

VS100TX HDBaseT™ Transmitter

HD Connectivity & Multimedia Distribution

Longer Distances, Improved Reliability, Lower Cost

Features

- ▶ **5Play™ convergence - simultaneous distribution of:**
 - Uncompressed high definition (HD) video: 1080p@60Hz@48 bits, 3D, 4K x 2K
 - High-quality audio
 - Ethernet 100BaseTx
 - Power over cable
 - Control signals including RS232 and Infrared
- ▶ HDCP compliant
- ▶ HDMI Rx & Tx interfaces for easy integration
- ▶ CISPR/FCC Class B EMC/EMI compliance
- ▶ Support of 100BaseTx according to IEEE 802.3u
- ▶ **Power:**
 - 1V, 1.8V and 3.3V
 - 5V tolerant IOs
- ▶ 196-pin LPGA, 15mm x 15mm
- ▶ 0°C to 70°C operating temperature
- ▶ RoHS and Green compliant

Applications

- ▶ Blu-ray, DVD players and recorders
- ▶ Digital set-top-boxes (STBs)
- ▶ Game consoles
- ▶ PCs
- ▶ HDMI repeaters, splitters and switches
- ▶ HDBaseT Switch
- ▶ AV Receivers

Overview of Valens VS100

The Valens VS100™ is the first HDBaseT-compliant chipset. The Valens VS100 transmits and receives uncompressed HD video, audio, Internet, power and control signals through a single 100m/328ft LAN cable.

HDBaseT delivers significant value to the entire home and commercial entertainment ecosystem, from CE/PC equipment manufacturers and audio/video connectivity product suppliers, through systems integrators and retailers, to installers and consumers. Homes, offices, hotels, airports and other public places can now install a robust HD ecosystem easily, effectively and at very low cost.



VS100

VS100 Product Family

VS100TX HDBaseT™ Transmitter

The VS100 family consists of two chips:

VS100TX (Transmitter): For DVDs, STBs and other HD source equipment.

VS100RX (Receiver): For HDTVs, projectors and other display equipment.

The VS100TX supports the following interfaces:

- HDBaseT Tx
- 1xHDMI in
- 1xHDMI out
- 1xMII/RMII bi-directional interface to interact with external Ethernet MAC /switch
- Bi-directional control channel which can be used for example for RS232 and IR control
- I2C slave management

Figure 1:
System
Functional
Diagram

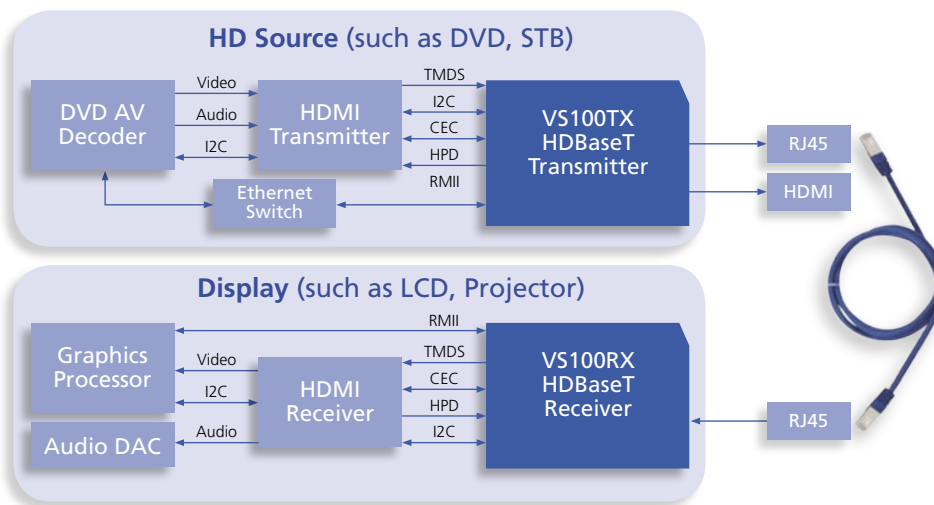
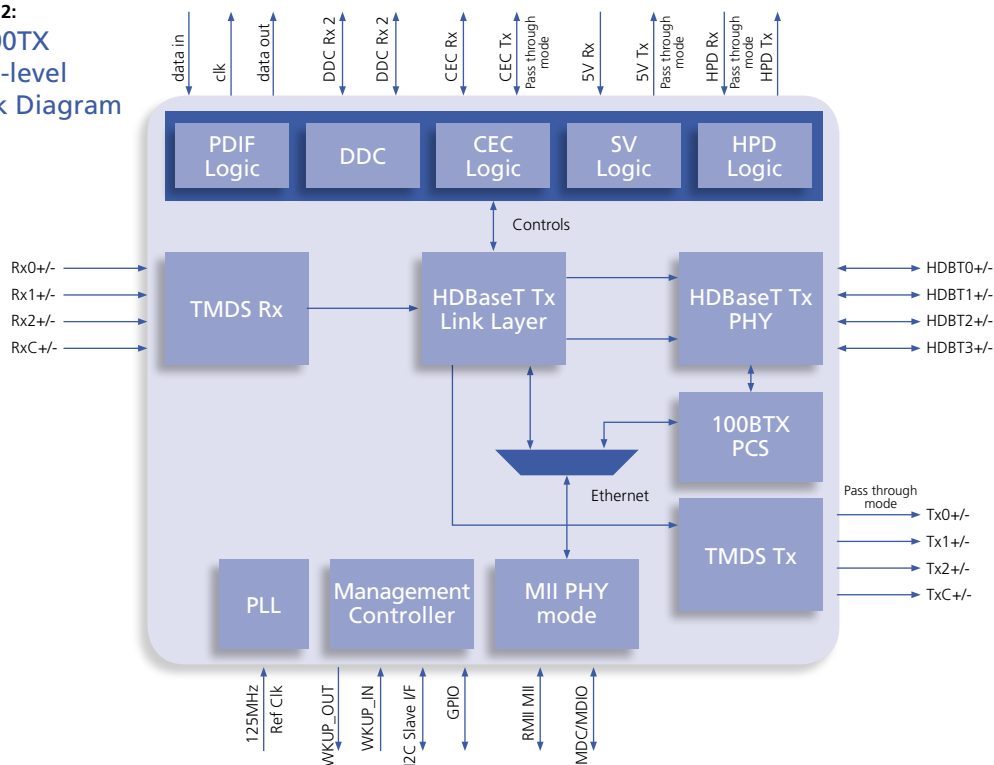
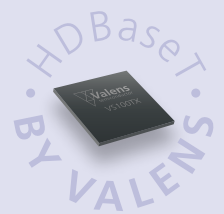


Figure 2:
VS100TX
High-level
Block Diagram



VS100



Valens Semiconductor is a leading provider of semiconductor products for the distribution of uncompressed HD multimedia content. The Company invented HDBaseT™, the first technology to enable long-reach connectivity of multimedia devices over a single 100m/328ft standard CAT5e/6 LAN cable. In late 2009, Valens, together with world-leading market leaders, cofounded the HDBaseT Alliance to promote and standardize the HDBaseT™ technology.

Established in 2006, Valens is a private company with offices in Israel, Japan, Hong Kong and the USA.



high definition made simple

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