GOPALAM EMBEDDED SYSTEMS

GES PRODUCT PORTFOLIO FOR ELECTRONICS AND INDUSTRIAL AUTOMATION SOLUTIONS

Acute
PC-based T&M Instruments

acontis technologies

Artila

DIAMOND SYSTEMS

DediProg

JBC

Monsoon Solutions Inc.

PDR | REWORK

SEALEVEL

PEmicro

PEAK System

Phyton

Quarch Technology

RelyUm

RFcreations
...a different perspective
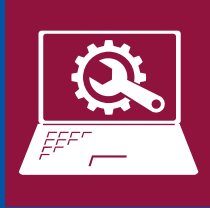
SEGGER

SECO
Endless ways to the future

TQ

Vision ENGINEERING

XJTAG

SEGGER

It simply works!

Embedded development tools by SEGGER

Debug & Trace probes

Software Tools

Embedded Software

Production Tools

J-Trace PRO

J-Link PLUS

Flasher PRO

Flasher Secure
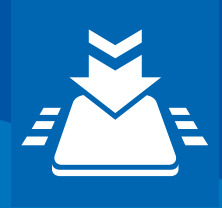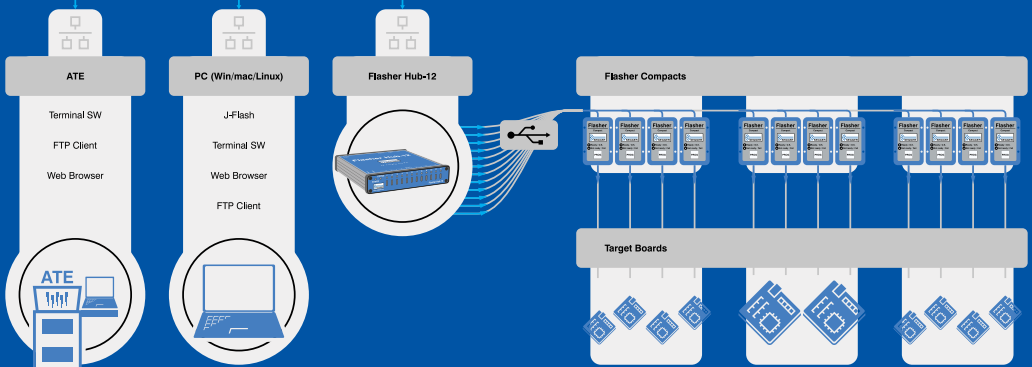
RTOS **Compiler** IDE Encryption **IP**
Graphical Debugger Cryptography
Authentication Connectivity
Compression User Interface

Telnet/FTP/HTTP

ATE
- Terminal SW
- FTP Client
- Web Browser

ATE

PC (Win/mac/Linux)
- J-Flash
- Terminal SW
- Web Browser
- FTP Client

Flasher Hub-12

Flasher Compacts

Flasher

Target Boards

Gang programming with Flasher Hub-12 and Flasher Compacts

PRODUCTION PROGRAMMERS

PEMicro Programming Solutions

In-System Flash Programmers

Cyclone LC Programmer   Cyclone FX Programmer

- Available in 2 models: ARM and Universal
- Universal supports: 8/16/32 bit devices from NPX, Infineon and STM
- FX: Anti tamper technology & ProCryption Security
- FX: 200+ programming images, Extremely Fast: upto 75 Mbps
- Select and Launch programming via a barcode scanner

Multilink Debug Probes

- PC USB interface to Multilink allows for fast, easy programming and debugging
- Supports JTAG daisy chaining of multiple ARM MCUs

Phyton Programming Solutions

Universal In-Socket Device Programmers

ChipProg - 481

- Device programmer with 48 pin socket
- Extremely fast! Programs and verifies programming of 1Gb NAND flash memory device for 23s
- Targeted at working with large density NAND & NOR flash memory devices

In-System Device Programmer
(JTAG, SWD, SPI, SCI, I²C, UART)

ChipProg-ISP2 - CPI2-B1

- Single Chanel - Multiple CPI2-B1 programmers combined into a programming cluster controlled from a single computer
- Supports 40,000+ in system programmable microcontrollers, flash memory & programmable logical devices

Gang In-System Device Programmers
(JTAG, SWD, SPI, SCI, I²C, UART)

ChipProg-ISP2 - CPI2-Gx

- Works in the standalone mode
- Multi-channel, Daisy chain up to 72 programming channels
- 51,786+ supported MCUs, PLDs and memory devices

Dediprog Programming Solutions

Universal In-Socket Device Programmers

NuProgPlus-U16

- EEPROM, Flash, MCU, eMMC, and UFS devices programming
- PC can link to multiple NuProgPlus-U16 and program IC at the same time

In-System (Serial) Device Programmer

SF600Plus-G2U

- High-speed USB and high SPI performance
- Support IC Kinds: SPI NAND/SPI NOR
- Works in the standalone mode

Automated Programming Systems

DP2T

- High Throught: Up to 1,000UPH (Unit per Hour) with only one nozzle
- Support Various IC Packaging: Sop, SSOP, TSSOP, PLCC, QFN, LQFP, BGA...etc.
- Support Different Input/Output Peripherals: Tape In/Out, Tray In/Out & Tube In

GOPALAM EMBEDDED SYSTEMS

Acute®
PC-based T&M Instruments

Acute Technology Inc., product lineup includes the TravelScope digital storage oscilloscope, TravelLogic logic analyzer, BusFinder eMMC, SD, MIPI D-PHY Protocol Analyzer, LA4000 Logic Analyzer, DG4000/TraveData Digital Pattern Generator, ADP series high-voltage differential probes, TravelBus 2 in 1 analyzer, and MSO2000/3000 Mixed Signal Oscilloscope.

