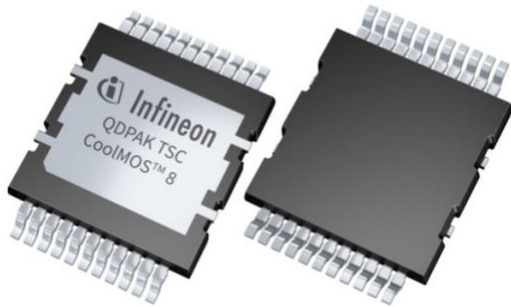




## M2S Tech 2024 Q2 Product Highlights

We hope you have had a great spring season! M2S Tech is happy to share some of the latest technologies from our supplier partners that may be beneficial in your current design efforts. Feel free to reach out to our team if you are interested in discussing any products in more depth or would like to receive samples.

M2S Tech Contact Page: <https://m2stech.com/contact-us>



### Infineon 600V CoolMOS 8 Family

The 600 V CoolMOS™ 8 SJ MOSFET comes with reduced gate charge ( $Q_g$ ) of 18% over CFD7 and 33% over P7 at 10 V, 50% lower COSS than CFD7 and P7 at 400 V, reduction in turn-off losses ( $E_{oss}$ ) is further improved by 12% over CFD7 and P7, reverse recovery charge ( $Q_{rr}$ ) is 3% lower compared to the CFD7, as well as the lowest reverse recovery time ( $t_{rr}$ ) in the market. The  $R_{th}$  thermal performance also improved with 14-42% comparing previous generation.

Furthermore, it offers an outstanding level of performance in PFC, TTF and other hard-switching topologies. In addition, the 600 V CoolMOS™ 8 SJ MOSFETs enable higher power density thanks to its optimized  $R_{DS(on)}$  which allows us to bring our best in class (BiC) products down to a single digit of 7 m $\Omega$  in a Si based super junction (SJ) technology.



### Murata Type 2GT, Multi-band LoRa Module

The Type 2GT module is 9.98 x 8.70 x 1.74mm and is built on a PCB housed in a metal case and packaged as a land grid array. The module's technical prowess is highlighted by its use of Semtech's advanced LR1121 RF transceiver IC, a thermally compensated crystal oscillator (TCXO), a second 32KHz crystal, an RF switch, and an RF matching network. These components ensure maximum frequency accuracy and reliable performance under varying environmental conditions.

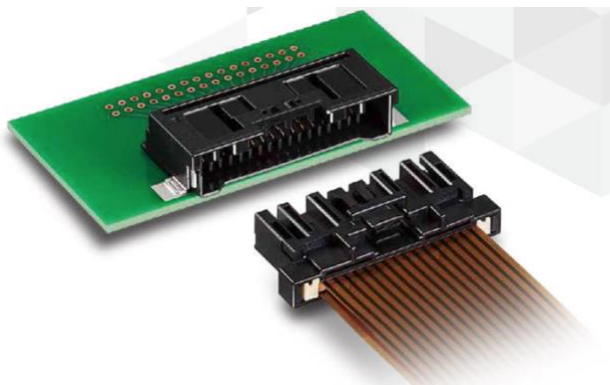
The Type 2GT's support for multiple frequency bands—including sub-GHz bands, the 2.4GHz ISM band, and the 2.1GHz satellite communications S-band—underscores flexibility and scalability, meeting the needs of various IoT applications such as smart agriculture, Industrial and environmental sensing, building and home automation.



### **Digi ConnectCore MP2**

Digi ConnectCore® MP2 is a versatile, secure and cost-effective wireless system-on-module (SOM) designed for industrial applications and smart connected devices. STMicroelectronics' STM32MP25 adds a neural processing unit (NPU) and image signal processor (ISP) for edge AI and computer vision applications. The fully integrated wireless connectivity, time-sensitive networking (TSN) and the compact SMTplus® form factor (30 x 30 mm) make it ideal for small portable devices and [Industry 4.0](#). The SOM is designed for maximum power efficiency to support battery powered applications.

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### **Hirose ZK1 High Heat and Vibration Resistance High Heat and Vibration Resistance, 2mm Pitch, FPC-to-Board, Automotive Connector**

1. Compact and Light Weight
  2. Simplified Assembly for Size and Weight Reduction
  3. Withstands High Heat and Vibration in a Compact Design
  4. Robust Center Locking Design
  5. Designed for Electric Shock Prevention
  6. Enhanced Dust Resistance with Two-Point Contact
- 



### **Nichicon GXC Series**

Conductive polymer hybrid aluminum electrolytic capacitors use both conductive polymers and electrolytic solutions for electrolytes. Combining the two types of electrolytes means the GXC series has characteristics of both aluminum electrolytic capacitors (oxide film repair) and conductive polymer aluminum solid electrolytic capacitors (low ESR performance and high heat resistance). The GXC series achieves 1.3 to 2.1 times higher ripple current than the GYC series by using an optimized electrode foil and highly heat-resistant sealing rubber, while maintaining the guaranteed life of previously released series (guaranteed for 4,000 hours at 135°C or 125°C). This contributes to higher performance in circuits requiring higher ripple current and miniaturization in circuits requiring fewer capacitors.

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