



# TRAFFICWARE CONTROLLERS

A testament to unwavering precision engineering and innovation, these controllers boast an innate ability to decipher intricate traffic patterns, making real-time adjustments a seamless reality.

Harness data intelligence and responsive control like never before, empowering you to transform the streets into fluid motion.



# CONNECT. CONTROL. TRANSFORM.

Our controllers are more than products. They're the hallmark of reliability and performance. Built on excellence, our controllers provide optimized traffic flow, reduced congestion, improved safety, leading to increased quality of life and a more connected urban landscape.



## COMMANDER

A compact controller design based on the latest ATC standards, the Commander is provided in a shelf or rack mount configuration, and supports all modern cabinets, including NEMA TS1, TS2, ITS and ATC. The Commander is loaded with our latest Scout controller software and allows engineers to operate even the most complex, multimodal signalized intersections. The Commander controller was designed in collaboration with our customers and represents our most advanced traffic controller offering.

## SHELF MOUNT FEATURES



### GRAPHICS PROCESSOR

- ARM Cortex-A7 processor @ 800MHz
- 256MB SDRAM memory, 256MB Flash memory
- 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. 3.4.118 - SD Card - high-speed SDIO interface

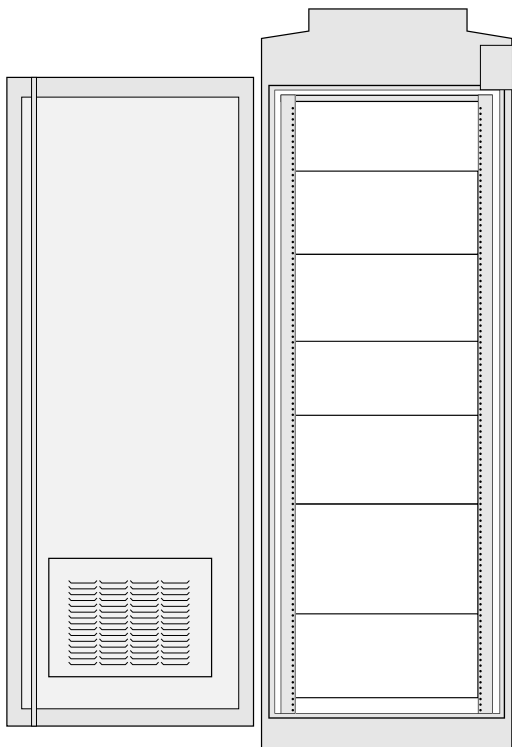
# COMMANDER SHELF MOUNT FEATURES COMPARISON

FEATURE	COMMANDER	BRAND X	BRAND Y	ATC v6.25/(TEES)
<b>Enclosure</b>				
Dimensions (HxWxD)	6.75"x19"x10.2"	8.5"x14.8"x6.4"	10.5"x14.8"x7.8"	
Carrying Handle	2, integral, sides	integral, rear		
<b>Engine Board</b>				
ATC Standard Compliance	v 6.25	v 5.2b/6.10		
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
<b>User Interface</b>				
Display	800 x 480	Y	240 x 120	
Sunlight Readable	Y	Y		
Display Heater Option	Y			Optional
Graphics Support	HTML5		Android™	
Keypad (# of keys)	29	28	28 (2070)	28
Key Spacing	0.8"	~0.8"	0.5"	
Tactile Keys	Y	N	Y	
Touch Panel	Y	Y	Y	
Speaker	Y	Y		Beeper
<b>Communication Ports</b>				
Ethernet	4	4	4	4
Ethernet (Graphics Processor)	1			
Ethernet (NEMA Ports 1&2, C50S)	Y	Y	Y	
USB Ports	3	2	4	1
USB (Graphics Processor)	1			
Datakey Socket (side)	Y	Y	Y	Optional
SD Card Socket, Internal (Speed)	Fast			Optional
SD Card Socket, External (Speed)	Serial			
24V DC Over-Current	Electronic	Electronic		Y
Comm Status Indicators	Y		Y	Y
Comm Slot (side)	Y	Y	Y	Optional

