



# **LAVA Light Industrial**

**Automation. Remote Management. Solid Connections.**





## Offering Resellers:

Reliable hardware to meet end-user customer requirements for commercial light industrial markets & applications.





- LAVA specializes in serial connectivity, our core technological competence.
- We are the première North American manufacturer of standard and custom serial ports and understand their applications with serial peripherals.
- LAVA engineering, manufacturing, and product testing are all carried out at our Toronto, Canada headquarters.
- Our philosophy and tight integration of operations enable us to take a strong partnership approach with our distributors.





## **Gain a competitive advantage:**

Buying from LAVA is not just buying products. LAVA cooperates closely with you to answer needs and solve problems.

Never worry about integrating different brands of hardware and software, reliability of your connections, or who to turn to when you are having difficulty.





- **LAVA**  
manufactures  
**I/O cards &**  
**serial device**  
**servers.**

|                            |  |
|----------------------------|--|
| Serial Cards               | PCI, PCIE, & ISA<br>1, 2, 4, & 8-port                            |
| Combo<br>(Serial/Parallel) | PCI, PCIE, & ISA<br>1 or 2 serial<br>+1 parallel                 |
| Ether-Serial Links         | RS-232/422/485<br>1, 2, 4, & 8-port<br><i>(with/without SSL)</i> |





## Product Summary

| Product                              | Ports |   |   |   |   |    | Connectors |       | Modes  |        |        |     | Notes                |
|--------------------------------------|-------|---|---|---|---|----|------------|-------|--------|--------|--------|-----|----------------------|
|                                      | 1     | 2 | 4 | 5 | 8 | 16 | DB-9       | RJ-45 | RS-232 | RS-422 | RS-485 | TTL |                      |
| Ether-Serial Link 1-DB9-232          | ✓     |   |   |   |   |    | ✓          |       | ✓      |        |        |     |                      |
| Ether-Serial Link 1-DB9-232 SSL      | ✓     |   |   |   |   |    | ✓          |       | ✓      |        |        |     | SSL encryption       |
| Ether-Serial Link 2-DB9-232          |       | ✓ |   |   |   |    | ✓          |       | ✓      |        |        |     |                      |
| Ether-Serial Link 4-DB9-232          |       |   | ✓ |   |   |    | ✓          |       | ✓      |        |        |     |                      |
| Ether-Serial Link 4-DB9-232 Cabled   |       |   | ✓ |   |   |    | ✓          |       | ✓      |        |        |     | Fan-out cable        |
| Ether-Serial Link 5-DB9-232 Embedded |       |   |   | ✓ |   |    | ✓          |       | ✓      |        |        |     | Embedded             |
| Ether-Serial Link 8-DB9-232 Cabled   |       |   |   |   | ✓ |    | ✓          |       | ✓      |        |        |     | Fan-out cables       |
| Ether-Serial Link 16-DB9-232 Cabled  |       |   |   |   |   | ✓  | ✓          |       | ✓      |        |        |     | Fan-out cables       |
| Ether-Serial Link 1-RJ45-232         | ✓     |   |   |   |   |    |            | ✓     | ✓      |        |        |     |                      |
| Ether-Serial Link 1-RJ45-232 SSL     | ✓     |   |   |   |   |    |            | ✓     | ✓      |        |        |     | SSL encryption       |
| Ether-Serial Link 2-RJ45-232         |       | ✓ |   |   |   |    |            | ✓     | ✓      |        |        |     |                      |
| Ether-Serial Link 4-RJ45-232         |       |   | ✓ |   |   |    |            | ✓     | ✓      |        |        |     |                      |
| Ether-Serial Link 8-RJ45-232         |       |   |   |   | ✓ |    |            | ✓     | ✓      |        |        |     |                      |
| Ether-Serial Link 1-DB9-422          | ✓     |   |   |   |   |    | ✓          |       |        | ✓      |        |     |                      |
| Ether-Serial Link 1-DB9-422 SSL      | ✓     |   |   |   |   |    | ✓          |       |        | ✓      |        |     | SSL encryption       |
| Ether-Serial Link 2-DB9-422          |       | ✓ |   |   |   |    | ✓          |       |        | ✓      |        |     |                      |
| Ether-Serial Link 1-RJ45-422         | ✓     |   |   |   |   |    |            | ✓     |        | ✓      |        |     |                      |
| Ether-Serial Link 2-RJ45-422         |       | ✓ |   |   |   |    |            | ✓     |        | ✓      |        |     |                      |
| Ether-Serial Link 1-DB9-485          | ✓     |   |   |   |   |    | ✓          |       |        |        | ✓      |     |                      |
| Ether-Serial Link 1-DB9-485 SSL      | ✓     |   |   |   |   |    | ✓          |       |        |        | ✓      |     | SSL encryption       |
| Ether-Serial Link 2-DB9-485          |       | ✓ |   |   |   |    | ✓          |       |        |        | ✓      |     |                      |
| Ether-Serial Link 1-RJ45-485         | ✓     |   |   |   |   |    |            | ✓     |        |        | ✓      |     |                      |
| Ether-Serial Link 2-RJ45-485         |       | ✓ |   |   |   |    |            | ✓     |        |        | ✓      |     |                      |
| Ether-Serial Link 1-TTL              | ✓     |   |   |   |   |    |            |       |        |        |        | ✓   | Embedded, pin header |

