

PLC SHIFT ARCHITECTURE DIAGRAM

SECURE IT PROTOCOLS
TLS ENCRYPTION AND AUTHENTICATION

MQTT SPARKPLUG B WITH TLS

REAL-TIME CONTROL PROTOCOLS
ETHERNET/IP, MODBUS TCP, OPC-UA

USB

ENTERPRISE / CLOUD (IT)

DMZ / INTERNET

FIELD (OT)

PLC SHIFT CLOUD
SIMPLIFIED MANAGEMENT

TAG DATA
AZURE EVENT HUB

FILE DATA (LOGS)
AZURE BLOB STORAGE

TABULAR DATA (RECORDS)
AZURE TABLE STORAGE

TIME SERIES DATABASE
APPLICATION CONTEXT
REST API

REAL-TIME DATA FOR DASHBOARDS
AND STREAM ANALYTICS

APP DIAGNOSTIC AND
CONFIGURATION CHANGE LOGS

DATALOGGER TABLES
EFM ALARMS, EVENTS AND HISTORY
EFM CONFIGURATION CHANGE LOG

IT SYSTEMS / REPORTS
ANALYTICS / DASHBOARDS

Power BI

MANAGEMENT MACHINE

PLC SHIFT MANAGER
AZURE STORAGE EXPLORER

OUTBOUND
CONNECTIONS

SCADA MACHINE

MQTT BROKER

Ignition
SCADA

EFM RECORDS TO SCADA
VIA MQTT SPARKPLUG B
WITH IGNITION AND
RECORDER MODULE

LINUX MACHINE

SSH

APPS

DRIVERS

CLOUD EXPORT

MQTT SPARKPLUG B

ETHERNET/IP
OPC UA
MODBUS TCP

MODBUS IO

PYTHON

CORE APP

PLC SHIFT

IP NETWORK
WIRED OR WIRELESS
CELLULAR MODEM OR
WIFI/PRIVATE RADIO

ENGINEERING MACHINE

Studio 5000
RS STUDIO 5000

SE REMOTE CONNECT

CODESYS

PLC - SAFETY AND CONTROL
ROCKWELL LOGIX
SE SCADAPACK / MODICON
OPTO 22 GROOV / CODESYS
OVARRO TBOX

MODBUS DEVICES
MULTIVARIABLE
TRANSMITTERS

FIELD DEVICES

ARM
MOXA UC-8210
RASPBERRY PI 10
RASPBERRY PI 11
XETA EDGE
OPTO 22 GROOV EPIC
SCADAPack 470i

X86
UBUNTU SERVER 20.04
UBUNTU SERVER 22.04