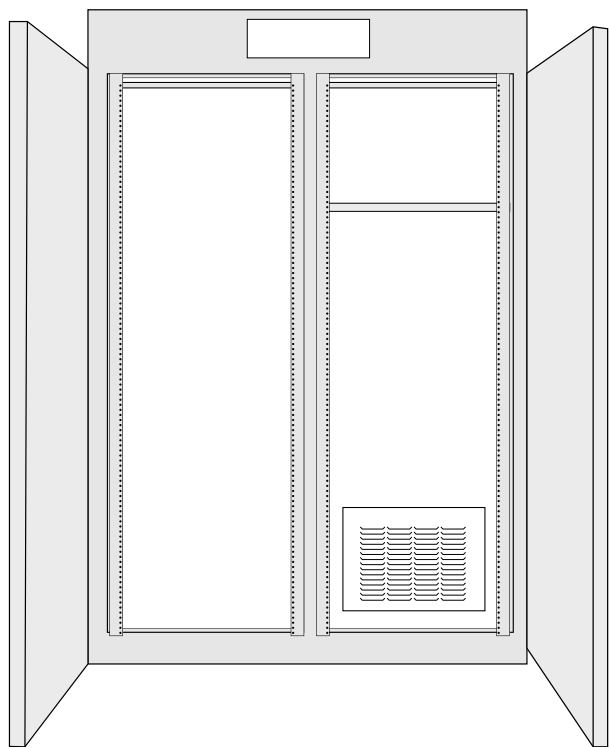
\*Other controller specifications based upon published data as of 04/01/2018

# COMMANDER CONFIGURATION GUIDE

MODEL NAME	NT1	NT1	NT1	RC1	ATX	HTS
CPU Model						
Operating System						
Cabinet Compatibility				Model 33x ITS/AC	ITS/AC	ITS/AC NEMA TS 2 Type 1
Connectors	NEMA TS 2 Type 1 A	NEMA TS 2 Type 2 A/B/C/D		C1S & C1 1s		
Field I/O Model						
Power Supply						
Front Panel						
Communications Modules (optional, 2x max.)						



**ATX32 Cabinet**



**ATX40 Cabinet**



# CONNECT. CONTROL. TRANSFORM.



## 980 ATC CONTROLLER

The 980 ATC controller is based on NEMA TS2 standards and has a TS2 Type 1 and Type 2 form factor that was designed in consideration of ATC 5.2b standards. The 980 ATC controller may be used in areas that require complex phasing, coordination and preemption, and is compatible with our latest controller software, Scout, as well as advanced technologies, such as SynchroGreen..

## 980 ATC FEATURES

### FLASH FILE SYSTEM

Easily configure the 980 Controller to various firmware versions using a Flash File System, eliminating the need for obsolete EPROM technology. Perform a complete traffic controller firmware update in only seconds instead of minutes, saving valuable time in the field. No hardware changes or EPROM replacements are required.



8-line by 40-character LCD screen

Keyboard programmable ports:  
• Four (4) EIA-232 ports  
• optional FSK modem

Firm large dedicated keys:  
• 4 red function keys, 10 numeric keys  
• 17 cursor and menu navigation keys  
• 2 LCD contrast adjustment keys

### NTCIP OBJECTS

NTCIP Standard objects and additional objects enhance the 980 Controller with new and standard ATC operating features. Experience the ultimate flexibility in traffic control with sixteen phases, sixteen overlaps, ten compatible phases per phase, alternative programming by time-of-day.

### DIAGNOSTICS

Built-in diagnostics provide improved maintenance and simplified repairs, allowing operators to test all input and output signals, RAM devices, memory, LCD, keypads, etc.

