VANET®

VANET's frTCP Edge VGE-fr5100

VANET's "frTCP Edge VGE-fr5100" revolutionizes wireless communication by making Wi-Fi networks perform like wired connections. Designed with patented TCP optimization and intelligent congestion control, it delivers seamless, stable, high-speed internet--no matter where you are.

Up to 100% Faster Speeds

Intelligent TCP flow regeneration recovers lost packets and optimizes throughput

4x More Stability

Minimized performance fluctuations and latency for mission-critical tasks

Plug & Optimize

Easily integrates with existing network hardware ideal for ISPs, enterprise backhauls, and smart network

"TRANSFORMING WIRELESS UNPREDICTABILITY INTO WIRED-LEVEL STABILTY LEADS THE WAY."

TCP Flow Regeneration

VANET's "frTCP Edge" increases TCP's performance over wireless networks by handling errors (packet losses) that are known to occur over wireless medium. It detects lost or corrupted packets with the use of timeouts and duplicate acknowledgments. It then mitigates the problem by retransmitting a bad packet. The next bad packet waits until the previous one is confirmed to have been received.

Furthermore, frTCP Edge adjusts the TCP window size to improve traffic bandwidth and to minimize packet retransmissions.
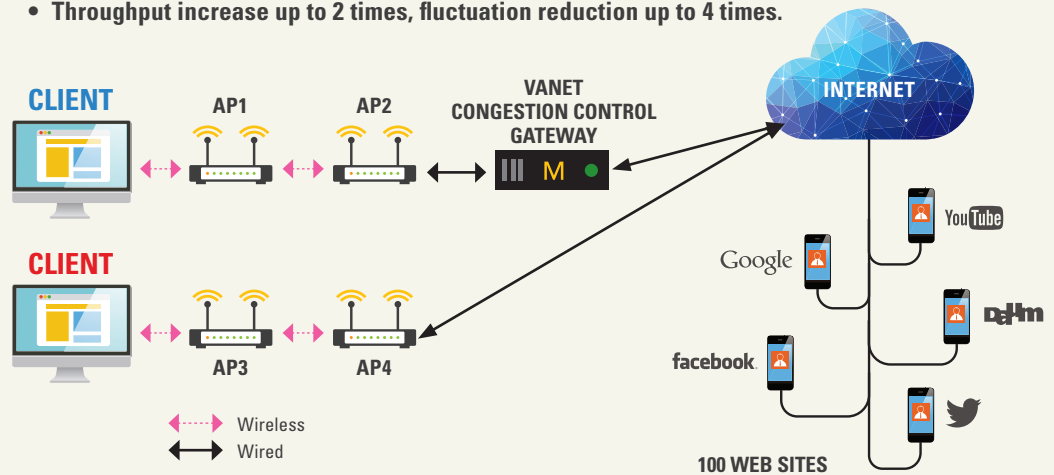
Web Optimization

Non media objects account for up to 50% of the network traffic and have a significant impact on bandwidth and speed. VANET's "frTCP Edge" minimizes browsing response times and optimizes rendering of web pages by using standard methods, such as compression of text and images, as well as by decreasing the loading of objects and respective response times through enhanced post optimization cache, browser cache, and more.

CONGESTION CONTROL WITH VANET EDGE GATEWAY

- Congestion control function is built into VANET Edge
- **Throughput increase up to 2 times, fluctuation reduction up to 4 times.**

