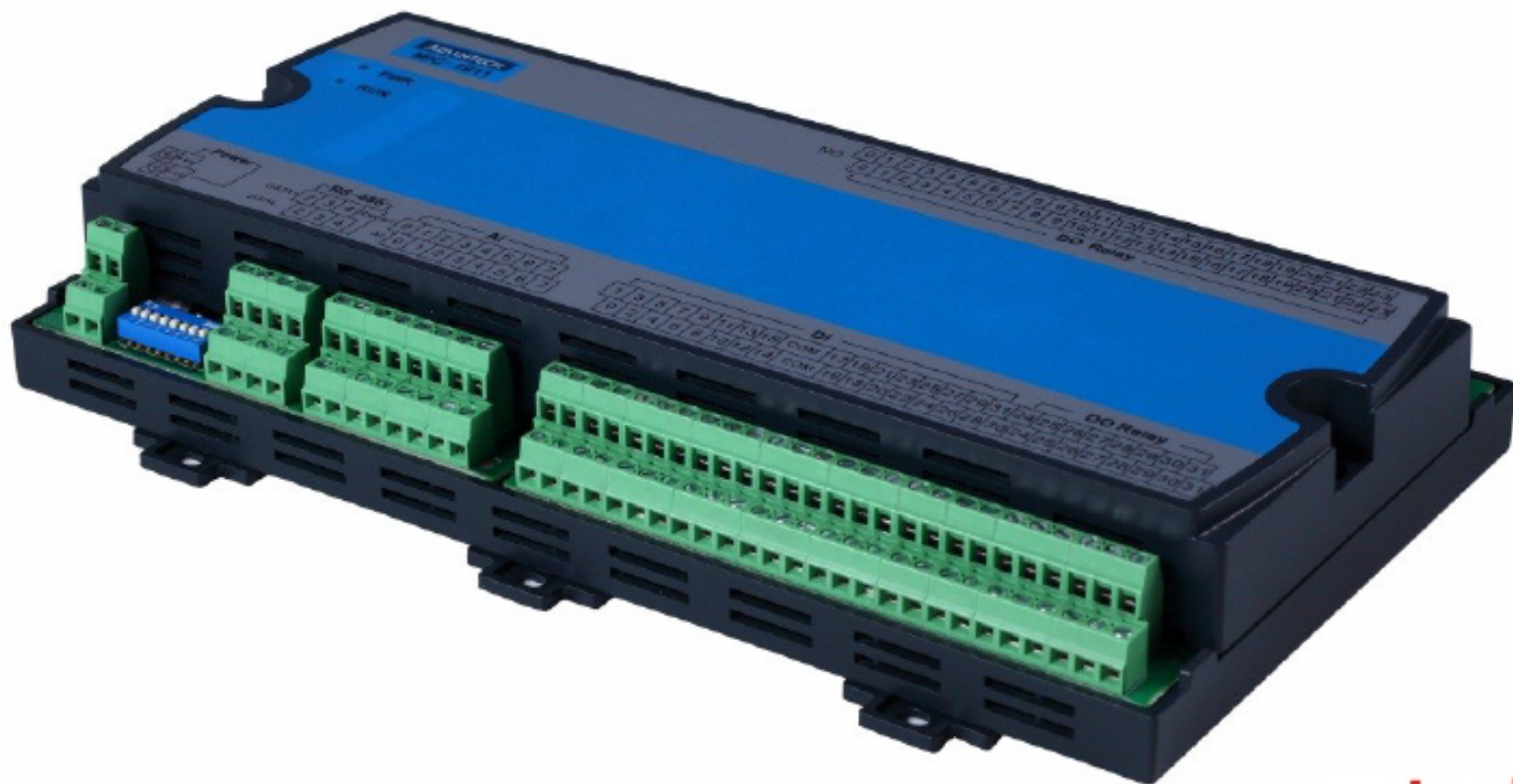


ADVANTECH

MIC-1911



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Introduction

- MIC-1911 is a standalone RTU/FRTU that provides a 16-bit 8-ch A/D converter, 32-ch Relay and 32-ch Digital input.
- This controller also supports 4 serial communication ports and 2 networking interfaces.
- You can seamlessly integrate your applications into MIC-1911 and speed up your system development with this application ready RTU.

