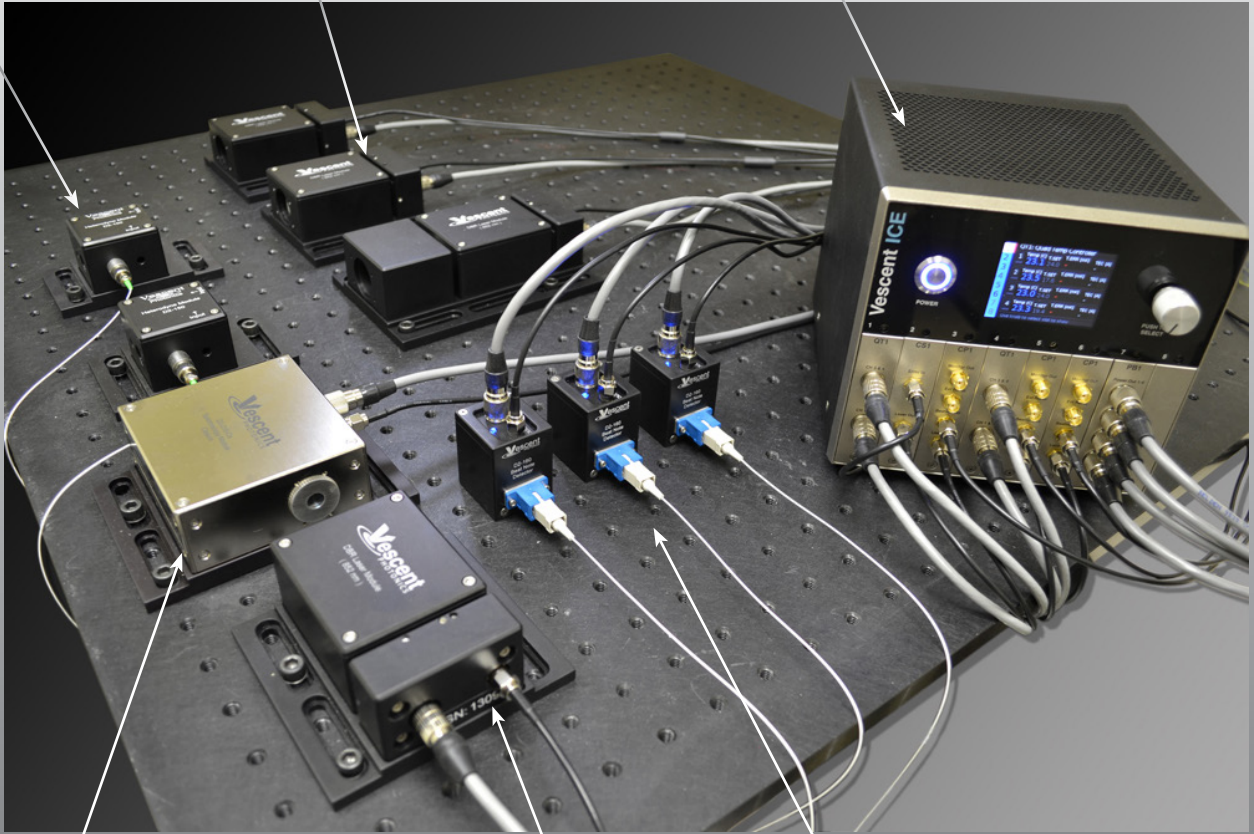


ICE System Example

D2-150 Heterodyne Modules

D2-100-DBR Slave Lasers

ICE-Box with all control electronics



D2-160 Beat Note Detectors

D2-210 Spectroscopy Module

D2-100-DBR Master Laser

Four-laser ICE system. The master D2-100-DBR laser is driven and locked by an ICE-CS1. The lock is to an error signal derived from a Doppler-free hyperfine transition of the D2 line of Cesium at 852 nm and is captured by the D2-210 Saturated Absorption Spectroscopy Module. Each of the three D2-100-DBR slave lasers (including a single high-power version) is driven and offset phase locked to the master with its own ICE-CP1. Each offset is independently adjustable from 250 MHz to >9.3 GHz. Optical beat notes are captured in the D2-150 Heterodyne Modules, launched into fiber and converted to an electrical beat note by the D2-160 Beat Note Detector. All signal processing and control signals are from within the single 6x6x7" ICE-Box.

Temperature control of the D2-100 DBR lasers is through two ICE-QT1 and power for the spectroscopy module and beat note detectors is bussed to the front panel using an ICE-PB1. And there is still a spare board slot available for the amplifier driver that is in development.