Compact and light weight, they are designed for convenient portability, aiming to provide customers with convenient and efficient solutions.

MSO3124V MIXED SIGNAL OSCILLOSCOPE
MSO3000 Mixed Signal Oscillosc

- DSO: 4 Channels, 1 GS/s S/R, 200 MHz bandwidth
- Logic / Protocol Analyzer: 16 Channels, 2 GS/s Timing Analysis, 250 MHz State Analysis
- Data Logger (HDD / SSD Storage)
- Total Memory: 4 Gb
- Digital Voltmeter: 3 digits
- Frequency Counter: 5 digits

6-in-1 Instruments: DAQ, DSO, DVM, Frequency Counter, Logic Analyzer, Protocol Analyzer

LA4136B LOGIC ANALYZER
LA4000 Logic Analyzer

- 136 channels
- 4GHz Timing Analysis / 400MHz State Analysis
- 32Gb Memory
- Logic, State and Protocol triggers
- Stackable with a DSO to form an MSO

*TravelBus, TravelLogic

Ideal for applications requiring high-speed timing analysis or dealing with complex state analysis

BF7264 PRO PROTOCOL ANALYZER
BusFinder Protocol Analyzer

- Real-time data display, post-capture waveform
- Trigger for commands or data
- 64 channels Logic Analyzer
- 32Gb total memory Protocol Analyzer
- Protocol Option: eDP1.4a, eMMC 5.1, MIPI D-PHY 1.2, NAND Flash, SD 3.0(SDIO 3.0), SD 4.1 (UHS-II), SGMII, UFS2.1

TS3124V DSO
TravelScope DSO

- Record length: 128Mpts/ch
- Channel: 4
- Sample rate: 1 GS/s
- Bandwidth: 200 MHz
- Data Logger (HDD / SSD Storage)
- Digital Voltmeter: 3 digits
- Frequency Counter: 5 digits

PROTOCOL ANALYZER

BiSS-C	I2S	PMBus	SMBus
CAN2.0B/CAN FD	LIN2.2	Profibus	SPI
DALI	MDIO	PWM	SVID
DP_Aux	MII	RGMII	UART (RS232)
eSPI	MIPI I3C 1.1	RMII	USB PD 3
HID over I2C	MIPI RFFE 3	RS-232	USB1.1
I2C	Modbus	RS-482	

ETHERNET
10BASE-T1S, MII/RMII/RGMII/GMII/SGMII

ADP5100-B HI-VOLTAGE DIFF. PROBE ; BATTERY

Hi-voltage Diff. Probe

- Powered by Battery
- Bandwidth : 100MHz
- Bandwidth limit : 5MHz / Full
- Over-range indicator
- Over-range alarm
- Double-layer probe cable for power insulation
- EC conformity : EN 61010-031:2002 +A1:2008
- Works for any grounded DSO with an BNC port

Protocol Analyzer
- Show real-time protocol data.
- Application timing: massive protocol data with some idles in between.

Protocol Logger
- Like data logger, save massive data into SSD hard drive.
- Application timing: massive protocol data.

Protocol Monitor
- Like dash cameras, record protocol data by the device's memory only.
- Application timing: trigger event only happens in very long time.

RFcreations
...a different perspective

Innovation that solves your Bluetooth® Test Challenges

- CS RF PHY & Part H CS Layer Tests
- HDT & higher bands ready
- BLE/Classic/802.15.4 RF PHY Tests
- Smallest, lowest power sniffer
- Bespoke protocols on request
- Production & Development Options

- Android sniffer/coverage app
- LE Audio latency measurements
- Runs in Windows, MacOS & Linux
- Configurable GUI & API
- Bespoke protocols on request
- Perpetual SW Licenses - no OPEX

mini-mᐧreph.

- World's smallest USB powered Protocol Analyser
- BR/EDR, BLE, Qualcomm QBHSL, MediaTek mHDTV2.0, IEEE 802.15.4, LE Audio and CS (Sin le/Dual/+++ options)
- Simultaneous RX & TX over the entire 2.4 GHz ISM band
- Live or post-capture decryption with blueSPY GUI
- 16 channel Lo ic Analysis & WiFi Packet Timin
- Custom 2.4 GHz PHYs available upon request

mᐧrephE.

