



FCC Product Information Document

E10G-7282-2506

Following are Block diagrams, internal and external pictures and comments on frequency stability of the above product.

Product Description

The E10G is a state of the art very high capacity low latency radio. It is the first freely available radio with a capacity of 5 GBps. Is also is capable of providing packet latency useful for low latency applications in the financial market.

The 600mm version includes a beacon for operation with the fully gimbaled (1200mm) antenna version. Due to the very small beamwidth of the 1200mm antenna version, active pointing is required in order to close communications. The beacon is used in this pointing process.

E10G 1200 version pointing uses state-of-the-art mono-pulse pointing. This technology uses a very low level beacon transmitted at a highly accurate frequency from the remote end (in the ISM 24Ghz band) to actively measure the angle of reception of the incoming signal from the remote end and track towards that signal. The result is the antenna can remain locked onto the remote transmission with accuracies measured in the 10's of millidegree even with violent motion of both end terminals.

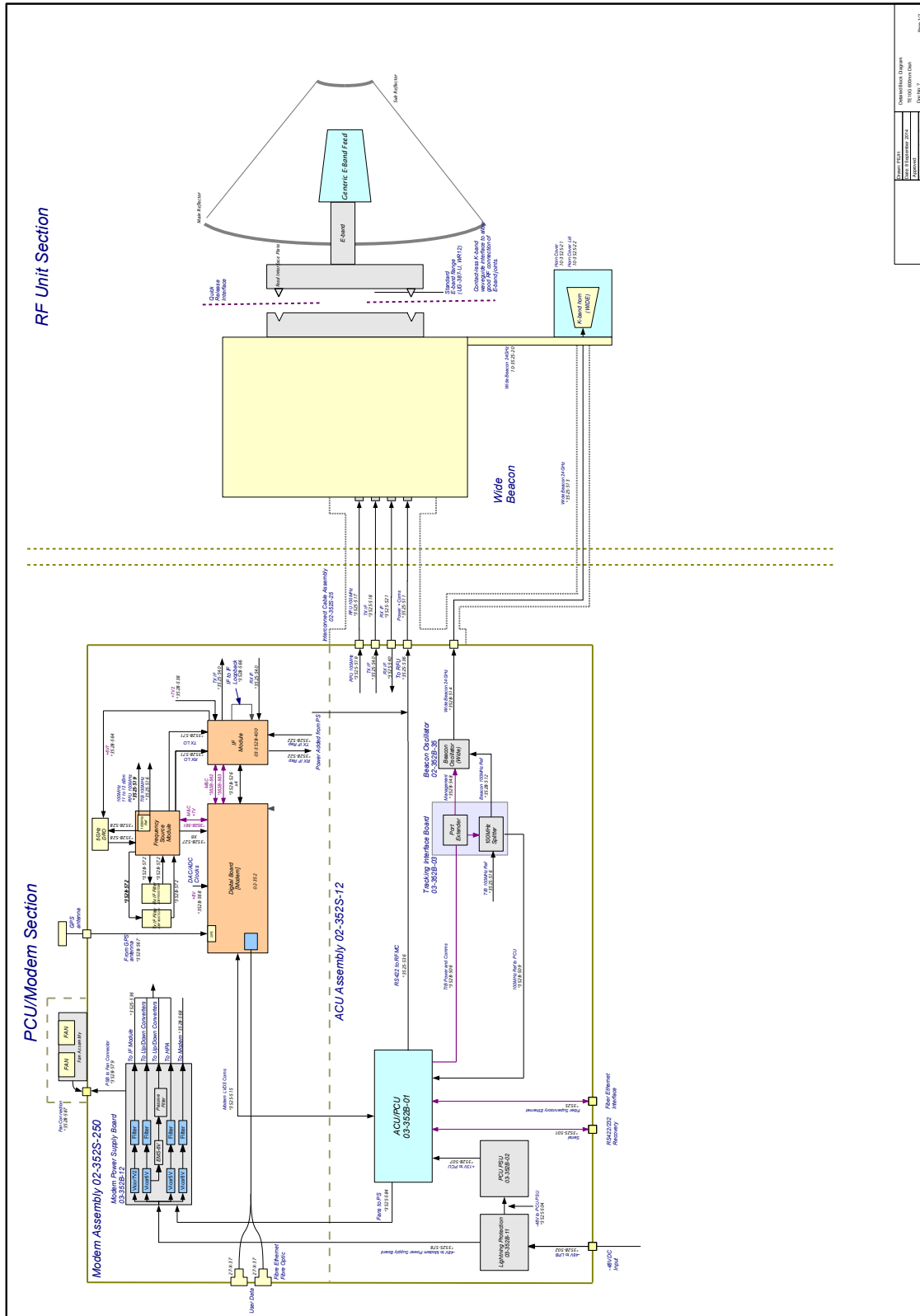
Comments of Frequency Stability

The entire systems frequency stability is locked to a 100MHz clock in the modem module. This clock is also GPS locked for extremely accurate frequency stability. The product transmit frequency is within 100Hz of target frequency at 80Ghz. This is needed for effective data transfer at the prescribed data rate.

The 100Mhz clock is based on the ABRICON AOCJY series smd oven controlled crystal oscillator with 5ppb (parts per billion) stability over 0 – 50 Degrees C and 10ppb stability over -20 to 70 degrees C.

GPS locking of the 100Mhz oscillator achieves the desired frequency stability and accuracy.

