

RTR-4® Portable Digital X-ray System Specifications



Special Features

- ◆ Fully digital imaging — no image degradation even with extended separation between the controller and imager
- ◆ Several hours of operation on battery power, or continuous operation on AC power through AC/DC converters (supplied) or external DC source
- ◆ LAN connection to controller available through supplied network interface card
- ◆ One-year warranty for entire system

Imaging Performance

- ◆ Can capture 0.08 mm (AWG 40) wire in air, and 0.16 mm (AWG 34) wire through 3 mm (1/8 in) of steel.
- ◆ Resolution better than 1.3 lp/mm.
- ◆ Total penetration over 25 mm (1 in) of steel.
- ◆ Ground-level imaging — down to 1.5 mm (0.06 in) above the ground. Beam angle 40 degrees for up-close operation.

Included with the RTR-4 System

- ◆ 50m (164 ft) cable on reel (controller to imager)
- ◆ RJ-45 Ethernet cable (controller to cable reel)
- ◆ 3m (10 ft) and 6m (20 ft) cable (imager to x-ray source)
- ◆ Operator Manual
- ◆ System restoration CD set
- ◆ Incident database management system

Controller Notebook Computer

- ◆ Processor: Core 2 Duo T7300, 2 GHz
- ◆ RAM: 2 GB
- ◆ Hard drive: 120 GB
- ◆ Optical drive: DVD/CD RW
- ◆ Display: 15.4" TFT active matrix 1680 x 1050 WSXGA+
- ◆ OS: Microsoft's Windows® XP Professional
- ◆ Battery: Lithium ion, over 4.5 hours continuous use
- ◆ Dimensions: 35.5 x 26.5 x 2.8 cm (14 x 10.4 x 1.1 in)
- ◆ Weight: 2.8 kg (6.1 lbs)
- ◆ Warranty: 3 years

X-ray Source

- ◆ Golden Engineering XR-200 pulsed 150 kVp source, 40° beam angle
- ◆ Integrated wireless communication — no add-on box
- ◆ Dose to target: <math><3.3 \mu\text{Sv}/\text{pulse}</math> at 1 m (3.6 mR/pulse at 1 ft)
- ◆ Dose behind source: <math><1.0 \mu\text{Sv}/\text{pulse}</math> at 6 cm (0.1 mR/pulse at 2.4 in)
- ◆ Dimensions: 32 x 19 x 11 cm (12.5 x 7.5 x 4.5 in)
- ◆ Weight: 5.5 kg (12 lbs) with battery
- ◆ Supplied with two 14.4V batteries and one charger (115 or 230 VAC)

Imager

- ◆ Imaging area: 20 x 25 cm (8 x 10 in)
- ◆ Digital image: 780 x 580 pixels
- ◆ Dimensions: 30w x 36h x 14.5d cm (12 x 14.3 x 5.8 in)
- ◆ Weight: 5.7 kg (12.7 lbs) with battery
- ◆ Supplied with two batteries and one external charger (115/230 VAC, 50/60 Hz)
- ◆ Variable power-on delay (0–3 minutes)

Temperature

	<u>Controller</u>	<u>Imager</u>
Operation:	10° to 35° C 50° to 95° F	-29° to 52° C -20° to 126° F
Storage:	-10° to 60° C 14° to 140° F	-40° to 60° C -40° to 140° F

Transport Case

- ◆ Rugged, weather-resistant case for the entire system, with heavy-duty padding, high-quality wheels, load-balancing handle, and easy-open latches
- ◆ Dimensions: 41 x 81 x 28 cm (19 x 32 x 11 in)
- ◆ Weight (full system in case): 34 kg (76 lbs)

RTR-4® Portable Digital X-ray Options and Accessories



Large Area Imager

For inspection of larger objects, the RTR-4 Large Area (LA) imager features an imaging area of 41 x 56 cm (16 x 22 in) — four times the area of the standard imager, with the same high resolution and ground-level imaging. With the LA imager, the RTR-4 can capture entire suitcases, parcels and other larger objects in a single image, and can inspect walls, vehicle panels and other large areas in far fewer images.

The LA imager measures 59 x 61 x 19 cm (23 x 24 x 7.5 in) and weighs 16 kg (35 lbs). The LA imager is supplied with a rugged transport case.



RTR-4 large area imager and standard imager

Toughbook® Control Computer

To handle more demanding field conditions, the RTR-4 can be controlled by a rugged Panasonic Toughbook computer. Designed to MIL-STD-810F, the Toughbook resists shock, vibration, moisture and dust. The Toughbook is covered by Panasonic's 3-year warranty.

The Toughbook features a full-size 34 cm (13.3 in) display. The Toughbook measures 30 x 24 x 6 cm (11.8 x 9.5 x 2.3 in) and weighs 4 kg (9 lbs).

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Wireless Control

The RTR-4 x-ray source, imager and controller can communicate wirelessly using modules installed in each component. This feature eliminates the cables between the components and provides added freedom for the operator.

The controller and imager use an encrypted 2.4 GHz signal that provides reliable communication at an unobstructed distance of 220 meters (720 ft) or through 30 cm (1 ft) of concrete. The imager and x-ray source use a security-coded 418 MHz signal. The wireless system is CE-marked and FCC-qualified.

RTR-4Pack Backpack Carrier

The RTR-4Pack holds the main system components (source, imager and controller) in a rugged backpack — with cables connected, ready to use.

More Options and Accessories

- ◆ 150 kVp x-ray source: Golden Engineering XR-200 (standard RTR-4 source)
- ◆ 300 kVp x-ray source: Golden Engineering XRS-3
- ◆ Cable, controller to imager: The RTR-4 system is supplied with one 50m (164 ft) cable. Up to two additional cables can be added, for a total of 200 m (656 ft).
- ◆ Languages: The RTR-4 user interface is available in many languages, including English, French, German, Italian, Spanish, Japanese, Korean and Vietnamese. Almost any language can be added.
- ◆ Training package, including video, workbook and reference cards
- ◆ Operator's manual (additional copies)

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