Device Specification

| | | |
|-----------------|-----------------------|---|
| Environment | Humidity | 95% @ 40° C (non-condensing) |
| | Operating Temperature | -10 ~ 60° C (14 ~ 140° F) |
| | Storage Temperature | -20 ~ 80° C (-4 ~ 176° F) |
| General | Certifications | CE, FCC |
| | Enclosure | ABS+PC |
| | Mounting | Wallmount |
| | Power Consumption | <10 W (Typical) |
| | Power Requirement | 10 ~ 30 VDC |
| | OS Support | Windows CE 5.0 |
| | System Design | Fanless with no internal cabling |
| | Remote Management | Built-in Advantech DiagAnywhere agent on Windows CE |
| System Hardware | CPU | Xscale @PXA-270 520MHz |
| | Memory | Onboard 64 MB SDRAM/32 MB Flash |
| | Display | DB15 VGA connector, supports 640*480 @ 60 Hz |

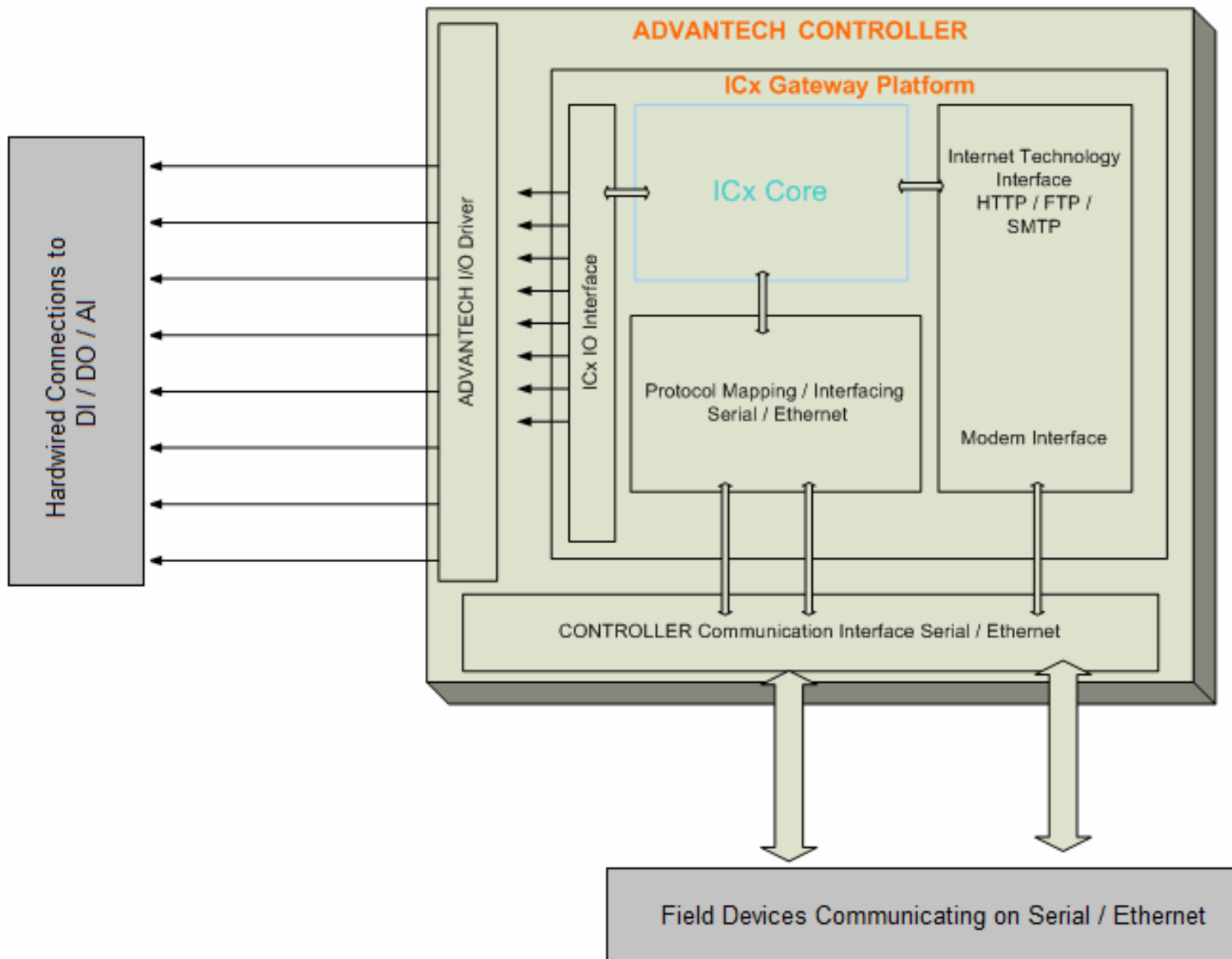
Comm. & I/O Interface

| | | |
|--------------------------------|-------------------------|--|
| Communication Interface | Serial Ports | 1 x RS-232 with DB9 (RTS,CTS,TX,RX), 3 xRS-485 with Terminal Block connector, Automatic RS-485 data flow control, Baud rate Max. 57600bps |
| | Isolation | Serial Port : 3000Vdc |
| | LAN | 2 x 10/100 Base-T RJ-45 ports |
| | USB | 1 x USB, OpenHCI, Rev. 1.1 compliant |
| Analog Input | Channels | 8 channel (differential, each channel can be configured with different range) |
| | Resolution | 16bit |
| | Sample Rate | 10Hz /sec. (total) |
| | Input Range | 0 ~ 150 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 5 V, 0 ~ 10V , 0 ~ 15 V, ± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, ± 15 V, ± 20 mA, 4 ~ 20 mA |
