



Media Switch  
family

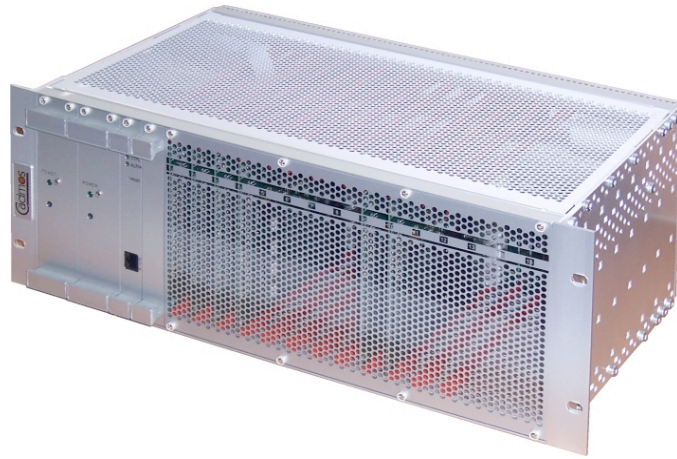
---

Controls,  
Alarms and  
Telesignals

**CAT series**

## Highlights

- **Up to 480 digital inputs;**
- **Up to 240 opto-coupled inputs;**
- **Up to 240 relay outputs;**
- **1 or 2 CPU (controller) boards;**
- **SNMP support;**
- **Fully-configurable:**
  - from a minimum of 32 inputs
  - to a maximum of 480 digital inputs or 240 opto-coupled inputs or 240 relay outputs
  - wide range of mixed configuration allowed
- **Fully compatibility with on field installed systems, both for**
  - communication protocol with remote control centre,
  - input/output types,
  - cable heading.
- **Hot-swap**  
all boards are designed with hot-swap capability.
- **Full redundancy**  
all functional sections can be fully redounded.
- **Centralization and remote control**  
(FTP, Web server, SNMP or proprietary NMS).



The CAT unit (Controls, Alarms and Telesignals) is the equipment of Media Switch family specifically designed to manage and control digital inputs, alarm signals, output signals. It can:

- Manage up to 480 digital input lines, up to 240 opto-coupled inputs lines and/or up to 240 relay outputs
- Operate in compatibility with existing installed systems
- Integrate advanced remote control functions by FTP, WEB server, SNMP or proprietary NMS.

## Main features

The CAT unit performs I/O management, interfacing digital or opto-coupled input device and/or controlling relay output lines.

The unit can also be considered as an advanced system able to replace (with full compatibility) existing systems and increase their performances with the typical features of the Media Switch family.

In compatible version (CAT-C model), the unit is configured with 4 SC-DI boards and 2 SC-DO boards, fully HW/SW compatible with the existing systems installed on-field (both in terms of connection to the Control Center and of connection with input/output devices).

Moreover, the SNMP server functionality of the ST unit allows any workstation on the LAN to obtain detailed information from the unit.

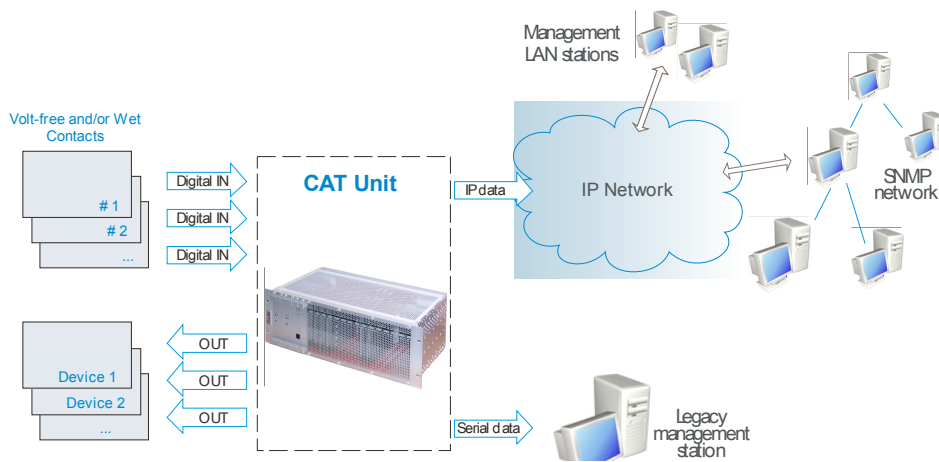
# Typical applications

CAT unit is the ideal solution to manage input/output devices, by centralization or remote control center.

The CAT unit can provide:

- digital inputs,
- opto-coupled digital inputs
- dry output contacts, user-configurable as NC or NO.

Advanced setting functions can be individually applied to each input/output line.



Operative scenario

Installed boards (max configuration)		All inputs are not coupled (max)	All inputs are opto-coupled (max)	Outputs (max)
SC-DI	SC-DO			
0	15	0	0	240
1	14	32	16	224
2	13	64	32	208
3	12	96	48	192
4	11	128	64	176
5	10	160	80	160
6	9	192	96	144
7	8	224	112	128
8	7	256	128	112
9	6	288	144	96
10	5	320	160	80
11	4	352	176	64
12	3	384	192	48
13	2	416	208	32
14	1	448	224	16
15	0	480	240	0

To calculate the number of the required SC-DI boards, if both passive and active digital sensor are present (using not coupled and opto-coupled inputs), refer to the following rule:

$$N = (A + 2 * B) / 32$$

I/O configuration

# Unit features

## Flexible design

The unit flexible functional architecture allows its use in several different operative scenarios. In each condition the CAT can be tailored to the actual needs.

