



THOR-400GE-QDD

Ethernet Packet Generator & Analyzer

With AUTO-NEG & LINK TRAINING

May 2020

Thor-400G-7S-1P 简介

PAM4 & NRZ | ANEG & LT | QDD Interface | L23 Traffic | 400G~10G Multi-speed

- ✓ 原生接口 QSFP-DD x1 and QSFP-56 x1
- ✓ 速率支持 1x400G / 2x200G / 4x100G / 8x50G / 2x40G / 8x25G / 8x10G
- ✓ 介质支持 Optical Fiber, AOC, AEC, DAC cable
- ✓ 支持 FEC (KP4 & KR4), ANEG & LT (端口自协商和链路学习)
- ✓ 支持 PRBS 业务测试及 MAC/IP 成帧以太网业务流量测试
- ✓ 配套基准测试套件 RFC2544, RFC2889, RFC3918, Y.1564
- ✓ 适用于交换、路由、网卡、光模块等各类产品的网络性能及功能测试

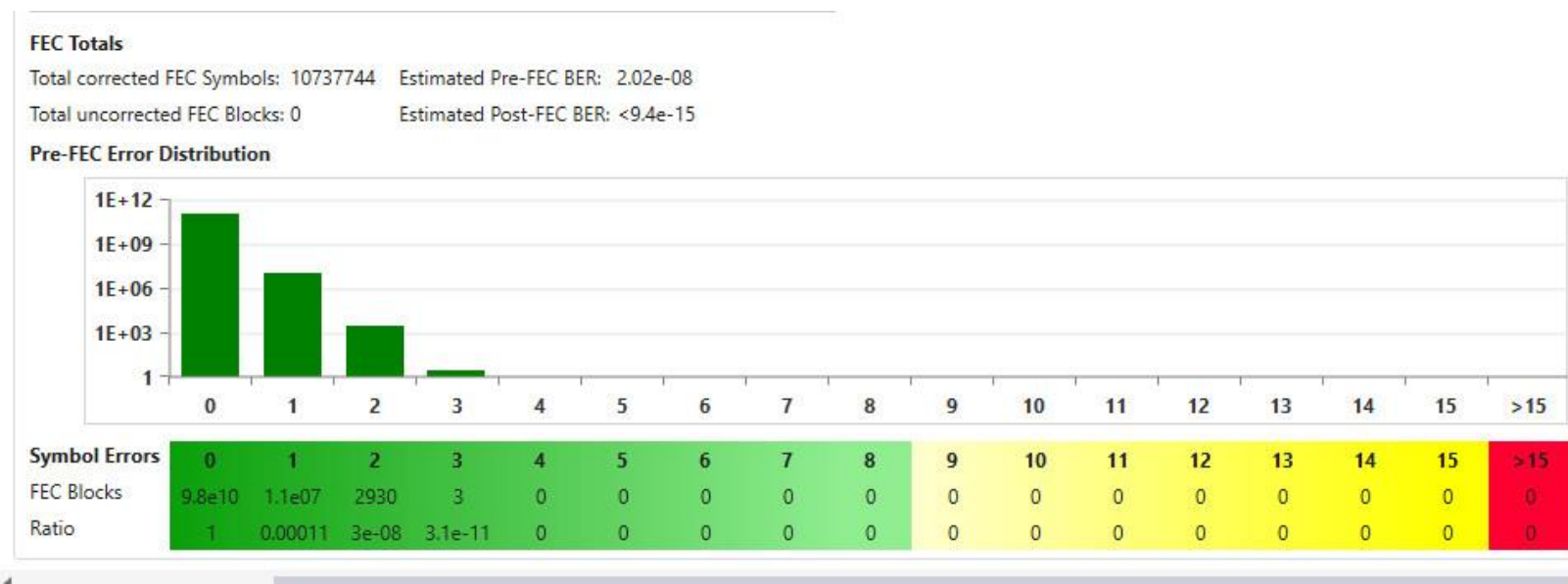
板卡规格书 <https://xenanetworks.com/product/thor-400g-7s-1p/>

AN-LT 白皮书 <https://xenanetworks.com/whitepaper/autoneg-link-training/>

产品特性 (Layer1)

PRBS | FEC Symbol Error Analysis | MDIO/I2C Read & Write | Error & Alarm Injection

- ✓ 支持丰富的PRBS码型测试链路原始误码情况
- ✓ 支持Pre-FEC BER, Post-FEC BER, 用于分析每Lane的链路质量
- ✓ 提供I2C的方式对光模块寄存器信息读写操作
- ✓ PCS/PMA层的错误及告警注入测试



产品特性 (Layer23)