Ether-Serial Links come complete with NA, UK, or European power supplies, Ether Link Manager software





| Product                        | Input                   |     | Outputs |              |          |              |         | Connectors |            |              |               | UARTs        |       |       | Operating Systems |     |              |        |        |           |         |          |        |        | Notes |            |       |                |   |
|--------------------------------|-------------------------|-----|---------|--------------|----------|--------------|---------|------------|------------|--------------|---------------|--------------|-------|-------|-------------------|-----|--------------|--------|--------|-----------|---------|----------|--------|--------|-------|------------|-------|----------------|---|
|                                | ISA                     | PCI | Serial  | Par. Bi-dir. | Par. EPP | Par. ECP/EPP | USB 1.1 | USB 2.0    | DB9 (male) | DB9 (female) | DB25 (female) | DB 25 (male) | 16550 | 16650 | 1665A             | DOS | Win 3.1/3.11 | Win 95 | Win 98 | Win 98 SE | Win NT4 | Win 2000 | Win Me | Win XP |       | Linux 2.4+ | QNX 6 |                |   |
| <b>Serial Cards</b>            |                         |     |         |              |          |              |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         |          |        |        |       |            |       |                |   |
| PCI                            | SSerial-PCI             | ●   | 1       |              |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | Low-profile PCI<br>RS-422 pinout                      |
|                                | SSerial-PCI/LP          | ●   | 1       |              |          |              |         |            |            | 1            |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | RS422 SS-PCI            | ●   | 1       |              |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | DSerial-PCI             | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | DSerial-PCI/LP          | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | Low-profile PCI, fan-out cable included               |
|                                | DSerial-PCI Powered     | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | DSerial-PCI 3.3V        | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | For 3.3 volt PCI and PCI-X                            |
|                                | Quattro-PCI             | ●   | 4       |              |          |              |         | 4          |            |              |               | ✓            |       |       |                   | ♦   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | Low-profile PCI, fan-out cable included               |
|                                | Quattro-PCI/LP          | ●   | 4       |              |          |              |         | 4          |            |              |               | ✓            |       |       |                   | ♦   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | Quattro-PCI Powered     | ●   | 4       |              |          |              |         | 4          |            |              |               | ✓            |       |       |                   | ♦   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | SVDC pin 1, 12VDC pin 9<br>For 3.3 volt PCI and PCI-X |
|                                | Quattro-PCI 3.3V        | ●   | 4       |              |          |              |         | 4          |            |              |               | ✓            |       |       |                   | ♦   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | Octopus 550             | ●   | 8       |              |          |              |         | 8          |            |              |               | ✓            |       |       |                   | ♦   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | Fan out cable included                                |
|                                | LavaPort-650            | ●   | 1       |              |          |              |         | 1          |            |              |               | ✓            |       | ✓     | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | LavaPort-PCI            | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | ✓   |
| LavaPort-Quad                  | ●                       | 4   |         |              |          |              | 4       |            |            |              | ✓             |              | ✓     | ♦     | ✓                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| ISA                            | SSerial-550             | ●   | 1       |              |          |              |         | 1          |            | 1            |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | RS-422 pinouts |   |
|                                | DSerial-550             | ●   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     |                | ✓   |
|                                | RS422-550               | ■   | 2       |              |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     |                | ✓   |
|                                | LavaPort-ISA            | ■   | 1       |              |          |              |         | 1          |            |              |               | ✓            |       | ♦     | ✓                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     |                | ✓   |
|                                | LavaPort-PnP            | ●   | 1       |              |          |              |         | 1          |            |              |               | ✓            |       | ♦     | ✓                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     |                | ✓   |
| <b>Parallel Cards</b>          |                         |     |         |              |          |              |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         |          |        |        |       |            |       |                |   |
| PCI                            | Parallel-PCI            | ●   |         | 1            |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | For 3.3 volt PCI and PCI-X                            |
|                                | Parallel-PCI/LP         | ●   |         | 1            |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | Parallel-PCI 3.3V       | ●   |         | 1            |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | Dual Parallel-PCI       | ●   |         | 2            |          |              |         | 2          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| ISA                            | Parallel Bi-directional | ■   |         | 1            |          |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | Parallel-ECP/EPP        | ■   |         |              | 1        |              |         | 1          |            |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| <b>Combo Cards</b>             |                         |     |         |              |          |              |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         |          |        |        |       |            |       |                |   |
| PCI                            | SP-PCI                  | ●   | 1       | 1            |          |              |         | 1          | 1          |              |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              | For 3.3 volt PCI and PCI-X                            |
|                                | 2SP-PCI                 | ●   | 2       | 1            |          |              |         | 1          | 1          | 1            |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | 2SP-PCI 3.3V            | ●   | 2       | 1            |          |              |         | 1          | 1          | 1            |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | LavaPort-Plus           | ●   | 2       | 1            |          |              |         | 1          | 1          | 1            |               | ✓            |       | ✓     | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| ISA                            | 2SP-ISA (2SP-550)       | ■   | 2       | 1            |          |              |         | 1          | 1          | 1            |               | ✓            |       |       | ♦                 | ✓   | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| <b>USB 2.0 and 1.1 Devices</b> |                         |     |         |              |          |              |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         |          |        |        |       |            |       |                |   |
| PCI                            | USB 2.0 Host Adapter    | ●   |         |              |          |              | 2       |            |            |              |               |              |       |       |                   |     |              |        |        |           |         | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
|                                | USB 1.1 Host Adapter    | ●   |         |              |          | 2            |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |
| <b>Specialty Cards</b>         |                         |     |         |              |          |              |         |            |            |              |               |              |       |       |                   |     |              |        |        |           |         |          |        |        |       |            |       |                |   |
| PCI                            | B255-PIO                | ●   |         |              |          |              |         | 1          |            |              |               |              |       |       |                   |     | ✓            | ✓      | ✓      | ✓         | ✓       | ✓        | ✓      | ✓      | ✓     | ✓          | ✓     | ✓              |   |

