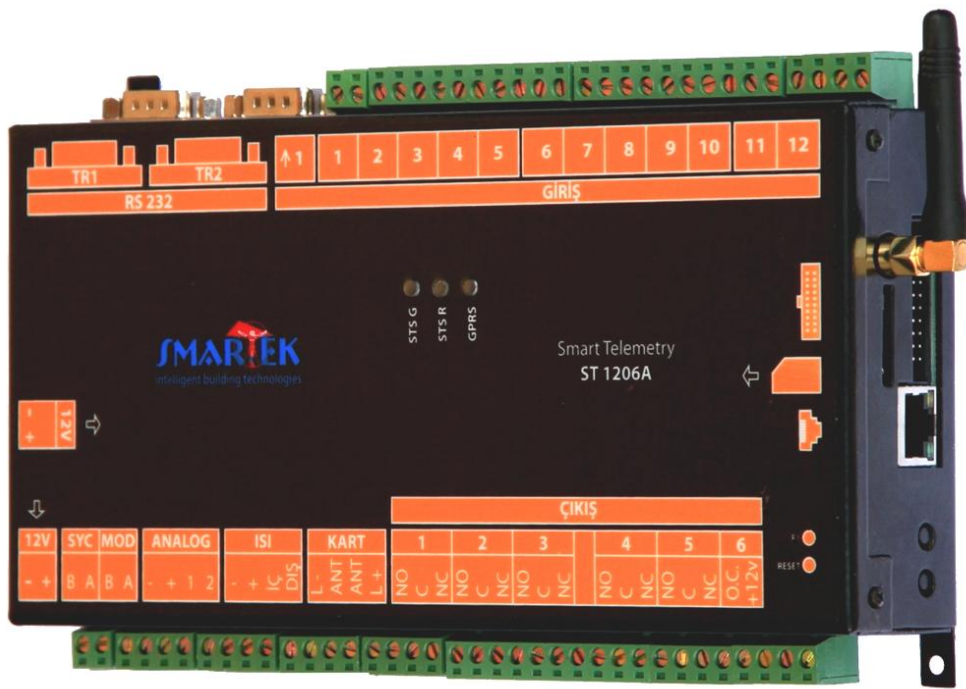


## ST-1206A



## STL-1206



## Telemetry for humanless stations

### Description:

ST 1206A and STL1206 are design to remote measurement, observation and automatic/manual control. Communication between telemetry to main server and main server to telemetry is done with TCP/IP communication via Ethernet socket and/or GPRS network.

Any changes on digital I/O status or measurements functions result change, telemetry save a log and also send log to the main server.

Embedded web server allows to direct access to the telemetry by http web pages in order to monitor and update settings/functions. (Embedded web server is functional only by Ethernet socket communication)

The difference between ST-1206A and STL-1206 is about sensor inputs. ST-1206A has 2 temperature, 1 humidity, 2 analog inputs, while STL-1206 has 6 sensor inputs which each can be flexibly chosen as temperature, humidity, analog, pressure, air quality, dust sensors by user.

### Features:

Feature	ST.1206A	STL.1206
Inputs (digital)	12	12
Temperature inputs	2	-
Humidity input	1	-
Analog inputs	2	-
Flexible measurements	-	6
Output (digital)	5	6
AMR (Meter reading)	1*	1*
Transparent Serial Port	2	2
Fan/motor drive (PWM)	1	1

**Table 1 : General Features**

\* If serial numbers of AMRs are known, up to 32 meters can be read by 1 port.

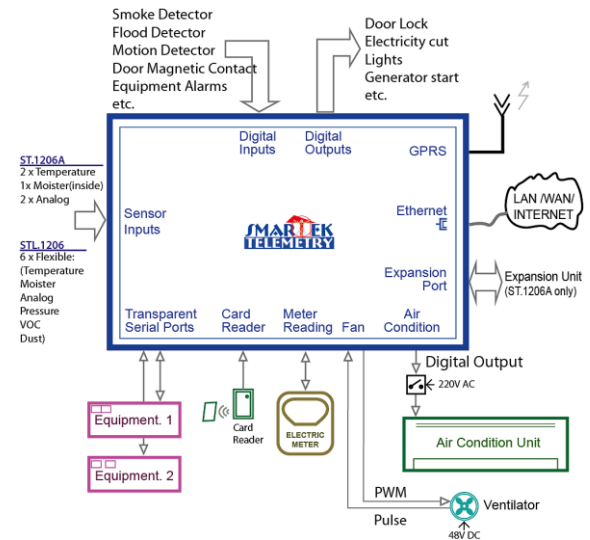
### Digital Inputs:

Digital inputs monitor any dry-contacts if it is open or close. Any change on the status, telemetry records log and sends it to the main server. Input functions are being calculated again and outputs controls as set or reset depending on the function automatically.

Input current value is 0,14mA in case of closed input.

Dry-contact output detectors like motion, magnetic contact, smoke, flood etc. and various device outputs can be connected to digital inputs.

### System Block Scheme:



### Digital Outputs:

Digital outputs have 220V AC 4A relays. These relays' both open and closed contacts can be used. If the load is higher than 4A, external switching component (contactor, relay etc.) should be used.

Digital outputs can be controlled by remote manual or automatic functions.

### Sensor Inputs (Measurements):

ST1206A has 2 temperatures, 1 humidity, 2 analog measurement inputs. Humidity sensor is located in the unit during manufacturing.