- Specifically designed for PHY Layer Testing
- Options for BR/EDR, BLE, QBHSL, IEEE 802.15.4
- RF Spectrum Record and Playback option - 3 hrs 40 mins
- C/I, blocking & intermodulation signals generated internally
- Accurate power control to -115dBm for coded PHY tests
- Full support for in-band emissions
- Production Line or Development options available

mᐧrephCS.
channel sounding
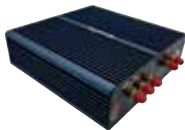
- Support for all CS RF-PHY test cases, including BT=2.0 modulation index & CS Layer tests via HCI
- Simple control via comprehensive GUI or Python/C dll.
- Log of all HCI traffic and key events
- Export of raw IQ data, spectrogram or the entire capture
- Capture of GPIO time aligned with IQ data
- Production Line or Development options available

pᐧd audio.

- Audio latency measured end-to-end, between-channels or relative to on-air packets in real-time
- Audio capture and generation accurately timestamped relative to Bluetooth packets
- Measures LE Audio Presentation Delay
- Measures SYNC between Left and Right channels

Diamond's products are **designed and tested** to ensure ruggedness and reliability when used in harsh environment applications.

- Component selection including latching connectors and wide temperature components, the use of thicker PCBs on larger size boards, and extensive use of heat spreaders instead of heat sinks go a long way toward improving ruggedness.

- All products undergo temperature testing, including power cycling at temperature extremes, to ensure reliable operation.

- Select products have been put through shock and vibration testing to assure their reliability in demanding applications such as military ground vehicles. Products are typically tested with most features active (i.e. all I/O ports active and all expansion sockets occupied) and at full processor load, to provide greater confidence in the test results.

SINGLE-BOARD COMPUTERS

Saturn
Rugged Apollo Lake X7-E3950 SBC with Data Acquisition and PCIe/104 Expansion
Test Standard: MIL-STD-202H

Gemini
Rugged COM Express Compact type 6 SBC with PCI/104-Express and miniCard I/O expansion
Test Standard: MIL-STD-202H

Jasper
Rugged COM Express with PCI/104-Express and miniCard I/O expansion
Test Standard: MIL-STD-202H, MIL-STD-810H

ETHERNET SWITCHES

EPS-8130-XT
Managed 8-Port Gigabit Ethernet switch with embedded layer 2 software
Test Standard: MIL-STD-202H

EPS-24G4X-HSP
EPS-24G4X Managed 28-Port Gigabit Ethernet Switch with 4 10G SFP+ Ports
Test Standard: MIL-STD-202H

EPSM-10GX4
Compact Managed 28-Port Rugged Gigabit Ethernet Switch Module
Test Standard: MIL-STD-202H

I/O AND POWER

DS-MPE-GE210
PCIe MiniCard Gigabit Ethernet Module
Test Standard: MIL-STD-202H

DS-MPE-SER4M
4-Port High Speed Serial Port PCIe MiniCard Module
Test Standard: MIL-STD-202H, MIL-STD-810H

DS-MPE-GPIO
36 Channel Digital I/O PCIe MiniCard
Test Standard: MIL-STD-810H

Mil-Grade Rugged Systems

Diamond Systems delivers military-grade rugged embedded computing systems and Ethernet switches with breakthrough pricing and delivery times. Common features and benefits of these systems include:

- Solid-body aluminum CNC construction
- MIL-DTL-38999 connectors
- -40 to +85 deg. C or similar wide operating temperature
- MIL-STD-461, -704, and -1275 compliant power supply with isolation option

- IP67 environmental protection
- Impressive I/O features
- High degree of configurability and customizability
- Short leadtimes and competitive prices

MIL-GRADE RUGGED SYSTEMS

GEODE-OSB
Rugged system with Nvidia Jetson AGX Orin supporting up to 8 GMSL cameras
Test Standard: MIL-STD-810H

GEODE-JSP
Rugged System with Intel® 11th Gen Core i7 processor
Test Standard: MIL-STD-810H

SabreNet-12000-001
Rugged 12-Port Managed Layer 2 or 3 Ethernet Switch
Test Standard: MIL-STD-810G

MIL-STD-202H TEST DETAILS

All tests conducted with products operational.

Test	Description
Sine sweep vibration	Method 204, tested at x, y, z axes 10-57 Hz @ 0.06 inch pk-pk 57-2000Hz @ 10G Sweep rate: 7.5 Min/Sweep, 2 Sweeps
Random vibration	Method 214, Table-1 Test Condition A, B, C & D Tested at x, y, z axes Condition D- 11.95 Grms for 15min
Shock	Method 213, Condition J, tested at x, y, z axes Half sine waveform test, 30G, 11mSec 3 shocks/direction

MIL-STD-810H TEST DETAILS

All tests conducted with products operational.

Test	Description
Random vibration	Method 514.8, Table 514.8 C-VII, Category 4 Tested at x, y, z axes and envelope 40 Minutes per axis @ 2.24 Grms
Shock	Method 516.8, tested at x, y, z axes and envelope; Terminal peak saw tooth, 40G, 11mSec 3 shocks/direction, operational; 40G, 6mSec, 2 shocks/direction, non-operational

MIL-STD-810G TEST DETAILS

All tests conducted with products operational.

