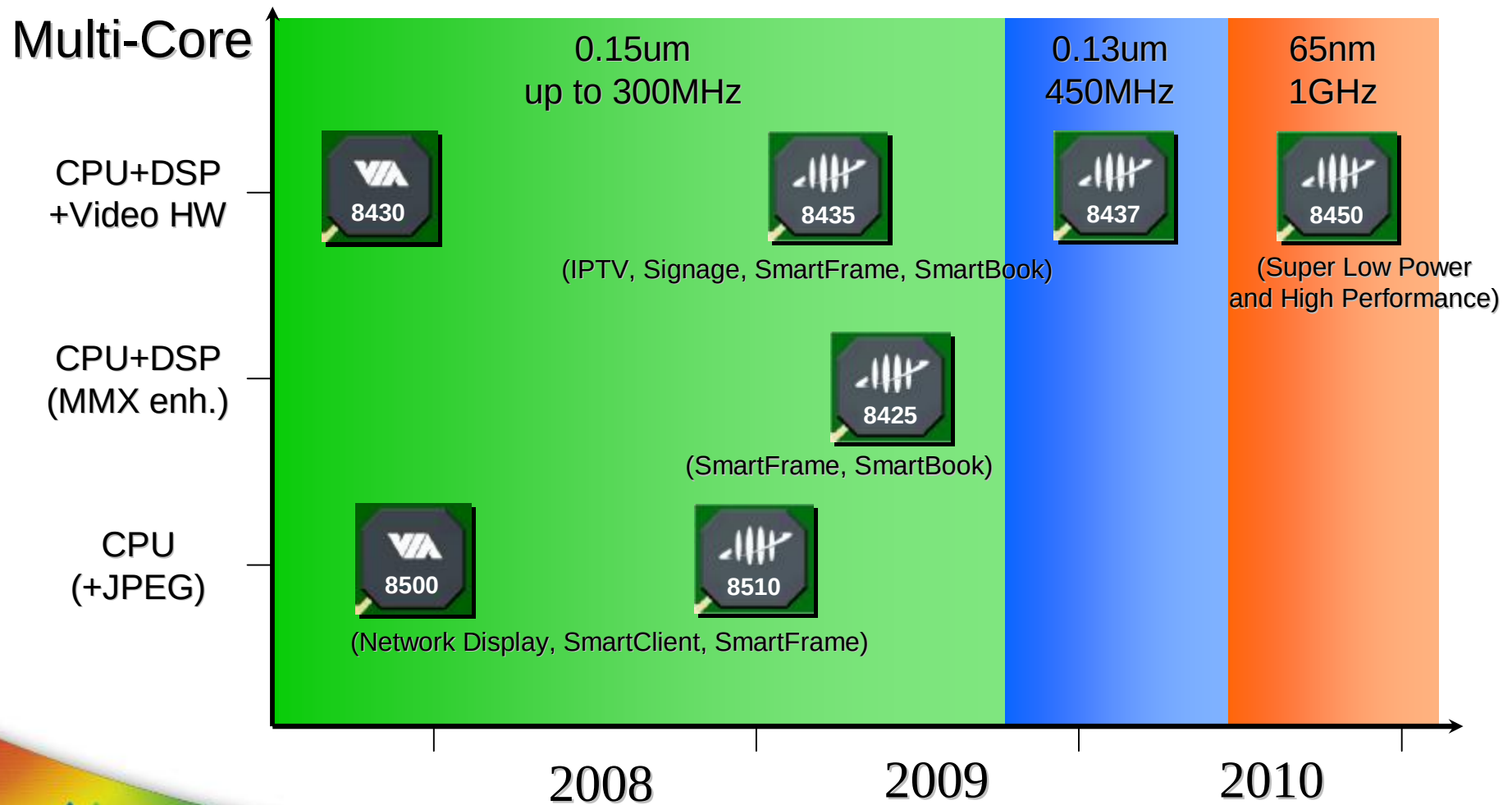
* on selected models



PRIZM Application Platform



WonderMedia SoC Roadmap



VT8430(X) Feature List

- Processor
 - ARM926EJ-S (250MHz)
 - DSP (200MHz)
- Video Decoding (H/W)
 - Resolution up to 720x480
 - MPEG2 MP@ML
 - MEPEG4 ASP@L5
 - H.264 BP/MP/HP@L3
 - JPEG / MJPEG Decoder
- Audio Decoding
 - MP3, WMA, AAC, AAC+
 - DTS, Dolby Digital
- Video I/O
 - 2D Graphics Accelerator
 - LCD controller (800x480)
 - TV-out
 - CCIR656/601 I/O
- MPEG2-TS
- Audio I/F
 - I²S, AC97, PCM, S/PDIF
- Memory / Storage
 - DDR, DDRII-400
 - NAND, SPI, LPC
 - IDE I/F
 - SD/SDHC(SDIO), CF, MMC, MS
- Peripherals
 - USB 2.0 Host/Device x1 & Host x1
 - 10/100 Ethernet MAC
 - UART, I²C, SPI, Keypad, CIR, PWM, GPIO
 - PCI x4 masters (VT8430 only)
- Security Engine
 - DES/3DES, AES, RC4
- Process and Package
 - 0.15um, 21x21 PBGA

