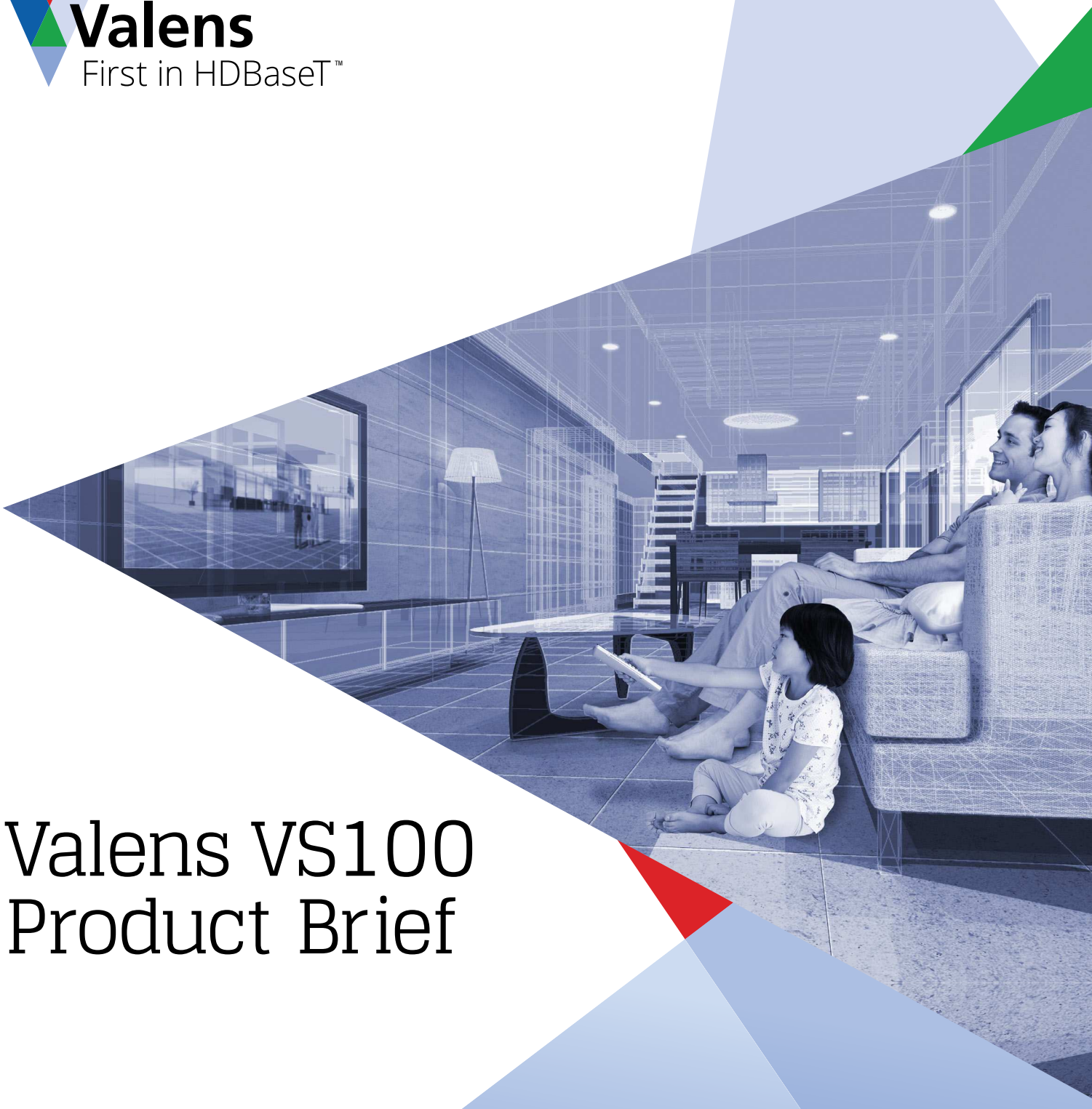
Valens
First in HDBaseT™



Valens VS100 Product Brief

Overview

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

HDBaseT™ delivers a 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 a very low cost.

