

THE NEED FOR ETHERNET IN INDUSTRIAL APPLICATIONS

OVERALL LANDSCAPE

Ethernet is the fastest growing communication technology in industrial automation. The key drivers of that growth are:



High demand in production are forcing automation players to deliver maximum uptime, all the time while maintaining a high level of quality.

CHALLENGES AND BENEFITS OF IMPROVED UPTIME

THE CHALLENGES OF IMPROVING UPTIME



HOW CAN I DIAGNOSE PROBLEMS AND ACCELERATE RESOLUTION SIMPLY AND EFFECTIVELY?

Even a well-designed process, built to be fault-tolerant, will experience problems that threaten uptime. While the most frustrating issues for plant networks are intermittent problems that can occur, changeovers or adding new devices can also introduce downtime.

THE BENEFITS OF IMPROVED UPTIME

INCREASED PROFITS

If a line builds 100 units/minute at a profit of \$1/unit, one hour of downtime means \$6,000/hour in lost production. In the automotive industry this is more than \$20,000/minute

REGAINED CAPACITY

Improved uptime creates additional capacity and makes a plant better able to address demand surges.



IMPROVED DIRECT LABOR COSTS

When you increase uptime, your production levels go up while labor remains the same. This decreases the labor cost per unit. In addition, employees can focus on their primary tasks and increase efficiency.

LOWER INVENTORY COSTS

Typical holding cost for many companies is 10-30% of inventory value per year. Reducing intermittent sources of downtime, such as the time needed for changeover, allows for smaller lot sizes and lower inventory levels.

SOLUTION

Build a **SMART** industrial network – one that is able to passively monitor itself and alert when action is required by choosing managed Ethernet switches

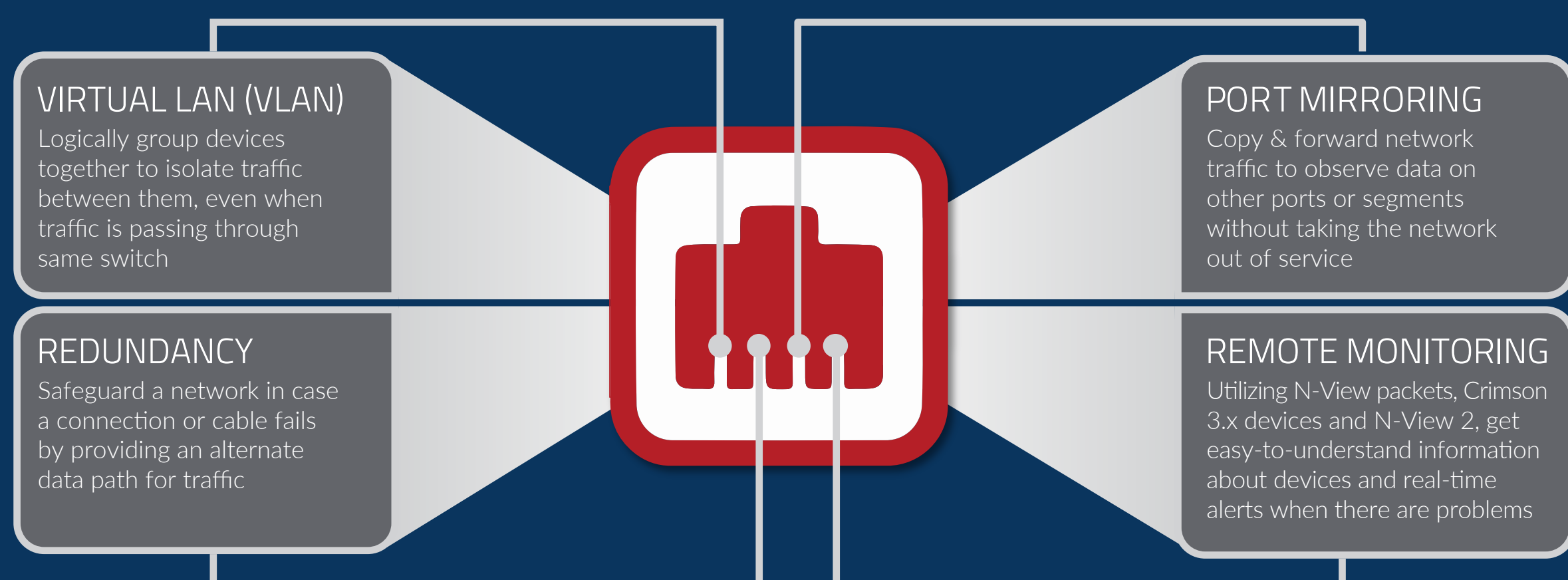
WHY MANAGED SWITCHES?

When it's important to have input and control over traffic on the LAN, it's time to consider a managed switch.

MANAGED SWITCHES ENABLE YOU TO:

- ▲ Configure settings specific to your needs
- ▲ Monitor switch performance
- ▲ Have control over how data travels and who has access to it
- ▲ Detect, diagnose & repair problems

BENEFITS OF MANAGED SWITCHES



MANAGED SWITCHES PRODUCT COMPARISON

SPECIFICATIONS	TYPICAL COMMERCIAL SWITCH WITH FAN COOLING	TYPICAL INDUSTRIAL SWITCH AND FIELD DEVICES	RED LION SWITCHES
MTBF HOURS	25k	200k	>1M
VIBRATION/SHOCK	1/5G	5/10G	50/200G
ESD/OVERVOLTAGE PROTECTION	2KV	4KV to 6KV	16KV
OPERATING TEMPERATURE (C)	0° to 45°	-20° to 60°	-40° to 70/80/85°
REDUNDANCY PROTOCOL	STP/RSTP >30s	Ring <1 s	~30ms RSTP/N-Ring, Real time Ring
INGRESS PROTECTION	IP20	IP20 / IP67	IP40 / IP67
POWER SUPPLY	230V AC	Dual 24V DC	Dual 10-30(49)V DC

