LANTRONIX®

IntelliBox 2100 Device Server

- ▶ **Reduce service calls or trips to repair or check on equipment IntelliBox does it for you!**
- ▶ **Save time, reduce costs and increase efficiency**
- ▶ **Network-enables equipment for Internet access**
- ▶ **Proactively monitors serial and Ethernet devices**
- ▶ **Takes automatic action and/or troubleshooting**
- ▶ **Automatically reporting with email or RSS**

RoHS
WEEE COMPLIANT

Fully Automate Your Remote Equipment with Real-time Event Management and Reporting

IntelliBox®-I/O 2100 is a breakthrough in truly automated control of remote equipment. Powered by Lantronix EventTrak™ technology, this highly-advanced, programmable device server connects your equipment to an IP network and monitors it to watch for events at specified intervals. When an event occurs, IntelliBox automatically sends pre-determined, user-defined command(s) to the equipment causing it to take appropriate and/or corrective actions – without any user intervention. IntelliBox can send email notification that the event was detected and handled accordingly.

True Autonomous Control with EventTrak

IntelliBox proactively monitors and controls remote digital I/O, dry contact (relay) and RS232/422/485-based equipment. With built-in EventTrak technology, IntelliBox can be set to query an attached device at timed intervals then, depending on the results, take pre-specified action(s). In addition to monitoring a serial line the IntelliBox can also monitor digital I/O. Fluid-level monitoring is a simple example – if IntelliBox notices a digital float sensor drop to a 'low level,' it can trigger a relay to start the fluid pump. When the level is restored the relay is triggered to stop the pump. IntelliBox sends an email to the user notifying them of the situation and the actions taken. Instead of reacting to an event or problem, users are proactively notified that an event occurred and the appropriate response automatically took place. This also enables users to control networked equipment directly through the serial or I/O port rather than depending on a PLC or SCADA server. In some instances, several events should occur before action is taken. EventTrak allows "Chain Definitions" (series of events/ actions) to be defined. They can be saved, stored and transferred from one IntelliBox to another, providing a great deal of flexibility for large-scale deployment.

IntelliBox is ideal for alarms, fluid pumps, motor drives, lights, fans, phone systems, access/control/alarm panels, HVAC equipment, PLC's, projectors, security cameras, proximity readers, card readers, etc.

Automated Reporting

IntelliBox consolidates the task of monitoring/reporting on multiple pieces of equipment. Rather than query and review the output of each device separately, users can configure the IntelliBox to query attached equipment at configurable intervals and gather the returned data. Incoming data can be sent via email or RSS feed, allowing hundreds of devices to be monitored from one RSS-enabled web page. Incoming data can be scanned for specific information. When it is detected, IntelliBox can send an email flagged as "Important" along with the data and take corrective action if needed.

Enterprise-grade Security and Data Center Standards

Equipped with the Lantronix Evolution OS™ networking operating system, IntelliBox delivers enterprise-grade level networking security with built-in SSH/SSL support. The hardened OS and mature protocol stack are resilient to denial of service (DoS) and port mapping attacks and prevent it from being used to bring down other networked devices. Evolution OS uses familiar data-center standards such as a Cisco-like command line interface (CLI) very similar to that used by routers and hubs, simplifying configuration and enterprise network integration. It also incorporates XML – a standard tool for web services, data transfer and rich content management that encapsulates data into a text-based format.

LANTRONIX® EVOLUTION OS™

Powerful and Rugged

IntelliBox is equipped with isolated serial, I/O and Ethernet ports and screw terminal connectors for serial, I/O, relay and power. It supports Modbus TCP, Modbus ASCII and Modbus RTU. IntelliBox also features 15KV serial port ESD protection which protects the IntelliBox from electrical overstress; ESD-protected I/O channels (independent and optically isolated); wide -40º–75ºC operational temperature range; and flexible power with 9-30 VDC and 9-24 VAC input range.

IntelliBox can act as a Modbus TCP slave, enabling Modbus TCP masters to monitor the status of digital inputs and set the digital outputs and relays. It can also be used as a "Modbus bridge" (Modbus TCP to Modbus RTU/ASCII protocol converter) enabling users to connect RS232/RS485 Modbus RTU/ASCII devices to their Ethernet network to be controlled by Modbus TCP masters (PLCs, OPC servers, SCADA software, etc).