STL.1206, any four of sensor inputs can be chosen as analog (first two sensors should be temperature, rest four can be chosen as temperature, analog, pressure, VOC, dust or analog).

Analog inputs are measured as percentage (0.0-5.0V). Related functions should be set as percentage. Weather station outputs or petrol tank levels can be connected to analog inputs.

Temperatures are measured in Celsius degree.

In case of user defined function result changes, telemetry records a log with measurement value and sends it to the main server.

If user defines mobile phone numbers for SMS, unit can send log records as SMS.

Unit also can send email by socket for function status change logs.



## Camera Snapshot Control

Telemetry unit can send snapshot command contact (via one of digital output) to an IP camera in case of security violation. By this output command, camera takes snapshots twice between 2 seconds, 10 seconds, 60 seconds and 5 minutes up to security violation stops.

IP camera should have snapshot dry contact input and ftp server sending feature.



## Proximity Card Reader

Telemetry supports 125kHz proximity card reader. Depending on custom design manufacturing, 13.56Mhz mifare cards can be implemented.

Access allowed card numbers are stored in the telemetry unit. All card readings are logged and sent to the main server. If user defined one of the digital outputs as an electric door lock, this output is controlled by card reader. Card list to allow access door can be updated locally or remotely.

If user defined door open sensor input or motion detector input is activated without card reading, siren begins to run in standard scenario.

Default card last access log number is 250, defined card number is 100. Those numbers can be increased by customer request.



## Meter Reading

Telemetry has a meter reading port with EN62056 standard protocol. This physical RS485 port allows user to read electricity, gas, water (which has EN65056 protocol port) locally or remotely. This port can be connected to one meter, but if serial numbers of meters are known, up to 32 meters can be connected together and all of them can be read by telemetry unit.

Reading can be done in one of two types. First type is "Readout" reading. This one reads the meter areas in common which is predefined by meter manufacturer. The second type is user defined area list. With this type, user defines areas to be read by a given list.

User can start reading by a command locally or remotely. In addition those manual readings, user can define date and time for automatic reading. Telemetry unit reads on time automatically and keeps last reading to be downloaded by remote server or local embedded web server.



## Transparent Serial Ports

Telemetry unit have 2 transparent serial ports (RS-232). These ports can be connected to two different equipments locally by their RS-232 ports.

User can connect to these ports via transparent ports remotely. RS-232 settings like baud-rate, data bit numbers, parity type can be defined at the beginning of connection remotely. Baud rate should be between 300-115.200 baud.



## Audible and Led Warning Signals

Telemetry unit has a buzzer inside to warn user. In addition to the buzzer, there are three status leds on it (one for GPRS). In addition to the audible buzzer inside the unit, user can define one of outputs as siren output, so warning effect increased.

## Real Time Clock

Embedded real time clock with battery backup keeps time accurately. Energy cut does not affect its working.

Telemetry unit periodically synchronize its time with a NTP server which ip is predefined by user.

## Log Records

Telemetry unit has 1.000 I/O and measurement logs in its non-volatile flash memory. Card access logs are recorded separately with 250 log buffer. Those logs maximum limits can be increased by customer demand.

Log records inside the unit can be downloaded by embedded web server or remote server.

Log records can be deleted remotely or locally.

## Function, Settings, Card Information

All functions, settings, card serials are stored in telemetry's non-volatile flash memory. Energy cut does not affect their content.

Those data can be updated or downloaded by remote server or embedded web server.

## Operations by Remote Server and Embedded Web Server:

Subject	Operation	Local Web Server	Remote Server
Firmware update	Update	✓	✓
Serial Number	Query	-	✓
Station Name	Query & Update	✓	✓
Date and time	Query & Update	✓	✓
Digital Input	Query	✓	✓
Digital Output	Query & Update	✓	✓
Analog Measurement	Query	✓	✓
Temperature Measurement	Query	✓	✓
General Settings	Query & Update	✓	✓
Function Definitions	Query & Update	✓	✓
Card Access Card Definition	Query & Update	✓	✓
I/O and Measurement Logs	Query	✓	✓
Card Access Logs	Query	✓	✓
Meter reading	Query	✓	✓
Meter Reading Periodically	Query	✓	✓
Meter Reading Area List (for periodical reading)	Query & Update	✓	✓
Reset		✓	✓
Hard Reset		-	✓

## Technical Data:

### Energy and Digital IO

Input	Min	Typical	Max	Unit
Vcc	11	12	13,5	V
Icc *	115	150	253	mA
Digital Input		0,14		mA
Digital Output			250V/4A	V AC/A

\* Vcc= 12V, no GPRS communication

### Temperature measurement

Input	Min	Typical	Max	Unit
Temp.	-55		+125	°C
Tolerance		± 0.5*		°C

\* Between -10 +85 °C

### Analog Measurement

Input	Min	Typical	Max	Unit
Input resistance	2k		10k	Ohm
Tolerance		± 3		%

### Card Reader

Description	Min	Typical	Max	Unit
Frequency		125		kHz
Reading range	5			cm
Telemetry-Reader distance			8 *	m

\* Might be differ according to environment noise.

### Transparent Serial Ports

Description	Min	Typical	Max	Unit
Baud rate	300		115.200	Baud
Data		7/8		Bit
Parity		Even/Odd		