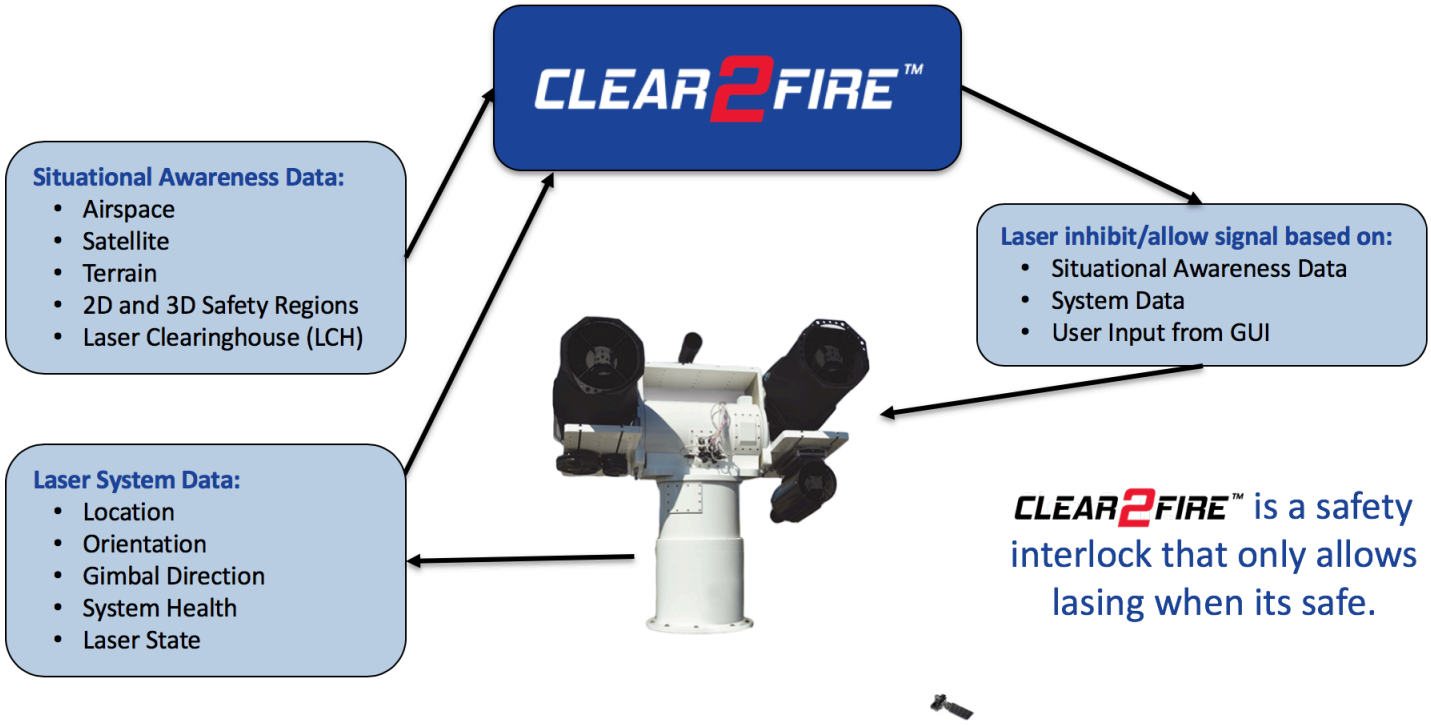
CLEAR2FIRE™

Clear2Fire (C2F) is a highly adaptable laser safety system for use with: LIDAR/LADAR systems, laser communication systems, laser imaging systems, or high energy laser systems. For these and other laser systems that have dynamic pointing, C2F provides a fail-safe way to protect people and assets from inadvertent illumination. C2F is a real-time system that constantly monitors the laser systems, gimbal and surrounding environment for safety conflicts, and if any are found, laser emission can be inhibited. The system can deconflict laser operations with static constraints such as 2D (azimuth and elevation) and 3D (latitude-longitude-altitude) keep-out areas, and dynamic keep areas from aircraft and satellites. C2F is also designed to meet the exacting requirements of the Air Force Laser Clearinghouse, should the need arise.