Relevant Patents

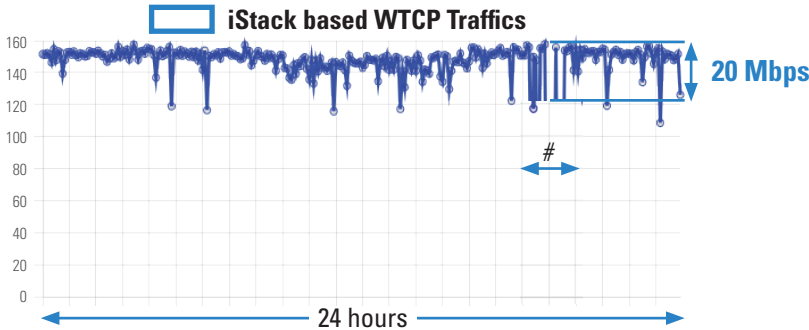| No.	Title
1	System and architecture for supporting mobility and multipath packet delivery In IP network stacks
2	System and method for supporting mobility and multipath packet delivery in IP communications and computer networks across NAT and firewall boxes
3	System and method for intelligent frame disposal.
4	System and method for bandwidth measurement using arrival time of packet intervals
5	Method for optimizing TCP sessions within network nodes
6	System and method for optimizing TCP sessions for the wireless network
7	Handoff and optimization module of the network protocol stack

Hardware Specification

Home & Small Business

Item	Description
Graphics/Display	2 x HDMI 2.0 support Dual 4K@60Hz display
Interfaces	Equipped with dual 10G SFP+ ports and dual 2.5G I226-V connections, this device guarantees fast network speeds for seamless data transfer
Memory	Supports Dual Channel DDR5 memory and has NVMe slots available for fast storage solutions, optimizing your multitasking capabilities and overall efficiency
Rich Interfaces	1xUSB3.2, 4xUSB2.0,1xType C, 2xHDMI 4096x2160@60 Hz
Network Card	2x Inte I226-V 2.5Gb network card+ 2x Inte 82599ES 10Gb SFP+ Card
Ram	1 x DDR5 Laptop RAM slots support up to 4800MHz 32GB Maximum (Available 32G Ram)
Storage Front	M.2 E key WiFi to NVMe (default delivery adapter board) 1 * SATA3.0 Back: 1 x M.2 NVMe 2280 Same side as the back mounted CPU (default equipped with heat transfer patch, Silicone grease needs to be prepared by yourself) (includ 512G SSD)
USB	1 x USB 3.2 Gen1 ,1 x USBC 3.2 Gen1 , 4 x USB 2.0
WIFI	1x M.2 WIFI 2230 slot Support WIFI6
Expansion Slots	2 * RS232/485 switching jump cap/1 * JCOM needle arrangement/1 * SATA3.0 (4-pin standard seat)

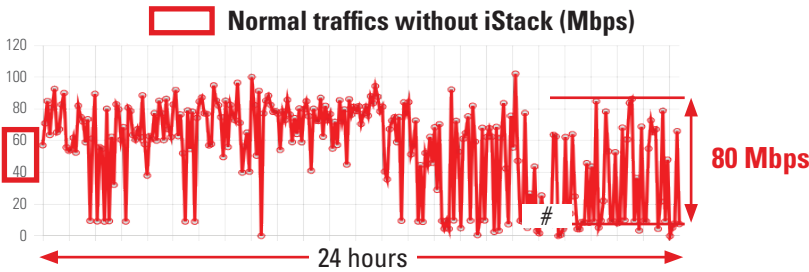# Performance Evaluation Result

CLIENT 1

with **VANET Gateway**
Avg. **150 Mbps**

iStack based WTCP Traffics

20 Mbps

24 hours

CLIENT 2

Normal Wi-Fi
Avg. **70 Mbps**

Normal traffics without iStack (Mbps)

