

112 Gbps PAM4 NOVARAY® CABLE ASSEMBLIES

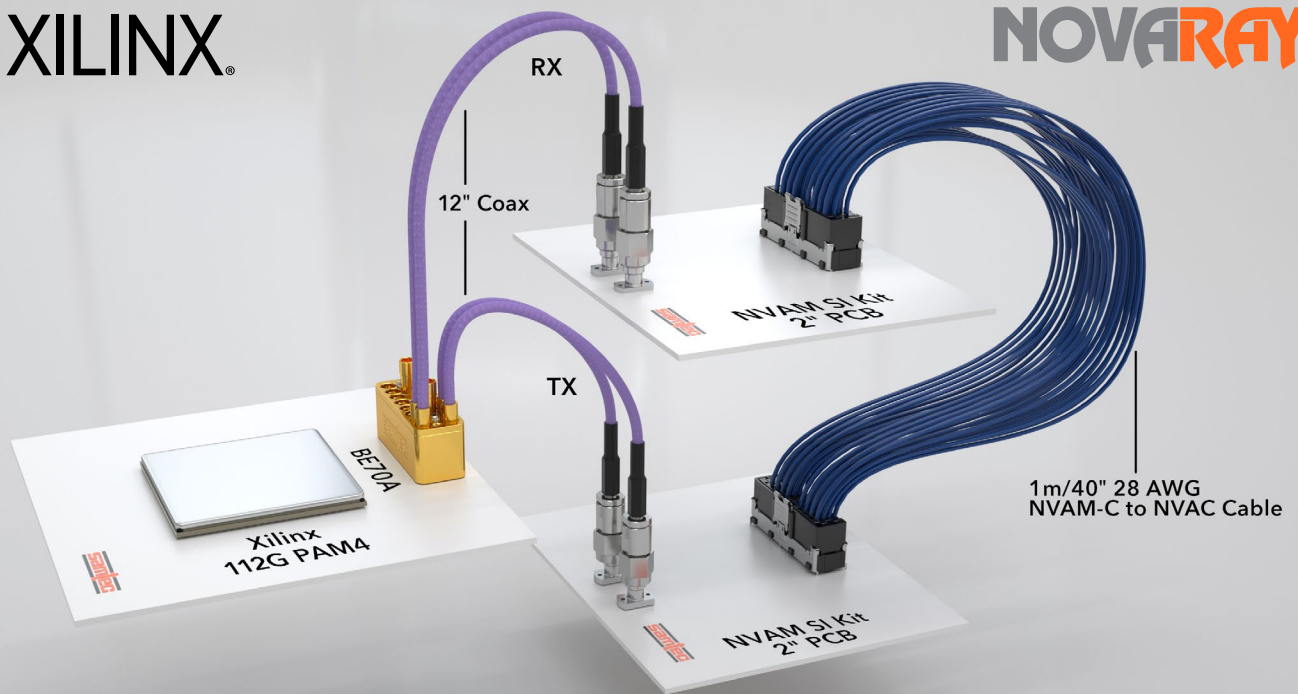
The innovative design of NovaRay® combines extreme density and extreme performance, which is critical as system sizes decrease and speeds increase. This inside-the-box, Flyover® Technology demonstration features both Precision RF 70 GHz Bulls Eye® and NovaRay® cable assembly.

The Xilinx Versal™ Premium Series silicon generates 112 Gbps PAM4 PRBS31 data launching through Isola I-Tera MT40 test boards via Samtec's 70 GHz Bulls Eye® High-Performance Test System cable assembly (BE70A Series) to a precision 1.85 mm Samtec compression mount jack.

The SI Evaluation board fans the signal out through a 2" [0.05 m] trace to the solder ball termination of the NVAM-C series connector. A 40" [1.0 m] NovaRay® cable assembly (NVAC Series) carries the signal through 34 AWG Eye Speed® ultra-low skew twinax cable to a second NVAM-C transition board.

The signal loops back via a second NovaRay® evaluation board to return to Xilinx Versal™ Premium Series silicon. The overall channel insertion loss is measured at -40 db @ 28 GHz. Signal eye heights, bit error and eye patterns are displayed in real time.

The total signal path length equals 68" [1.7 m] with 6 interconnect transitions.



Overall IL = -40 dB @ 28 GHz

Xilinx Versal™ Premium series' 112G PAM4 GTM transceivers are central to enabling power-optimized, 800G network systems. The Versal Premium ACAP features a broad selection of 32G, 58G, and 112G transceivers on the same device, allowing vendors to scale mainstream 100G systems, ramp 400G deployment, and position themselves for 800G and beyond.