| | Input Impedance | Voltage: 20 M Ω Current: 120 Ω (Build-in120 Ω . resistor for Current Input) |
| | Accuracy | Voltage : +/- 0.1 %, Current : +/- 0.2 % |
| | Isolation | 3000Vdc |
| | CMR | @ 50/60 Hz 92DB |
| | High Common Mode | 200Vdc |
| | Drift | Span Drift ± 25 ppm/ $^{\circ}$ C, <i>ff</i> Zero Drift ± 6 μ V/ $^{\circ}$ C |
| | Connector | Terminal Block.(#14~22AWG) |

Comm. & I/O Interface

| | | |
|-----------------------|-----------------------|---|
| Digital Input | Channels | 32 channel |
| | I/O Type | Sink |
| | Wet Contact | Logic 0 : 0~10V |
| | | Logic 1: 19~30V |
| | Isolation | 3000Vdc |
| | Connector | Terminal Block.(#14~22AWG) |
| Digital Output | Channels | 32 channel |
| | I/O Type | Power Relay Form A |
| | Contact Rating | AC: 5A @ 250Vac DC: 30V@5A (Resistive Load) |
| | Isolation | 500Vdc |
| | Connector | Terminal Block.(#14~22AWG) |

ADVANTECH CONTROLLER – ICx Platform Architecture



Protocols Supported

- Both Master / Slave Implementation Supported
- MODBUS RTU and MODBUS TCP
- IEC 60870-5-101/ 103/104
- DLMS
- Ethernet I/P

Modem Communication

- Any modem supporting Windows DIALUP Connection (otherwise WINCE driver shall be provided by Modem Vendor)
- Facilities supported over GPRS Modem (any Internet connectivity)
 - VPN Connectivity
 - IEC 60870-5-104
 - FTP (Client / Server)
 - SMTP Email
 - Web Server (Web Interface) provision for remote Diagnostics & Control