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WM8435 Feature List

- Processor
 - ARM926EJ-S (300MHz)
 - DSP (200MHz)
- Video Decoding (H/W)
 - Resolution up to 1280x720
 - MPEG2 MP@ML
 - MEPEG4 ASP@L5
 - H.264 BP/MP/HP@L3
 - JPEG / MJPEG Decoder
- Audio Decoding
 - MP3, WMA, AAC, AAC+
 - DTS, Dolby Digital
- Video I/O
 - 2D Graphics Accelerator
 - VGA, LCD controller (1280x1024, 1366x768)
 - SDTV-out
 - CMOS Sensor Input
- MPEG2-TS
- Audio I/F
 - I²S, AC97, PCM, S/PDIF
- Memory / Storage
 - DDRII-667
 - NAND (4~16-bit ECC), SPI
 - IDE I/F
 - SD/SDHC(SDIO) x2, CF, MMC, MS, xD
- Peripherals
 - USB 2.0 Host/Device x1 & Host x2
 - 10/100/1000 Ethernet MAC
 - UART, I²C, SPI, Keypad, CIR, PWM, GPIO
- Security Engine
 - DES/3DES, AES, RC4, SHA-1
- Process and Package
 - 0.15um, 21x21 PBGA

ES: Q2 2009, MP: Q3 2009



WM8437 Feature List (Preliminary)

- Processor
 - ARM926EJ-S (450MHz)
 - DSP (200MHz)
- Video Decoding (H/W)
 - Resolution up to 1280x720
 - MPEG2 MP@ML
 - MEPEG4 ASP@L5
 - H.264 BP/MP/HP@L3
 - JPEG / MJPEG Decoder
- Audio Decoding
 - MP3, WMA, AAC, AAC+
 - DTS, Dolby Digital
- Video I/O
 - 2D Graphics Accelerator
 - VGA, LCD controller (1400x1050)
 - SDTV-out
 - CMOS Sensor Input
- MPEG2-TS
- Audio I/F
 - I²S, AC97, PCM, S/PDIF
- Memory / Storage
 - DDRII-667
 - NAND (4~16-bit ECC), SPI
 - IDE I/F
 - SD/SDHC(SDIO) x2, CF, MMC, MS, xD
- Peripherals
 - USB 2.0 Host/Device x1 & Host x2
 - 10/100/1000 Ethernet MAC
 - UART, I²C, SPI, Keypad, CIR, PWM, GPIO
- Security Engine
 - DES/3DES, AES, RC4, SHA-1
- Process and Package
 - 0.13um, 21x21 PBGA

ES: Q4 2009, MP: Q1 2010



WM8450 Feature List (Preliminary)

- Processor
 - ARM1176JZF (1GHz)
 - 128K Level-2 Cache
- Video Decoding (H/W)
 - Resolution up to 1920x1080
 - MPEG2 MP@HL
 - MPEG4 ASP@L5
 - H.264 BP/MP/HP@L4.0
 - VC-1 SP/MP/AP
 - JPEG / MJPEG Decoder
- Audio Decoding
 - MP3, WMA, AAC, AAC+
 - DTS, Dolby Digital
- Video I/O
 - 2D Graphics Accelerator
 - 3D (OpenGL ES 2.0, OpenVG 1.1)
 - VGA, LCD controller(1600x1200)
 - SDTV/HDTV-out
 - CMOS Sensor Input
- MPEG2-TS
- Audio I/F
 - I²S, AC97, PCM, S/PDIF
- Memory / Storage
 - DDRII-800
 - NAND (4~16-bit ECC), SPI
 - SD/SDHC(SDIO)
- Peripherals
 - USB 2.0 Device/Host x1 & Host x3
 - 10/100/1000 Ethernet MAC
 - UART, I²C, SPI, Keypad, CIR, PWM, GPIO
- Security Engine
 - DES/3DES, AES, RC4, SHA-1
- Process and Package
 - 65nm, 19x19 PBGA

ES: Q2 2010, MP: Q4 2010

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WM8425 Feature list

- Processor
 - ARM926EJ-S (300MHz)
 - DSP (200MHz)
- Video Decoding (DSP)
 - Resolution up to 640x480
 - JPEG, MJPEG
 - MPEG2, MEPEG4
 - RV, AVS, H.264
- Audio Decoding
 - MP3, WMA, WAV, AAC, PCM
- Video I/O
 - 2D Graphics Accelerator
 - LCD controller (1280x800)
- Audio I/F
 - I²S, SPDIF
- Memory / Storage
 - DDRII-533
 - NAND (4~16-bit ECC), SPI
 - SD/SDHC(SDIO) x2, CF, MMC, MS, xD
- Peripherals
 - USB2.0 Host/Device x1 & Host x2
 - 10/100 Ethernet MAC
 - UART, I²C, SPI, Keypad, CIR, PWM, GPIO
- Process and Package
 - 0.15um, 19x19 PBGA