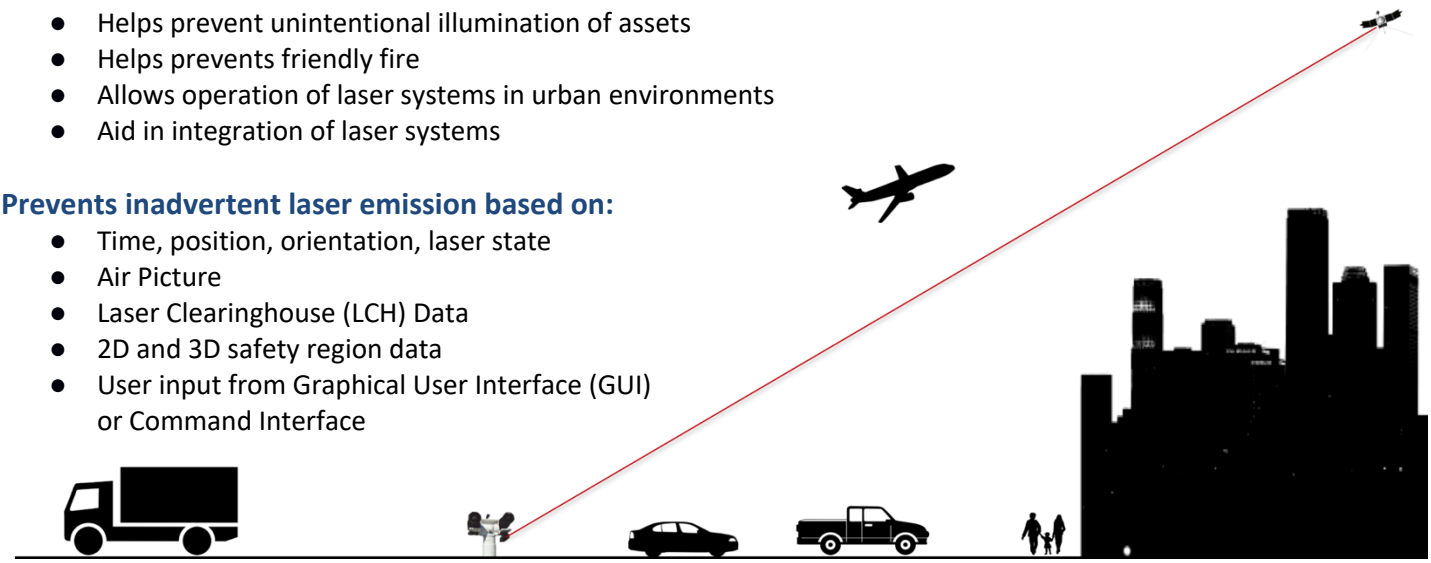


What are the benefits?

- Helps prevent unintentional illumination of assets
- Helps prevents friendly fire
- Allows operation of laser systems in urban environments
- Aid in integration of laser systems

Prevents inadvertent laser emission based on:

- Time, position, orientation, laser state
- Air Picture
- Laser Clearinghouse (LCH) Data
- 2D and 3D safety region data
- User input from Graphical User Interface (GUI) or Command Interface



Vision Engineering Solutions LLC

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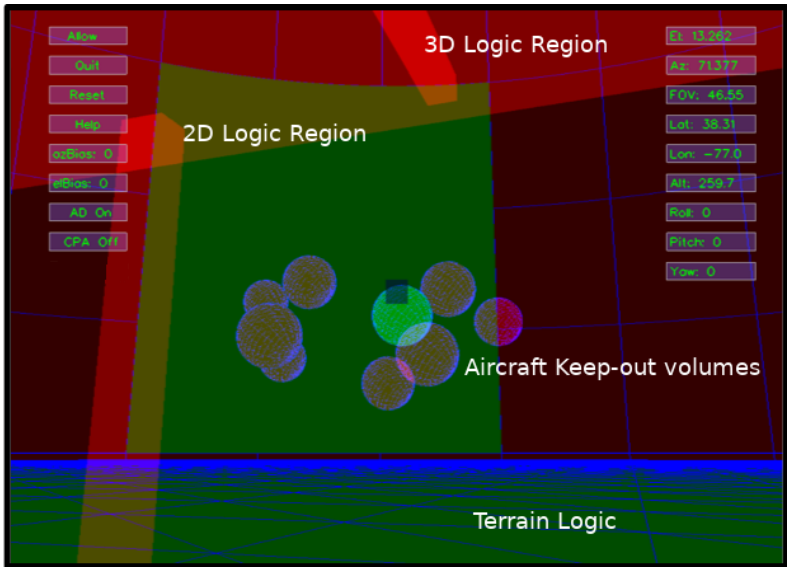
In addition to providing this failsafe laser safety function, C2F can also provide the user with a 3D graphical situational awareness display. It is based on open standards and can be deployed on dedicated hardware, embedded within a command and control system, or deployed as part of a Software as a Service (SaaS) architecture. C2F is the result of over 20 years of designing, building, and fielding real-time laser safety systems.