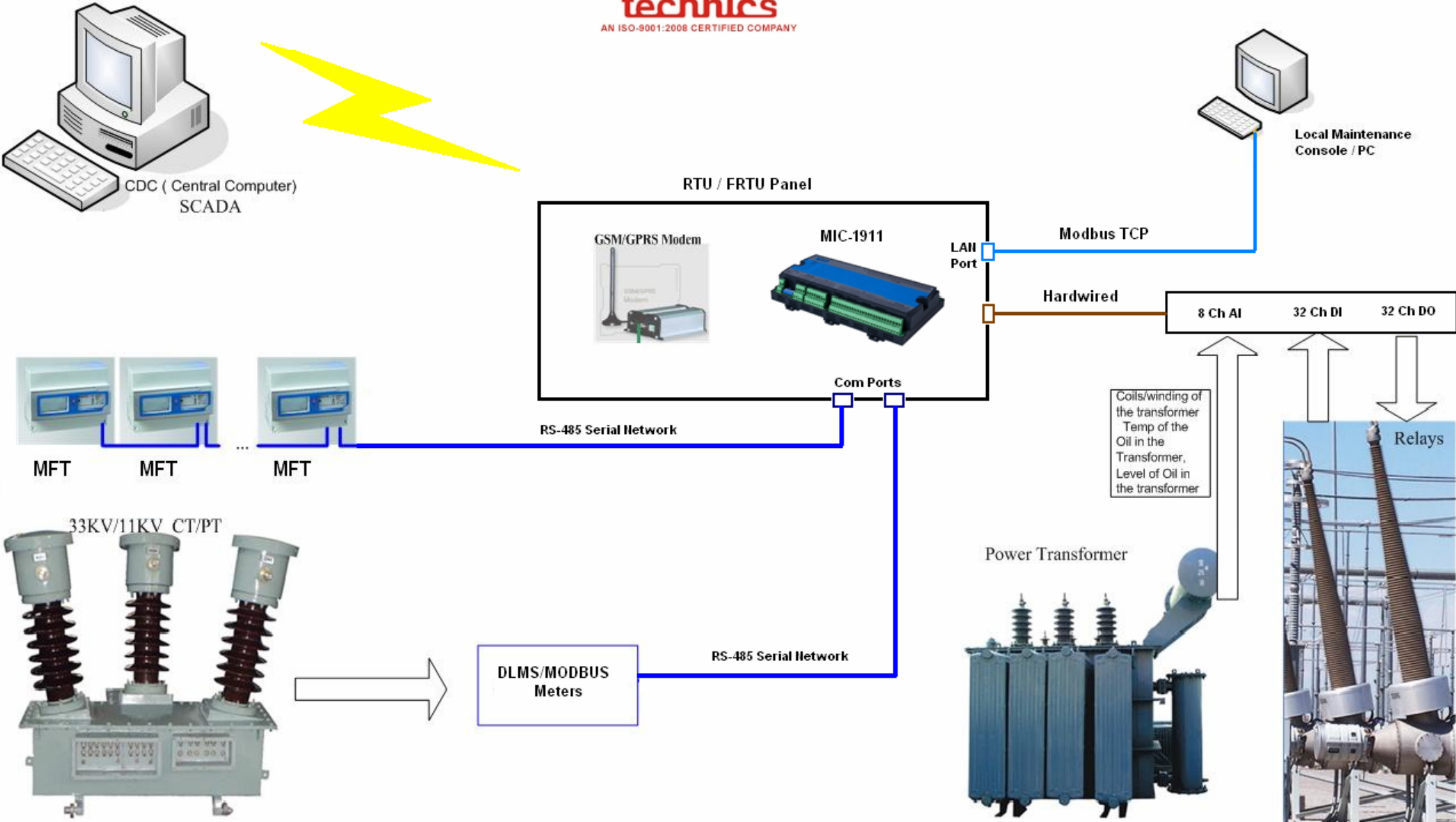
MIC-1911 Capabilities

- Acquiring analog values from Multifunction Transducers or alternatively through transducer-less modules and the status inputs of devices from the substation, processing and transmitting to Master stations. Capability to acquire analog inputs from analog input cards receiving standard signals viz current loops 4-20Ma , RTD etc.
- Receiving and processing digital commands from the master station(s).
- Isolation of 3000VDC on Serial ports, AI & DI points and 500VDC isolation on DO contacts.