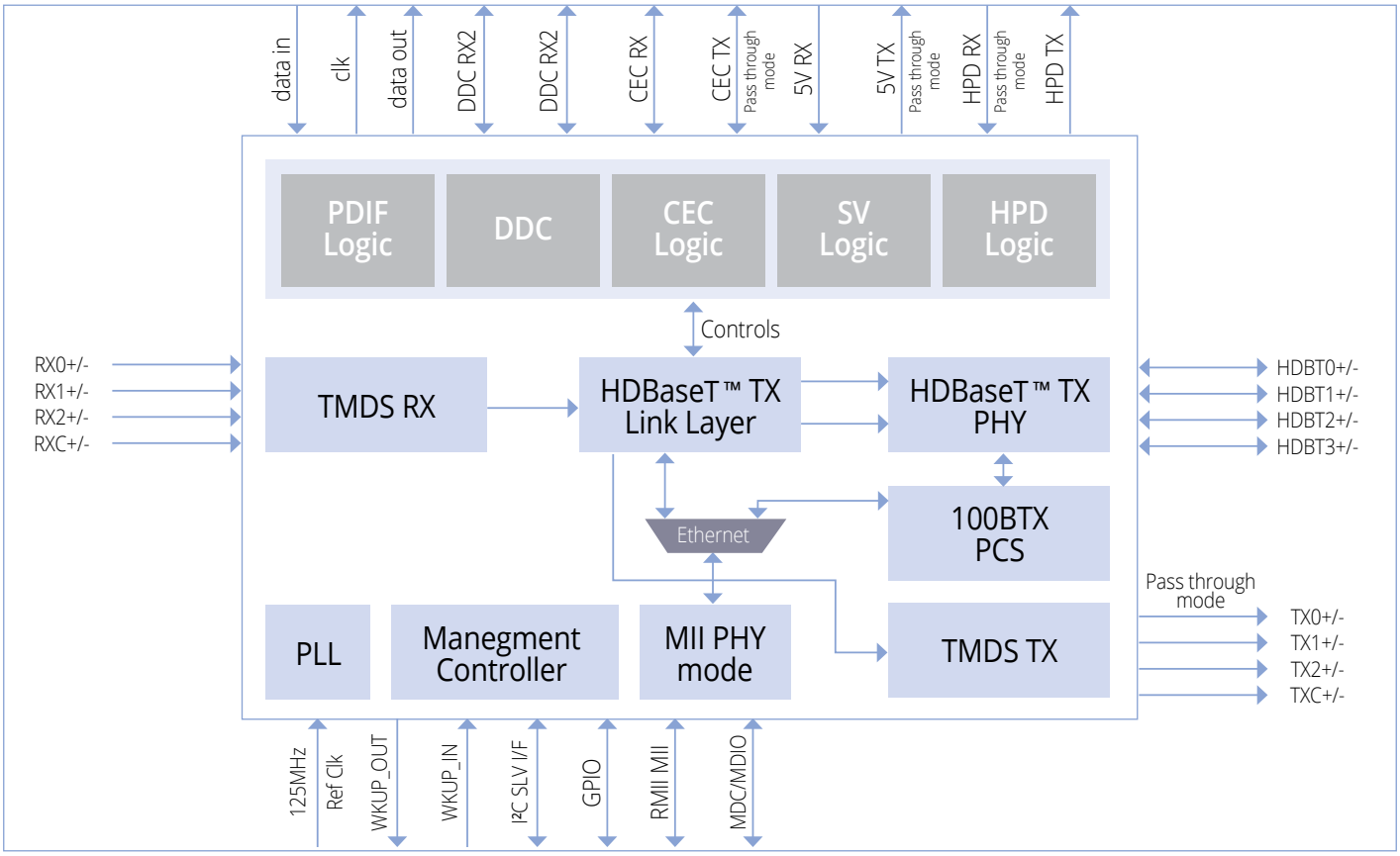
Architecture

The VS100 family consists of two chips:

