Emerson’s Roxar™ Integrated Downhole Network (IDN) was designed to take an infrastructure host role in well completions, offering communication, power and interfacing for a variety of downhole instruments and devices.

The driver of the IDN is the Roxar Downhole Network Controller (DHNC) card that can be placed in a rack or Surface Acquisition Unit for land or platform wells, or in a Subsea Electronics Module for subsea wells. The DHNC card communicates instrument data to the end user over standard industry interfaces and protocols.

Emerson can offer a range of instruments that can be connected to the IDN:

- Roxar HS series gauges
- Roxar Wireless PT – Annulus B
- Roxar Matrix Downhole Wireless Interface™

**Applications**

- Permanent Downhole Pressure and Temperature Monitoring
- Real time pressure and temperature monitoring in the B annulus of subsea wells
- Intelligent Multistage Completion Network™
  - Pressure and temperature measurements in the lower completion
  - Temperature profiling over the reservoir in the lower completion

<table>
<thead>
<tr>
<th>Maximum number of instruments</th>
<th>32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable requirement</td>
<td>1 TEC (mono or dual conductor)</td>
</tr>
<tr>
<td>Maximum cable length</td>
<td>16,000 m (52,400 ft)</td>
</tr>
<tr>
<td>Main Interfaces</td>
<td>RS422, 10Mbit Ethernet</td>
</tr>
<tr>
<td>Main Protocols</td>
<td>MODBUS RTU, TCPI</td>
</tr>
</tbody>
</table>

**Key Benefits**

- All instruments can be served by a single cable in the well limiting the requirement to one feedthrough in the tubing hanger
- One network card enables simplified integration, testing, and maintenance activities
- Possibility to optimize monitoring strategy for each well without time consuming engineering requirements

The Integrated Downhole Network is a complete engineered solution. Consult your Emerson Automation Solutions representative for more information.