Test	Description
Random vibration	Method 514.7C, Table 514.7C-V, Category 4, Tested at x, y, z axes, 40 min/axis 2.24 Grms
Shock	1. Functional Shock Test: Method 516.7, Procedure I, 40G 11ms, 3 shocks/direction 2. Crash Hazard Shock Test: Method 516.7, Procedure V, 75G 6ms, 2 shocks/direction

CYCLONE PROGRAMMERS

In-system, stand-alone programmers for internal & external flash.

Versatile programming tools built for reliability on the production line. Rich feature sets offer terrific value. Support for ARM Cortex, AURIX TriCore, Renesas, PowerPC and 8-/16-/32-bit architectures.

Cyclone LC Programmer Features

Program with one touch, with or without a PC, after configuring a programming image. Programming can also be fully automated with the included Cyclone Control Suite.

- Simple To Configure & Operate
- Extensive Device Support
- Reliable & Feature Rich
- Easily Automated

Cyclone FX Advanced Features

The Cyclone FX programmer adds a tremendous boost in speed and storage size, allows expandable memory via the SD card slot, ProCryption Security, advanced automation & useful control port features.

- ProCryption Security (AES/RSA Encryption)
- WiFi Control, High-Speed Programming
- Massive Internal & Expandable Storage
- Advanced Automation & Gang Programming

EASY SETUP & POWERFUL FEATURES SAVE VALUABLE TIME

SIMPLE SETUP/ PC-BASED

STAND-ALONE MODE

CONTROL MULTIPLE UNITS
w/ CYCLONE FX or Advanced License

Device Support

NXP: kinetis/S32, LPC, i.MX, HC08,HCSO8, HC(S)12(X), S12Z, ColdFire V2/V3/V4, RSO8, Power MPC5xx/8xx, DSC,CPU3xx, QORIVVA MPC5xxx, 68HC16
STM: SPC5, STM8, STM32
Renesas: H8 and H8s/Tiny, MC16C and M16C80, M32C, R8C, RH850, RL78, RX600
Infineon TriCore: AUDO TC1xx, AURIX TC2xx/TC3xx
Legacy Devices: HC05, HC11, MAC7xxx, MCORE

DIAGNOSTIC TESTING MADE EASY

With XJTAG's powerful tools, using JTAG boundary scan - built into many ICs in today's electronic products

QUICKLY DETECT MANUFACTURING DEFECTS

Including open circuits, shorts circuits, missing and incorrectly fitted components, using XJTAG's easy to use software

XJTAG offers a complete solution for testing populated printed circuit boards (PCBs) using JTAG boundary scan, providing products and services for fault detection and fast in-system programming.

Fast Prototype Board Bring-Up & Debug

Benefit from manufacturing-level debugging and testing capabilities on your development bench. Deliver proven, high-quality circuit boards faster and more cost-effectively with XJTAG's integrated test development environment.

FAST TEST DEVELOPMENT
Test more of your prototype, sooner

TEST WITHOUT FIRMWARE
Start testing your hardware long before the software is ready

SUPERIOR TEST COVERAGE
Access more of your board with XJTAG Boundary Scan

FAST BOARD DEBUG
Access the full capabilities of Boundary Scan

XJTAG works with the JTAG / IEEE 1149.X boundary scan test standard built into FPGAs, CPLDs and most CPUs.

Helps diagnose and quickly repair faults, even under BGAs and enables testing and programing of JTAG and non-JTAG devices in-circuit from the same environment.

Select your XJTAG software package

Test Developer Pro	=	XJD	XJR	XJA	XJI
Test Developer	=	XJD	XJR		
Board Repair	=	XJR	XJA	XJI	
Production Tester	=	XJR			
BScan Inspector	=	XJA			
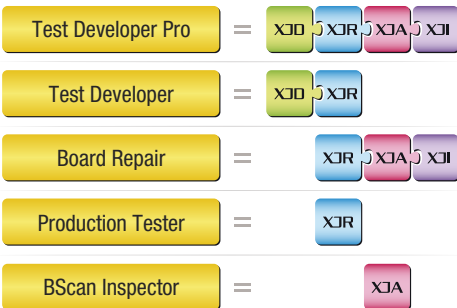
Standalone versions of XJRunner and/or XJAnalyser are also included with your integrated environment's license

Development Systems
Test Development & Graphical Board Debug

XJDeveloper - IDE
Test and Programming Development and Debug Environment

XJInvestigator - Repair Station
Manufacturing Repair/Rework Station

XJAnalyser - Real-time Debug
Prototype Board Bring-up & Real-time Graphical Board Debug

XJRunner - Production Test
Run-time Manufacturing Test & Programming Environment

acontis offers **real-time software** for more than 20 years. We are the experts for our customers that need reliable real-time capabilities for machine controllers, medical devices, transportation systems and more. Our company is known for high quality products "Made in Germany".

