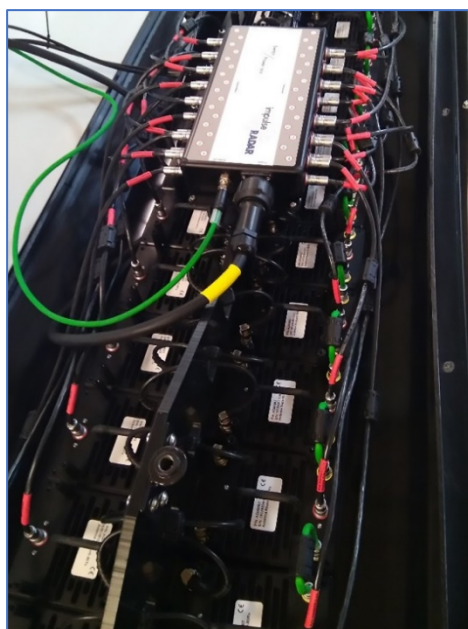
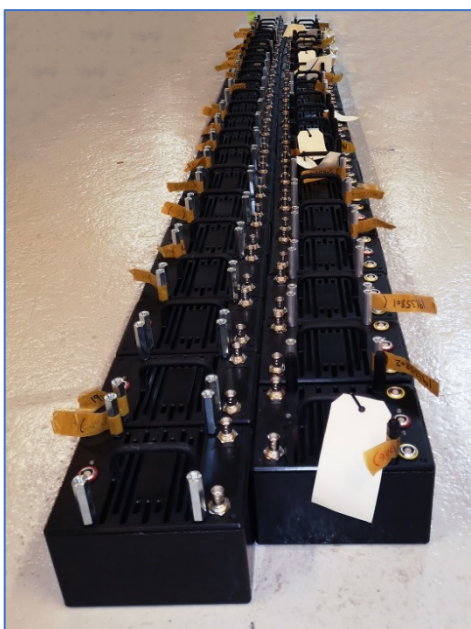


## Bespoke 44-Channel 3D GPR Array Solution with Raptor-80 Antennas

At ImpulseRadar, we build modern high-performance GPR antennas built on the latest Real-Time Sampling (RTS) technology. A good example is the ImpulseRadar Raptor antenna solution which is based on the concept of a separable transmitter and digital receiver that form an adaptable self-contained GPR system. When connected to a suitable ethernet switch, Raptor antennas can be configured in pairs to form multi-channel 3D GPR array systems with up to 30-channels as standard. The flexibility of these configurations allows Raptor to be used to create everything from small push-cart systems up to larger vehicle mount systems.

However, Raptor antennas can actually be configured to form much larger arrays. As word of this has spread, we have been approached by a client to make a bespoke 44-channel array solution utilizing Raptor-80 (800 MHz) antennas. This arrangement will result in an array covering a width of 2.4 m, which in Europe is about the maximum that can legally be mounted behind a vehicle, without special arrangements.

Today we initiated the pre-delivery tests with heat-chamber evaluation (50°C), as well as simulated indoor speed tests at up to 90 km/h, @ 2.5 cm point spacing, without any issues. The accompanying images show Raptor-80 antennas being arranged during production to form 44-channels for identification and labeling prior to individual and group testing, then formal connection in sequence for final outdoor performance tests.



**Note:** ImpulseRadar supply standard carrier solutions in the form of a push-cart and vehicle-mount, which depending on the Raptor antenna type (Raptor-45 [450 MHz] or Raptor-80 [800 MHz]), can accommodate either 8-12 channels or 18-30 channels respectively. Clients requiring bespoke channel arrangements beyond these are responsible for the design and build of their own carrier solutions, albeit with support from us in relation to antenna location, separation, cabling, and power arrangements.