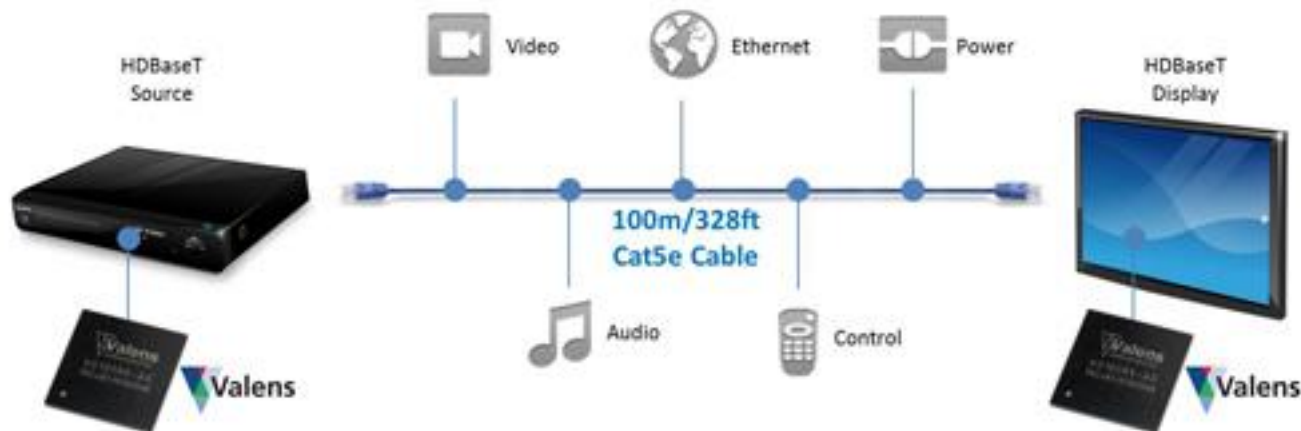


# HDBaseT Training Module



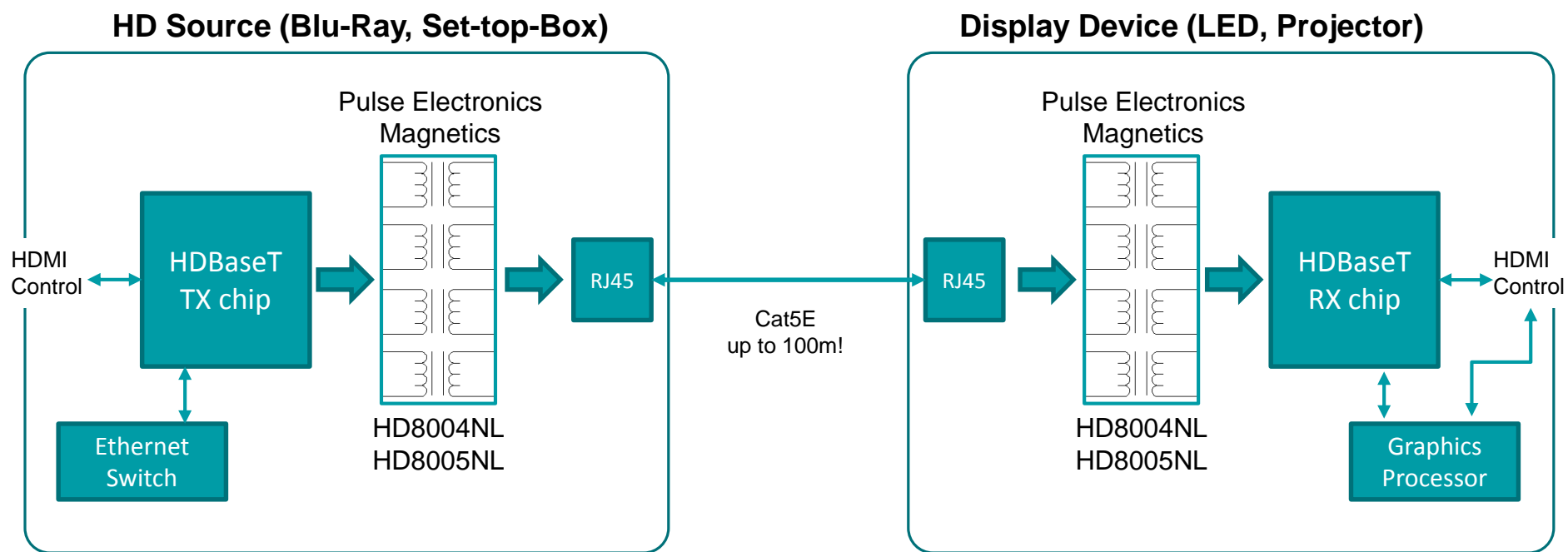
# What is HDBaseT™?

