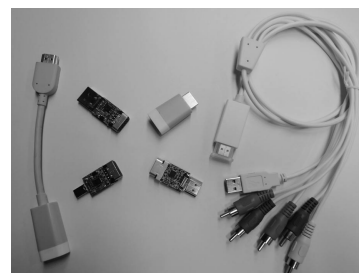
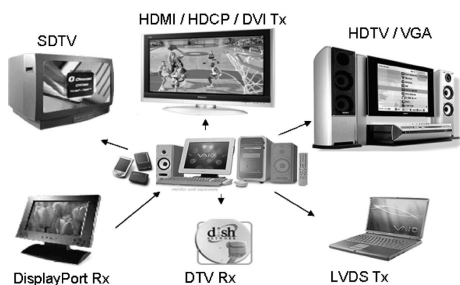


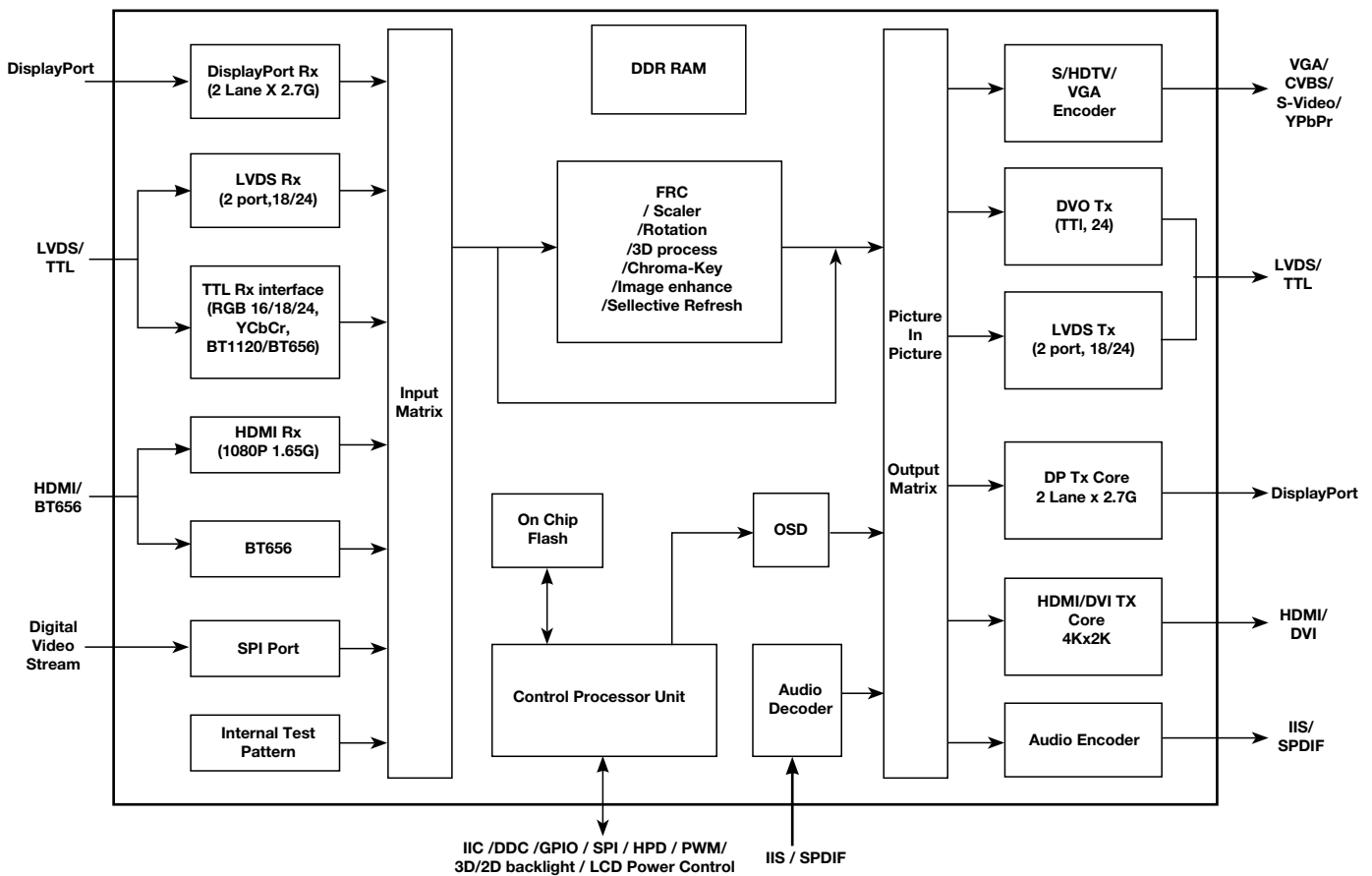
Chrontel 成立于 1986 年，是一家从事混合信号集成电路研发与生产的公司，总部位于美国硅谷圣何西，并于中国上海，深圳，武汉，台北等各地拥有多家子公司和办事机构。产品主要应用于视频信号接收，发送，格式转换等领域，主要产品包括视频编码器件，SDVO 视频转换器件，HDMI 视频发送接收以及转换器件，DisplayPort 视频接收以及转换器件，LVDS 视频转换器件，VGA/HDMI CABLE 均衡器，CEC Device 和多接口输入输出带 PIP 功能器件等。Chrontel 的产品被 Dell, HP, GE, MINDRAY, ZTE, HUAWEI, Sony, MSI, QuanDa, Asus, Toshiba, Fujitsu 等许多著名 ODM / OEM 厂商所采用。目前大量应用于 PC 及周边，工控，医疗，监控，汽车电子，消费类等市场(如 Ultrabook PC, IPC, MID, GPS, Cell phone, Car Infotainment device, Docking station, Cable)。



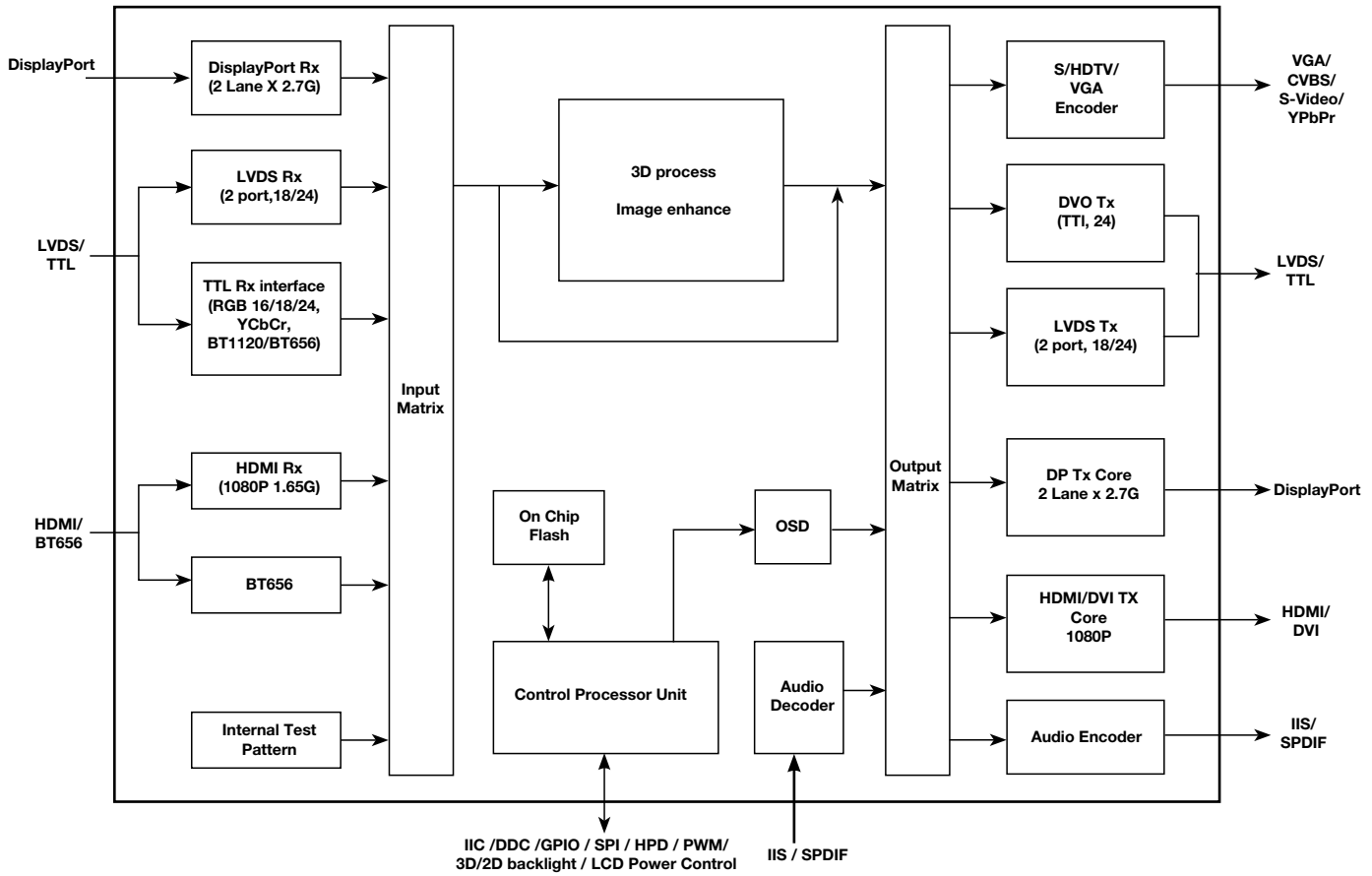
	Product	Input Format	Output Format	Description	Package
TV Encode	CH7010B-TF	DVO, Digital RGB, YCbCr	DVI, CVBS, S-Video, SCART	TV Encoder / DVI Transmitter	LQFP 64
	CH7012B-TF	12bit Digital RGB, YCrCb	CVBS, S-Video, YPbPr, analog RGB	Input: 800x600, 3DAC	LQFP 64
	CH7013B-DF	16bit Digital RGB/YCrCb	CVBS, S-Video, YPbPr, analog RGB,	Input: 800x600, 3DAC	LQFP 48
	CH7016A-DF	12bit Digital RGB/YCrCb	CVBS, S-Video, YPbPr, analog RGB,	Output: 1080P, 4DAC	LQFP 48
	CH7018A-TF	DVO, Digital RGB	VGA, YPbPr, CVBS, S-Video, LVDS	TV Encoder / LVDS Transmitter TV Encoder / LVDS Transmitter	LQFP 128
	CH7024B-DF	24bit Digital RGB/YCrCb	CVBS, S-Video	Input: 720x576, 2DAC	LQFP 48
	CH7026B-TF/TFI	24bit Digital RGB/YcrCb/CPU	CVBS, S-Video, YPbPr analog RGB, VGA	Input: 1024x680 with scaler, 1280x1024 Bypass, 3DAC	LQFP 80
