

MRH™

NanoVIP®QUADRA™ is an **AE²A** (Any Energy Efficiency Analyzer) system that extends the successful NanoVIP® analyzers family thanks to the NanoVIP® **MRH™ technology**.

NanoVIP® QUADRA™ extends NanoVIP® TWO™ and NanoVIP® CUBE™ measuring range, breaking into the whole energy field, thanks to its extreme flexibility and wireless capabilities.

It works as a powerful standalone Electrical Power Quality analyzer as it includes all the measuring features of its related NanoVIP® CUBE™, but it can also measure parameters and efficiencies of energy systems like Solar sets, UPS, Generators, Storages, Chillers, Heating systems etc.

NanoVIP® QUADRA™ is powered by NanoVIP® **MRH™ technology** that, thanks to specific hardware and firmware solutions, is capable to offer to electrical field professionals the possibility to perform:

-  **Multipoint**
-  **Realtime**
-  **Heterogeneous**



*Measurement campaign on complex and spread energy handling systems.*

**MRH™ technology** finally overcomes the difficulty to catch events where and when they are really originated; it makes multipoint electrical checks safer, easier and quicker allowing professionals to patrol many critical points of a network in **realtime**.


MADE IN ITALY





MADE IN ITALY


**elcontrol**<sup>®</sup>  
energy net



-  - High usage flexibility
- Realtime, heterogenous multi-point measurement
- Unlimited loads, unlimited generators, solar panel strings, storages systems, grid connections and standalone points
- Self setting network
- Auto recognition of clients
- Calculations according to EN 61724 and CEI 82-25

-  - Estrema flessibilità di impiego
- Misure in tempo reale, multipunto ed eterogenee
- Illimitati carichi, illimitati generatori, pannelli e stringhe di pannelli, sistemi di accumulo, punti rete, singoli punti ed inverter
- Rete di misure auto configurata
- Riconoscimento automatico dei device periferici
- Calcoli in accordo con EN 61724 e CEI 82-25

-  - Gran versatilidad de uso
- Medición heterogénea multipunto en tiempo real
- Cargas ilimitadas, generadores ilimitados, cadenas de paneles solares, sistemas de almacenamiento, conexiones de red y puntos independientes
- Red de auto-configuración
- Reconocimiento automático de dispositivos cliente
- Cálculos y verificaciones según EN 61724 y CEI 82-25

-  - Hohe Nutzungsflexibilität
- Realtime, eterogene Mehrpunktmessung
- Unbegrenzte Lasten, unbegrenzte Generatoren, Solarpanel-Strings, Lagersysteme, Netzanschlüsse und Standalone-Punkte
- Selbstsetzendes Netzwerk
- Automatische Erkennung von Clientgeräten
- Berechnungen und Prüfungen nach EN 61724 und CEI 82-25



**NanoVIP® QUADRA™**

	Master	DE	DS	DGP
Master operating	✓			
Client operating		✓	✓	✓
Standalone	✓			
Single point monitoring	✓	✓		
USB connection	✓	✓	✓	✓
SD card	✓	✓	✓	✓
Local campaign data storage on SD	✓	✓	✓	✓
AC measurements	✓	✓		
DC measurements	✓	✓	✓	
Solar measurements	✓		✓	
Panel and panel string verification (CEI 82-25)	✓		✓	
Multi lines solar systems verification (CEI 82-25)	✓			
Multi lines solar system realtime measurements	✓			
Solarimeter interface	✓		✓	✓
Temps interface (Ambient and Panel)			✓	✓
Wind speed interface			✓	✓
General transducers interfaces				✓
Harmonics	✓	✓		
Transients	✓			
Inrush	✓			
Wave form	✓	✓		
Counters	✓	✓	✓	✓
Alarms	✓			
Active, Reactive and Apparent PE	✓	✓		
Tariffs	✓			
EN 50160 test	✓			
EN 61724	✓	✓	✓	
PC Software QUADRAstudio	✓			
Indoor max point to point distance	60m	60m	60m	60m
Outdoor point to point max distance	600m	600m	600m	600m

✓ = Available

Via Vizzano 44 - 40037  
Pontecchio Marconi (BO) Italy  
Phone +39 051 6782006  
FAX +39 051 845544  
sales@elcontrol-energy.net  
vendite@elcontrol-energy.net  
www.elcontrol-energy.net

**elcontrol**<sup>®</sup>  
energy net



## Safety

Safety is a key and indispensable point for Elcontrol.

**MRH™ technology** makes a further step in electrical safety as it allows professionals to follow measurement with safely closed electrical panel doors, still leaving them the chance to operate on analyzer.

In critical conditions, master can be used as a remote measurement monitor device that permits professional to remotely check what each network device is measuring without accessing powered on electrical panels.

## Time Efficient

**MRH™ technology** of NanoVIP® QUADRA™ system boosts professionals efficiency due to its real-time and multipoint measuring capability.