The unit is made up of max 15 expansion boards (SC-DI or SC-DO type):

- SC-DI board can manage up to 16 opto-isolated inputs or up to 32 non-isolated digital inputs,
- SC-DO board can manage up to 16 relay outputs.

The amount of SC-DI / SC-DO boards can be determined based on the actual operative scenario (total input/output devices to be managed), as listed in the previous table.

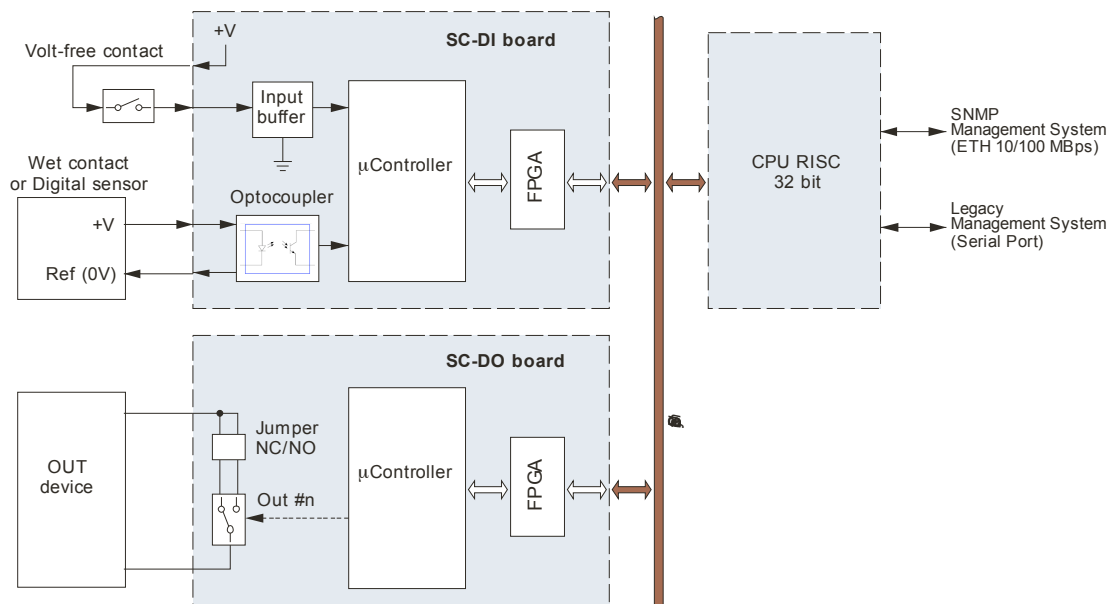
All functional section are configurable in redundancy. So, two fully-independent power supply modules are available (each one with its own power cord).

CPU unit is also available in redundant configuration. Up to two SC-MCD or SC-MCE boards (or upper versions), can be installed to assure uninterrupted service.

The unit is endowed with several proprietary communication bus that support high speed data transfer and configuration information exchange.

Input/Output management functions are fully user-configurable via Remote Control software.

## External devices interface



## Reliability and Maintainability

CAT unit plus are:

# Technical Specifications

---

## Operational:

The unit manages digital input lines (SC-DI boards) with or without opto-coupler and relay outputs (SC-DO boards), user configurable as NO/NC.

## Max configuration:

When fully expanded, the unit can be configured with:

- max 480 digital or max 240 opto-coupled inputs,
- max 240 relay outputs,

## I/O characteristics:

Input

- +5Vdc contacts
- Opto-coupled contacts (insulated)

Output

- Relay dry contacts (2A max)
- User-configurable as NO / NC

## Remote setting:

By existing management systems or through "CadmosView" software.

## Operation:

Local: limited to monitoring functions, by frontal panel LEDs.

Remote: configuration and operation monitoring, via LAN or serial port.

## MTBF

>500.000 hours for each interface  
(MIL-HDBK-217F Part stress)

## Power distribution

Power distribution is provided by two power supplies, in redundant configuration

## Mains:

Typical: 220 Vac / 50 Hz

Max range: 90 to 264 Vac

## Power consumption:

0,16A (max configuration)

## Dimensions

Height: 176 mm (4 U rack 19")

Width: 482 mm (19" rack mount)

Depth: 250 mm (mainframe)  
max size 280 mm

For more information about our products, please visit

[www.cadmos.it](http://www.cadmos.it)

or contact us at

[info@cadmos.it](mailto:info@cadmos.it)



Cadmos Quality  
Management System  
is  
**ISO 9001:2000**  
certified

## Cadmos microsystems S.r.l.

Via B. Pontecorvo, 11  
00012 Guidonia Montecelio (RM)  
Italy

Phone +39 0774 353919

Fax +39 0774 014367