

# Cellular Connection and Protocol Conversion for Smart Metering

## IEC 101/104 Protocol Conversion and Remote Management Platform



Edge Solution Ready Package

### ESRP-PCS-ICR3231

- Cellular Routers or Gateways Provide Secure Internet Connectivity for Devices and LANs via a Cellular Network
- Managing and Monitoring Substations using the IEC 60870-5 Communication Protocol
- Provides Bidirectional Conversion Between IEC101 and IEC104 Protocols

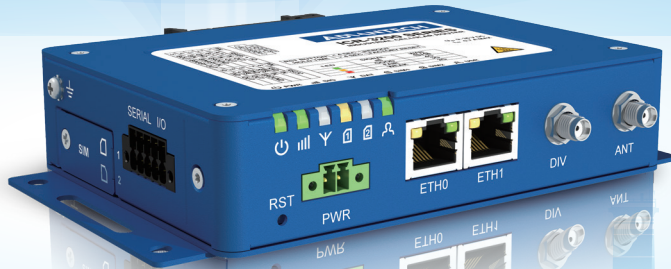
IEC 60870-5-104

IEC 60870-5-101

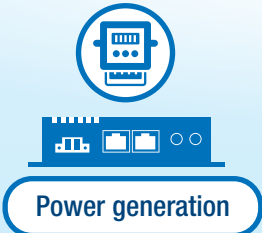


Control center

ESRP-PCS-ICR3231



Flow meter



Power generation



Industrial Field

# ADVANTECH

Enabling an Intelligent Planet

# Cellular Connection and Protocol Conversion for Smart Metering

## ESRP-PCS-ICR3231

### ✓ Cellular Routers or Gateways Provide Secure Internet Connectivity for Devices and LANs via a Cellular Network

The remote management and diagnostic gateway provides automatic wireless failover for wired networks and supports real-time data encryption in addition to the creation of VPN tunnels, which enhance data security.

### ✓ Managing and Monitoring Substations Using the IEC 60870-5 Communication Protocol

The gateway connects substations to control rooms via TCP/IP and Ethernet with the IEC 60870-5-104 protocol, allowing the service of multiple devices during operation, significantly reducing costs compared to when leased serial lines are employed on the LAN side of a substation to connect RTUs using the IEC 60870-5-101 protocol.

### ✓ Provides Bidirectional Conversion Between IEC101 and IEC104 Protocols

The gateway enables fast and cost efficient coupling between control stations and SCADA systems using the IEC 60870-5-101 and IEC 60870-5-104 communication standards. It also derives benefits from extensive protocol compatibility at the application level.

P/N	ESRP-PCS-ICR3231
WAN Type	GPRS/UMTS/HSPA+/LTE Ethernet WAN
number of 10/100 ETH port	2
SIM	2
Storage	Internal Flash 1.3 GB
Wi-Fi	Optional 2 x MIMO, 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac
Serial COM port	RS 232/485
I/O	YES
PoE	None
GPS Receiver	by model
Platform	Linux
Enhanced software development	Script/user module, Python, Bash, C/C++, Node-Red
VPN support	IPSec, OpenVPN, PPTP, L2TP, GRE
Security	HTTPS, SSH, VPN tunnels, SFTP, DMZ, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
Network and Routing	DHCP Server, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, DMVPN, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup Routers, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
Configuration	Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server, Backup configuration, Restore configuration
Device Management Tool	WebAccess/DMP

#### Ordering Information

ESRP-PCS-ICR3231

Industrial Cellular Router with IEC 101/104 Protocol conversion software