Situational Awareness data about: the airspace, satellites, local terrain, and predefined 2D and 3D safety zones is combined with local laser system data such as: location, orientation, pointing direction, laser system health and laser operational mode is combined using safety rules to determine if it is safe to illuminate. If it is safe to emit, then a clear to fire signal is sent to the laser via our patented laser interface module. However, because of our commitment to open interfaces, our failsafe hardware can be replaced with yours, if necessary. Finally, C2F is designed from the ground up to be used on moving platforms such boats, airplanes, or UAS and can process inertial guidance data in real time.



3D Situational Awareness display

Capabilities

Clear2Fire v1.1 (PN C2F-1.1)

Support for multiple real-time safety modes:

- 2D and 3D inhibit or allow zones
- Local obstacle avoidance
- Airspace deconfliction
- Satellite deconfliction

Situational awareness

- Real-time 3D situational awareness displays
- Real-time data logging of system status, with time tags

Computation

- Can deconflict for multiple lasers
- Full 3-dimensional computation
- Compensation for slow laser shutdown
- Platform motion correction

Clear2Fire v2.x (PN C2F-2.x)

Includes all features from Clear2Fire v1.1 with the additional enhancements:

- Virtualized software only solution
- Remote User Interface

Early adopters of Clear2Fire v1.1 will get a free upgrade to Clear2Fire v2.x

At Vision Engineering we are constantly working to improve C2F. Upcoming versions will have features such as real-time laser hazard analysis and real-time prediction of clear lasing times.

CLEAR2FIRE™

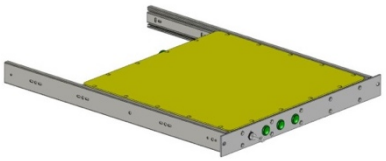
What is included within the Clear2Fire v1.1 Package:

- Clear2Fire v1.1 Software
- User's Manual v1.1
- Interface Control Document (ICD) v1.1
- Software Support Package (1st year included in price)
    - Remote support for initial configuration: to be completed within 60 days from the delivery date with up to 20 hours of support.
    - Software updates
    - Additional support can be purchased on a time and materials basis. Blocks of support hours can be purchased at a discounted rate. Unused hours from a block purchase will not be refunded.
- Rack mount PC (provided by Vision for an additional fee)
    - Standard Equipment Warranty

Clear2Fire v1.1 Options:

- Centralized or Decentralized satellite deconfliction (requires 3rd party data source)
    - Vision can work with 3rd parties to obtain required certifications

- *Laser Interface Module (LIM)* (PN C2F-LIM-1.1)
    - *Vision custom rack mount hardware*
    - *Provides failsafe interface to lasers*
    - *Can control up to 8 independent lasers*



- *Laser System Simulator (LSS)* (PN C2F-LSS-1.1) supporting planning mode
    - *Able to simulate all inputs to C2F*
    - *Able to simulate real-time scenarios via scripting interface*
    - *For interface debugging and testing*
    - *For user training*
    - *For mission planning*

- *Training Package*
    - *Training for 3 days and is limited to 4 people*
    - *Includes hands-on training and certification*

Custom Options:

- Low SWaP and embedded hardware configurations
- Metric calibration of gimbal and IMU
- Custom radar interfaces
- Custom telemetry interfaces

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