MOTORSPORT | MAGNETI MARELLI

MPDU-I
Dashboard - TFT color display

Description

The MPDU-I is a combined dashboard and input module for use either as a stand-alone display unit, or as an integral part of a complete data acquisition and monitoring system for use in the demanding environment found in motorsports vehicles.

The compact dimensions of the MPDU-I make it particularly suitable for car applications. The advanced features of the TFT colour display permits to configure windows with an easily personalised screen layout.

The MPDU-I is equipped with a comprehensive range of analogue and digital inputs. The graphical bar indicator is typically used for representing engine revs.

The alarms are visualized in a special page.

As part of the Magneti Marelli data acquisition and telemetry system, the MPDU-I can communicate via CAN network with the Magneti Marelli data loggers receiving and displaying data from the logger as well functioning as an additional input module.

Main Features

- *Visible area TFT 98.7 x 57.5 mm*
- *4.3", 16:9 diagonal, viewing angle (U/D/L/R): 80/80/80/80 up to 16.7 M colors*
- *On display is shown: bar graph, gear number, speed, lap time, best lap, lap number and many others information on 12 pages available*
- *4 push-button on the front panel for page and bar graph selection, temporary alarm disable, brightness regulation*
- *6 high-brightness warning lights green/red for gear change (with programmable threshold for each gear)*
- *4 high-brightness warning blue leds*
- *5 Single-ended*
- *1 Temperature*
- *2 Digital Inputs*
- *1 Lap Triggers*
- *1 Internal 3 Axial Accelerometer*
- *1 Can Line*
- *1 Ethernet Line*

Benefits

- *Bar graph with 2 configurable non-linear scale, manually selectable or automatically swapped by condition*
- *Available 8 brightness steps for backlight regulation*
- *Alarm channels with programmable thresholds and linkable to leds*
- *Inputs configurable to suit all sensors in the product range*
- *Transmit internal inputs and channels over CAN bus*
- *Easy to use and configure*
- *Designed for rugged applications*

Typical Applications

All race bikes/cars

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Technical Characteristics

Inputs

Single-ended (@ 12 bit)	5
NTC/PT1000 temperature sensor	1
NTC internal temperature sensor	1
Internal 3 axial accelerometer (up to 16 g)	1
Lap Trigger	1
Digital Input (Remote push button)	2
"Code Load" enable pin	1

Outputs

Voltage references (@ 5 V, 50 mA)	1

Leds

Green RPM shift leds	4
Red RPM shift leds	2
Blue Alarm leds	4

Communications

CAN line	1
Ethernet line (10/100base T)	1

Logic Core

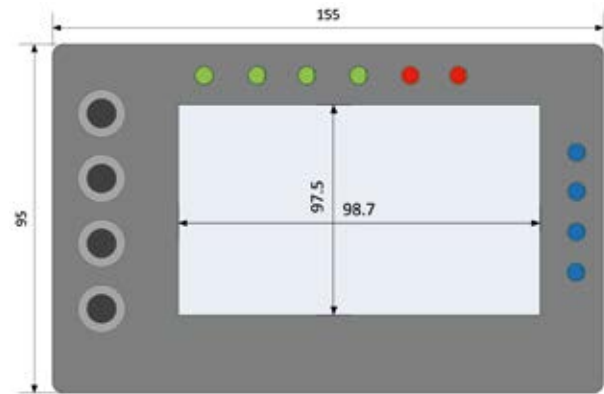|	
Microcontroller (150 DMIPS)	1
Flash EPROM (microcontroller)	1 Mb
RAM memory (microcontroller)	132 Kb
ARM CortexA9 Dual Core @600MHz	1
DDR2 @333MHz (x32) (on board)	1 Gb
NAND Flash memory	512 Mb
Time keeper (Microcontroller)	1

Connectors

192922-1280 ITT-CANNON (19 Pin)	1
Ethernet 192922-1190 ITT-CANNON (4 Pin)	1

Other Characteristics

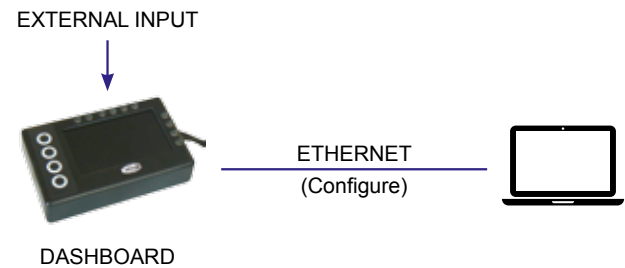|	
Power supply	8 to 16 V
Operating internal temperature (Excl. Ethernet)	-20/+85 °C
Protection class	IP 40
Visible area LCD	98.7 x 57.5 mm
Dimensions	
without wiring	155 x 95 x 30 mm
Weight (approx.) (**)	480 g

(** approximately 28 cm wiring included)

Dimensions

Dimensions in millimetres

Application Schematics

STAND-ALONE MODE

EXTERNAL INPUT

DASHBOARD

ETHERNET
(Configure)

CAN COMMUNICATION MODE

EXTERNAL INPUT

DASHBOARD

CAN Bus

DATA LOGGER

ETHERNET
(Configure)