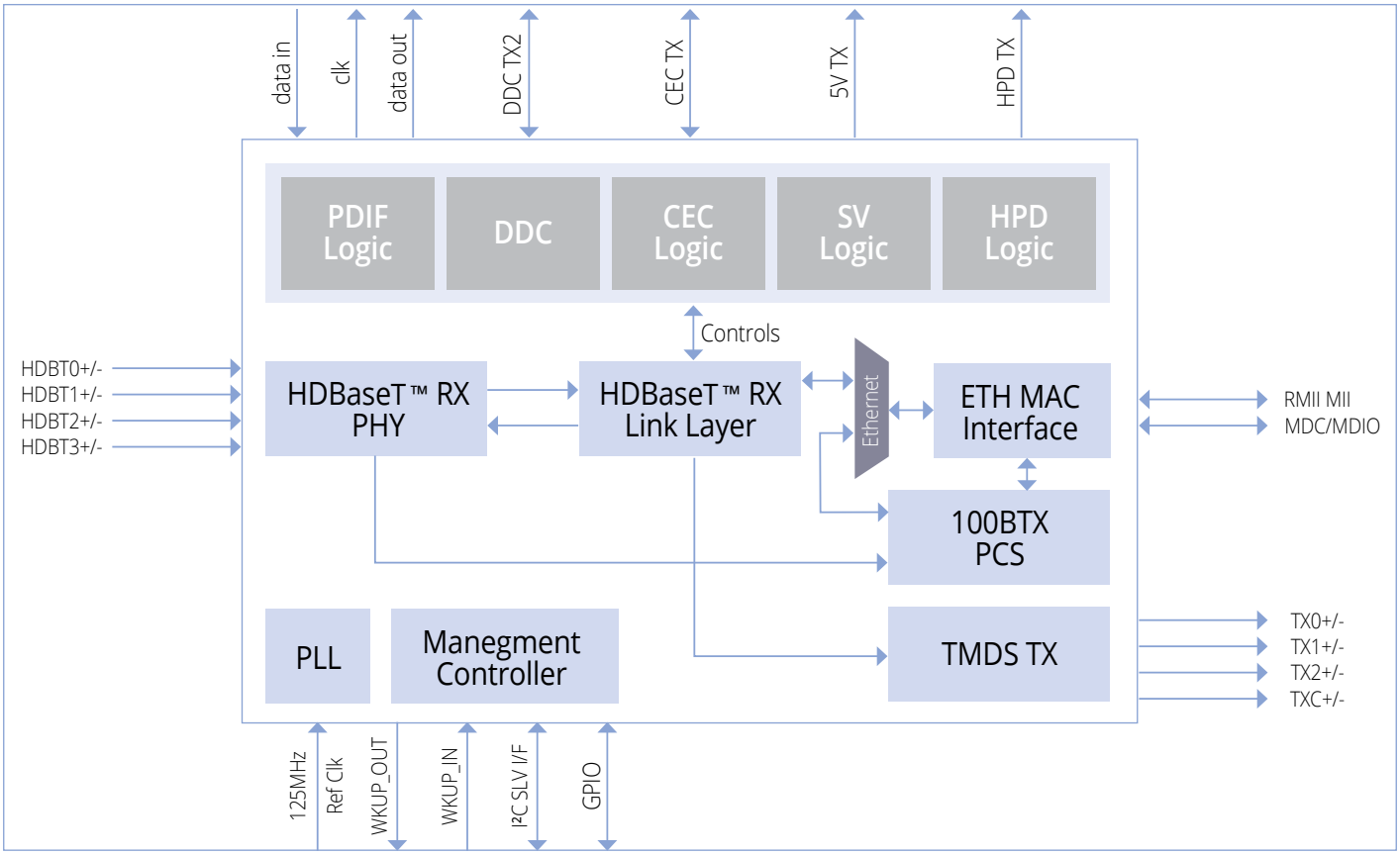
- **VS100TX (Transmitter):** For DVDs, STBs and other HD source equipment.
- **VS100RX (Receiver):** For HDTVs, projectors and other display equipment.

The following block diagram illustrates the major VS100 components:

