Next-generation wireless standards are transforming global connectivity

Eaton's electronic components are at the heart of 5G connectivity

Wireless connectivity is an integral part of today's world. For many telecom companies, providing the fastest data speeds with higher bandwidths to support current and future technological innovations is critical to growth and expansion. At Eaton, we are committed to building the most reliable and advanced electronic components to support the present and future of wireless connectivity.

Wireless connectivity is essential in virtually every electronic device or system, whether in smartphones, industrial machines, or automobiles. Wireless standards have rapidly evolved to the 5th-generation (5G) standard. 5G's global rollout enables a new era of tech products and continues to transform the way humans live and work.

What makes 5G special?

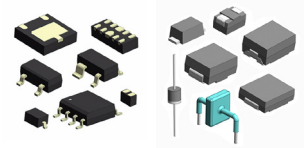
The latest 5G wireless standard drastically increases data speeds, boosts capacity, and lowers latency of communications. Whether in autonomous driving, virtual/augmented reality, 4K (ultra-high definition) video streaming, or Internet of Things (IoT) applications, 5G delivers incredible data transfer speeds in real-time. 5G is at least ten times faster than 4G LTE. Other advantages of leveraging 5G over older wireless standards include a massive increase in the number of devices connected wirelessly, faster cloud communications, and the creation of ultra-dense networks (UDNs).

Mobile operators in the U.S. have collectively achieved 75% coverage of the entire population with 5G service, while 8% of users have purchased 5G-compatible devices. Experts project that nationwide 5G adoption could occur over the next 2-3 years, as more people learn about the benefits and use cases that make the 5G standard compelling. As more companies race to provide the fastest and most comprehensive 5G networks across the globe, Eaton will remain a key provider of the electronic components that make it all possible.

Circuit protection

PolySurg ESD protection

- Low trigger voltage and clamping voltage delivers enhanced ESD protection of very sensitive ICs
- Bi-directional, single line and array, devices for placement flexibility
- Low leakage current (<0.1nA typ.) reduces power consumption
- Ultra low capacitance for very high speed data protocols



TVS diode ESD and lighting protection

- Uni-directional and bi-directional performance with very low clamping voltages
- Low-profile design allows for board savings
- Low leakage current reduces power consumption
- Provides critical protection against lightning for 5G stations

MLV overvoltage ESD protection

- Working voltages from 5.5 to 200 Vdc
- Most common industry standard footprints; from 0201 up to 4032 EIA
- Come in compact, low-capacitance, standard, and high-energy offerings
- Ideal for protection of I/O interfaces and components/circuits sensitive to ESD transients

SMCPxxxSC

- 6 Vdc to 400 Vdc, peak repetitive pulse current of 100 A
- Thyristor in SMB package that is coordinated with Bussmann TCP brick fuse
- Eliminates overvoltage caused by fast-rising transients
- Ideal for telecom base stations and other telecommunications applications

Magnetics

Chip inductors and ferrite beads (EMI filters)

- Wide Product Range: 0201 to 1206 (size: 1 nH to 22 uH)
- Low profile
- High current
- Low DCR

EXL pressed powder inductors

- 4 mm to 7 mm footprints (9 sizes)
- Inductance range from 0.15 µh to 10 µH
- Higher power density
- Up to 30% current rating and 50% lower DCR
- Superior EMI shielding

DR shielded drum inductors

- High power density
- High efficiency
- Peak current ratings up to 56 Amps
- Inductance ratings from 0.33 µH to 1000 uH

EPM DC-DC converters

- Non-isolated DC-DC converters
- High efficiency with a wide input voltage range
- Low power consumption
- Programmable features in a compact package

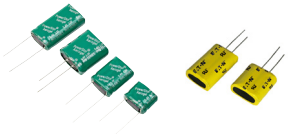
Supercapacitors

Coin cell supercapacitors

- 0.1 F - 1.5 F capacity per cell
- 5.5 V
- -40 °C to +85 °C operating temp.
- Very low self discharge
- RoHs, Reach, no heavy metals or un-safe chemicals used

HV/TV Cylindrical supercapacitors

- 1F - 100 F capacity per cell
- 2.7 or 3.0 V
- -40 °C to +85 °C operating temp.
- UL recognized
- Ultra low ESR for high power density



PHV/PTV Supercapacitor packs

- 0.5 F - 5.0 F capacity
- 5.4 or 6.0 V
- -40 °C to +65 °C
- Large capacitance for high energy density
- Ultra-low ESR for high power density

HS hybrid supercapacitors

- 30 F - 220 F capacity
- -25 °C to +85 °C
- Small-footprint, high-power energy storage
- 10x the energy densities of standard supercapacitors

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com/electronics

www.eaton.com/electronics

Printed in USA
Publication No. ELX1042 BU-ELX21042
April 2021

Follow us on social media to get the latest product and support information.

Powering Business Worldwide