QUASAR Q4 | Electronic interlocking

Distributed and compact electronic interlockings for railway stations of any size, metros and tramways.

CAF Signalling is a world reference in the design and implementation of rail control solutions for the railway industry.

TECHNICAL CHARACTERISTICS

Extensible architecture

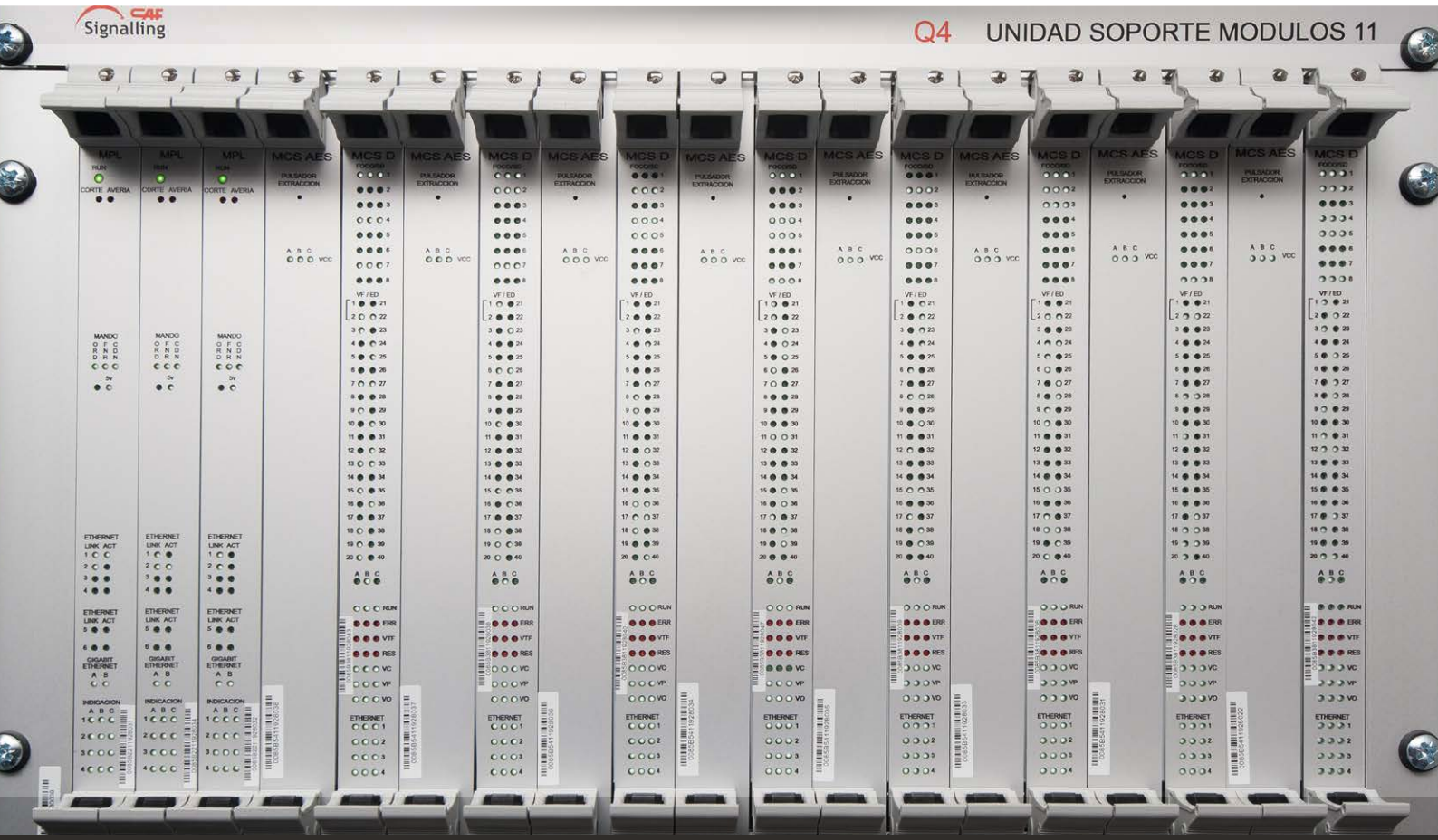
QUASAR Q4 electronic interlocking is built on a platform especially designed for controlling any type of signalling areas, from the smallest and simplest to the biggest and most complex.

