## Optical Transport for 5G

The radio access network (RAN) is not the only part of the telecom network that will be affected by the rollout of 5G networks. The rest of the telecoms industry is gearing up for higher traffic volumes and data speeds. To cope with the demands of 5G wireless networks, the latest optical (WDM/OTN) transmission equipment requires increasingly powerful processors.

Most processors with this kind of power share two features: an increasingly low operating voltage with an increasingly high load current.

A telecom equipment manufacturer required a powerful processor for the processing unit in its latest optical transmission equipment. Artesyn’s LGA80D digital DC-DC power module, with its high output current at operating voltages as low as 1.05V and 0.95V, proved to be the ideal solution.

The LG80D module is a highly efficient power module with a high power density in a low profile, and the ability to be connected easily in parallel. The integrated PMBus interface gives the added benefit of easy performance monitoring of the LGA80D power module. With 20 optical switch ports, this customer’s new optical transmission equipment has enough capacity to support the high data flow of 5G networks.

### Optical Transport

Wavelength division multiplexing / optical transport network (WDM/OTN) equipment is used in the backbone core, metro core, metro aggregation layer, and metro edge telecom networks. A leading global provider of WDM/OTN solutions has selected Artesyn’s AVQ400 series quarter-brick isolated DC-DC converters for their large capacity multi-service OTN platform. This provides flexible transmission and fast service provisioning, allowing carriers to offer new services to their subscribers.

Chosen for its high quality and reliability, the AVQ400 series is designed to provide...
a regulated low noise 12 Vdc output for feeding downstream non-isolated point-of-load (POL) converters and is designed primarily for use with standard 48 V telecommunications equipment supplies. The converter has a typical efficiency of 95% and is based on an open-frame design that is optimized for forced air or conduction cooling – an aluminum baseplate option is available for enhanced thermal performance. The conversion technology employs 140 kHz fixed frequency switching to help minimize external EMI filtering requirements.