RF Unit Section





External Pictures

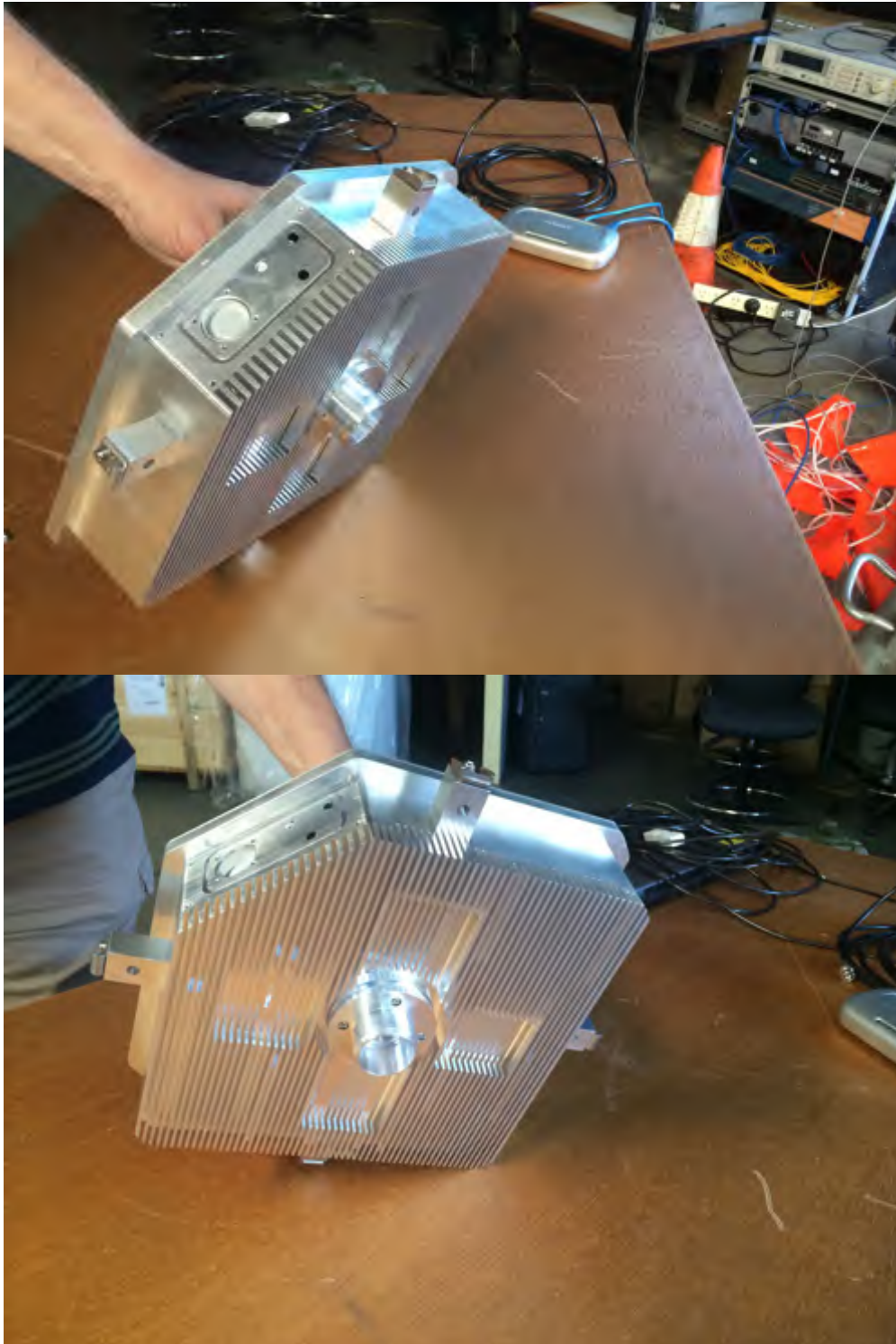