- **HDBaseT™** technology was launched in 2010 by Valens Semiconductor.
- Enables plug-and-play digital connectivity between HD video sources and remote displays.
- 5Play feature set, converged through a single 100m/328ft CAT5e/6 cable enables the delivery of:
  - Video – uncompressed HD / 3D video up to 4K resolution
  - Audio – Any standard digital audio format
  - Ethernet – 100BaseT Ethernet
  - Control – Various digital control signals such as RS-232, USB
  - Power – Up to 100W using category cable (PoH)



Source: [www.valens.com](http://www.valens.com)

# How it works – Signal Transmission



# HDBaseT™ magnetics

## ➤ Key Functions

- Provide safety isolation of 1500Vrms, 60seconds minimum
- Provides common mode noise rejection for improved EMI performance

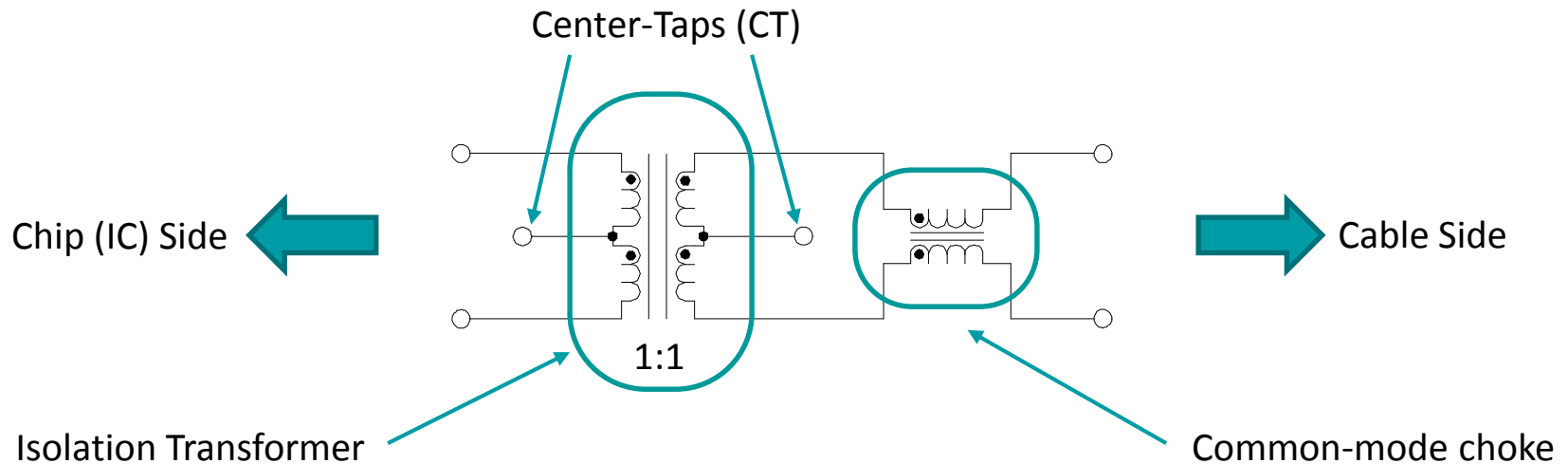


Figure 1 – Basic Schematic (one channel shown)