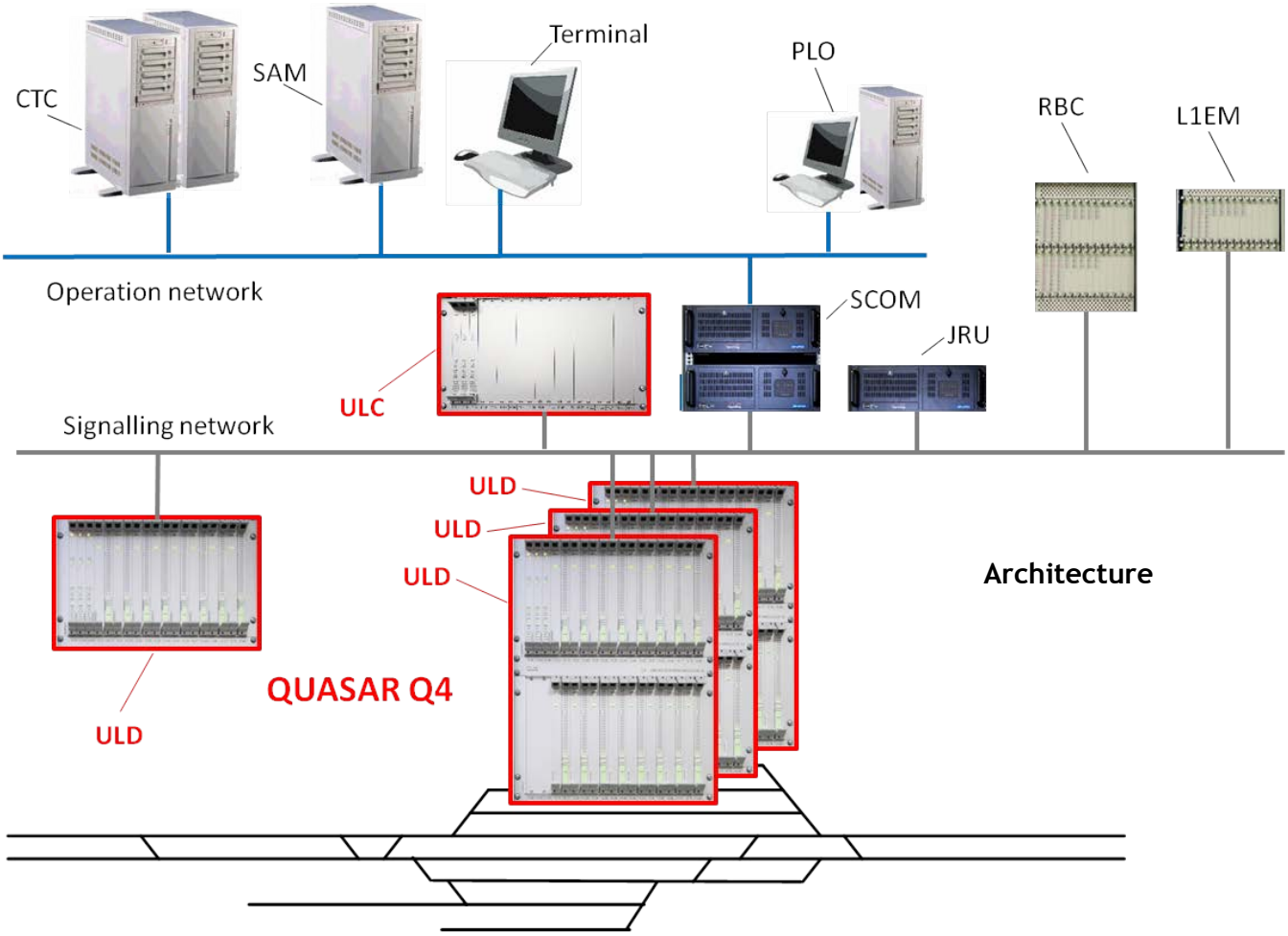
The architecture is fully 2 out of 3, from the processing core to the acquisition and control of field elements. Inputs are scanned and processed by 3 independent channels, results are compared and voted among the processors, and outputs are eventually voted by a safe 2 out of 3 hardware mechanism.

Distributed heart, adaptable body

QUASAR Q4's architecture is conceptually distributed: a Central Logical Unit (ULC) carry out the safety logic, and two or more Distributed Logical Units (ULDs) implement both object controller and block functions.

Each ULD can supervise up to 40 high-density input / output boards, and the number of ULDs can grow to fulfil the most demanding needs.





ULC and ULD functions may be combined—for small or medium-sized stations and tramway shunting areas—in just one device (Autonomous ULD).

Flexibility and adaptability

QUASAR Q4 can be adapted to abide by the principles, operational rules and needs of any railway administration, tramway company or metro installation.

QUASAR Q4's physical interfaces are design to support any project's requirements: one-phase and three-phase point machines, multi-motor points, single or double wire lamps, LED lamps, day and night lighting, third rail, etcetera.

QUASAR Q4 provide native Ethernet interfaces that enable a direct connection to the signalling network and other networks, as well as internal communications (between ULC and ULDs) and communication with axle counters, gateways and other devices—through communication protocols compliant with the required safety level.

ADVANTAGES AND BENEFITS

Integration with CAF Signalling's AURIGA ERTMS and CBTC systems

QUASAR Q4 can be integrated out of the box with AURIGA ERTMS devices (L1EM and RBC) and CBTC equipment (Zone Controllers), by means of communication protocols compliant with the European standard EN 50159.

Data preparation and installation

CAF Signalling's data preparation tools and engineering processes guarantee the most demanding safety level achievement. Besides, it simplifies installation, field testing and commissioning.

Maintenance and diagnosis

CAF Signalling provides a Maintenance Aid System (SAM) with a complete set of diagnosis and fault detection tools.

All QUASAR Q4 interlockings, object controllers and block controllers share the same hardware platform, with a reduced number of module types. This enables maintenance optimization and cost reductions. Besides, processing modules, input / output modules and power supply modules are hot swappable.

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