

uLOG-Carrier eRTM Module

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The uLOG-Carrier board is a eRTM card that provides the primary function of fan-out and distribution of the LO, REF, CAL, and Clock signals from the uLOG-RF module. Furthermore, it will provide high quality (low noise) DC power, up to 3 thermo-electric (TEC) controllers, and the mechanical support, with RF shielding, for the uLOG-RF module. The Carrier will also incorporate a micro-controller with Ethernet and multiple diagnostic measurements. The uLOG-Carrier is mixed signal (analog/digital/RF) card that also houses switch-mode DC/DC convertors and must perform all functions with less than 5 fs [10 Hz - 1 MHz @ 1.3 GHz] added noise to the RF signals. For this reason great care must be taken in maintaining signal integrity and separation. Therefore even though the function of the uLOG-Carrier is straight forward, the implementation is quite challenging.

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