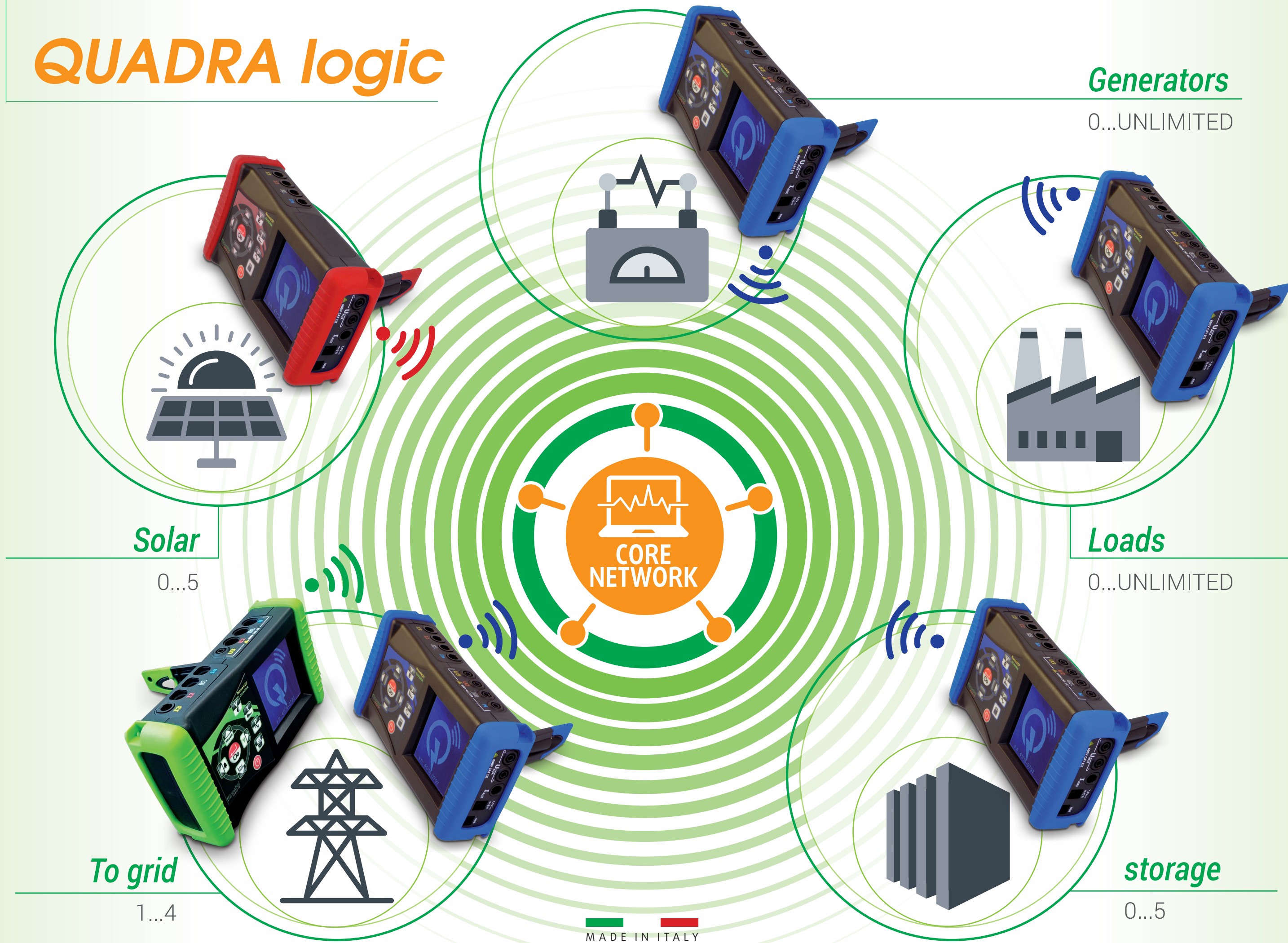
It cannot erase the analyzer deployment time (captors and ct clamps fixing) but it dramatically squeezes analyzing times. Let's consider a simple need of a professional that plans to make a measurements on three different points of a network; let's assume one our campaign each and five minutes time each for captors and CTs setting.

With a standard analyzer: 5+60+5 minutes per each point.  
3 hours and 30 minutes

With a **NanoVIP® QUADRA™** system: 5+5 minutes per each point and just 60 minutes of campaign. 1 hour and 30 minutes.



# QUADRA logic



Solar

0...5

Generators

0...UNLIMITED

Loads

0...UNLIMITED

To grid

1...4

storage

0...5

MADE IN ITALY

- Multipoint
- Realtime
- Heterogeneous

## Congruent & Solid Data

A typical limit of campaigns done on different positions of a network consists in the fact that they do not measure events in the same moment; it happens very often that, once you have caught an event, it is almost impossible to get also its source.

Realtime multipoint measurement of **NanoVIP® MRH™ technology** finally overcomes this limitation giving to professionals a set of measurements (done on different network points) but in the same moment and synchronized; whenever event happens, the source is caught as well.

No need for extra measurement, tests and attempts to recreate same event conditions.

## Naturally Heterogeneous

**NanoVIP® MRH™ technology** makes very simple and quick to set up and measure in real-time a network where heterogeneous devices (loads, generators, ups, solar systems etc.) are working together.

It is sufficient to declare each measuring device role to quickly launch a real-time measurement or an overall campaign. **NanoVIP® MRH™ technology**, due to its auto-recognition and self-configuration capabilities, does automatically all the necessary network settings.