



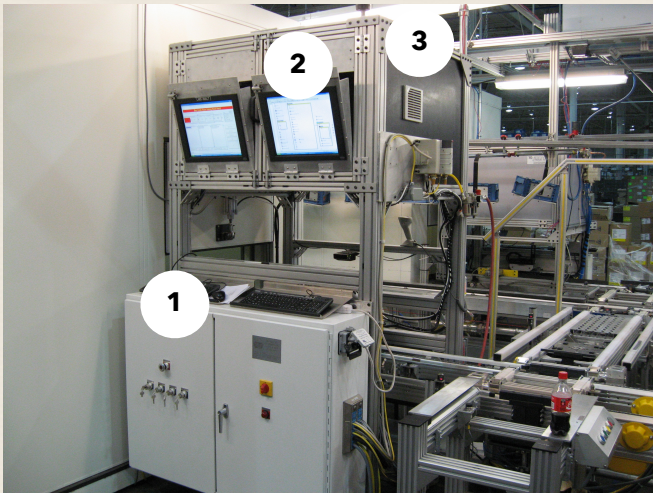
Testing & Monitoring Technology

Services

- Consulting & Engineering
- Design & Feature engineering
- Six Sigma

Test Station Capabilities

- Electrical Testing
- Part Verification
- Function Testing
- Auditing
- Equipment Health - vibration analysis
- Quality control



Prognostic and Availability Monitoring System



1. Intel-based PLC for equipment control



2. Intel-based touch screen monitor for operator



3. Intel-based Edge computing device

Test systems and monitoring systems are a vital tool to ensure that safety and compliance requirements are in check and key components to preventative maintenance. Our systems design incorporate the ability to perform testing and monitoring in a production or lab environments. Results can automatically be documented and stored locally or to a remote (Cloud) location.

Hexagon Technology uses software tools that meet the latest standards and components for high-performance computing from industry leaders such as Intel Corporation, GE, GP Systems GmbH.

Systems Enhancements include touch screen monitors, voice/audio prompts, laser and light curtains, password protected programs and screens

Configurable software enables the user to adjust and set the Pass/Fail threshold parameters, Enable/Disable specific checks, Adjust/Set orders and sequences.

Inferencing, Revision control, data storage and connectivity follow latest industry standards: openVINO, SQL, PostgreSQL, HTML5, JSON, XML, Https, SSH, Git, wireless 5G, TCP/IP.



System Specifications

Redundancy	<ul style="list-style-type: none"> Hot swapping of all modules Hot-standby CPU modules Dual ring high-speed internal data bus Automatic power distribution between power supply modules Redundancy of internal bus, CPU, CPU interconnection, I/O modules, power supply modules, SCADA connection Hybrid counter/digital modules with support of 2oo3 voting at the level of modules 	
Features	<p>General</p> <ul style="list-style-type: none"> Real-time programmable logic controller Modular configuration, allowing flexible extension and change of configuration Supports up to 130,000 channels In-module event archiving <p>Processing power and redundancy</p> <ul style="list-style-type: none"> Minimum application cycle time – 1 ms (5 ms with redundancy) Scan time – 1 ms Switchover in 5 ms Processing of complex algorithms with powerful CPU modules and built-in microprocessors in I/O modules <p>System configuration</p> <ul style="list-style-type: none"> Up to 40 modules in a rack, up to 255 racks, up to 10 km (via fiberoptic line) between racks RJ-45, SFP, or mixed connection between racks Star, ring, or mixed network topologies CPU module can be placed into any rack <p>Programming and visualization</p> <ul style="list-style-type: none"> Programming with IEC 61131-3 languages + CFC in Epsilon LD software Online application update Remote configuration/maintenance and application updates Special firmware with MySQL database server CPU module with DVI output for connecting a display and using Target-visualization Web visualization option in CPU modules 	
Communications	<p>Supported interfaces</p> <ul style="list-style-type: none"> RS-232 (9-pin, full duplex, speed 300-115, 200 bps, opto-isolation 500/1500 V, overvoltage protection) RS-422/RS-485 (9-pin, speed 300-115, 200 bps, full-channel opto-isolation 500/1500 V, overvoltage protection): up to 96 ports per controller Ethernet 10/100/1000 RJ-45 (full duplex): up to 4 ports per CPU Ethernet 10/100/1000 fiberoptic (single-mode, multi-mode): up to 2 ports per CPU <p>Built-in communication protocols*</p> <ul style="list-style-type: none"> IEC 60870-5-101 (master/slave) IEC 60870-5-104 (master/slave) Modbus RTU (master/slave, with expansion capabilities) Modbus TCP (master/slave, with expansion capabilities) OPC DA, OPC UA <p><i>* Additional communication protocols, including non-standard ones, can be implemented according to your requirements.</i></p>	
Design	<ul style="list-style-type: none"> Mid-size dimensions: 40×180×145 mm (W×H×D) Detachable terminal blocks Installation on a 105-mm DIN rail, with a clamp Passive cooling; no mechanical or rotating structural components 	
Specifications	<ul style="list-style-type: none"> Minimum application cycle time Bus scan time Time stamping accuracy Switchover time from main to standby controller Timing accuracy Processor RAM Flash memory (CU 00021, 031) SSD (CU 00051, 061, 071) Input power I/O module size (W x H x D) Operating temperature range Approvals 	<ul style="list-style-type: none"> 1 ms (5 ms in redundant configuration) 1 ms from 1 ms From 5 ms (1-2 cycles) 50 μs Intel Atom, ARM Cortex-Axx 2 GB, 512 MB 1 GB 4 GB (optional up to 64 GB) <ul style="list-style-type: none"> 85...264 VAC 18...36 VDC 120...370 VDC 40 × 180 × 145 mm 0...+60°C CE, EAC, GOST-R, FCC-ready



CPU Specifications

	CU 00 051	CU 00 061	CU 00 071
Redundant operation	Complete	Complete	Complete
Processor type	Intel Atom	Intel Atom	Intel Atom
RAM	2 GB	2 GB	2 GB
Flash memory	-	-	-
SSD	4 GB	4 GB	4 GB
Serial ports	<ul style="list-style-type: none">• 1 x RS232• 1 x RS485	<ul style="list-style-type: none">• 1 x RS232• 1 x RS485	<ul style="list-style-type: none">• 1 x RS232• 1 x RS485
Network ports	4 x Ethernet RJ45	<ul style="list-style-type: none">• 2 x Ethernet RJ45• 2 x Ethernet FO	<ul style="list-style-type: none">• 2 x Ethernet RJ45• 2 x Ethernet FO
Integrated MySQL database	-	-	Yes
USB host	2 ports	2 ports	2 ports
DVI port	-	-	Yes
GPS / Glonass receiver	Yes	Yes	Yes
Approvals	CE, EAC, GOST-R, FCC-ready	CE, EAC, GOST-R, FCC-ready	CE, EAC, GOST-R, FCC-ready