EN

Kapsch TrafficCom

kapsch challenging limits

EcoTrafiX™ Controller

16 Series.

The EcoTrafiX™ Controller is the high performing result of an evolved generation of traffic controllers for an efficient, safe and sustainable mobility. Our long-term experience in traffic projects and in manufacturing modular electronic equipment makes this product the optimal solution for highly reliable signals management.

EcoTrafiX™ Controller provides advanced performance control strategies both local and centralized, capable of adapting to local regulations to prioritize the public transportation, emergency vehicles, bicycles or pedestrians.
EcoTrafiX™ is capable to operate with different protocols (UNE, NTCIP, UTMC) with ability to operate in isolated mode, under centralized control strategy or with adaptive traffic control systems (optional).

Controller´s architecture.

EcoTrafiX™ Controller is the most compact device on the segment. It has evolved to provide the most advanced communication channels to enable easy operation tasks using serial port, Ethernet, USB, Bluetooth / Wi-Fi (optional) for local accessing and the possibility of installing GPS antennas in the equipment.
EcoTrafiX™ Controller cabinet can be customized to be adapted to any design regulations, offering a wide range of combinations.

Efficient and Sustainable.

EcoTrafiX™ electronics makes feasible reaching up to 1080 kg CO2* emissions savings per junction per year. The controller has been designed to manage LED type lamps, providing very low nominal power consumption (from 15W). EcoTrafiX™ Controller is an equipment rated as low greenhouse gas emissions.

Easy Installation and Maintenance.

EcoTrafiX™ Controller presents a modular architecture that enables the field tasks. In addition to the possibility of onsite configuring the controller provides a remote configuration tool based on web access designed to simplify the configuration tasks, commissioning and maintenance.

Safe.

The dual processor system of the controller offers a higher level of safety in the equipments performance. Its smart output cards allow controllers control unit to perform a check about its state, providing the equipment with an additional safety level.

**according to internal studies Madrid 2024*

Extended list of technical features

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Signal Groups

- Group maximum capacity: 16
- Number of groups per card: 4
- Type of output for lamps control: Solid state
- Dimming option

Communications and display

- Ethernet
- RS232 line
- USB
- Wi-Fi / Bluetooth (both optional)
- Display (optional)

Electrical characteristics

- Inter Internal consumption: 15W to 50W depending on configuration
- Power supply: $115V_{ac}$ – $230V_{ac}$ (-20%, +15%)
- Network frequency: 50/60Hz +/-5%
- Signal groups Maximum load:
  - Per output: 2A
  - Per group: 4A
  - Per card: 8A
  - Per controller: 15A
- Lamps supply: $24V_{ac}$ – $42V_{ac}$ / $115V_{ac}$ – $230V_{ac}$

Mechanical features

- Different options of metallic and polyester resin cabinet
- Protection scale: IK10 / IP55
- Dimensions: 700 x 500 x 250mm
- Self-supported chassis: 600 x 480 x 200mm
- Control rack: 270 x 250 x 170mm

Safety

- Independent control and supervision units
- Monitoring of all outputs
- Output current measurement
- Leakage current per phase
- Overvoltage and overcurrent output lamps protection
- Main overvoltage, overcurrent and residual current protection
- Separate control devices for green and red/yellow lamps voltage
- Automatic recloser for circuit breakers (optional)

Environmental conditions

- Designed to meet with: EN50293, EN50556, EN12675, CE marking
- Temperature range: -40 ºC to +70 ºC
- Humidity: 95%

Inputs and outputs

- Optisolated digital inputs: up to 56
- Digital outputs: up to 8

Characteristics

- Configurable startup, failure and off mode output state
- Autonomous flashing mode
- User web interface
  - Full monitoring of all controller parameters
  - Graphical interface to programming
  - Simulation capabilities
  - Test functions included for maintenance purposes
- Realtime and historical status register - HRLOG (optional – up to 60 days)
- C-ITS enabled direct connectivity with ITS-G5 RSU (optional)

Extended protocols list

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Protocols

- NTCIP 1201 and 1202
- UNE 135401-4
- UM/008- UTC MIB UTMC full compliant
- Proprietary protocols

UTMC supported features

- Streams: up to 4
- Stages: up to 127 including all-red
- Traffic plans: up to 127
- Safety monitoring: green/green conflict, unwanted signals, absent signals, red lamp monitor, power supply, safety timings, detector fault, internal state
- Non-volatile fault log

UTMC control mechanisms

- Fixed Time (FT)
- Semi-Vehicle Actuated (SVA)
- Full-Vehicle Actuated (VA)
- Adaptive intelligent control embedded (optional)
- Manual control
- Standalone and centralized operation
- Cableless Linking Facility (CLF)
- Emergency
- Hurry Call
- Public Service Vehicle Priority

NTCIP supported features

- Rings: up to 4
- Traffic plans: up to 127
- Overlaps: up to 16
- Group Separation: Vehicle / Pedestrian / Overlap

NTCIP control mechanisms

- Concurrent ring control
- Phase sequence per ring
- Vehicle and pedestrian cycle length
- Sequential traffic plans per phase
- Volume and occupation weight
- Full Vehicle Actuated (VA)
- Fixed Time (FT)
- Public Service Vehicle Priority
- Emergency Vehicle Priority

UNE supported features

- Sub controllers management: up to 4
- Stages: up to 127 for vehicle/pedestrian
- Positions per transition: up to 127
- Transitions: up to 127
- Traffic plans: up to 127
- Flexibility on control mode: built upon stable phases controlling, color lamp states or traffic plan regulation
- Group separation: traffic groups, direct command groups, mixed groups

UNE control mechanisms

- Fixed Time (FT)
- Semi-Vehicle Actuated (SVA)
- Full-Vehicle Actuated (VA)
- Micro-regulation (optional)
- Adaptive intelligent control embedded (optional)
- Manual control
- Standalone and centralized operation
- Coordinated
- Emergency preemption
- Bus priority local or remotely managed
- Tramway advanced priority management
- Local and Remote forced actuation
- Push button, crosswalk time demand and blind pedestrian demand

Kapsch TrafficCom

is a provider of intelligent transportation systems in the fields of tolling, traffic management, smart urban mobility, traffic safety and security, and connected vehicles. As a one-stop solutions provider, Kapsch TrafficCom offers end-to-end solutions covering the entire value creation chain of its customers, from components and design to the implementation and operation of systems. The mobility solutions supplied by Kapsch TrafficCom help make road traffic safer and more reliable, efficient, and comfortable in urban areas and on highways alike while helping to reduce pollution. The Kapsch Group is a globally operating technology corporation headquartered in Vienna. The company's areas of expertise – digitalization and mobility – are addressed via two business units: Kapsch BusinessCom and Kapsch TrafficCom both support their clients and customers in the role of end-to-end suppliers and providers of products and solutions along the entire value-added chain. Kapsch. challenging limits.

>>> www.kapsch.net

Kapsch TrafficCom AG | Am Europlatz 2 | 1120 Vienna | Austria | P +43 50 811 0 | ktc.info@kapsch.net | www.kapsch.net | www.kapschtraffic.com | Doc No.: ETXC16-V08_EN