MERCURY Series/Global-7243A4x4CB Module

Global Telecom's Mercury series Mini PCIe module is an advanced multi-band CAT15 LTE PCIe mini card product developed by Global Telecom for the embedded LTE module market. It supports standard PCIe USB interface and can be easily integrated into laptop, set-top box and other real-time devices to provide advanced 4G broadband communication capability.

Overview

CAT12/15 module supports both FDD and TDD modes of LTE operation, and a host-less system on chip (SoC) design, reducing cost and power consumption. Its interface – featuring standard PCIe USB 2.0 and Gigabit RGMII – works with LTE eNodeB systems and ensures easy and fast integration with virtually any host. The form factor also supports advanced 4G technologies, such as AMC, HARQ, and MIMO. Roaming and handing over support are available.

Features

- Industrial PCIe form factor design (not standard size) *Advanced 4G capabilities with 4R2T design (Release 13 compliant) *Up to 256 QAM *Multi-band and multi-mode (FDD & TDD) support

- Tx CDD and UL CA Support

- Up to 4CC

- RGMII Gigabit Ethernet and USB 2.0 support

- Full IPv4 & IPv6 and multiple PDN support

- PPT, L2TP, and GRE VPN Tunneling clients' support

Key Benefits

- Improved Network Efficiency

- Advanced built-in router software & host less router operation support

- Router and bridge operation mode support

- Supports B48 CBRS

- 4*4 MIMO technology for superior 4G performance

Patented Intent-Based Network Optimization

The CAT 12/15 leverages Global Telecom's patented Intent-Based Network Optimization solution, the fixed wireless industry's only platform that dynamically and automatically ensures that users are always attached to the highest performing and least congested sectors.

Technical Overview

The CAT 12/15 Module utilizes industry-leading MIMO technology, featuring 4x4 MIMO and delivers instant access to 4G speeds while simultaneously improving spectrum efficiency and extending the coverage area. It can provide up to 600 Mbps data throughput, far exceeding wired broadband data speeds and easily satisfying the needs of the most demanding IoT projects, including real-time HD video and VoLTE applications.

Cat 12/15 Module
Multi=band 4G LTE Mini PCIe

Superior Performance

Global-7243A4x4CB adopts standard MINI PCI-E form factor design and support a variety of advanced 4G technologies such as AMC, HARQ, MIMO and etc. The host-less SoC design further help to reduce the product cost and power consumption.

Advanced MIMO Technology

Global-7243A4x4CB supports advanced MIMO technology (4 Rx and 2Tx). It allows the module to achieve up to LTE category 15 performance. The MIMO technology also helps to extend the coverage and greatly improve spectrum efficiency

Technical Specifications	
Physical	
Dimensions	74mm * 50mm * 6mm
Weight	<30 g
Power consumptions	Average: 3.5W, Peak: 7W
Antenna Type	IPEX-1 Connectors (4)
Power Supply	DC 3.8-5.0V
Environmental	
Operating Temperature	Operating temperature -40~65°C
Storage Temperature	Storage temperature -45~85°C
Humidity	5% ~ 95%
Wireless Radio Interface	
Radio Access	3GPP LTE Release13, CAT 12-15
Operation Mode	Duplex Mode TDD & FDD with 4R2T Design
Frequency Band	B2, B4, B5, B12, B13, B17, B25, B26, B41, B53, B66, B71 + B48(CBRS)
Bandwidth	1.4 MHz, 3 MHz, 5MHz, 10MHz, 15 MHz, 20 MHz
Modulations	DL: QPSK, QAM16, QAM64, QAM256 UL: QPSK, QAM16, QAM64
CA Support	DL MIMO & CA 4*4 MIMO (2CC), 2*2 MIMO (4CC) UL CA & QAM64 Optional Support
Output Power	23dBm ±1dBm per Tx , 26 dBm HPUE @ B41
Hardware Interface	52-Pin Mini PCI-E card interfacce
GNSS	
Software Specifications	
Networking Configuration	RGMII Gigabit Ethernet (High speed application) & USB 2.0
Data Networking Features	Linux, Mac OS, Android, Windows XP, Vista, and Windows 7/8/10
Device Management	Plug and Play, WEB GUI, TR069