

# PCIe-PoE454 Series

4-port 5GBASE-T Ethernet 802.3at PoE+ Frame Grabber Card



CE FC

## Key Features

- 4x IEEE 802.3bz 5GBASE-T Ethernet ports by four Marvel AQC111C controllers
- Compliant with IEEE 802.3at to deliver up to 25.5 W for each port
- Supports 5G/ 2.5G/ 1G/ 100M link speed
- x4, Gen3 PCI Express interface offering 4GB/s total bandwidth
- Per-port PoE+ power on/ off control
- Compatible with COTS NBASE-T industrial cameras

## Introduction

PCIe-PoE454at is an industrial-grade 4-port 5GBASE-T frame grabber card with 802.3at PoE+ capability for advanced machine vision applications. It leverages Marvel AQC111C 5GBASE-T Ethernet controller to offer dedicated 5 Gb/s Ethernet bandwidth for each port. Furthermore, it is backward compatible with 2.5G, 1G, 100M link speeds to support legacy Ethernet devices and can transmit data utilizing economical Cat 5e Ethernet cables up to 100 meters without bandwidth degradation.

5GBASE-T, or NBASE-T, is an emerging technology, especially for the machine vision market. Cameras with a 5GBASE-T Ethernet interface have up to 5 times the Ethernet bandwidth compared to Gigabit Ethernet, thus supporting higher resolution and frame rate. PCIe-PoE454at provides high port density to provide four 5GbE ports in a standard half-size PCIe card form factor. In addition, it comes with IEEE 802.3at PoE+ PSE function so you can simply power the NBASE-T camera using a single Ethernet cable.

For machine vision systems requiring multiple high-resolution 5GBASE-T cameras, PCIe-PoE454at is the ideal frame grabber that provides high port density, 24/7 reliable operation, and excellent throughput performance without frame loss.

## Specifications

|                       | PCIe-PoE454at   | PCIe-N452  |
|-----------------------|---|--|
| Bus Interface         | 4-lanes, Gen3 PCI Express interface, compliant with PCI Express Base Specification Revision 3.0                                       |  |
| # of 5G Port          | 4x 5GBASE-T Ethernet ports by four Marvel AQC111C 5G controllers, supporting 5G, 2.5G, 1G, 100M link speed                            | 2x 5GBASE-T Ethernet ports by four Marvel AQC111C 5G controllers, supporting 5G, 2.5G, 1G, 100M link speed |
| PoE Capability        | In compliance with IEEE 802.3at-2009 (PoE+), each port delivers up to 25.5 W of power   | -  |
| Ethernet Connector    | 4x RJ-45 connectors   | 2x RJ-45 connectors  |
| Cable Requirement     | CAT-5e or CAT-6 cable, 100 meters maximum   |  |
| Power Requirement     | Maximum 5.5 A@12V (66W) from PCIe gold finger connector<br>Maximum 8.5 A@12V (102W) with onboard 6-pin PCIe power connector connected |  |
| EMC                   | CE Class A, according to EN 55032/55035<br>FCC Class A, according to FCC Part 15, Subpart B   |  |
| Operating Temperature | 0°C ~ 55°C with airflow   |  |
| Dimension             | 167.7 mm (W) x 111.2 mm (H)   |  |

## Ordering Information

| Model No.     | Product Description   |
|---------------|---|
| PCIe-PoE454at | 4-port 5GBASE-T Ethernet 802.3at PoE+ Machine Vision Frame Grabber Card |
| PCIe-N452     | 2-port 5GBASE-T Ethernet Machine Vision Frame Grabber card              |