455U-D Industrial Radio Modem

High Performance Modem
Performance, integrity, security
Powerful, flexible, easy to use

ELPRO TECHNOLOGIES
Industrial Wireless Technology

Licensed and license-free radio channels,
380 – 512 MHz, 10mW – 5W, 12.5/20/25 KHz

Three serial ports - two RS232 and one RS485,
two data ports and one configuration port
available with audio 600 ohm input for external modems

Connect to two serial devices using MDC technology...
Multiple Device Connectivity - two independent configurable
serial ports

Wireless data rate up to 19.2 Kb/s

Diagnostics and Configuration via dedicated RS232 port
Remote configuration and diagnostics to all units via the
wireless channel

Military-grade security encryption - 128 bit AES

Mesh Repeater networking – each unit can act as a
repeater and connect to serial devices

Multiple operating modes

OPR Functionality ... Protocol sensitive mode with
Optimum Path Routing for Modbus, DF1 and DNP3
networks - maximum network communications efficiency

Broadcast “multidrop” mode

Addressed “dial-up” or fixed connection mode

On-line and remote modem control via AT commands

Hot-redundant standby functionality

Backup battery charging functionality with smart power
monitoring and low power sleep mode
455U-D Industrial Radio Modem Range Specifications

Digital Input/Output
Input voltage-free contact / Output FET 30VDC 500mA
May be used for powering up local devices or hot-redundant standby control.

Operating Functions for 455U-D

Configuration/Diagnostics
Configuration via AT commands or dedicated Windows Configuration package
Configuration and diagnostics access to remote units via wireless channel, both on-line and off-line
Diagnostic information can be accessed by dedicated Windows package or on-line by a host serial device
RSSI and noise signal measurement in dBm
Supply voltage, battery voltage, internal temperature, antenna fault status

Multiple Device Connectivity (MDC)
Two independent wireless links managed simultaneously - two serial devices can be connected to each unit (RS232 & RS485).

Security
128-bit AES encryption of wireless data can be enabled
Uses a 16-byte encryption key combined with a random 16-byte initialization vector unique to each message
Remote configuration/diagnostics password protected.

Operating Modes
Broadcast mode - wireless "multi-drop"
Addressed mode - acknowledged or un-acknowledged
Optimum Path Routing (OPR) mode - protocol specific modes for Modbus, DF1, DNP3 and Profibus - ensures optimum wireless message routing for fastest system response in busy networks

Store& forward Repeater
Each unit can act as a repeater and modem
Multiple repeater functionality can be configured in each operating mode using routing tables

Hot-redundant Standby
Two units connected together in a hot-redundant standby configuration
Changeover triggered by radio or serial communication delay timeout,
Hot-redundant standby control.

Input voltage-free contact / Output FET 30VDC 500mA
May be used for powering up local devices or hot-redundant standby control.

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Hot-redundant Standby
Two units connected together in a hot-redundant standby configuration
Changeover triggered by radio or serial communication delay timeout,
CPU watchdog, low supply voltage, antenna fault

Model Details
455U - Type - Power - Band - Channel

Type | D | Data modem, full functionality
     | B | Data modem, Bell 202 or V23 messaging
     | C | Data modem compatible with ELPRO 405U

Power | L | 10 – 500mW
     | H | 0.5 - 5W

Band | 390 | 380 – 400 MHz
    | 430 | 420 – 440 MHz
    | 460 | 450 – 470 MHz
    | 500 | 490 – 512 MHz

Channel | N | 12.5 KHz
       | W | 25KHz

ELPRO Technologies is an ISO 9001:2008 Quality Assured Company.