# VTK-AE1M-01

## Main Features

- Compliant with IEEE 100BASE T1 (IEEE 802.3bw)
- Single UTP to use to reduce the overall cost
- mini-PCIe form factor for easy & quick installation
- Alternative USB interface (signal shared with mini-PCIe)
- Wide-range operating temperature
- Easy to leverage existing Ethernet environments
- Master-slave configuration via a switch to reduce latency during handshaking

## Product Overview

VTK-AE1M-01 is designed with one port automotive Ethernet which is compliant with IEEE 802.3bw to satisfy the modern infotainment applications by just using one UTP cable to work. Besides, it can reduce the vehicle weight compared to traditional Ethernet and save a specific infrastructure cost. With mPCIe form-factor design, the user can easily install VTK-AE1M-01 to any vehicle computers or any devices with a built-in mPCIe slot suitable for vehicle audio/video steam access or vehicle lab for testing.

## Specifications

**Form Factor**
- mini-PCIe form factor

**PC Interface**
- USB2.0 (VCP, baud rate 57.6kbps)

**I/O Connector**
- 4-Pin wafer connector (USB 2.0 I/F)
- DB9 connector for J1708 (w/ an external cable)

**USB 2.0 to Ethernet**
- MAC/RMII chip: ASIX: AX88772BLI

**1-Port BroadR-Reach 100Mbps**
- PHY chip: BROADCOM BCM89811
- Copper MDI: full-duplex, one-pair UTP
- IEEE 1588/802.1AS
- Reach distance: 15m
- Compliant to IEEE 802.3bw™ (IEEE 100Base-T1)

**Dimension**
- 51mm (L) x 30mm (W) (2.01" x 1.18")
- Weight: 13g

**Environment**
- Operating temperatures: -40~85°C
- Storage temperatures: -40~90°C
- Related humidity (with system chassis): 5%~90%

**Vibration Test**
- Operating
  - IEC 60068-2-64, 2G
  - MIL-STD-810G, 514.6C procedure 1, category 4
- Storage
  - MIL-STD-810G, 514.6E procedure 1, category 24

**Shock Test**
- MIL-STD-810G, 516.6 procedure I, trucks and semi-trailers=40g
- Crash hazard: procedure V, ground equipment=75g

**Operating System**
- Linux kernel 3.x (above)

## Ordering Information

- **VTK-AE1M-01 (P/N: 10VK0AE1M00X0)**
  1-port IEEE802.3bw Ethernet, full-size mini-PCIe form factor, USB 2.0 interface

**NEXCOM**

Add-On Modules

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