etc





## Most Popular for LIGHT INDUSTRIAL Applications



ESL RS-232 1-DB9



Quattro-PCI Powered



ESL RS-232 4-DB9 Cabled



DSerial-PCI|LP



Ether-Serial DIN mounting



ESL RS-232 5-DB9



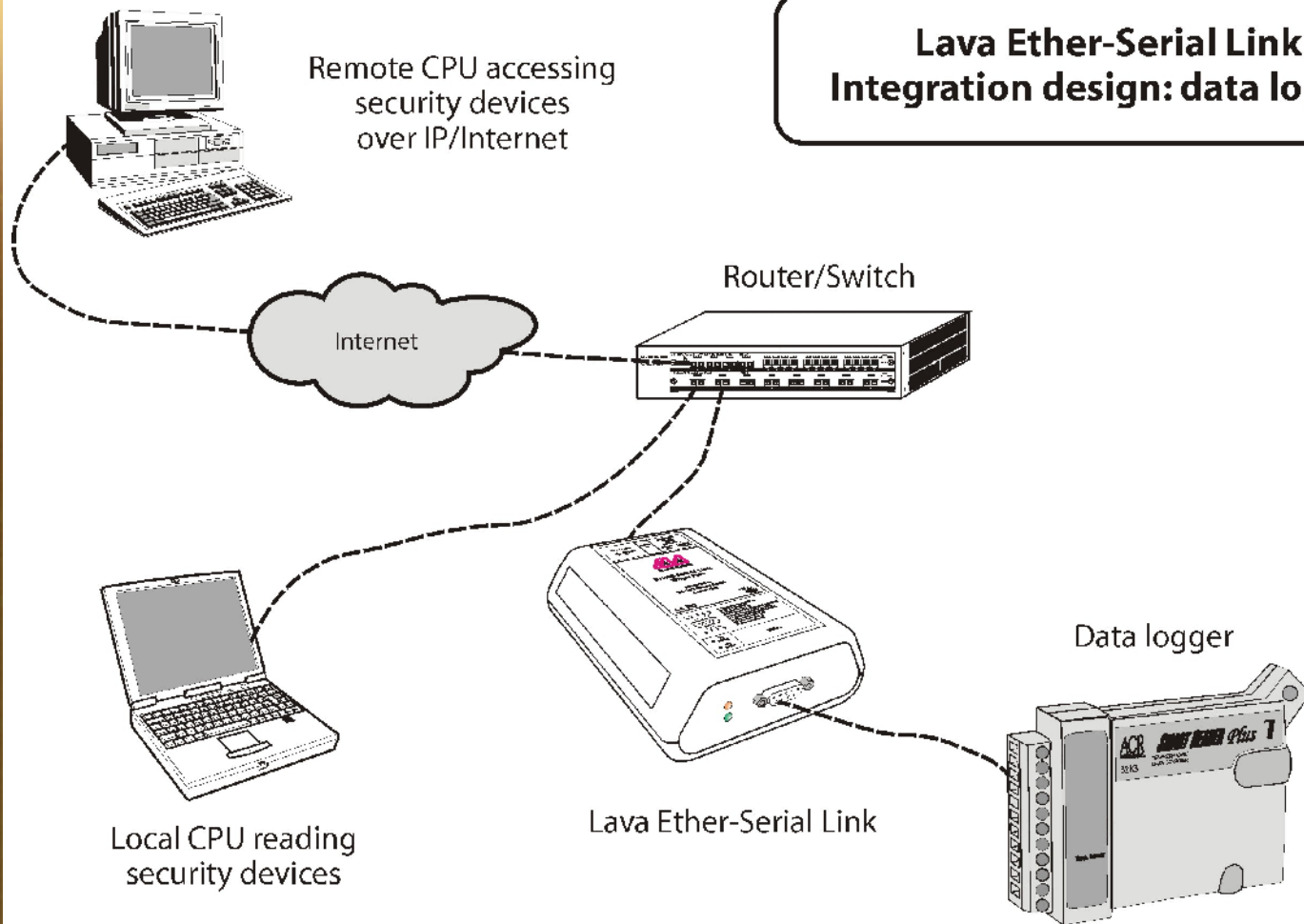
SSerial-550

DataTap-IP (Data-sniffer)