We take real-time machine communication to the next level with our extensive portfolio of **EtherCAT software** - enabling our customers to realize the best-in-class EtherCAT controllers, as well as enabling thousands of companies to commission and operate EtherCAT networks with maximum performance and highest availability. With our unique EtherCAT simulation technology, we facilitate the realization of digital twins of devices and networks and also empower our customers for hardware-independent implementation of EtherCAT SubDevices.

EtherCAT Software
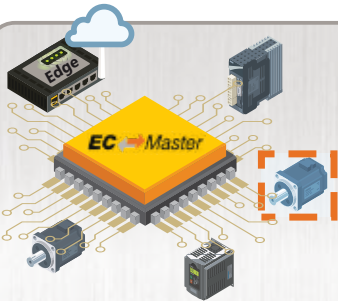
The acontis EtherCAT MainDevice software is the core in countless EtherCAT networks - including machinery, aerospace, medical, automotive, measurement and many more industries.

Complementing to the EC-Master, acontis offers a full portfolio for all users of EtherCAT: From development and verification, commissioning and supervision to maintenance and trouble-shooting.

Key Benefits of acontis EtherCAT software

- High performance and low CPU load for fast update rates.
- Ready-to-run for many operating systems.
- Supporting all major CPU architectures: x86, ARM, RISC.
- Available for many processors from AMD, Broadcom, Infineon, Intel, NXP, Nvidia, Renesas, ST, Texas Instruments or Xilinx.
- Fast project realization by easy-to-use software and APIs, extensive documentation, examples and professional support.
- Most reliable and robust implementation, field-proven since 20 years in many high-profile controllers from Bosch Rexroth, Lenze, KUKA, Omron, Panasonic, Yaskawa and many more!

acontis EtherCAT portfolio

EC Engineer — Most convenient configuration, commission and analysis of EtherCAT networks

EC Simulator — Use digital twins for controller or device development, verification and virtual commission

EC STA — EtherCAT MainDevice and Testing functions combined in one powerful tool

EC Monitor — Link EtherCAT data to IoT and supervision systems independent from EtherCAT controller!

EC Inspector / **EC Lyser** — Monitoring and troubleshoot EtherCAT networks

Embedded modules & systems from TQ-Embedded

TQ is one of very few suppliers worldwide, offering solutions on all common processor architectures – from Arm®, QorIQ® Layerscape, Power Architecture® up to x86. TQ support does not only cover the module itself but also offers assistance for your individual application board.

Highlights

▸ Application kit (starterkit)
▸ BSP Support
▸ Schematic mainboard review
▸ Mainboard layout and production
▸ Customer specific mainboard design
▸ Complete system design, well-founded application design knowledge
▸ Own production ISO 13485, EN 9100 & ISO 16949 certified

Category

BoxPC
Carrierboard
Single Board Computer
Starterkit
Embedded Module

Form factor

COM-Express® Basic
COM Express® Compact
COM Express® Mini
SMARC
TQ Socket
TQ LGA

TQ-Systems as a hardware specialist for embedded systems is working in close partnership with all leading semiconductors and operating system vendors.

intel Technology Provider Platinum 2019

Proven Partner NXP

TEXAS INSTRUMENTS
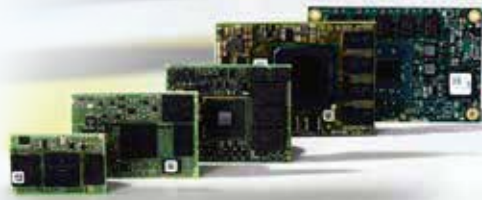
Energy | Smart Grid

Based on our know-how of power electronics and control technology, we are creating regulations for transformers to secure the network against sudden power surges, for example.

Building automation

Our smart products in distributed building control point the way to added efficiency in building automation. This renders complex building automation tasks easy to handle.

Industry | Automation

Our solutions are used for various industrial applications, e.g. as mechanical engineering, automation, measurement, control and regulation-, process-, and monitoring technology.

Telecommunication

In telecommunications fast and efficient networking is crucial. Large quantities of data must be processed in a short time. Our solutions additionally imply long-term availability, industrial capability and use in an expanded temperature range.

IoT

Intelligent objects, secure data communication, worldwide management as well as centralized and, to some extent, decentralized storage and data processing require reliable and secure systems on all levels.

GOPALAM EMBEDDED SYSTEMS

SEALEVEL®

Intentionally Designed for Reliable Performance in Demanding Environments

Sealevel is the leading designer and manufacturer of industrial computers, Ethernet serial servers, USB serial, PCI Express and PCI bus cards, and software for critical communications. We offer over 350 core products, available in nearly every configuration imaginable. Or, if you need something completely customized to meet your specifications, our award-winning team of engineers is at your service.

MADE IN THE USA

Industry Applications
Aerospace & Defense
Automation & Control
Manufacturing & OEMs
Rail & Public Transit
Test & Measurement

NEW Flexio Fanless Industrial Embedded Computers
• Industrial Processing & Performance with Long-Term Availability
• Solid-State Design Guarantees Extended Operation
• Unmatched I/O Configurability for Automation & Control

COM-Based Carrier Solutions
Sealevel's engineering and manufacturing teams have valuable experience designing and producing high-performance carrier boards for both standard and custom applications.