	CH7026B-GF/GFI	24bit Digital RGB/YcrCb/CPU	CVBS, S-Video, YPbPr, analog RGB, VGA	1024x680 with scaler, 1280x1024 Bypass, 3DAC	BGA 80,
	CH7055A-BF/BFI	TTL/ Digital RGB	Analog RGB+Csync	Triple High Speed Video DAC	QFN 40
DVI/ HDMI Transmitters	CH7301C-TF	12bit Digital RGB, YCrCb	DVI/165M, YPbPr, analog RGB, VGA,	Output : 1600x1200	LQFP 64
	CH7302A-TF	16bit Digital RGB, YCrCb	DVI/165M, YPbPr, analog RGB, VGA,	Output : 1080P,	LQFP 64
	CH7033B-BF/BFI	24 bit Digital RGB, YCbCr, BT1120	HDMI, VGA/YPbPr,	Output : 1080P(HDMI/DVI), 1920*1080(VGA). Input max: 1366*768, Frame Buffer, Scaler	QFN 88
	CH7053A	24 bit Digital RGB, YCbCr, BT1120	HDMI, VGA/YPbPr,	Output : 1080P(HDMI/DVI), 1920*1080(VGA)	QFN 88
	CH7035B-BF/BFI	24 bit Digital RGB, YCbCr, BT1120	HDMI	Output 1080P, Input max: 1366*768, Frame Buffer, Scaler	QFN 88
LVDS Transmitters	CH7305A-TF	12bit Digital RGB, YCrCb	CH7305: Single/Dual LVDS; CH7304: Single LVDS	Output : 1600x1200 I2S/SPDF, Scaler, line Buffer	LQFP 64
	CH7018A-TF	Dual 12bit Digital RGB, YCrCb	Dual LVDS 330M, CVBS, S-Video, YPbPr, analog RGB	Output : 1600x1200	LQFP 128
	CH7034B-BF/BFI	24 bit Digital RGB, YCbCr, BT1120	LVDS, VGA/YPbPr	Output : 1366*768 (LVDS), 1080P(YPbPr) , Frame Buffer, Scaler	QFN 88

	Product	Input Format	Output Format	Description	Package
SDVO for PC/IP	CH7022A-TEF	SDVO	CVBS, S-Video, YPrPb, analog RGB, VGA	Output :1080P	LQFP 64
	CH7307C-DEF	SDVO	DVI	Output :1600x1200	LQFP 48
	CH7308B-TF	SDVO	Dual LVDS/165M	Output :1600x1200, Scalar, line Buffer	LQFP 64