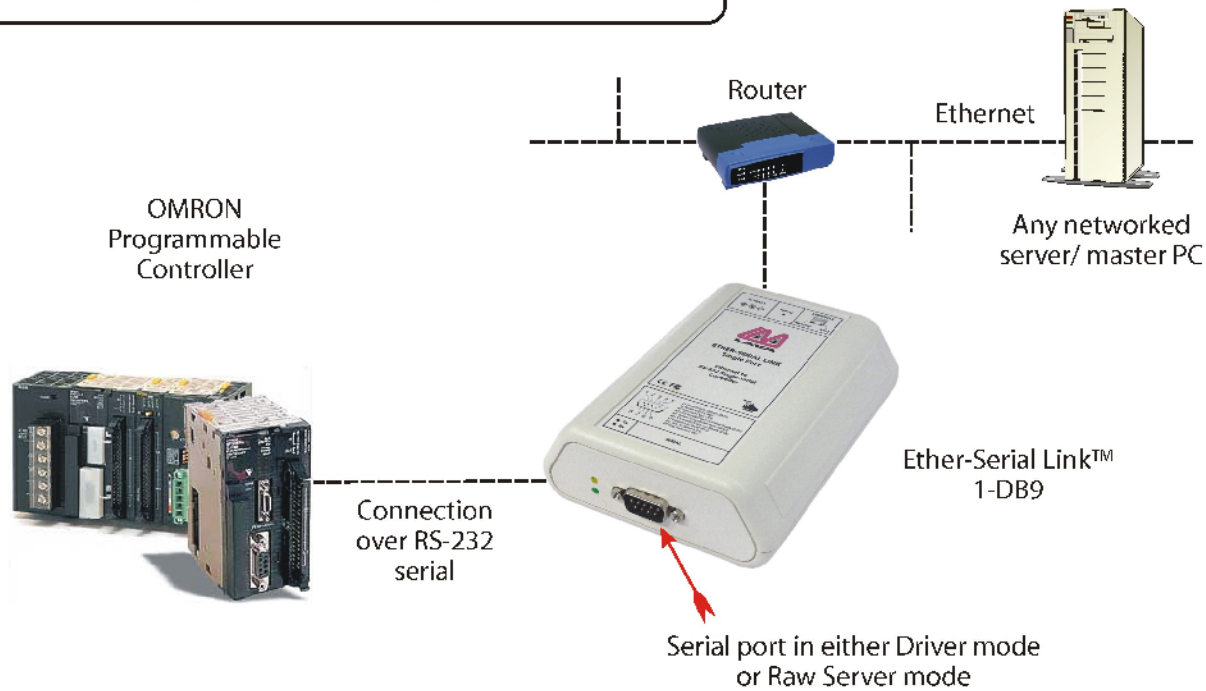


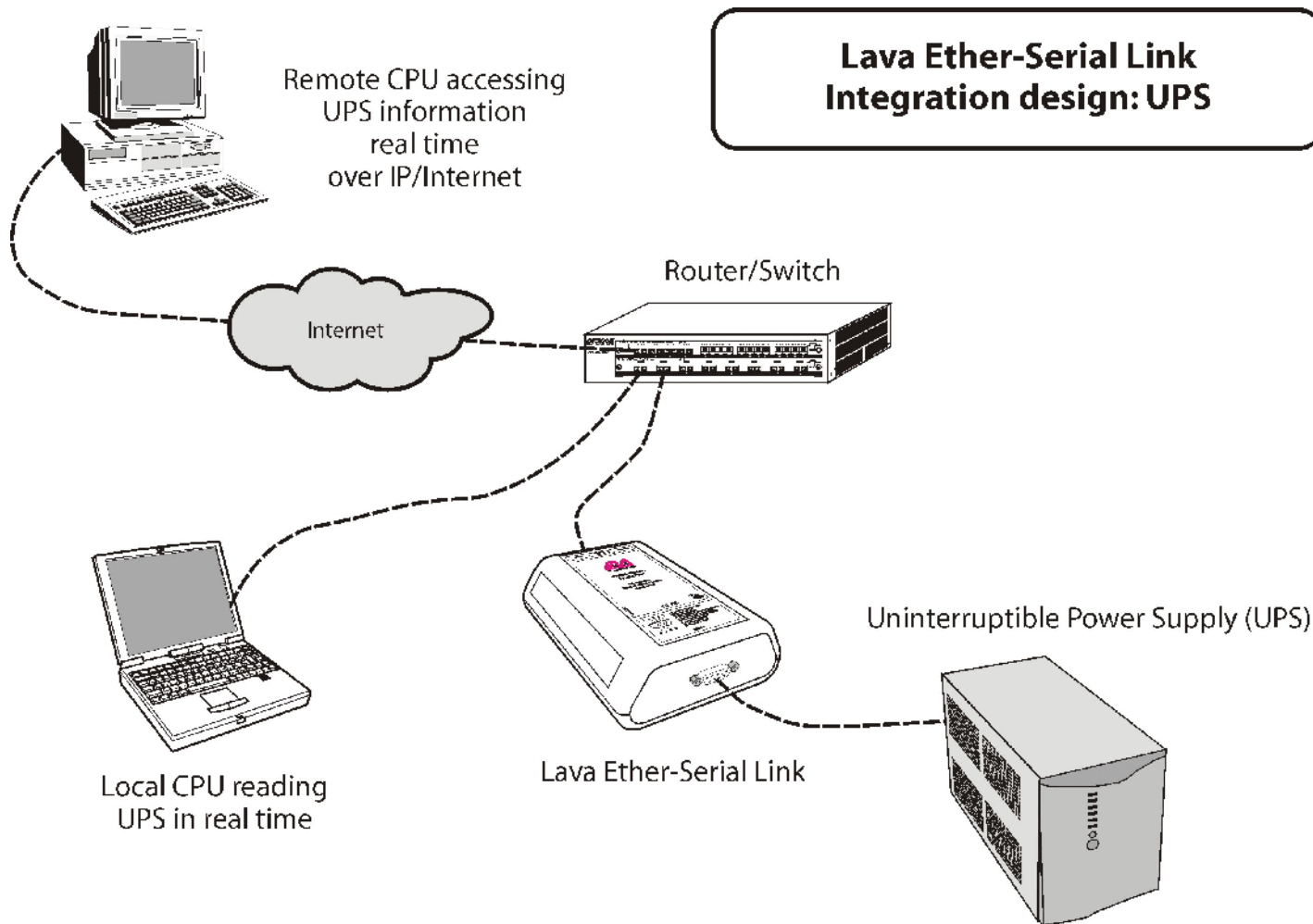
**Lava Ether-Serial Link  
Integration design: data logger**





