

LINUX RPU

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LINUX REMOTE PROCESSING UNIT

OVERVIEW

The remote processing unit (RPU) is designed to collect data from RWIS sensors. SSI has advanced RPU technology by introducing a Linux-based operating system, creating an ITS platform with more powerful, more flexible remote processing. The Linux RPU is designed for multitasking and is expandable to include additional ITS technologies such as traffic sensors, cameras, fixed anti-icing spray systems or wireless device control, such as with variable message signs or flashing beacon signs.

A key feature of the Linux RPU is the additional I/O port capabilities. These additional ports allow new ITS applications to be added to RWIS as technology advances. The Linux RPU offers improved lightning and surge protection for greater reliability, larger memory systems for greater processing power and improved communication capability.

FEATURES

- ▶ Based on industry-standard architecture
- ▶ Designed to withstand adverse environmental conditions
- ▶ NTCIP-ESS compatible and upgradable
- ▶ Flexible, powerful and expandable
- ▶ Direct ethernet connectivity
- ▶ Compatible with an array of sensors
- ▶ Complete data histories
- ▶ Supports a wide range of communication protocols





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PRODUCT DESCRIPTION

The Linux RPU supports up to eight pavement and sub-surface sensors with inputs and outputs for an array of atmospheric sensors and other devices. Analog and digital sensors can be added to expand monitoring capabilities for traffic and other applications.

The Linux RPU measures, stores and transmits current information from pavement surface, sub-surface, atmospheric sensors and ITS devices to the central server. It can be programmed with algorithms to determine chemical concentration for specific deicing chemicals.

BENEFITS

- ▶ Wide range of road weather and traffic information
- ▶ Improved communication capability (fiber optic, network, satellite)
- ▶ NTCIP-ESS open protocol
- ▶ Web browser maintenance program benefits repair technicians
- ▶ ITS platform allows for flexibility and future expansion



SPECIFICATIONS

RPU PANEL

Construction

- ▶ 8-slot card cage with ISA back plane
- ▶ Ruggedized industrial card rack PC (Personal Computer)
- ▶ Pentium grade processor with linux operating system for multitasking

Enclosure

- ▶ 30" x 24" x 13.31" aluminum (76.2 cm x 6.96 cm x 33.81 cm) (NEMA 4)

SERIAL PORTS

- ▶ Ten (2 system dedicated and 8 for device interface)
- ▶ RS-232 or RS-485 selectable
- ▶ On-board Ethernet port 10 / 100 Mbs

OPERATING TEMPERATURE

- ▶ -40°F to 160°F (-40°C to 70°C)

LIGHTNING PROTECTION

- ▶ Standard protection for 4 serial ports and all signals, extensive lightning protection including transorbs and gas discharge tubes, standard
- ▶ Optional lightning protection for all 10 serial ports available

POWER REQUIREMENTS

- ▶ 120 VAC or 12 VDC



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