



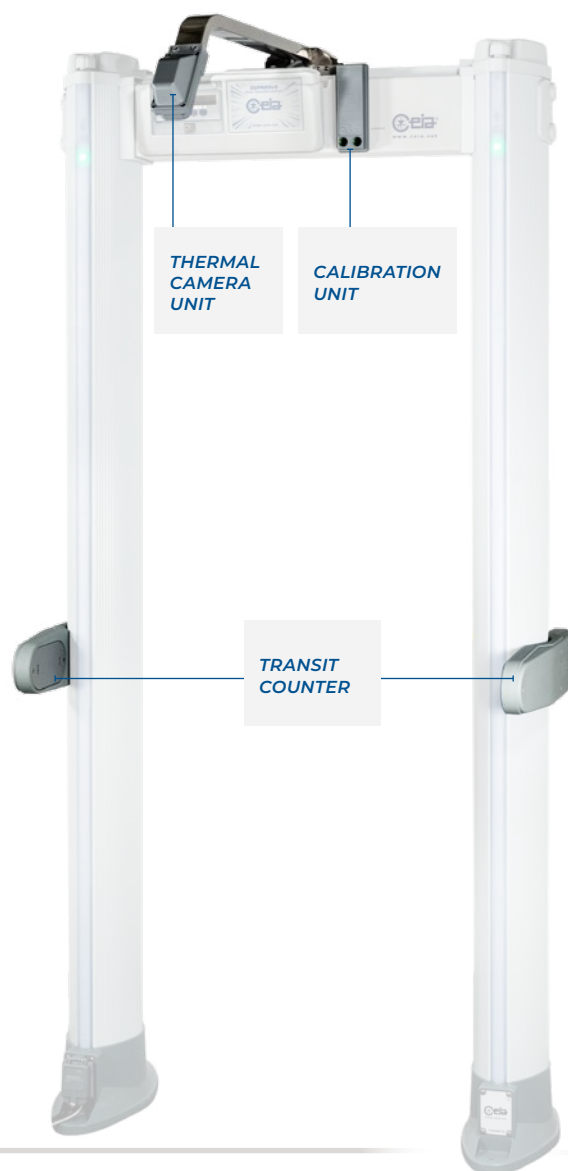
# TDU THERMAL DETECTION UNIT

**ANTI-COVID**  
SECURITY SOLUTION

## ANTI-COVID ADVANCED EMBEDDED SENSOR FOR CEIA SECURITY WALK-THROUGH DETECTOR GATES

- **DESIGNED FOR FAST AND COST EFFECTIVE SCREENING OPERATIONS**
  - Simultaneous threat and fever detection
  - No separate screeners for person temperature control needed
  - On-the-fly temperature measurement, no need to stop
- **EMBEDDED UPGRADE**
  - No additional installation checkpoint space required
- **AUTOMATIC DETECTION OF HIGH BODY SURFACE TEMPERATURE**  
through infrared thermal camera that maps the internal gate area
- **REAL-TIME, HIGHLY SELECTIVE, MAXIMUM FACIAL-TEMPERATURE MEASUREMENT FUNCTION**
- **TEMPERATURE COMPLIANCE OR ALARM SIGNALLING**  
provided by the gate control unit display
- **EXCLUSIVE INTEGRATED THERMAL CALIBRATION SYSTEM**  
with Dual Temperature-Stabilized Reference
- **SELECTIVE MEASUREMENT ON ONE PERSON ONLY IN TRANSIT**
- **EASY TO INSTALL AND TO OPERATE**
- **STAINLESS STEEL AND TECHNICAL POLYMERS CONSTRUCTION**
- **COLUMN AND PANEL TDU UPGRADE VERSIONS AVAILABLE**
- **PATENT PENDING**

CAN BE INSTALLED ON ALL CURRENT CEIA SECURITY GATES



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THREAT DETECTION THROUGH ELECTROMAGNETICS

**THE RAPID SPREAD OF COVID-19 INFECTIONS** has required the introduction of containment measures at all levels. Measures include the use of face masks, social distancing and also the measurement of body temperature as an indicator of possible virus infections.