**Lava Ether-Serial Link™**  
**Integration design for OMRON Programmable Controller**







## Sample LAVA applications for Light Industrial/Manufacturing Customers

**LAVA Ether-Serial Links** for timing, frequency, and synchronization solutions.

**LAVA Ether-Serial Links** for manufacture and market of computerized mill automation systems, custom PLCs, and motor control products.

**LAVA Parallel-PCI cards** for transatlantic aerospace and defense.

**LAVA Parallel-PCI cards** for undisclosed homeland security.

**LAVA SSerial-PCI** for monitoring technology systems.

**LAVA Quattro-PCI cards** for world's largest maker of forestry equipment and medium speed engines.

**LAVA Quattro-PCI cards** for the world's leading manufacturer of catamarans, sailboats, and kayaks.

**LAVA Quattro-PCI/LP cards** for testing, automation, and applications development.

**LAVA Quattro-PCI/LP cards** for manufacturer of industrial marking machines, metal tag printers, barcode readers, and custom machinery.

**LAVA Ether-Serial Links** for credit card systems, leak detection equipment, monitoring wells, self-service equipment, tanks, hoses, compressors, & more.

**LAVA DSerial-550** for internal infrastructure.





# What can LAVA do for you?

- **Specialized focus:**

LAVA designs and manufactures only top quality parallel, serial, and Ethernet I/O boards and devices.

- **100% product testing:**

LAVA uses only the highest quality components and subjects every final product to comprehensive testing before it leaves the factory, virtually eliminating reseller maintenance and servicing costs.

- **Standards-based design:**

LAVA I/O products stringently conform to industry standards and protocols, ensuring compatibility and interoperability with other manufacturers' hardware, software, and peripheral devices.

- **Real-time technical support:**

LAVA Technical Support is staffed by technical engineers who provide support for Windows, Linux, and QNX operating systems. They can answer questions or troubleshoot installations Monday through Friday, 9:00 a.m. to 5:30 p.m. EST.





- **Customization of products:**

Centralized operations uniquely position LAVA to quickly and cost-effectively create custom solutions for specialized users. With dual high-speed surface mount technology assembly lines and the latest in wave solder equipment, we can ensure high volume and quick production runs.

- **LAVA Lifetime Warranty:**

All LAVA I/O products are guaranteed to last a lifetime. Any LAVA product that fails to perform its intended function will be repaired or replaced.







**Call: +416-674-5942**

**Web: [www.lavalink.com](http://www.lavalink.com)**

