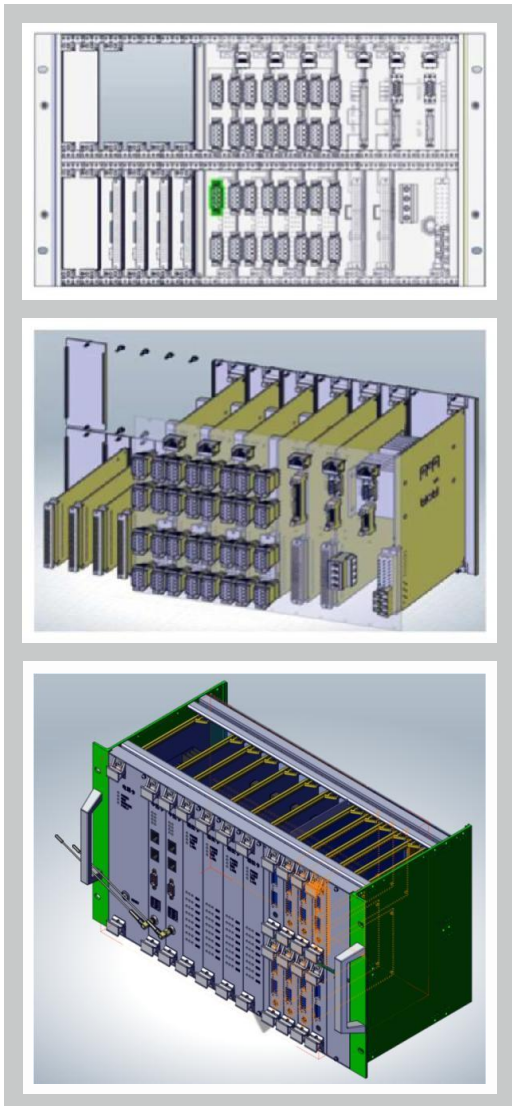


M T C - I Traffic Signal Controller

New Generation AI-Enabled Intelligent Traffic Signal Controller





Overview of MTC-I Traffic Signal Controller

As a next-generation traffic signal controller, the MTC-I integrates the most advanced concepts and technologies in intelligent traffic control. Designed to align with future trends in autonomous driving, it significantly outperforms comparable products in processing capabilities, communication security, and overall performance, delivering powerful functionality and technological leadership.

The MTC-I adopts a modular design to flexibly meet the control requirements of diverse intersection types. It offers customized adaptation to intersection traffic characteristics while ensuring maximum reliability and stability for traffic light operations. With CAN bus connectivity for enhanced expandability and communication efficiency, and open-protocol interfaces for seamless integration with other traffic control systems, it also supports handheld remote control functionality.

Core Capabilities of MTC-I Traffic Signal controller

- UTC Central Control
- Adaptive (Inductive) Control
- Emergency Priority Control
- Bus Priority Control
- Cable-Free Coordinated Control
- Variable Signage Control

The main functional features of the MTC - I include:

- Can control 8 to 32 phases
- Can be configured with 2 to 32 stages
- Can be configured with at least 8 sub - controllers, independently controlling 8 intersections
- Can access 64 vehicle detectors and 32 external I/O inputs
- Can be configured with 128 local plans, with day types and special dates being flexibly configurable
- Supports various phase types, including motor vehicle lights, non - motor vehicle lights, pedestrian lights, ramp control lights, and variable signs, etc.
- Real - time monitoring of signal lights and power supply voltage
- Real - time monitoring of green conflict and communication
- Monitoring of signal timing and safety logic
- Comprehensive fault and event logs

Functional Advantages of the MTC-I Traffic Signal Controller

Compared with traditional traffic signal machines, the MTC – I Traffic Signal Controller has significantly improved in terms of functions and control capabilities. The more significant performance advantages include:

Master-Slave Hot Standby	Dual CPU hot standby (optional): If the primary CPU fails, the backup CPU automatically takes over within 500ms, ensuring uninterrupted intersection operations and maximum reliability.
Edge Computing	Edge computing capability (optional): Processes radar, camera, and internet traffic data in real-time to adjust signal control strategies and adaptive schemes.
Connected Vehicle Support	Supports V2X communication with RSUs (Roadside Units) for SPAT messages, countdown timers, VIP priority routes, green wave guidance, and other smart traffic scenarios.
High Capacity	Controls up to 32 phases , configures 2–32 stages , and manages 8+ sub-controllers to independently operate 8 adjacent intersections simultaneously.
Open Interfaces	Open-protocol firmware enables integration with third-party traffic control systems.
Global Positioning	Built-in GPS/BeiDou positioning for precise location and system time synchronization.
Enhanced Security	National cryptographic chip for encrypted data communication.
Remote Control	Compatible with handheld remotes and third-party remote control systems.
Safety Assurance	Green conflict detection, real-time monitoring of signals/power, safety logic checks, and comprehensive fault/event logging.
Scalability	Modular architecture and CAN bus connectivity enable easy expansion for diverse intersection needs.

Functional Parameters of MTC-I Traffic Signal Controller

The MTC-I integrates data from diverse vehicle detectors :

- Manual Control (Step-by-Step / Selective)
- All-Red Mode
- Yellow Flashing Mode
- Emergency Priority Mode
- Bus Priority Mode
- VA Adaptive Control
- Cable-Free Coordination
- Central System Schedule Control
- Central Manual Control
- Central Adaptive Zone Control



Multi-Source Detection Compatibility

MTC-I Traffic Signal Controller supports various types of vehicle detectors, including video, microwave, millimeter - wave radar, radar - vision integrated machine, loop coil, geomagnetic, and internet data, etc., and can be accessed via I/O interface, vehicle detector interface, or network port.

MTC-I Traffic Signal Controller Electrical Specifications

- **Communication Interfaces:**
2× Ethernet 2× USB 1× CAN 2× RS232 1×RS485 1× RS422
- **Power Supply:** 220V ±20%, 50/60 Hz
- **Power Consumption:** standard: 20W High-End: 50W
- **Max Load Capacity:** 30A
- **Max Load per Solid-State Output:** 4A
- **Operating Temperature:** -40°C to +70°C

Authorised Distributer



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