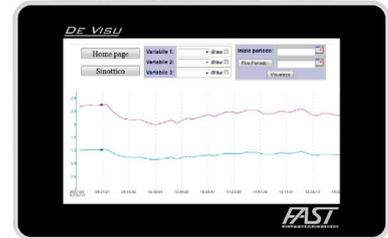**Pietro Fiorentini**

FIONet ™

Starbox De Visu

Starbox De Visu is an RTU designed to control and manage pressure reduction and gas metering stations, even under harsh environmental conditions.

It combines the typical features of a datalogger with advanced process control, multi-device connectivity, and remote wireless communication.

The system enables remote pressure regulation, flow control and limitation, multi-line flow splitting, remote monitoring and disconnection, as well as other advanced computational functions. Overall, it optimizes gas network operations, reducing both operational costs and energy consumption.

City gates

District stations

Features	Values
Analogue inputs (AI)	8 inputs, 12-bit resolution, 0-10 Vdc
Digital inputs (DI)	3 inputs, 10-30 Vdc, configurable as status inputs or meter inputs, opto-isolated with ESD protection ±15 KV
Digital outputs (DO)	2 outputs, 10-30 Vdc, opto-isolated with ESD protection ±15 KV
Expandability	Up to 160 DI, 64 DO, 32 AI, 16 AO via MODBUS RS232 / RS485 / RS422 / ETHERNET / CANBUS
Communication vector	External Modem/Router, typical channels GSM/GPRS-LAN 4G/5G/wired (other communication technologies available upon request)
Communication protocol	Modbus RTU/TCP Master/Slave, IEC 62056-2, IEC 60870-5-101, IEC 60870-5-104, Siemens S7
Local communication	1 Ethernet port, (10/100 Mb/s), 2 serial ports RS485/422, 1 configurable serial port RS232, 2 CANBUS, 1 USB port
Case	IP 20
HMI	7" TouchScreen Display with 800 x 480 resolution, LED Backlight, Brightness 240 cd/m^2, max Contrast Ratio 500:1, Viewing Angle at Contrast Ratio CR>5: ±70°H and ±70°V, Typical Response Time 15 ms
Power supply	10 – 30 Vdc
Typical absorption	2 - 4 W (max 10 W)
Expandable memory	USB, Micro-SD CARD (on request)
Environmental conditions	from -20°C to + 70°C
Dimensions	210x135x41 (mm)

Table 1 Features

Features and **Approvals**

Features	Values
Automation	PLC EMBEDDED compliant with standard IEC 61131-3
User messages	SMS / email
Alarms	Warning and management of alarms and events generated by exceeding thresholds and/or reaching physical/logical states
Datalogging	Data acquisition and logging with the following features: Basic acquisition time: 1" Basic storage time: 5' - 1h Maximum number of variables that can be acquired: 10,000 Maximum number of samples stored: 6,000,000 Sample processing: instantaneous, min, max, average
OPC connectivity	Supported via OPC SERVER
Configuration	Through the integrated WEB server or through the Rainbow Configurator SW
User Application	Using languages in a LINUX environment
Operating system	LINUX embedded

Table 2 Features and values

Starbox De Visu is CE marked and complies with Directive 2014/30/EU (Electromagnetic Compatibility).

EMC

Starbox De Visu competitive advantages

Multimedia and multi-access connectivity

Integrated functions for pressure regulation and energy efficiency

Reduced energy consumption

Modular and scalable I/O configuration

Extended programmability through Embedded PLC

VPN-based encrypted communication