80 Mbps

24 hours
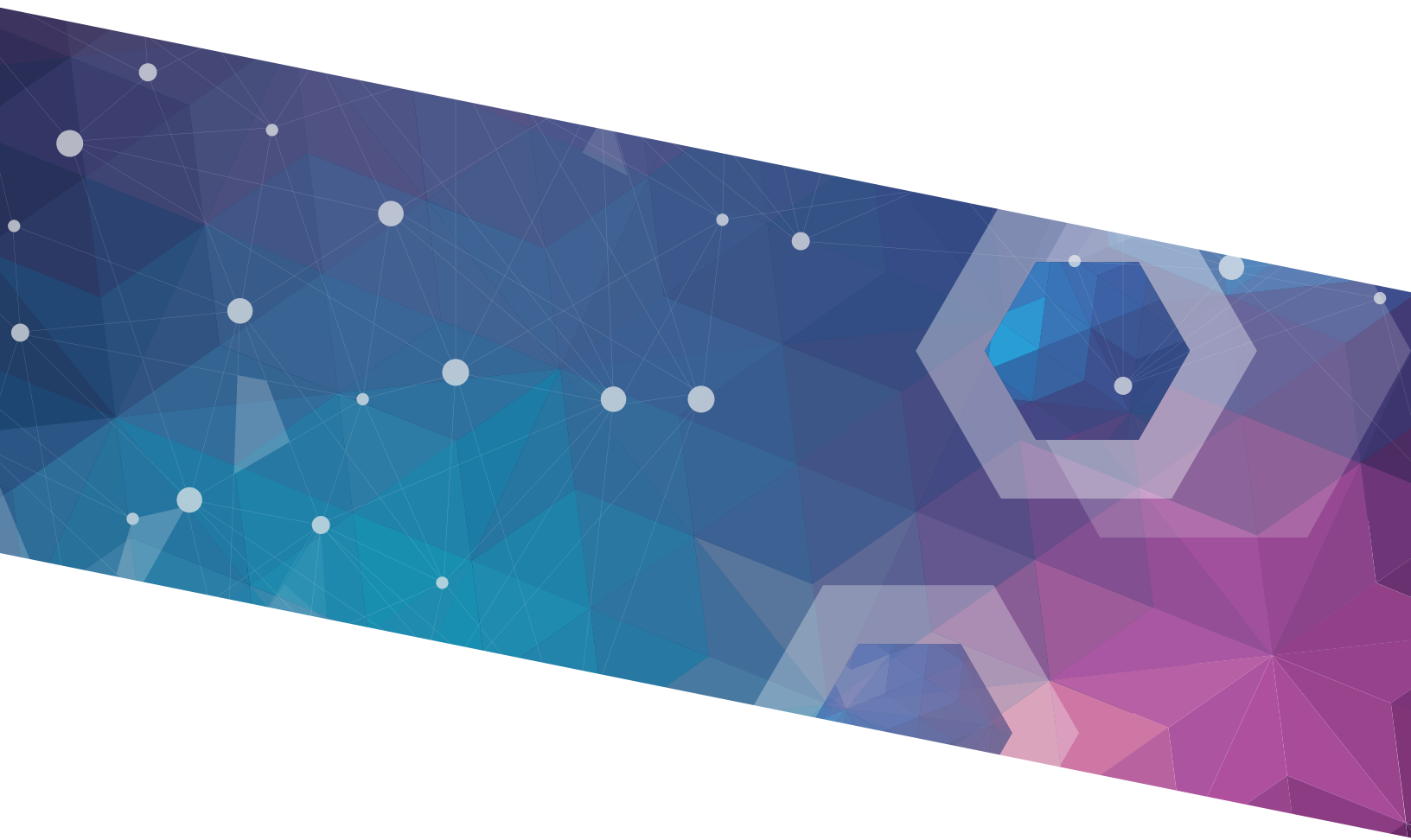
#: Due to the external internet problem, data in this span was not considered.

Customer Field Test

Since each field has unique condition and user pattern, VANET Inc.'s technical consulting team will bring our equipment and perform BMT on the target site and provide its specific comparison report.

CONTACT

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VANET Inc. is one-of-a-kind wireless infrastructure and Application Company. Insisting on supreme technologies, VANET Inc. sets out to create the best Internet Solution Technologies to enable transparent and non-disruptive convergence for the next-generation-Internet.

VANET® REV. 01/22