	CH7313A-DEF	SDVO	DVI(include HDCP)Internal Key	Output :1600x1200	LQFP 48
	CH7315B-TEF	SDVO	HDMI	Output :1080P	LQFP 64
	CH7317B-TF/BF	SDVO	Analog RGB, VGA	Cost Down from CH7022 Pin to Pin with CH7022	LQFP 64 QFN 64
	CH7318C-BF/	SDVO(HDMI)	HDMI	HDMI level shifter	QFN 48
HDMI Adapter	CH7101B-BF/BFI	HDMI 1.4	VGA+I2S	bypass mode ,Support audio in/out	QFN 40
	CH7102A-BF/BFI	HDMI 1.4	BT656 I2C Slave	Support audio in/out(HDM 480/576P)	QFN 40
	CH7103B-BF/BFI	HDMI 1.4	YPbPr	bypass mode,Support audio in/out	QFN 40
	CH7104B-BF/BFI	HDMI 1.4	VGA+YPbPr	Support audio in/out	QFN 40
	CH7105B-BF/BFI	HDMI 1.4	VGA+CVBS	Support audio in/out	QFN 40
	CH7106B-BF/BFI	HDMI 1.4	VGA+YPbPr+S-video+CVBS	Support audio in/out	QFN 40
	CH7107B-BF/BFI	HDMI 1.4	CVBS	Support audio in/out	QFN 40
	CH7108B-BF/BFI	HDMI 1.4	CVBS+S-video	Support audio in/out	QFN 40
	CH7109A-BF/BFI	HDMI 1.4	BT656 I2C Master	Support audio in/out(HDM 480/576P)	QFN 40
	CH7110A-BF/BFI	HDMI 1.4	BT656 + CVBS	ITU-R601/656, YCbCr , CVBS	QFN 48
	CH7117A-BF	HDMI 1.4	YPbPr/CVBS/S-Video/VGA/BT656	with Flexible Scaler HDMI YPbPr/ CVBS/S-Video/VGA/BT656	QFN-88
DP Adapter	CH7510A-BF	DP, eDP	mini-LVDS	DP/eDP Receiver with TCON	QFN 68
	CH7511B-BF/BFI	eDP, 2 Lane	LVDS	eDP to LVDS Converter(1920*1200)	QFN 68
	CH7512A-BF	DP, 2 Lane	LVDS	DP to LVDS Converter	QFN 68
	CH7515A-TF	eDP, 4Lane	LVDS	up to 2560*2048 w/3D IIS, SPDIF Output	TQFP 128
	CH7516A-TF	DP, 4 Lane	LVDS	IIS, SPDIF Output	TQFP 128
