**⊕CUBIC**

# Validator 6100

## Validator at-a-glance:

- Operates in conjunction with single board computer for stationary fare collection across transit modes and multi-applications
  - Wide range of data upload/down load options
  - Flexibility of fare structures from simple to complex — time, zone, value and/or multi-trip
  - Validation at entry and/or exit
  - Flexibility of communications — wired, optional cellular modem (GPRS, CDPD, CDMA)

- Cubic's Tri-Reader® for secure processing of ISO 14443 Type A and Type B full featured and limited use contactless smart cards
  - Simple and-low cost upgrade of legacy systems through smart card overlay
  - Freedom of card choice
  - Ease of use, customer convenience
  - Faster boarding
  - Reduced fraud
  - Reduced maintenance

- Simple passenger interfaces
  - Easy to read transflective liquid crystal display
  - Optional buttons for passenger selection
  - Quick visual indication of status with Red/Yellow/Green light-emitting diodes
  - Distinct audible tones to alert passenger of status

## The Validator processes contactless smart cards for fare collection across transit modes including bus, bus rapid transit, tram, ferry, and train. Designed for stationary use, the validator interfaces with a single board computer for processing, memory, and communications. With the Validator, smart card capability can be added to any existing fare collection system as well as other non-transit applications such as parking, event ticketing, tourist attractions, and facility access.

## How it works

For smart card transactions, the Validator quickly reads the card, calculates the required fare, deducts the correct fare from the stored value or stored rides on the card and re-encodes the remaining value or number of rides to the card or validates a transit pass on the card. Transactions are forwarded to the single board computer for retention and subsequent transmission to the station computer and/or central computer system. The passenger is immediately notified of fare status via a liquid crystal display, color light emitting diodes and audible alerts.

The use of contactless smart cards results in greater customer convenience and a dramatic reduction in boarding times, fraud and maintenance costs.

# Validator 6100

## Specifications:

### Physical
Dimensions: Height 1090mm (42.9in), Width 353mm (13.9in), Depth 178mm (7in)
Weight: 30.4kg (67lbs)
Material: stainless steel with polished finish
Voltage: 90 to 264 VAC; 115 VAC or 230 VAC with heater option
Power Dissipation: 25W Max; 300W Max with heater option

### Capacity
Processor: ELANSC400-66A1 66 MHz 486 Class CPU
Operating System: Phar Lap or Windows XP or Cubic Intel-based single board computer (SBC)
Memory: 8 MB Flash, 16 MB RAM, EEPROM, 256K SRAM,
32 MB Disk-on-Chip

### External Interfaces
10 Base T Ethernet port

### Environmental
Storage Temperature: -30°C to +80°C (-22°F to +176°F)
Operating Temperature: -20°C to +55°C (-4°F to +131°F);
-30°C to +55°C (-22°F to +131°F)  with heater option
Relative Humidity: 15% to 95%
Vibration: Mil-Std-810D, Method 514.3, Category 8, 0.25g (RMS) all three axes, 5 to 200 Hz
Shock: Mil-Std-810D, Procedure I, half-sine pulse, 5g peak, 10msec
Ingress Protection: EN60529
Immunity: EN61000-6-2, EN50121-4
Emissions: FCC 15B, Class A
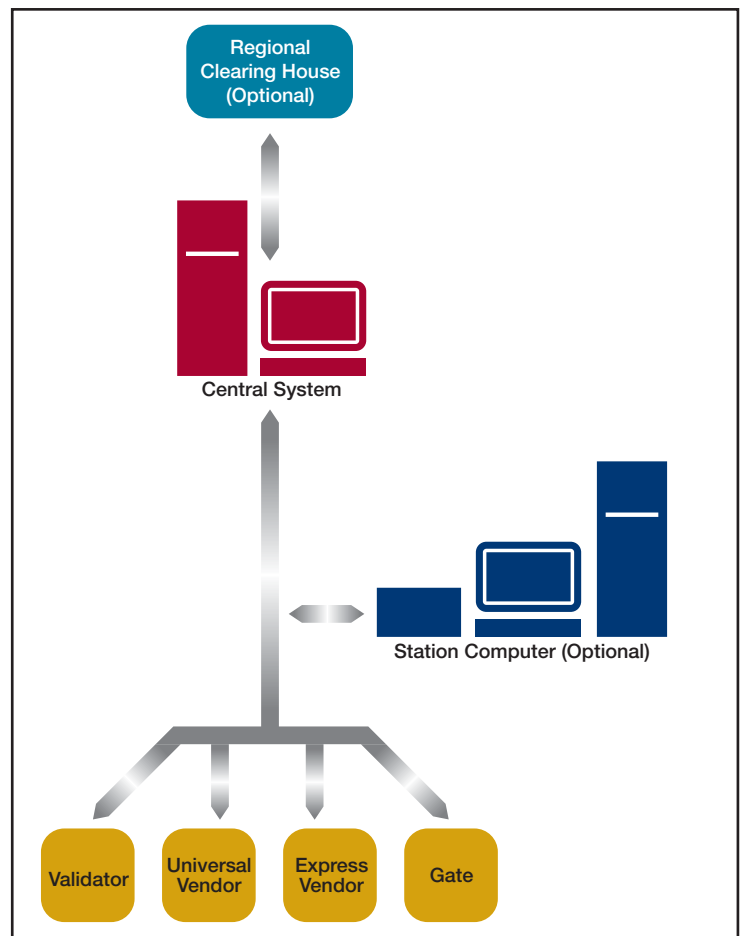Flammability: UL 94V-0

### User Interfaces
Operator Interface: N/A
Patron Interface: transflective monochromatic LCD, (optional color thin film transistor LCD with quarter video graphics array), 320 x 240 pixels, backlight, 1 set of red, yellow and green LEDs, speaker, 4 selection buttons with Braille option, option for Braille instruction panel
Media Issuance: N/A
Media Acceptance: ISO 14443 Type A and Type B full featured and limited use contactless smart cards



Tri-Reader® is a registered trademark of Cubic Transportation Systems, Inc.

*In the interests of product improvement Cubic reserves the right to change the above specification without notice.*

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