Data Acquisition Devices
Sealevel's Seal/O data acquisition devices provide powerful digital, analog, and serial expansion to any monitoring and control system. Connect to the host via wireless, Ethernet, USB, RS-232, or RS-485.

Embedded Computing Systems
Designed for applications where reliable computing and SWaP-C² optimization is a must, Sealevel embedded I/O computing systems combine the reliability of a PLC with the configurability of an industrial computer.

Serial Cards & Interfaces
Sealevel offers the widest selection of serial choices for data-intensive applications. These interfaces support RS-232, RS-422, RS-485, and RS-530 electrical interface standards, as well as USB and Ethernet solutions.

Touch Panel Controllers
Achieve computing, I/O, and HMI requirements with Sealevel rugged touch panel controllers. HazPAC touchscreen control systems are certified by ATEX and IECEx and for Class I, Division 2 and also maintain NEMA 4/IP64 protection from sprayed liquids.

RelyUm

Relyum Time-aware High-Availability Reliable Ethernet H/W Solutions (HSR, PRP, TSN)

Relyum offers an innovative solution to face the new security challenges emerging in the context of IEC 61850 Smart Grids and substations.

IEC 61850 is the backbone for the Smart Power Automation and Control Systems (PACs), developed to provide a zero-delay and no frame lost Ethernet based networking solution for critical control messages communicated within these systems (like GOOSE or SMV messages).

Relyum by Soce products are key enablers for the time-aware high-availability reliable Ethernet network implementations in the next generation Digital Substations and Smart Grids:

RELY-RB Time-aware Redbox Switch

RELY-RB Time-aware Redbox Switch combines HSR/PRP redundant Ethernet links with regular Ethernet ones in a single equipment. This approach solves the need of switching PTP traffic and providing access to high-availability topologies to the regular Ethernet nodes or LANs.

RELY-REC Time-aware Network Recorder

RELY-REC Time-aware Network Recorder includes means for continuous network monitoring and further debugging. This equipment integrates advanced technologies to support combined PTP and HSR/PRP GbE topologies.

RELY-PCIe Time-aware Redbox-DAN -Switch PCIe NIC

RELY-PCIe Time-aware Redbox-DAN-Switch PCIe NIC allows direct access to time-aware high-availability networks to legacy PC systems (PCIe or PCI). Moreover, this board removes the need for additional Redbox equipment to connect other non-redundant nodes (Single Attached Nodes - SANs) thanks to the third port which implements low-latency switching to the redundant ones.

RELY-SV-PCIe Sampled Value Subscriber DAN PCIe NIC

Relyum has launched an innovative **edge computing product for the Smart Grids**, aligned with the current virtualization trends. This device incorporates to the RELY-PCIe model a powerful processing capability for protecting and measuring the quality of the Electric grid based on the SV provided by the merging units.

RELY-RB-SEC Secure Time-aware Redbox Switch

Relyum's offer is completed with this device, a redbox switch equipment with **IEC 62351-6 and IEC 62351-9 support**, that allows to retrofit the existing infrastructure by ciphering, deciphering and authenticating real-time traffic at wire-speed.

GOPALAM EMBEDDED SYSTEMS

Quarch Technology

HOW TO ANALYZE AC-POWERED DEVICES

AC power analysis is critical for understanding and optimizing the power consumption of a huge range of devices. As more green energy standards come in and power prices rise, the requirements for testing will only increase.

We can analyse virtually any common mains or AC-powered device - Single or 3 phase.

FEATURES

- Measure 1-phase or 3-phase supplies
- Monitor voltage, current and power
- Capture data in Power Studio or direct to your own files
- Powerful automation option for capture and analysis

This device can capture high resolution AC traces for long periods of time:

- 8,000 Samples per second
- 16, 32 and 63 Amp versions
- Plug-and-play setup
- Manual and fully automated capture options
- PoE powered
- USB and LAN connectivity
- Supports upto 400v AC

QUARCH POWER STUDIO

QPS (Quarch Power Studio) allows you to view and capture power data over extended periods of time, and easily analyze the power performance

FEATURES

- Record any length of power trace
- High resolution capture for detailed analysis
- Annotate traces
- Export screenshots and trace sections
- Measure detailed features and view area statistics