**Security checkpoints at the entries to airports and other sensitive buildings should now be equipped with security systems compliant with the new measures.** This means detecting target threats with the minimum rate of nuisance alarms in order to limit the number of secondary checks necessary, reduce contacts between checkpoint operators and persons in transit and reduce waiting times upstream from the system. **All in all, this requires a metal detector with a very low nuisance alarm rate.**

**The TDU (Thermal Detection Unit) is an upgrade sensing kit for COVID screening compliance that can be installed on all current CEIA Security Gates, allowing the following functions:**

- Simultaneous threat and fever detection on all screened persons
- Accurate person measurement using an infrared camera with automatic determination of the highest temperature
- Zone of measurement can be selected on either the full IR camera frame or the face area only (high selectivity mode)
- Indication of the thermal alarm on the control unit display
- Continuous calibration of the thermal measuring system using two temperature-stabilized Reference Bodies.
- Transit direction and count verification with synchronization of the temperature measurement of the inspected person inside the gate. This ensures maximum accuracy and unique signaling

## TDU - ADVANCED IR PROCESSING

**TDU provides advanced automatic capabilities to ensure correct temperature measurements even in unfavorable installations and difficult environmental conditions.**

For this purpose, the temperature measurement is taken on the face of only the person walking through. This selective capability allows to prevent possible measurement errors due to the following scenarios:

- Queue of people seen in the IR camera frame with different facial temperature
- Fixed hot-spot in the IR frame (i.e. floor or structures exposed to sun light)
- Moving hot objects or areas, crossing the IR frame
- Hot clothing, accessories or hot drinks carried by the person walking through

All the above cases that could generate a false febrile alarm are automatically rejected as the measurement is restricted to the face area only.

## TDU - SPECIFICATIONS

<b>INFRARED TECHNOLOGY</b>	Bolometric / Measurement sensitive elements: 19.200
<b>MULTISPECTRAL INFRARED</b>	8 $\mu$ m - 14 $\mu$ m
<b>THERMAL ALARM THRESHOLD</b>	Programmable from 93°F to 108°F (34°C to 42°C)
<b>ACCURACY</b>	+/- 0.54°F (+/- 0.3°C)
<b>MEASUREMENT HEIGHT</b>	39.5" (minimum) / 81" (maximum)
<b>CALIBRATION</b>	Automatic, by exclusive integrated thermal calibration system with double reference (patented)  Each reference is constantly controlled by a sensor device that is 100% tested on a production setup that is NIST traceable and verified with equipment that is calibrated to ISO/IEC 17025 accredited standards
<b>WORKING ENVIRONMENT CONDITIONS</b>	IND00R, 50°F - 86°F (10°C - 30°C) / Relative humidity < 80%

## SIGNALING



**NO THERMAL ALARM**

**THERMAL ALARM**

## UPGRADE KIT

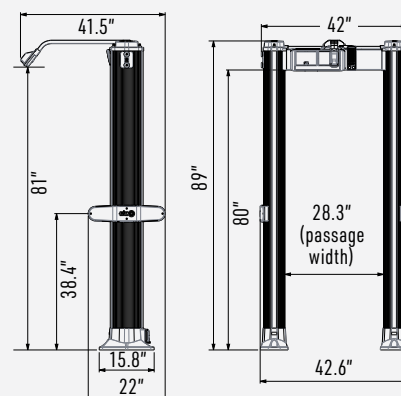
- 1 THERMAL CAMERA ARM
- 2 DUAL REFERENCE CALIBRATION UNIT
- 3 TRANSIT COUNTER (not needed if already installed on the gate)



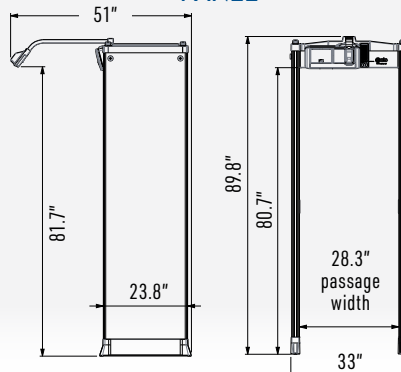
<b>ELLIPTIC COLUMN version</b>	part # TDU/E	1 + 2
	4-Beam Transit counter	3
part # 46983		
<b>PANEL version</b>	part # TDU/P	1 + 2

## DIMENSIONS

### ELLIPTIC COLUMN



### PANEL



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CEIA USA reserves the right to make changes, at any moment and without notice, to the models (including programming), their accessories and options, to the prices and conditions of sale - DP060K0091v5100uUS-2021