The COMMANDER™ ATC Traffic Signal Controller is designed to meet and exceed the latest NEMA TS1, TS2 and ATC standards. COMMANDER is the result of customer guidance, Cubic | Trafficware's extensive experience in electrical design and the latest innovations in industrial design & software engineering concepts. COMMANDER provides unparalleled performance in all signal control applications with advanced functionality for complex phasing, detector processing, coordination, preemption, communications, SynchroGreen Adaptive timing control, ATMS systems operation, Transit Signal Priority (TSP), Light Rail Transit (LRT) and Connected/Autonomous Vehicle applications.

COMMANDER’S ground-breaking industrial design is compact for those tight-fit cabinets and easily carried with dual handles, capturing the essence of COMMANDER’S functional design elements. Its enhanced usability includes a large, sloped and recessed front panel with bright color display for day and night time use, touch screen, large keypad, and graphical user interface (GUI) as well as a classic mode user interface. A web-based interface allows remote operation via a smart phone, tablet or laptop.

Performance features include full compliance with the Version 6 ATC standard and more... enhanced Version 6 engine board with an additional QUICC processor for communications co-processing, and a separate processor for graphics and other secondary control functions. COMMANDER is designed to operate with Cubic | Trafficware's SCOUT controller software.
**Product Features**

**Industrial Design**
- Strong, sturdy construction to withstand rough handling
- Compact - 8.2" x 15" x 6.5"
- Solid, flat top - resists drips & condensation and allows items to be placed on top
- Sloped front face for greatest viewing angle at a variety of heights
- Dual handles - designed and placed for comfort
- Recessed front panel provides additional protection
- Side-mounted ATC 2070-A2 Comm module slot
- Recessed module face reduces shelf width needed for cable connectors
- Non-skid, screw-mounted, wide-temperature feet

**Performance**
- Full compliance with Version 6 ATC...and more
- Enhanced Version 6 engine board
- 2nd powerful processor module for graphics and secondary functions

**Removable Storage**
- SD Card
  - Up to 8GB
- Datakey
  - 3.3V
  - Up to 32Mb
- Both devices
  - Receptacles installed, storage devices optional
  - Industrial temperature rated
  - Configuration and log data
  - Recessed to protect from damage

**Display**
- 7" color 800 x 480 TFT display
- High-brightness, sunlight-readable
- Resistive touch panel, unaffected by moisture
- Both graphical user interface and Classic Mode UI
- Display and touch screen sealed to front panel

**Graphics Processor**
- ARM Cortex-A9 processor @ 800MHz
- 1GB SDRAM memory
- 4GB Flash memory
- Linux ver. 4
- Ethernet link to engine board – allows loosely-coupled co-processing
- Web-based interface for smart phone or tablet operation

**Graphical User Interface**
- Allows user to switch between GUI and Classic Mode UI
- Day and night mode
- Table data entry with collapsed arrays and pop-ups
- Message Center and Alerts
- Graphic real-time status

**Engine Board - Ver. 6**
- Meets and exceeds ATC Standard ver. 6.25
- Meets Caltrans TEES 2009 & Errata 1 & 2
- Supports ATC API
- PowerQUICC 2 Pro @ 400MHz
- 2nd QUICC for port expansion
- 128MB DRAM - 512MB ready
- 256MB Flash - 1GB ready
- 2MB SRAM (SuperCap-backed) – 4MB ready
- Linux ver. 3.4.18
- SD Card – high-speed SDIO interface

**Keypad**
- Firm rubber keypad with large keys
- Metal dome tactile switches
- Generous 0.8” spacing
- Key assignments friendly to 2070 and 980 ATC users
  - Dual-labels provide 1-1 mapping to 2070
  - Retains ATC controller 980 alternate functions
  - Dedicated brightness function key

**5 Ethernet Ports**
- 2 - Ethernet switches, one per engine board ethernet
- 2 - 10/100 ethernet ports per switch
- 1 - 10/100 ethernet port to graphics processor

**“Active” Indicator**
- Bi-color LED - Red and Green

**3 USB 2.0 High Speed Ports**
- 2 - USB ports from engine board
- 1 - USB port to graphics processor

**ATC Console Port**
- ASYNC EIA-694 (RS232), also for devices (SP4)
- 115.2 Kbaud
- NEMA TS-2 Port 1
- NEMA TS-2 Port 2
  - ASYNC EIA-694 (RS232) for devices (SPII)
  - 115.2 Kbaud, with modem control

**Speaker**
- Loud, front-mounted speaker
- Supports tones and full audio

**Concur, Start, Inhibit, Misc**

**Ring Timing**

**Home**

**Controller**

**Monitor**

**System**

**Cabinet**

**Key:**
- firm rubber keypad with large keys
- metal dome tactile switches
- generous 0.8” spacing
- key assignments friendly to 2070 and 980 ATC users
  - dual-labels provide 1-1 mapping to 2070
  - retains ATC controller 980 alternate functions
  - dedicated brightness function key
## Features Comparison

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>COMMANDER™</th>
<th>Brand X*</th>
<th>Brand Y*</th>
<th>ATC v6.25 / (TEES)</th>
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<tbody>
<tr>
<td><strong>Enclosure</strong></td>
<td></td>
<td></td>
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<tr>
<td>Dimensions (H x W x D)</td>
<td>8.2” x 15” x 6.5”</td>
<td>8.5” x 14.8” x 6.4”</td>
<td>10.5” x 14.8” x 7.8”</td>
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<tr>
<td>Carrying Handle</td>
<td>2, integral, sides</td>
<td>integral, rear</td>
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<tr>
<td><strong>Engine Board</strong></td>
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<tr>
<td>ATC Standard Compliance</td>
<td>ver 6.25</td>
<td>ver 5.2b/6.10</td>
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<td>Processor</td>
<td>PowerQUICC 2 Pro</td>
<td>PowerQUICC 2 Pro</td>
<td>PowerQUICC 2 (TEES)</td>
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<td>Additional Comm Processor</td>
<td>QUICC</td>
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<tr>
<td>Speed (MHz)</td>
<td>400</td>
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<tr>
<td>DRAM (MB)</td>
<td>128</td>
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<td>64</td>
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<td>FLASH Memory (MB)</td>
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<td><strong>User Interface</strong></td>
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<tr>
<td>Display - Color Graphic</td>
<td>800 x 480</td>
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<td>240 x 120</td>
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<td>Sunlight Readable</td>
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<td>Display Heater Option</td>
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<tr>
<td>Graphics Support</td>
<td>HTML5</td>
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<td>Android™</td>
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<tr>
<td>Keypad (# of keys)</td>
<td>29</td>
<td>28</td>
<td>28 (2070)</td>
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<td>Key Spacing</td>
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<tr>
<td>Tactile Keys</td>
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<td>Touch Panel</td>
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<td>Speaker</td>
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<td>Beeper</td>
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<td>Serial Port (NEMA Ports 1 &amp; 2, C50S)</td>
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<td>USB Ports</td>
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<td>Datakey Socket (side)</td>
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<td>SD Card Socket, Internal (Speed)</td>
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<td>Comm Status Indicators</td>
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<td>Comm Slot (side)</td>
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<td>Y</td>
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*Other controller specifications based upon published data as of 07/01/2019*