TECHNICAL

- Server (QIS)
- Handles multi-gigabyte filesJava based application
- Built on Quarch Instrument
- No additional drivers needed

sales@embeddedsingapore.com
www.embeddedsingapore.com

GOPALAM
EMBEDDED SYSTEMS

JBC
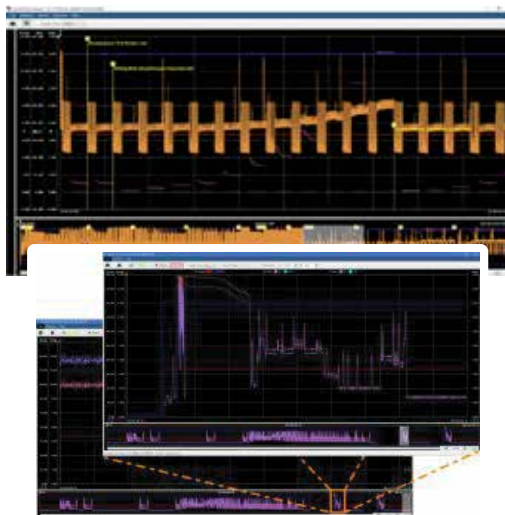
HEATING SYSTEM
JBC provides the **Most Efficient Soldering System** which leads to quality improvement & an efficiency increase.
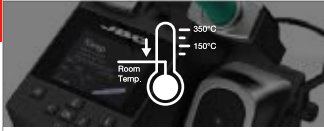
HEAT MANAGEMENT
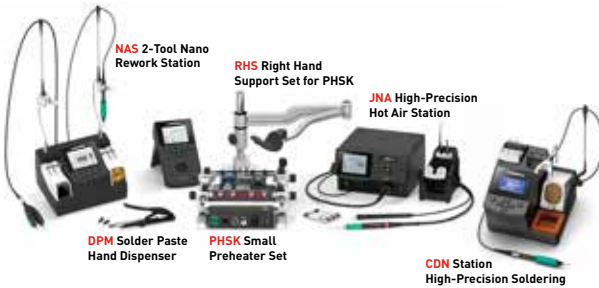Thanks to both **Sleep & Hibernation Modes**, tip life increase exponentially.

350°C
150°C
Room Temp.

INCREASE PRODUCTIVITY
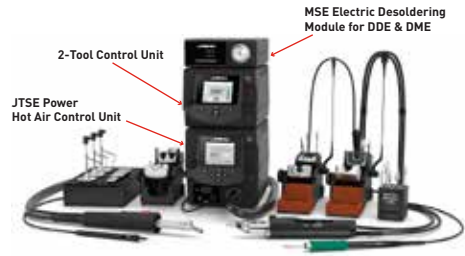Use **Quick Cartridge Extractor** to change quickly & safely without switching the station off.

High Precision
NANO REWORK SOLUTIONS

NAS 2-Tool Nano Rework Station

RHS Right Hand Support Set for PHSK

JNA High-Precision Hot Air Station

DPM Solder Paste Hand Dispenser

PHSK Small Preheater Set

CDN Station High-Precision Soldering

High Power
RMSE COMPLETE REWORK STATION

MSE Electric Desoldering Module for DDE & DME

2-Tool Control Unit

JTSE Power Hot Air Control Unit

SMD Rework System
The ideal solution for your entire rework tasks.

Includes Hot Air Station, Preheater with PCB Support, and Rework Arm.

JBC Preheater Range
For rework on multi-layered PCBAs and/or large ground planes in order to avoid thermal shock and facilitate soldering as well as desoldering processes.

ADJUSTABLE TWEEZERS RANGE
Provide the highest precision when soldering or reworking SMD components.

Preheaters | **Fume Extractors** | **Tip Cleaners** | **Auto Feeder** | **Wire Stripper** | **Automation**

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sales@embeddedsingapore.com
www.embeddedsingapore.com

GOPALAM
EMBEDDED SYSTEMS

BGA/SMT REWORK STATIONS

PDR designs, manufactures, and distributes IR Rework Stations, Industrial X-Ray Inspections Systems, and IR Thermal Test equipment for the electronics component and PCB assembly industry.

PDR isn't just a brand, it's a revolution delivering unmatched control and effortless execution.

At the forefront of SMD rework technologies, PDR are working with many of the world's top names in:

- Electronic Manufacturing
- Defence
- Automotive
- Medical
- Research & Development

PDR IR-E3

- Advanced Focused IR component heating
- Quartz IR PCB preheating with up to 3 zones
- Split Beam prism system for simultaneous PCB/component viewing
- Precision Components Pick & Placement up to 10um
- Precision PCB handling
- Component Nest/Flux Application Facility
- Closed Loop Non-Contact Temperature Sensing
- Advanced Automatic Thermal Process Control
- Reflow Process Observation Camera
- PCB Forced Air Cooling

FOCUSED INFRARED

What you see you heat. No collateral damage. Instantaneous control.

PLACEMENT TECHNOLOGY

Our placement technology allows every operator to achieve the same standard of quality.

INTELLIGENT SOFTWARE

One profile to rework nearly all applications.

ULTRA HIGH-PERFORMANCE HIGH RESOLUTION IMAGE QUALITY COMPACT X-RAY SYSTEMS

Founded in 1998, PDR Xray Systems has become a world leader in providing high quality industrial X-Ray solutions to specifically address the needs of the Semiconductor, PCBA, Medical Device, Government, and NDT communities.

Noted for high image quality and affordability, PDR XRAY Systems is the product of Engineering Teams formerly associated with GenRad, Teradyne, and Nicolet Xray Imaging Systems. This overarching expertise in the field of X-ray technologies has led to the development of superior performance PXI technology that forms the backbone of each PDR X-Ray system.

