

The Cypress Envirosystems Wireless Gauge Reader [gas management] system allows Micrel facilities and maintenance to monitor legacy systems... Micrel saves time, money and effort by acting proactively... We are very pleased with our purchase.

Guy Gandenberger

Vice President, World Wide Operations

Micrel



CASE STUDY:
Gas Cylinder Management at Micrel
 WIRELESS GAUGE READER (WGR)
 WIRELESS TRANSDUCER READER (WTR)

OUR FAMILY OF PRODUCTS

WIRELESS PNEUMATIC THERMOSTAT (WPT)	WIRELESS GAUGE READER (WGR - 100)	WIRELESS STEAM TRAP MONITOR (WSTM - 100)
WIRELESS FREEZER MONITOR (WFM - 100)	WIRELESS TRANSDUCER READER (WTR - 100)	BLUE BOX SERVER (BBS - 100)



Reduce Wasted Gas

Installs in Minutes, No Breaking Seals

HEADQUARTERS

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SITUATION:

Micrel, a leading semiconductor manufacturer, needed to automate the monitoring of 100 gas cylinders to reduce wasted gas, save labor and avoid unplanned downtime. Traditional automation solutions were unacceptably disruptive and costly to implement.

- Mature facility constructed over 20 years ago
- Gas cylinders were replaced early to avoid outages, resulting in wasted gas and disposal fees
- Relied on scheduled operator rounds to read gauges twice a day totalling eight labor hours per day
- Periodic unplanned downtime caused by empty cylinders impacted efficiency and drove up costs



SOLUTION:

The WGR and WTR were installed at 70% less cost than traditional transducers. The installation avoided process downtime and was completed in minutes per cylinder.

	WGR and WTR	Wired Transducer
Process Downtime	\$0	\$1,000
Transducer/Sensor	\$1,200	\$300
Installation/Wiring (design, labor, materials)	\$50	\$1,500
Update legacy system to meet safety/fire codes	\$0	\$1,000
I/O Panel Termination	\$0	\$200
Total Cost (per point)	\$1,250	\$4,000
Total Project Cost	\$125,000	\$400,000

The WGR—an 'electronic eye'—clamps onto the face of pressure gauges and the WTR taps into weigh scales to extract the information required for gas management



- The WGR installs in minutes onto pressure gauges without breaking seals, performing leak checks, or running wires
- The WTR connects in minutes to weigh scales and legacy controllers to obtain levels for mixed-phase cylinders
- Built-in trending, graphing, and historization
- Configurable e-mail or text message alarms
- OPC and BACnet interfaces with existing automation

RESULT:

The information provided by the WGR and WTR enabled Micrel to improve the management of their gas cylinders resulting in less wasted gas, lower labor cost and fewer unplanned downtimes.

- **Reduced gas waste:** Decreased total gas purchases by approximately 10% by using more gas in each cylinder before change-out
- **Labor savings:** Reduced labor devoted to gas rounds by one full-time equivalent
- **Fewer unplanned downtimes:** Prevented eight unplanned shutdowns by sending low-gas alarms

Realized benefits from Cypress EnviroSystems' Gas Cylinder Management solution.

**\$215,000 Annual Savings
7-Month Payback**

	Annualized Savings
Gas Savings: 10% of gas usage	\$80,000
Labor Savings: One full-time equivalent	\$95,000
Reduced Downtime: \$5,000 per incident	\$40,000
Total Savings per Year	\$215,000