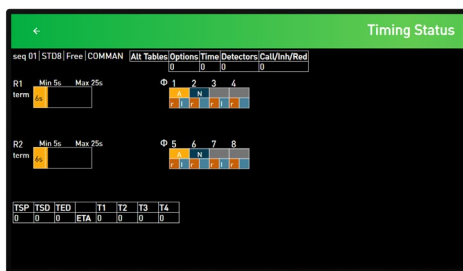
### SPECIFICATIONS

<b>Voltage:</b>	89 to 135 VAC
<b>Frequency:</b>	60 +/- 3 Hz
<b>Temperature:</b>	60 +/- 3 Hz
<b>Humidity:</b>	95% max, non-condensing
<b>Dimensions:</b>	10.50"H x 14.75"W x 8.38"D

# SCOUT CONTROLLER SOFTWARE

**Scout controller software is the industry's premier traffic signal software.** With over 40 Years of traffic industry experience, Scout has the functionality to address the most complex intersections needs and supports NTCIP, CV2X, TSP. Scout supports ATC cabinets and has expanded phases, overlaps, coordination parameters, and preemption enabling easy customization to support your traffic demands.

Scout pairs perfectly with our Trafficware® ATC controllers, including Commander, 2070-1C and 980 ATC. Interoperability is not an issue as Scout software works on most Linux platforms.



Phases	1	2	3	4	5	6	7	8
Min Grn	5	5	5	5	5	5	5	5
Exp. Sec	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Max 1	25	25	25	25	25	25	25	25
Max 2	10	10	10	10	10	10	10	10
Red Ctr	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Ctr	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Walk	0	5	0	5	0	5	0	5
Ped Ctr	0	10	0	10	0	10	0	10
Red Flou	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Density Times								
Add Inh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Inh	0	0	0	0	0	0	0	0



## FEATURES

### COORDINATION

253 Patterns, actions and splits with cycle lengths up to 999 seconds within 64 day plans with 48 events

### PEER-TO-PEER COMMUNICATIONS

Communicate with up to 15 other controller over IP to remotely exchange inputs and outputs

### OPTIONAL MODULES

Connected Vehicle (CV2X) SynchroGreen Adaptive, Signal Performance Measures (SPMs), Transit Signal Priority (TSP), Detector Control System (DCS), and Traffic Responsive (TR)

### CABINET COMPATIBILITY

NEMA TS 1, NEMA TS 2, Model 33x, ITS, ATC

### SIGNALS

Vehicle Phases: 32  
Pedestrian Phases: 32  
Rings: 8  
Phases Per Ring: 32  
Overlaps: 32  
Output Channels: 32

### DETECTION

Vehicle Detector Inputs: 128  
Pedestrian Detector Inputs: 32  
Alternate Tables : 8

### MISCELLANEOUS

Logic Statements: 100  
Preempt Sequences: 12  
Transit Priority Sequences: 4  
Special Event Sequences: 4





## WHO WE ARE

For us, transportation is personal. We know that every journey matters, no matter how long or short. That's why the team at Cubic Transportation Systems helps transportation authorities and transit agencies design, integrate, deploy and manage mobility systems fit for the challenges of tomorrow.

We work alongside our transportation partners to understand their needs, objectives, and budgets while helping them build modern mobility systems to manage demand and congestion, make journeys safer, and empower travelers to make informed and preferred travel choices.

Whether you're after a small-scale cloud-based, real-time passenger information system, a regional congestion management platform, or a complex traffic management system for urban networks delivered in an as-a-Service model, we're here to support you and your customers.

Our solutions are scalable to ensure we're the right-sized partner for any job, from rural communities like Eugene, Oregon, and Merida, Mexico, to urban metropolises like London, New York City, Sydney, and Singapore. With over 1,500 transportation projects across every continent under our belt and a network of convenient, locally-based offices with dedicated support teams, we have the technology and the know-how to solve your mobility challenges.

But don't just take it from us. Hear from our local partners who entrusted us with their mobility needs. We've worked with partners from all transportation modes, including transit agencies, airports, highways, intersections, and corridors across small communities, metropolitan cities, and regional authorities.

**Get in touch to see how we can work together to help your transportation network.**

### **Cubic Transportation Systems, Inc.**

9233 Balboa Avenue  
San Diego, CA 92123  
TEL: +1 281-240-7233  
trafficwaresales@cubic.com  
transportation.cubic.com