PDR's 90kV X-ray and 130kV X-ray systems are engineered with high-quality materials and craftsmanship and X-ray safety standards exceeding the most stringent requirements for industrial safety. All X-ray non-destructive inspection systems built by PDR are equipped with a suite of X-ray image processing tools and features that incorporate cutting-edge technologies to insure that your X-ray system delivers quality X-ray images and the power of analytic tools required for a successful X-ray program.

PDR GENX-130P

- BGA Inspection/Analysis
- Counterfeit Inspection
- Porosity/Voiding Detection
- Medical Device Inspection
- Wire Bond Inspection
- LED Inspection
- Less Than 1 uSv/hr (0.1 mR/hr) USFDA 21 CFR-1, J-1000, 1020.40

BGA INSPECTION
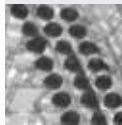
PCB X-RAY
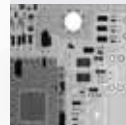
QFP SOLDER JOINTS
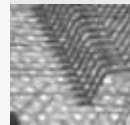
SMT CONNECTORS
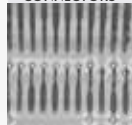
COUNTERFEIT DETECTION

BOND WIRE INSPECTION

QFN INSPECTION
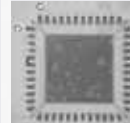
BGA INSPECTION - HI MAG

Vision ENGINEERING
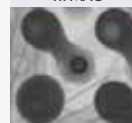
OPTICAL INSPECTION SYSTEMS

Eyepiece-less Stereo 3D Microscopes

MANTIS

3 - 15x Magnification	Ergonomic Working	Digital Image Capture
5MP image quality	Long working distance	Ergonomic position	3D view	Overlay & Image comparison	Import, export settings

LYNX EVO

2.7 – 240x Magnification	Easy Viewing	HD Image Capture
Glasses free	Outstanding image quality	3D illumonation	360 viewer	WiFi	focus stacking	high precision stage

DIGITAL INSPECTION SYSTEMS

2D Digital Inspection Systems

MAKROLITE 4K

3x - 330x Magnification	Wide Dynamic Range Improved contrast	Ultra HD Exceptional resolution

EVO CAM II

0.8 – 750x Magnification	Large Field of View	PC control option

VE CAM

Wi-Fi Screen sharing	Wide Field of View	Touch screen Compatible

DIGITAL INSPECTION SYSTEMS

3D Digital Inspection Systems

DRV-Z1

6.1 – 93x Magnification

Easy 3D Digital View

Share Live 3D View

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GOPALAM EMBEDDED SYSTEMS

THE NEXT GENERATION OF 2-IN-1 HIGH PRECISION POWER MONITORING HARDWARE AND BENCHTOP POWER SUPPLY IS HERE

Eliminate the need to buy a separate power supply and power monitoring device. Save space and test setup cost using the highly scalable solution of Monsoon High Voltage Power Monitor (HVPM).

POWERFUL SOFTWARE
Full featured Windows GUI-PowerTool. Multiple APIs support for Linux, Mac and Windows platforms which allow for fully-automated testing

WIDE VOLTAGE AND CURRENT RANGE
Main Channel- Output Voltage Range 0.8-13.5 V
USB- Up to 5.5 V
Aux Channel -Up to 13 V supplied externally
0.01 V Increments
Continuous Current 6 A

PORTABLE MODULAR DESIGN
Very flexible; Can be deployed individually at a single workstation or scaled up to rack mount style configurations for large scale testing

HIGH ACCURACY
Main Channel- Fine Current Range
50μA-60 mA; Resolution 0.9 μA
(+/- 50μA) in low current measurements
Coarse Current Range 60mA-6A;
Resolution 125 μA

WIDE APPLICATIONS
Development and testing of Smartphones, Tablets, Software App, Automotive, IOT devices with respect to Battery drain

APPLICATION HIGHLIGHTS

INDUSTRY LEADING CERTIFICATIONS
UL, FCC and CE certified

AFFORDABLE

BRIEF SPECIFICATIONS
- Size: 8 in x 6 in x 2 in (20 cm x 15 cm x 5 cm)
- Weight: 1.1 lb (0.5kg)
- Input power 115V to 240V, 47-63Hz
- Main channel 0.8V to 13.5V range
- USB channel 2.1V to 5.4V
- Aux channel input 0.5V to 13V
- UL, CE, FCC certified

TYPICAL USE CASES
- Smartphones, Tablets or Laptops
- Smartphone Apps
- Internet of Things (IoT) Devices, Medical Devices
- USB Devices
- Automotive Sub-circuits
- Prototype Designs
- Power measurement of Arduinos, Raspberry Pi and Microcontrollers
- Burn in testing

WHAT'S INCLUDED?
- High Voltage Power Monitor (HVPM)
- Power supply
- 2 alligator clips
- 2 USB cables
- Information card with links to PowerTool software and support documentation

EMBEDDED SYSTEMS