SMART
MOBILITY

URBAN TRAFFIC CONTROLLER - MFU3000

The MFU3000 traffic controller is the result of extensive experience acquired by SICE over more than 40 years in cities across the world in the fields of Traffic Engineering, Electronics and Traffic Light Regulation Software.

The MFU3000 traffic controller includes the most recent technological advances, both in hardware and firmware, for embedded systems and compatible PCs in industrial environments to be able to launch them for the control and management of urban traffic.

The MFU3000 is modular, compact, flexible and powerful, but in basic terms it is a secure and reliable piece of equipment.

MFU3000 OVERVIEW

The Traffic Controller is an electronic piece of equipment which is mainly in charge of controlling a group of traffic lights, generally located at a traffic junction or intersection on public roads.

- CPU hardware platform, based on the latest generation ARM micro-processor. Peripherals for complete connectivity (Ethernet LAN and USB amongst others).
- Support from three main CPU for different functionalities and two micro-processors for each output module to two traffic light groups.
- Application embedded in a real time operating system (RTOS).
- Optional GPS device module for hourly synchronization.
- Management of wireless communications: GSM, GPRS, UMTS.
- Remote channel for centralization through native Ethernet LAN
- Local multi-interface maintenance channel: RS232, LAN, USB, GSM, GPRS, UMTS, BLUETOOTH.
- Management of user access profiles
- Sending of alerts and events through SMS messages and also optional e-mails.
- Control of incandescent, halogen and LED lighting
- Optional decreased night flow.
- 100% compatibility with all SICE controllers.
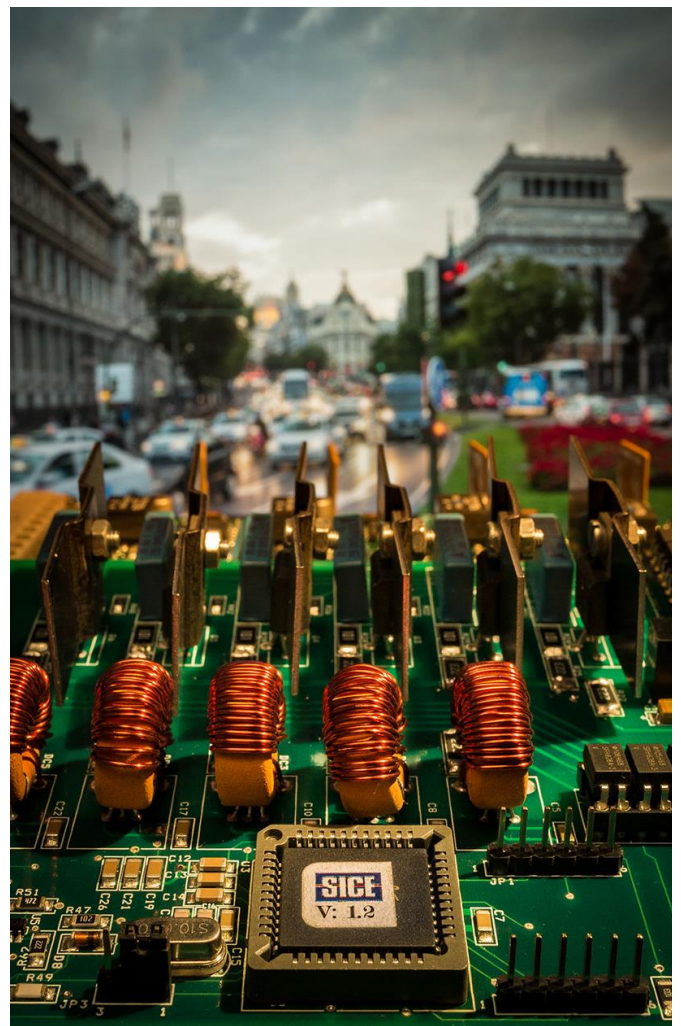
OPERATING MODES

The basic programming and configuration of the MFU3000 provides a control strategy by phases and/or groups for any operating mode, with dependence on traffic through vehicle sensors, actuated or semi-actuated, and without dependence on traffic in a fixed sequence, coordinated with other equipment or in an independent manner (autonomous) or centralized through zone exchanges or computers which comprehensively manage traffic from a control center.

In all modes public transport priority strategies can be used, either by phases or by groups, as with Emergency strategies.

CONTROL METHODS

The controller has the following control methods to select traffic plans and implement stable phases.
- Manual control
- Automatic control
    - Selection of Schedules
    - Selection of Traffic Data
- Centralized control
- Adaptive control

The controller Operating Mode can be both by phases and by groups.

REGULATIONS

The MFU3000 complies strictly with different national and international regulations relating with road safety equipment, traffic safety regulations, electrical safety, environmental safety and electromagnetic compatibility (EMC).

Due to compliance with the previous regulations, the controller satisfies the essential objectives of European directives:
- Low voltage directive 73/23/EEC
- Electromagnetic compatibility directive 89/336/EEC which accredits the product's CE marking.

TECHNICAL DETAILS

Main CPU:	32-bit ARM Architecture
Supply voltage:	85 to 264 V
Frequency:	50/60 Hz
Maximum output current:	6.3 A
Digital inputs:	512 DI (overall aim)
Digital outputs:	128 DO (overall aim)
Analogue inputs:	3 AI
Output supply voltage:	230 V, 42 V, 110 V, 125 V with the possibility of dimming
Communications:	RS232/RS485 / Ethernet
USB port:	2 USB ports (1 slave + 1 master)
GRPS and GPS modules:	optional
Power outputs:	192 (Grouped in Red/Amber/Green traffic light groups and direct command groups). Total 64 groups
Range of operating temperatures:	between -10ºC and +60ºC (standard)

ISO 9001
ISO 14001
OHSAS 18001
BUREAU VERITAS
Certification
BUREAU VERITAS
1828