The new COMMANDER™ ATC Traffic Signal Controller is designed to meet and exceed the latest NEMA TS1, TS2-1, TS2-2 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, adaptive timing, systems operation 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.

Performance includes 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 firmware.
**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 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-A7 processor @ 800MHz
- 256MB SDRAM memory
- 256MB Flash memory
- Two 10/100MB ethernet ports
- USB 2.0 high-speed
- TFT LCD interface
- Linux ver. 4
- Ethernet link to engine board – allows loosely-coupled co-processing

**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 940 ATC users
  - Dual-labels provide 1-1 mapping to 2070
  - Retains ATC controller 940 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)
- 115.2Kb/s, Tx/Rx
- NEMA T5-2 Port 1
- SDLC port for cabinet communications
- 153.6Kbps
- NEMA T5-2 Port 2
- ASYNC EIA-694 (RS232) for devices (SPII)
- 115.2Kb/s, with modem control

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

**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

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# 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>
<td></td>
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<tr>
<td>ATC Standard Compliance</td>
<td>ver 6.25</td>
<td>ver 5.2b</td>
<td>ver 5.2b</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>
<td>128</td>
<td>64</td>
<td>64</td>
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<td>FLASH Memory (MB)</td>
<td>256</td>
<td>64</td>
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<td>32</td>
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<td>SRAM (backed up) (MB)</td>
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<tr>
<td>Linux Version</td>
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<td>2.6.3x</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>
<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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<td>Graphics Support</td>
<td>HTML5</td>
<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>Tactile Keys</td>
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<td>Speaker</td>
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<td>Y</td>
<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>USB (Graphics Processor)</td>
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<td>24V DC Over-Current</td>
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<td>Comm Status Indicators</td>
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<td>Yes</td>
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<td>Comm Slot (side)</td>
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<td></td>
<td>Y</td>
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*Other controller specifications based upon published data as of 04/01/2018