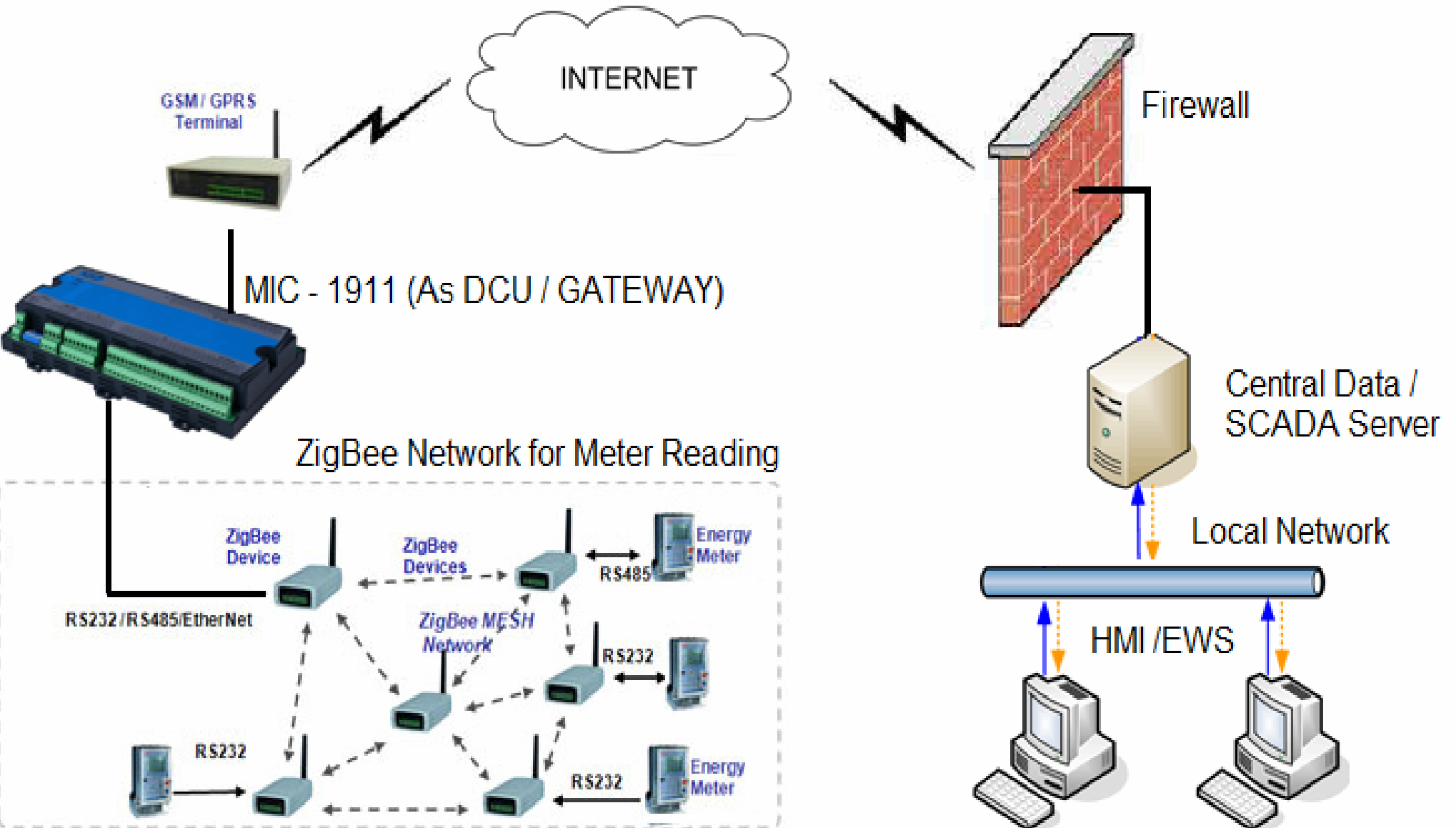
- Capability of automatic start-up and initialization following restoration of power after an outage without need of manual intervention. All restarts reported to the connected master stations.
- Remote database downloading of MIC-1911 from SCADA/DMS control centre.
- Supports VPN or M2M Connectivity for Security.
- Capable of acquiring analog values through transducers having output as 4-20 mA, 0-10 mA, 0-+10 mA etc using analog input modules.
- Remote Maintenance or Diagnostic Software provided to continuously monitor operation of MIC-1911 and report hardware errors to the connected master stations.