ES: Q2 2009, MP: Q3 2009

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VT8500 Feature List

- Processor
 - ARM926EJ-S (300MHz)
- JPEG / MJPEG CODEC (HW)
- Audio Decoding
 - MP3, WMA, AAC (S/W)
- Video I/O
 - 2D Graphics Accelerator
 - LCD controller (1024x1024 / 1280x800)
 - CCIR656/601 I/O
- MPEG2-TS
- Audio I/F
 - I²S, AC97, PCM
 - 8ch ADC
- Memory / Storage
 - DDR, DDRII-400
 - NAND (4-bit ECC), NOR, SPI
 - IDE I/F
 - SD/SDHC(SDIO), CF, MMC, MS
- Peripherals
 - USB 2.0 Host/Device x1
 - 10/100 Ethernet MAC
 - UART, I²C, SPI, CIR, PWM, GPIO
 - PS/2 Keyboard & Mouse
 - Generic uP I/F
- Security Engine
 - DES/3DES, AES, RC4
- Process and Package
 - 0.15um, 19x19 PBGA



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VT8500L Feature List

- Processor
 - ARM926EJ-S (300MHz)
- JPEG / MJPEG Decoder (HW)
- Audio Decoding
 - MP3, WMA, AAC (S/W)
- Video I/O
 - 2D Graphics Accelerator
 - LCD controller (1024x1024 / 1280x800)
 - CCIR656/601 I/O
- Audio I/F
 - I²S, AC97, PCM
 - 8ch ADC
- Memory / Storage
 - DDR, DDRII-400
 - NAND (4-bit ECC), NOR, SPI
 - IDE I/F
 - SD/SDHC(SDIO), CF, MMC, MS
- Peripherals
 - USB 2.0 Host/Device x1
 - UART, I²C, SPI, CIR, PWM, GPIO
 - Generic uP I/F
- Security Engine
 - DES/3DES, AES, RC4
- Process and Package
 - 0.15um, 19x19 PBGA

WM8510 Feature list

- Processor
 - ARM926EJ-S (300MHz)
- JPEG / MJPEG Decoder (H/W)
- Audio Decoding
 - MP3, WMA, AAC (S/W)
- Video I/O
 - 2D Graphics Accelerator
 - VGA, LCD controller (1024x768 /1280x1024)
 - CCIR-656/601 Input
- Audio Codec I/F
 - I²S, AC97
- Memory / Storage
 - DDRII-667
 - NAND (4~8-bit ECC), NOR, SPI
 - SD/SDHC(SDIO), MMC
- Peripherals
 - USB2.0 Host x2 & Device x1
 - 10/100/1000 Ethernet MAC
 - UART, I²C, SPI, PWM, GPIO
 - PS/2 Keyboard & Mouse
 - Generic uP I/F
- Security Engine
 - AES, RC4, SHA-1
- Process and Package
 - 0.15um, 19x19 PBGA



ES: Q1 2009, MP: Q2 2009

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WonderMedia SOC Comparison

	VT8500	WM8510	WM8425	VT8430X	WM8435	WM8437	WM8450
CPU	300MHz	300MHz	300MHz	250MHz	300MHz	450MHz	1GHz
DSP	N/A	N/A	Audio/Video	Audio	Audio	Audio/Video	N/A
Video	S/W (QVGA)	S/W (QVGA)	DSP (VGA)	H/W (Full D1)	H/W (HD-720P)	H/W (HD-720P)	H/W (HD-1080P)
Maximum Resolution	1280x800	1280x1024, 1366x768	1280x800	800x480	1280x1024, 1366x768	1440x1050	1600x1200
Video Interface	LCD	LCD, VGA	LCD	LCD, TV	LCD, TV, VGA	LCD, TV, VGA	LCD, TV, VGA
NAND	MLC(4-bit)	MLC(8-bit)	MLC(16-bit)	SLC	MLC(16-bit)	MLC(16-bit)	MLC(16-bit)
USB2.0	x1	x3	x3	x2	x3	x3	X4
DRAM	DDR2-400	DDR2-667	DDR2-533	DDR2-400	DDR2-667	DDR2-667	DDR2-800
Ethernet	10/100	Gigabit	10/100	10/100	Gigabit	Gigabit	Gigabit
Package	19x19 BGA	19x19 BGA	19x19 BGA	21x21 BGA	21x21 BGA	21x21 BGA	19x19 BGA

Software Foundation

- Operation System :
 - MontaVista Linux Professional Edition 4.0 or 5.0
 - Microsoft WinCE 5.0 or WinCE 6.0
- Board Support Package :
 - Linux
 - Boot loader
 - Kernel
 - File system
 - Device drivers
 - WinCE
 - Boot loader
 - OEM adaption layer (OAL)
 - Device drivers
 - Runtime image configuration files



montavista™

Microsoft®
Windows CE 5.0

Windows® Embedded CE 6.0

Open Software Platform

	Network Display	IPTV/Digital Signage	SmartClient	SmartBook	SmartFrame
UI/AP					
RDK					
SDK		GTK+/ DirectFB			VGUI/ DirectFB
BSP					

WonderMedia

ISV/ODM/Customers



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Thank you !