Features and Specifications

Serial Interface
2 Serial ports: 1 RS232, 1 RS422/485 (4-wire/2-wire) with terminal block connection
Baud rate selectable from 300 to 230 Kbps
Customizable baud rate support for non-standard serial speeds
LED indicators for TXD and RXD activities

Serial Line Formats
Characters: 7 or 8 data bits
Stop bits: 1 or 2
Parity: odd, even, none

Flow Control
Hardware: RTS/CTS
Software: XON/XOFF

Modem Control
CTS, RTS, DTR, DCD on Serial 1

Digital I/O
2 Independently configurable digital I/Os, configured via GUI set-up Menu
Opto-isolated to eliminate grounding issues
Logically compatible with 3.3V level and also higher voltage levels
Transient voltage and polarity reversal protection built in

Relay
Contacts are capable of handling up to 8A resistive load
Contacts are mechanically isolated to eliminate grounding issues
Contacts are non-latching with Normally Open (NO) or Normally Closed (NC) for simple application such as power failure indication

Network Interface
1 RJ45 Ethernet port
10Base-T/100Base-TX
Full or half duplex
Auto-negotiating or hard coded

LED Indicators
10Base-T and 100Base-TX Link
Ethernet Activity
Serial Transmit Data
Serial Receive Data
Power / Status

Management
Internal web server
SNMP v2C (MIB-II, RS232MIB)
Serial login
Telnet/SSH login
XML
DeviceInstaller software

Power
Removable screw terminal block connector
9-30 VDC or 9-24 VAC with chassis ground
2.3W

Environmental
Temperature: -40°C to 75°C (-40° to 167°F) Operating
Temperature: -40°C to 85°C (-40° to 185°F) Storage
Humidity: 10% to 90% relative humidity, noncondensing

Agency Approvals
UL, CSA, FCC, CE,TUV, CTick,VCCI, FM Class 1, Div. 2

Protocols Supported
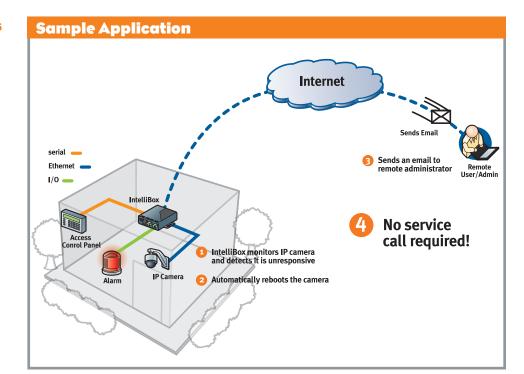ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, SMTP, FTP, DNS, Traceroute, HTTP

Industrial Application Protocols
Modbus TCP, Modbus ASCII/RTU

Sample Application

CPU
Lantronix DSTNI-EX 120 MHz clock, 256 KB SRAM, 16 KB Boot ROM Internal CPU Memory

Memory
4 MB Flash
2 MB SRAM

EEPROM
64 Kbits

Reset
Recessed push button

Packaging
Case: metal enclosure with wall mounts
IP30 enclosure rating
Dimensions: (L x W x H): 115 x 109 x 23 mm (4.54 x 4.30 x .90 in), terminal blocks included
Weight: 0.3 kg (0.63 lb) (10 oz)

Shipping Dimensions (L x W x H)
254 x 216 x 70 mm (10 x 8.5 x 2.75 in.)

Warranty
2-year limited warranty

Isolation
1.5 KVAC / 2.1 KVDC galvanic isolation between power input port and Ethernet port (except chassis ground)
1.5 KVAC / 2.1 KVDC galvanic isolation between power input port and serial ports
1.5 KVAC / 2.1 KVDC galvanic isolation between Ethernet port and serial ports
1.5 KVAC / 2.1 KVDC opto-isolation between digital I/O ports and all other ports
1.5 KVAC / 2.1 KVDC mechanical isolation between Relay contacts and all other ports
8 KV direct contact, 15 KV air discharge, ESD protection on all serial ports (IEC 1000-4-2, IEC 61000-4-2)
40 A (5/50 ns) EFT protection (IEC 61000-4-4), 12 A (8/20 us) lightning protection (IEC 61000-4-5) on Ethernet port
Transient voltage protection and ESD at power input with max non-repetitive surge current 800 A (8/20 us) (IEC 61000-4-2)
Transient voltage protection and ESD with max non-repetitive surge power 600W peak (10/1000 us) at digital I/O ports

Ordering Information

Part Number	Description
IBIO21002-01	IntelliBox-I/O 2100, 2 port IA device and I/O server with EventTrak, worldwide power supply with regional adapters.

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