# HDBaseT™ magnetics

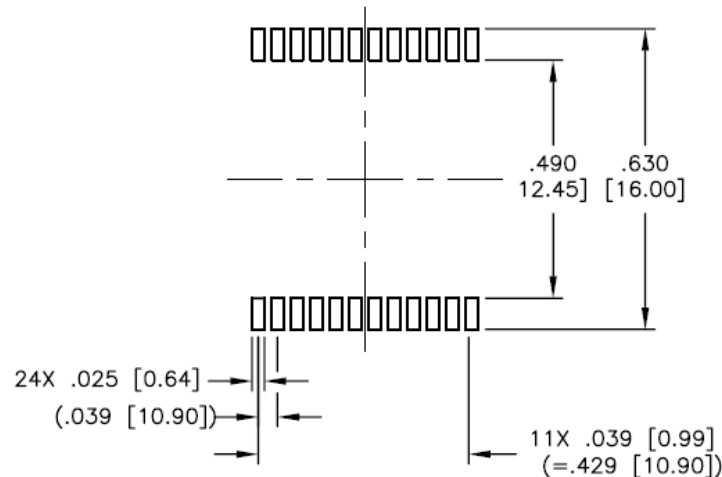
## ➤ Key Features

- Fully qualified to meet HDBaseT™ magnetics requirements
- Power over HDBaseT (PoH) of 60W (HD8004FNL) and 100W (HD8005FNL)
- 24-pin, 72x14.99x5.72mm, SMT package
- RoHS and REACH Compliant
- Meets IEEE 802.3at standard
- Production released, parts are available in distribution
- Operating Temperature 0C to +70C
- Storage Temperature -20C to +125C



## ➤ PCB Layout Recommendations

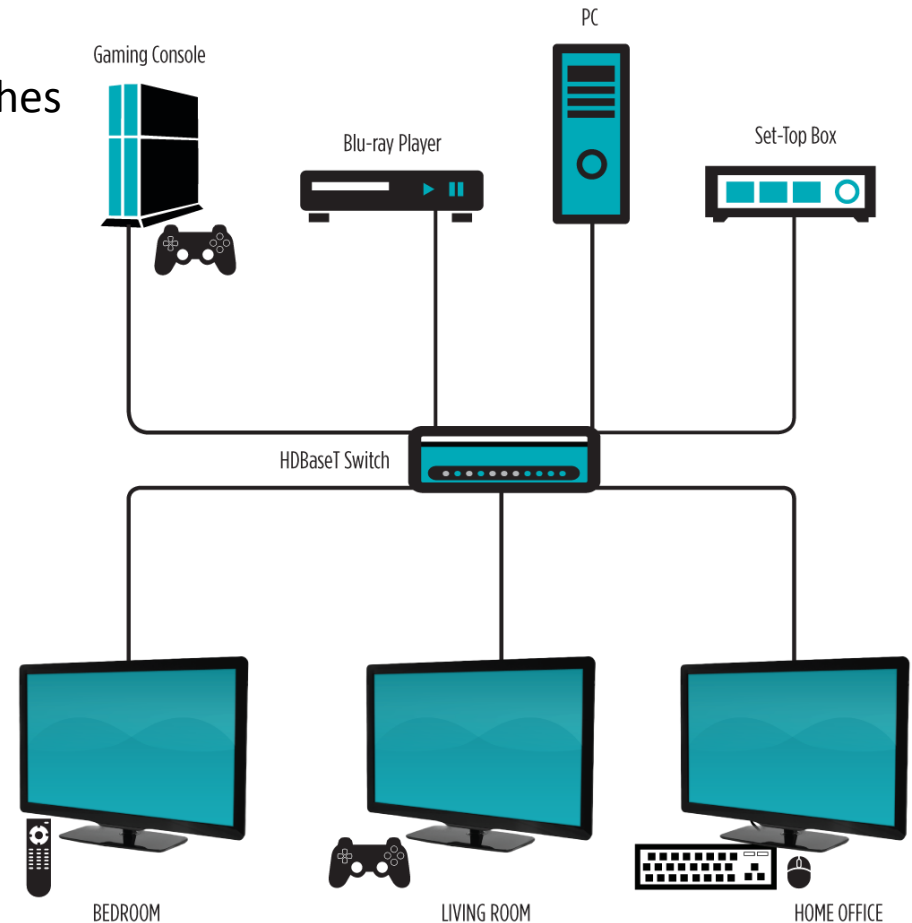
- Keep signal traces from IC to magnetics module as short as possible.
- Avoid PCB traces with 90-degree bends.
- Ensure that there is no contiguous ground plane underneath the module.
- Using BST (75Ω resistors and high voltage capacitor to chassis ground) to terminate cable side CTs is advisable for best EMI performance.
- Refer to HDBaseT™ IC manufacturer's application notes for further layout considerations.
- Follow suggested land pattern as shown below: inch(mm).



# Typical Applications

HDBase T used in variety of devices:

- Blu-ray, DVD players and recorders
- HDMI repeaters, splitters and switches
- DVTs, LCDs and plasma displays
- Rear and front projectors
- Digital set-top boxes
- A/V receivers
- Game consoles
- PCs



# HDBaseT™ transformers

- Pulse is a member of HDBaseT alliance
- Major contributors



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Thank You