RTU/FRTU Solution (MIC-1911)

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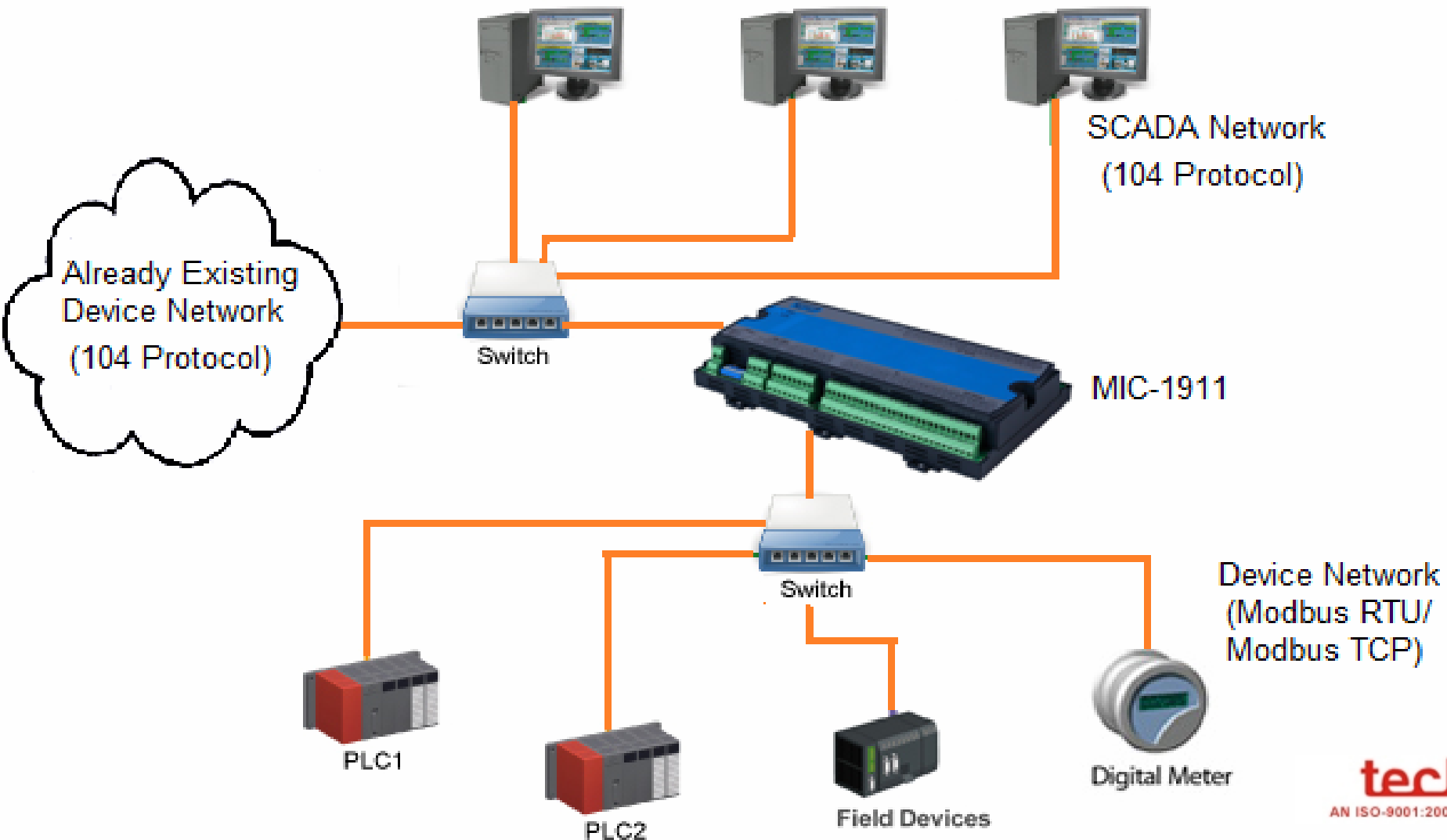
ZigBee AMR Solution (MIC-1911)



DAQ & Control Solution



SCADA CONTROL ROOM



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Thank you

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