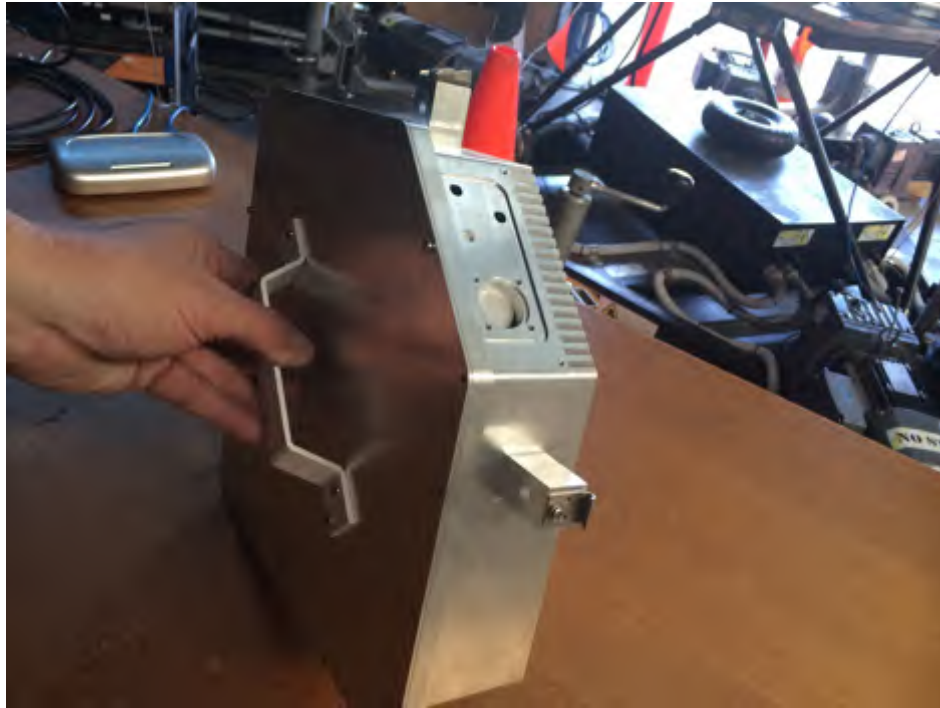
Pictures of Main Modules

Modem Module

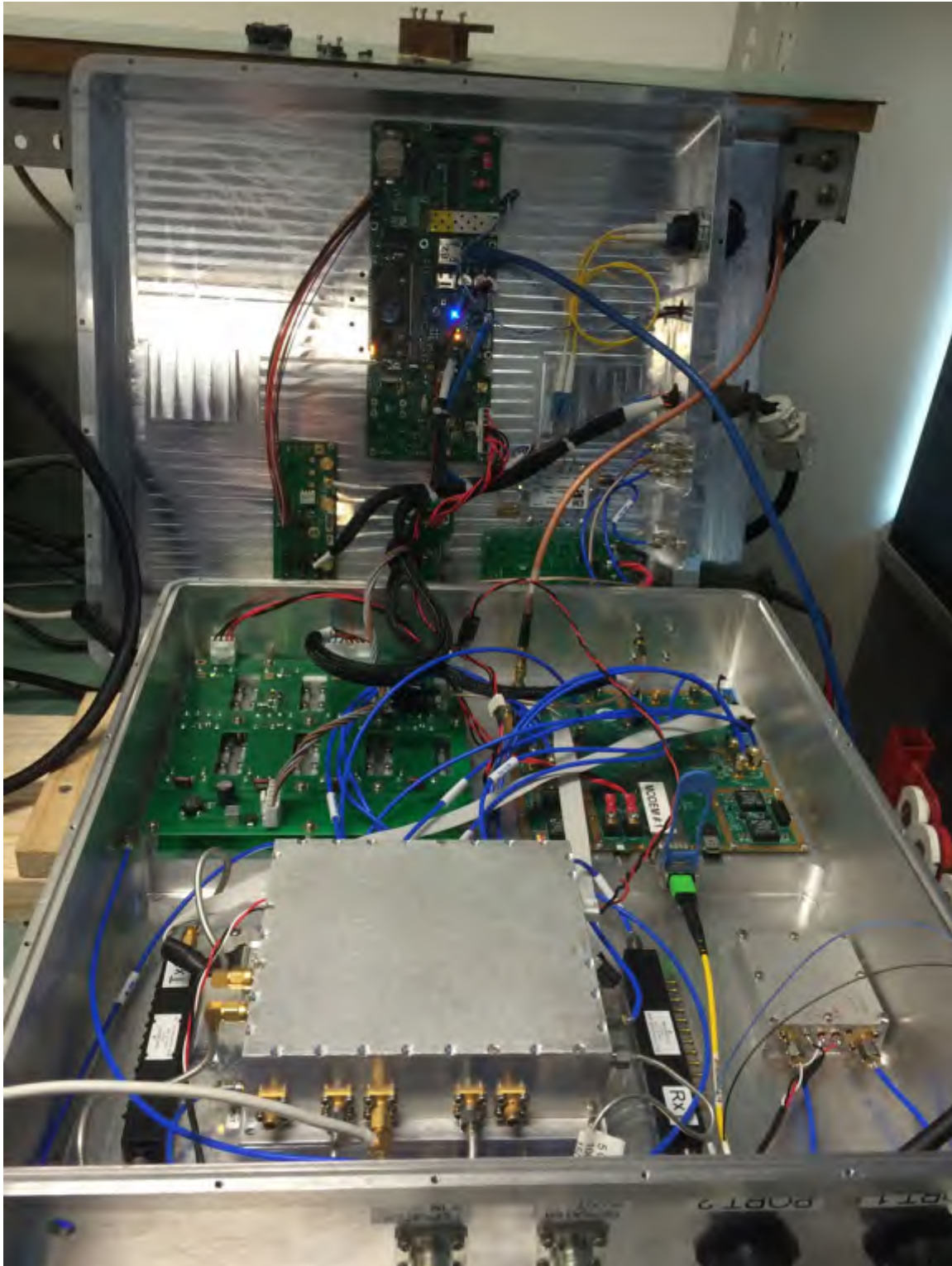


RF Module





Internal Pictures of Modem Box





Internal Pictures of CSIRO RF Unit