Wire-speed Traffic PG | Multi-Streams & Flows | PFC | Multi-Media

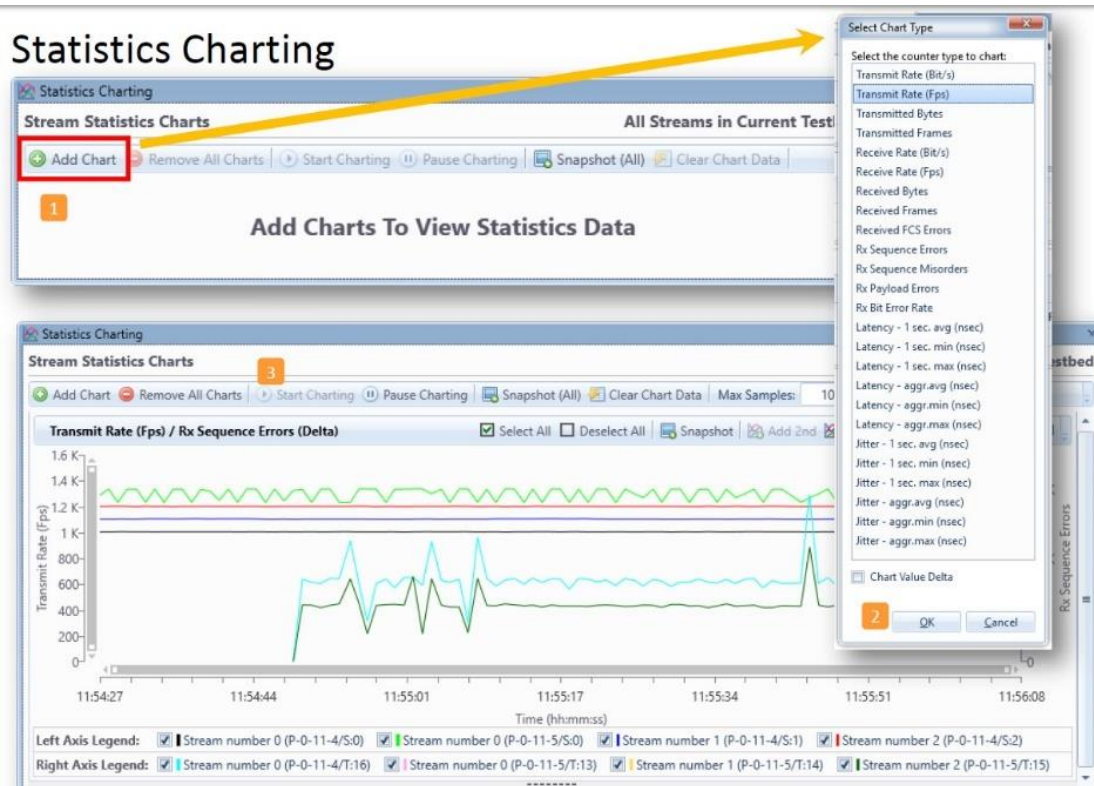
- ✓ 线速400GbE以太网流量生成与分析
- ✓ 10G~400G 7速速率多介质支持
- ✓ 每个端口支持独立的多流多业务设定

Port Speed	Standard	Signaling	Interface
400G	802.3bs	8x50G PAM4	QSFP-DD
2x 200G	802.3bs / 802.3cd	2x 4x50G PAM4	QSFP-DD (dual CS)
2x 200G	802.3bs / 802.3cd	2x 4x50G PAM4	2x QSFP56
1x 200G	802.3cd	8x25G NRZ	QSFP-DD
4x 100G	802.3cd	4x 2x50G PAM4	QSFP-DD (2:8)
4x 100G	802.3cd	2x 2x 2x50G PAM4	2x QSFP56 (dual CS)
2x 100G	802.3bj	2x 4x25G NRZ	2x QSFP28
8x 50G	802.3cd	8x 50G PAM4	QSFP-DD (1:8)
8x 50G	802.3cd	2x 4x 50G PAM4	2x QSFP56 (1:4)
4x 50G	Consortium	2x 2x25G NRZ	2x QSFP28 (2:4)
2x 40G	802.3ba	2x 4x10G NRZ	2x QSFP+
8x 25G	802.3by/Consortium	2x 4x 25G NRZ	2x QSFP28 (1:4)
8x 10G	802.3ae	2x 4x 10G NRZ	2x QSFP+ (1:4)

产品特性 (Software)

Global & Graphical statistics | Benchmark test suite | CLI & RESTful API

- ✓ GUI测试软件及基准测试套件
- ✓ 完善的API调用接口支持



产品特性 (ANEG-LT)

AUTO-NEG & LINK TRAINING | Probably the Best INTEROPERABILITY

- ✓ 集成调优最新的BCM PHY方案
- ✓ 业内最佳兼容性支持 (已完成Avago、Intel、Mellanox、Microchip、Texas、Huawei等多家方案对接)

Speed Device	200G NEM	100GE NIC	PHY/ ASIC vendor	Switch/ ASIC vendor	3rd party T&M vendor
400G PAM4			✓		
200G PAM4	✓		✓		✓
100G PAM4	✓	✓	✓		
50G PAM4	✓	✓	✓	✓	✓

Table drawing time# Jan-2020

产品优势

价格 | 服务 | 可扩展性

- ✓ 提供三年的免费软硬件维保：含RFC2544/2889等基准测试套件，不设License限制
- ✓ 产品生命周期内免费提供技术支持
- ✓ FPGA方案，支持新标准规范的功能迭代
- ✓ 灵活的1RU/7KG便携机箱及4RU/ 2.4TbE高密度机箱配置



Xena 100/400G 中国客户

