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HSINCHU, TAIWAN, February 13, 2023 /EINPresswire.com/ -- Vertexcom Technologies, a leader in Wi-SUN SoC and networking software design, delivering smart grid and IoT communication solutions, announced its VC735X series SoC has successfully registered as one of the first FAN 1.1 Certified Test Bed Unit(CTBU) by Wi-SUN Alliance, also passes PHY Layer for FAN 1.1 Profile certification. VC735X is Vertexcom's next-generation wireless SoC, a Wi-SUN FAN RF Mesh Wireless SoC with OFDM/FSK concurrency that makes the perfect solution for IoT networking and sensing applications.

In the Wi-SUN Alliance certification test, CTBU refers to Interoperability Test to Wi-SUN radio equipment Certified Test Bed Unit, which means that VC735X plays a demonstration role in PHY Layer for FAN 1.1 Profile certification.

VC735X, CTBU, PHY Layer for FAN 1.1 Profile

Wi-SUN FAN 1.1 update includes the following directions:
1. Higher data rate
The new OFDM PHY specification supports a data rate increase from 150 kbps to 2.4 Mbps.
Vertexcom VC735X can provide up to 3.6 Mbps proprietary data rate.
2. Multiple transmission rate switching
Due to different usage scenarios, the product can selectively support switching between FSK, OFDM, or different transmission rates.
Vertexcom VC735X can selectively support switching between FSK, and OFDM, with different data rates.

Dr. HH Li, the president of Vertexcom states that VC735X series is the latest generation of Wi-

SUN SoC, we are honored to announce VC735X passes Wi-SUN PHY Layer for FAN 1.1 Profile certification. The critical feature of VC735X is the concurrency of FSK and OFDM at any data rate. This means VC735X not only supports FSK 50/100/150/200/300/400/600 Kbps, 1 Mbps data rate but also has a proprietary FSK/OFDM concurrency, also known as FSK/OFDM Auto Mode Detection. In which the Rx can automatically detect whether the incoming packet is FSK or OFDM, so the Tx can transmit whatever mode it prefers without informing the Rx in advance. In other words, the leading FSK packet is no longer required, improving the transmission rate and routing efficiency.

The features of VC7351

Highest data rate Sub-GHz Wireless SoC
- FSK: 50/100/150/200/300/400/600
- OFDM: 2.4 Mbps for 16QAM on 802.15.4x.
- OFDM: 3.6 Mbps for 64QAM
RF Parameters
- RF Bands: 850-960, 430-520, 300-330, 230 MHz
- Tx Power: FSK: 20 dBm. OFDM: 17 dBm
- Rx Sensitivity: FSK: -108 dBm/50Kbps. OFDM: -93 dBm /2.4Mbps
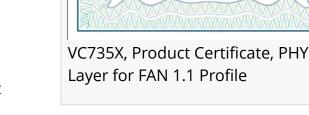Adaptive Modulation
- Modulation: OFDM, FSK, OQPSK
- OFDM, FSK Concurrent & Co-existence

MCU
- ARM Cortex M3 32-bit MCU (max. 120 MHz). 2 MB Flash, 256 KB SRAM.
- AES 128/192/256-bit
- Support Wi-SUN Protocol: FAN1.0 & FAN1.1

VC735X, Product Certificate, PHY Layer for FAN 1.1 Profile

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C735X series is the latest generation of Wi-SUN SoC, we are honored to announce VC735X passes Wi-SUN PHY Layer for FAN 1.1 Profile certification."
Dr. HH Li, the president of Vertexcom

About Vertexcom Technologies
Vertexcom Technologies develops communication chips and networking software for long range, large scale, auto networks of IoT and smart grids. Vertexcom has a complete communication solution, including Wi-SUN, Homeplug AV & GreenPHY, HPLC, G3-PLC, and hybrid dual-mode communication solutions. As a contributor to international communication specifications, Vertexcom participates in the development of WiSUN FAN 1.1 and its plugfest specification, and G3-PLC & RF hybrid dual-mode specification.

www.vertexcom.com

About Wi-SUN Alliance
Wi-SUN Alliance is a global non-profit member-based association made up of industry leading companies. Its mission is to drive the global proliferation of interoperable wireless solutions for use in smart cities, smart grids and other Internet of Things (IoT) applications using open global standards from organizations, such as IEEE802, IETF, TIA, TTC and ETSI.
https://www.wi-sun.org/

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