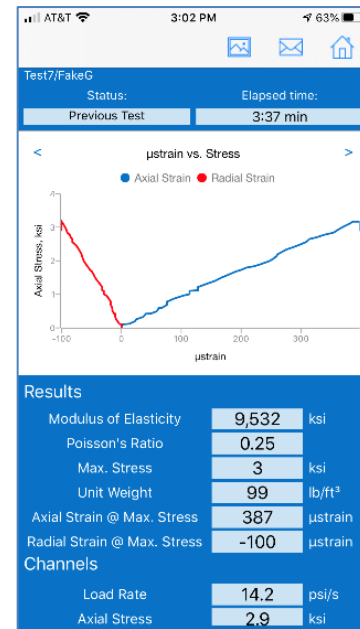


## Automatic Data Acquisition Unit (DataCube)



- 16-bit (+/-0.003%) resolution.
- Four (4) total sensor inputs for strain gages, load cells, pressure transducers, temperature sensors, etc.
- 0-5 VDC Input, 12 VDC and 5 VDC excitation (signal conditioning sold separately)
- Internal storage for up to 10,000 data points per input channel
- 100 samples per second maximum acquisition rate
- $\pm 0.0025\%$  F.S typical temperature stability
- 0°C to +50°C operation temperature range
- 5 VDC Power at 500 mA using Micro USB or four internal replaceable AA batteries. External LiPo batteries available for continuous field operation
- Universal Data Acquisition software compatible with iOS (8+), Android (4.4+), and Windows 10 (FCU Version 1709+) devices. Includes continuous or circular data buffers and time/level crossing data acquisition.
- Does not require continuous monitoring; mobile device can be disconnected and DataCube will continue to collect data until test parameters are satisfied

### DESCRIPTION

The GCTS DataCube is an economical, four-channel, wireless data acquisition unit. This system can accept load cells, pressure transducers, LVDTs, or other analog input signals (strain gages and AC sensors require signal conditioning, sold separately). Each channel features digital offset and gain, 16-bit resolution, and an anti-alias filter.

A mobile device (Android, Apple, or Windows) must be connected to the DataCube to begin recording data. Once the DataCube begins recording data, the user can disconnect their device. At any time, the user can reconnect their device to view current data or, when the test is over, collect all recorded data. This is ideal for long term tests as the user will not need to be at the system constantly taking readings. The data can then be easily sent to an email in a spreadsheet attachment.

Various mobile applications are available for specific tests, including: Consolidation, direct shear, indirect tension, direct tension, point load, unconfined compressive strength, CBR, and Marshall stability and flow. We are constantly developing new applications, so please contact us for any test specification that is not listed.

## Automatic Data Acquisition Unit (DataCube)



(Legacy load frame upgrade with the DataCube)

### List of Available Applications

Unconfined Compressive Strength of Cohesive Soil (ASTM D2166)  
Unconfined Compressive Strength of Compacted Soil-Lime Mixture (ASTM D5102)  
Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soil (ASTM D2850)  
Consolidated Drained Triaxial Compression Test for Soils (ASTM D7181)  
Consolidated Undrained Triaxial Compression Test for Cohesive Soils (ASTM D4767)  
Triaxial Compression Creep Strength of Chemically Grouted Soils (ASTM D5202)  
One-Dimensional Consolidation Properties of Soils Using Incremental Loading (ASTM D2435 and AASHTO T216)  
One-Dimensional Swell or Collapse of Soils (ASTM D4546)  
Flexural Strength of Soil-Cement Using Simple Beam with Third-Point Loading (ASTM D1635)  
Liquidity Limit, Plastic Limit, and Plasticity Index of Soils (ASTM D4318)  
Consolidated Undrained Direct Simple Shear Testing of Fine Grain Soils (ASTM D6528)  
Splitting Tensile Strength of Cylindrical Concrete Specimens (ASTM C496)  
Flexural Strength of Concrete Using Simple Beam with Third-Point Loading (ASTM C78)  
Flexural Strength of Concrete Using Simple Beam with Center-Point Loading (ASTM C293)  
Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete - Round Panel (ASTM C1550)  
Creep of Concrete in Compression (ASTM C512)  
Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression (ASTM C469)  
Determination of Energy Absorption Capacity of Fiber Reinforced Slab Specimen (EN 14488-5)  
Test Method for Metallic Fiber Concrete – Measuring the Flexural Tensile Strength (LOP) (EN 14651)  
Direct Shear Strength Tests of Rock Specimens Under Constant Normal Force (ASTM D5607)  
Splitting Tensile Strength of Intact Rock Core Specimens (ASTM D3967)  
Direct Tensile Strength of Intact Rock Core Specimens (ASTM D2936)  
Compressive Strength and Elastic Moduli of Intact Rock Core Specimens under Varying States of Stress (ASTM D7012)  
Point Load Strength Index of Rock and Application to Rock Strength Classifications (ASTM D5731)  
Creep of Rock Core Under Constant Stress and Temperature (ASTM D7070)  
Marshall Stability and Flow of Asphalt Mixtures (ASTM D6927, D5581 and AASHTO T245)  
California Bearing Ratio (CBR) of Laboratory-Compacted Soils (ASTM D1883 and AASHTO T193)  
Indirect Tensile Strength of Bituminous Mixtures (ASTM D6931 and AASHTO T322)

\* Custom applications can be designed upon request. Contact GCTS for more details.