	CH7517A-BF/BFI	DP 1.2a, eDP	VGA	DisplayPort to VGA Converter	QFN 40
	CH7525A-BF/BFI	DP 1.2a,eDP 4 Lane	HDMI 1.4, DVI	1080P@120HZ,4K*2K@30HZ, protocol converter	QFN 48
	CH7530A-BF/BFI	DP++	HDMI 1.4, DVI	1080P@120HZ,4K*2K@30HZ, DP++ Type 2 Adapter	QFN 40
Type - C adapter	CH7231	Type - C (USB3.0、 USB3.1)	USB Type-C E-Maker	Support USB3.1	SOT23-5
	CH7211	Type - C (USB3.0、 USB3.1)	HDMI 2.0 + USB 2.0/USB 3.0	Support USB3.0、 USB3.1	TBD
	CH7212	Type - C (USB3.0、 USB3.1)	VGA + USB 2.0/USB 3.0	Support USB3.0、 USB3.1	TBD
	CH7213	Type - C (USB3.0、 USB3.1)	DP + USB 2.0/USB 3.0A	Support USB3.0、 USB3.1	TBD

	Product	Input Format	Output Format	Description	Package
LVDS Adapt	CH7036A-BF/BFI	LVDS	LVDS+HDMI ;LVDS + VGA	w/Scaler output:1080P Input max:1366*768	QFN 88
Others	CH7322B-MF	HDMI peripheral	HDMI	HDMI CEC	SSOP 16
	CH8009A-BF	CMMB R/F	CVBS、 SPI BT656-alike Parallel video	CMMB Demodulator and AV Decode	QFN 88
	CH7038A-TF/GF	LVDS, DP,HDMI,TTL,BT1120,BT656	CVBS, VGA, YPbPr, LVDS/TTL, DP,HDMI/DVI,I2S/SPDF	Scaler, Frame Buffer, PIP, OSD, Multi-Standard Display Interface Converter with Scaler	TQFP176, BGA 180
	CH7039A-TF/GF	HDMI, DVI, eDP/DP, LVDS, TTL/BT1120, TTL /BT656, SPI	HDMI, DVI, DP, eDP, LVDS, VGA, CVBS , S-Video, YPbPr, TTL / BT656, TTL / BT1120	HDMI, DVI, DP, eDP, LVDS, VGA, CVBS , S-Video, YPbPr, TTL / BT656, TTL / BT1120 IIS, SPDIF Input, SPDIF Output	TQFP176, BGA 180



CH7038 Functional Block Diagram



CH7039 Functional Block Diagram