VS100TX



VS100RX

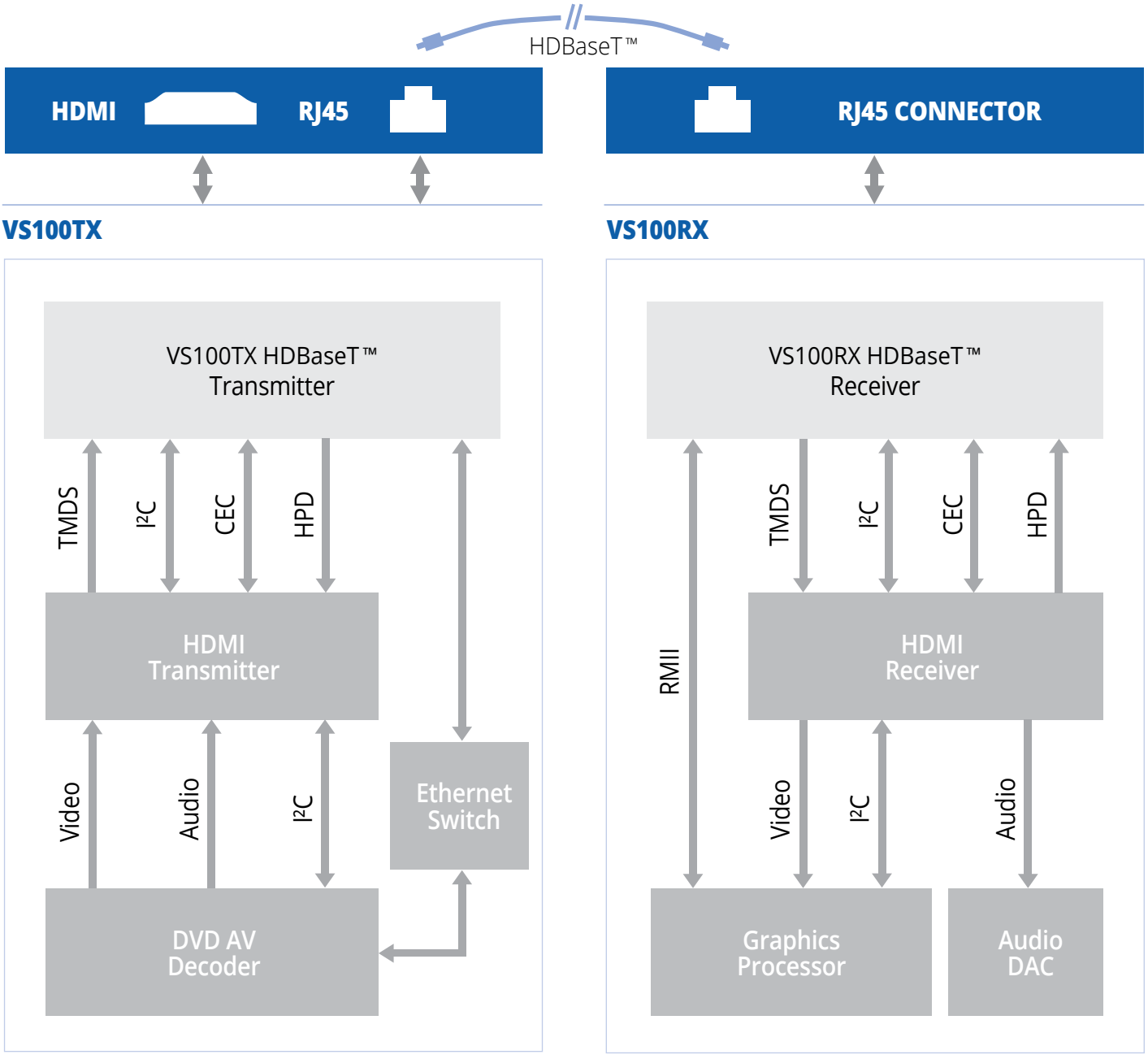


Applications

The VS010 chip can be used in various applications throughout multiple industries.

VS100TX:
Blu-ray, DVD players and recorders, digital set-top-boxes (STBs), game consoles, PCs
HDMI repeaters, splitters, switches, HDBaseT™ Switch, A/V receivers, surveillance cameras
VS100RX:
A/V receivers, DTVs, LCDs and plasma displays, rear and front projectors, HDMI repeaters, splitters, switches
HDBaseT™ Switch, digital signage, DVR for surveillance

The following diagram illustrates an example of system functionality of HDBaseT VS100 :



Key Technical Highlights

Features

5Play convergence – simultaneous distribution of:
- Uncompressed high definition (HD) video: 1080p@60Hz@48 bits, 3D, 4K x 2K
- High-quality audio
- Ethernet 100BaseTX
- PoH - Power over HDBaseT™
- Control signals including RS232 and infrared

HDCP Compliant

HDMI RX and 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 LBGA, 15mm x 15mm (TX), 268-pin LBGA, 21mm x 21mm (RX)

0°C to 70°C operating temperature

RoHS and Green compliant

VS100TX supported interfaces

HDBaseT™ TX

HDMI in

HDMI out

MII/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

VS100RX supported interfaces

HDBaseT™ RX

HDMI out

MII/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

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