I/A Series® Remote Terminal Unit (RTU)
RTU 40 – Hardware Configurations

OVERVIEW

The I/A Series RTU 40 is a powerful Intelligent Device specifically designed for integrated control system applications where, in addition to the traditional RTU functions, enhanced communication capabilities combined with high performance control and regulatory strategies are required.

As symbolized by the **CE** logo, the RTU 40 is in compliance with the applicable European Union directives.

Inside the RTU 40 family, three different basic architectures are available to easily meet all possible plant and customer needs, from simple cost-effective to complex highly reliable configurations:

- Rail – very compact enclosure, housing a single central processing unit (CPU), single power supply module and several I/O communication interfaces built-in on the CPU board.
- Target – 19-inch rack enclosure, housing a single CPU, single power supply module and up to seven CompactPCI card slots.
- Dual System – 19-inch rack enclosure, housing redundant CPUs, redundant power supply modules and up to three redundant CompactPCI card slots (six card slots total).

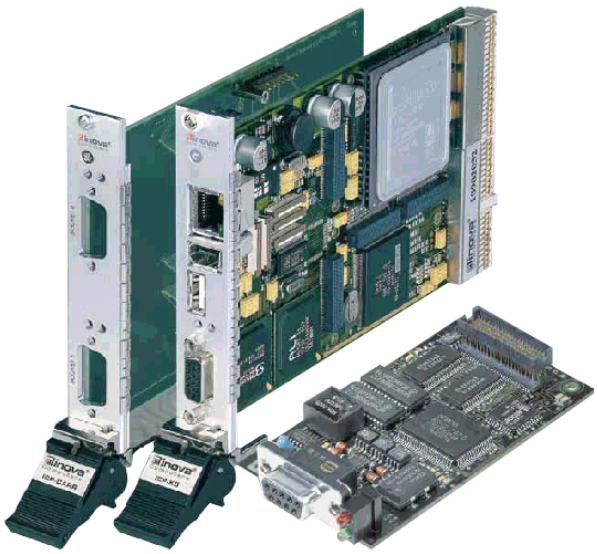
ENCLOSURES

RTU 40 enclosures are available for mounting on DIN rails and 19-inch industry standard chassis mounting. This flexibility allows system designers to choose the most suitable and cost-effective RTU configuration.

All enclosures are scratch and corrosion-resistant and are shielded against EMI radiation.

INTERFACES AND CARDS

All RTU 40 card slots are 3MU size (in height) while the backplane is a standard industrial CompactPCI.



FIELD I/O INTERFACES

The RTU 40 is a high-performance, modular, flexible, and multi-tasking remote SCADA data concentrator. When it must manage local I/O electric signals coming from field, one (or more) RTU 20 must be connected to one (or more) of its RS-232-C or RS-485 serial interfaces to perform data acquisition and control I/O functions to the non-intelligent plant devices/instruments. In the RTU 40 dual system configuration, with RS-485 interfaces, the connections to the local RTU 20 can be fault-tolerant.

POWER SUPPLY MODULES

According to the available power voltage, RTU 40 can be provided with one of the following power supply modules:

- 110/220 V ac, 48 to 70 Hz, 60 W
- 24 V dc, 60 W
- 48 V dc, 60 W.

OPERATING TEMPERATURES

The RTU 40 (all models) operate in two different temperature ranges:

- from 0°C to +50°C (standard), or
- from –25°C to +70°C (optional)

with maximum relative humidity up to 95% (noncondensing at 40°C).

RTU 40 RAIL CONFIGURATION

Just 18TE wide, the rail configuration is the most compact RTU 40 available.

Its enclosure, scratch and corrosion-resistant, can be mounted on a standard DIN rail allowing easy positioning in a variety of locations: outdoors (inside IP65/NEMA4 protected additional mini-cabinet or existing shelter) and indoors in the control room (inside dedicated or existing industrial rack, cabinet, panel, or wall).

