

NEMA TS1, TS2-1 and TS2-2 ATC Controller



Advanced Traffic Controller

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 10/100MBit ethernet ports
- USB 2.0 high-speed
- TFT LCD interface
- Linux ver. 4
- Ethernet link to engine board allows loosely-coupled co-processing



Graphical User Interface -

- Table data entry with collapsed arrays and pop-ups
- Message Center and Alerts

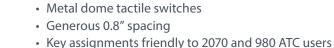
- Meets and exceeds ATC Standard ver. 6.25
- Meets Caltrans TEES 2009 + Errata 1 & 2
- PowerQUICC 2 Pro @ 400MHz
- 128MB DRAM 512MB ready
- 256MB Flash 1GB ready
- Linux ver. 3.4.118

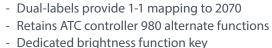


- Day and night mode
- Graphic real-time status

Engine Board - Ver. 6

- Supports ATC API
- 2nd QUICC for port expansion
- 2MB SRAM (SuperCap-backed) 4MB ready
- SD Card high-speed SDIO interface





• Firm rubber keypad with large keys

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)
- 115.2Kbaud, Tx/Rx

NEMA TS-2 Port 1

- SDLC port for cabinet communications
- 153.6Kbps

NEMA TS-2 Port 2

- ASYNC EIA-694 (RS232) for devices (SP8)
- 115.2Kbaud, with modem control

Speaker

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







5. Detectors

P2

6. Comm

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2. Coordinate

7. Status

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8. Login, Utils



Features Comparison

FEATURE	COMMANDER™	Brand X*	Brand Y*	ATC v6.25 / (TEES)
Enclosure				
Dimensions (H x W x D)	8.2" x 15" x 6.5"	8.5" x 14.8" x 6.4"	10.5" x 14.8" x 7.8"	
Carrying Handle	2, integral, sides	integral, rear		
Engine Board				
ATC Standard Compliance	ver 6.25	ver 5.2b	ver 5.2b	
Processor	PowerQUICC 2 Pro	PowerQUICC 2 Pro		PowerQUICC 2 (TEES)
Additional Comm Processor	QUICC			
Speed (MHz)	400	233		
DRAM (MB)	128	128	64	64
FLASH Memory (MB)	256	64	64	32
SRAM (backed up) (MB)	2	2	1	1
Linux Version	3.4.118	2.6.3x	3.4	2.6.18
User Interface				
Display - Color Graphic	800 x 480		240 x 120	
Sunlight Readable	Υ	Υ		
Display Heater Option	Υ			Optional
Graphics Support	HTML5		Android™	
Keypad (# of keys)	29	28	28 (2070)	28
Key Spacing	0.8"	~0.8"	0.5"	
Tactile Keys	Υ	N	Υ	
Touch Panel	Υ	Υ	Υ	
Speaker	Υ	Υ		Beeper
Communication Ports				
Ethernet	5	4	4	4
Ethernet (Graphics Processor)	1			
Serial Port (NEMA Ports 1 & 2, C50S)	Υ	Υ	Υ	
USB Ports	3	2	4	1
USB (Graphics Processor)	1			
Datakey Socket (side)	Υ	Υ	Υ	Optional
SD Card Socket, Internal (Speed)	Fast			Optional
SD Card Socket, External (Speed)	Serial			
24V DC Over-Current	Electronic	Electronic		Yes
Comm Status Indicators	Υ		Υ	Yes
Comm Slot (side)	Υ	Y	Υ	Optional
		*Other controller spe	ecifications based upon pub	lished data as of 04/01/2018