The rail configuration includes:

- the RTU 40 CPU board and its relevant built-in interfaces including:
  - one Ethernet 10/100 Mbps
  - two serial RS-232-C (COM1 and COM2)
  - one parallel port (LPT1)
  - one FireWire and one USB interface
  - an optional piggy-back module capable of managing two serial lines (RS-232-C or RS-485) or one Fieldbus interface.
- a 60 W, ac/dc or dc/dc power supply module.

The RTU 40 rail enclosure features:

- Dimensions (H x W x D): 132 x 95 x 280 mm (5.2 x 3.7 x 11 in)
- Material: anodized aluminum
- I/O data cables that enter through standard connectors on front/rear card panels.

RTU 40 TARGET CONFIGURATION

Housed in a 19-inch wide card chassis, the target configuration is the largest RTU 40 available.

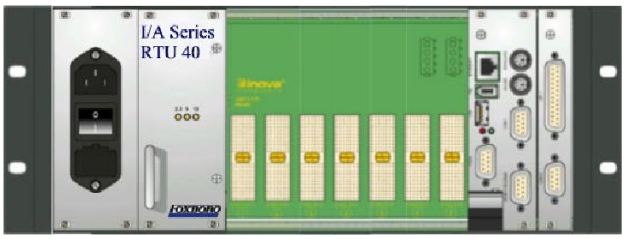
Its enclosure, scratch and corrosion-resistant, can be mounted in a standard 19-inch industrial rack allowing easy positioning in a variety of locations: outdoors (inside IP65/NEMA4 protected additional cabinet or existing shelter) and indoors in the control room (inside dedicated or existing rack, cabinet, or panel).

The target configuration includes:

- the RTU 40 CPU board and its relevant built-in interfaces including:
  - one Ethernet 10/100 Mbps
  - two serial RS-232-C (COM1 and COM2)
  - one parallel port (LPT1)
  - one FireWire and one USB interface
  - an optional piggy-back module capable of managing two serial lines (RS-232-C or RS-485) or one Fieldbus interface.
- a 60 W, ac/dc or dc/dc power supply module
- seven CompactPCI card slots (3MU height).

The RTU 40 target enclosure features:

- Dimensions (H x W x D): 132 x 482 x 280 mm (5.2 x 19 x 11 in)
- Material: anodized aluminum
- I/O data cables that enter through standard connectors on front card panels.



RTU 40 DUAL SYSTEM CONFIGURATION

Housed in a 19-inch wide card chassis, the dual system configuration has been designed for the redundant RTU 40.

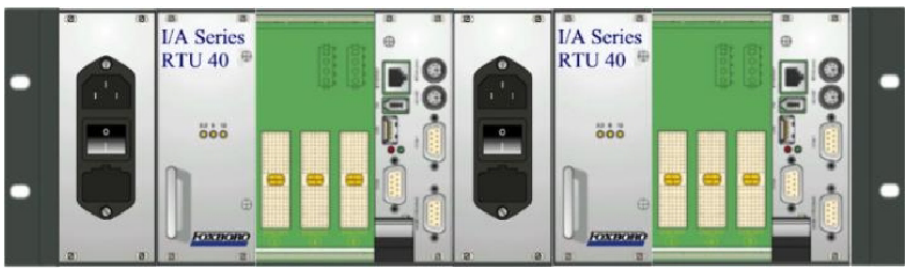
Its enclosure, scratch and corrosion-resistant, can be mounted in a standard 19-inch industrial rack allowing easy positioning in a variety of locations: outdoors (inside IP65/NEMA4 protected additional cabinet or existing shelter) and indoors in the control room (inside dedicated or existing rack, cabinet, or panel).

The dual system configuration includes:

- two RTU 40 CPU boards and their relevant built-in interfaces (main and backup units)
- two 60 W, ac/dc or dc/dc power supply modules (main and backup units)
- three plus three CompactPCI card slots, 3MU height (main and backup I/O interfaces).

The RTU 40 dual system enclosure features:

- Dimensions (H x W x D): 132 x 482 x 280 mm (5.2 x 19 x 11 in)
- Material: anodized aluminum
- I/O data cables that enter through standard connectors on front card panels.



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