



Embedding  
ideas...

## **Company Profile**

### **Crystaline Infotek Pvt. Ltd.**

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## **MISSION**

To Provide End to End Electronic Product Development Services

To Build Intellectual Property in Security & Surveillance Verticals

To provide the growth path to every member of the company

## Introduction

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### Identity: Electronic Product Development / Manufacturing Services Company

Our core offerings are -

- End-to-End product development services for electronic products – hardware & firmware development services.
- Engineering services for fabless semiconductor companies
- Development of device drivers, BSP, OS porting etc.
- Manufacturing of Electronic products developed as own brand / developed for customers

### ABOUT CRYSTALINE

Crystalline Infotek Pvt. Ltd., provides solutions and development services in embedded domain. The company offers end-to-end Integrated Product development services and also manufacturing services. The founders of the Company are professionals working in these areas with the motive to excel in the technology domain and build a successful Global corporate enterprise. The focus is on developing hardware and software for various equipments, instruments, products used in Power Electronics, consumer electronics, security & surveillance, medical electronics, process and industrial automation and communication and so on.

### BRIEF HISTORY:

Started in 1996 as a partnership firm making dozens of products. It was then incorporated as a Pvt. Ltd. Co. with product range limited to Power Electronics and concentration on Linear Regulated DC PSU, AC-to-AC (Frequency) Converters, DC-to-AC Inverters, DC-to-DC Converters, Switched Mode Power Supplies and Interface converters.

### EXCELLENCE IN EVERYTHING CRYSTALINE DOES:

The **Crystalline** Group has built and fostered a nationwide reputation for excellence in everything it does. During the last **decade**, the group has fine-tuned its skills, expanded its resources, enriched its experience, matured as a corporate enterprise and developed an attitude that sees customer satisfaction as the ultimate reward for a work well done. **Crystalline** realises that, to be competitive, the customer has to be the point of focus. Over a quarter of century of involvement in business has given the group deep insights into the finer aspects of customer care. And nothing gives **Crystalline** more fulfillment than the smile of satisfaction on the faces of its customers. This commitment to customer care is the cornerstone of the group's corporate philosophy and shall always remain its core strength.

## Management and Operation Team

The founders of Crystalline, Mr. Nitin Joshi and Mr. Anant Gokhale have a rich experience of more than 15 years as entrepreneurs. They set the overall tactical and strategic direction of the company. However, every member of Crystalline is a crucial element in the success of this enterprise. Our team comprises of about 25 qualified members: Hardware Engineers, Firmware programmers, Engineering staff, QA Experts, Technical Writers, Project Leaders/Managers etc. Crystalline is well supported by its eminent board of advisors.

The relevant details of the key team members are as delineated below -

Nitin Joshi	C.E.O & Director	Nitin is a founder member of Crystalline Infotek and Chief Executive Officer. His key contribution is in the thought process and overall direction at Crystalline. He looks after strategic and tactical planning for business development as well as technology pursuits and execution of key projects. Wireless Technologies and Security & Surveillance domain are his areas of interest. His quest for complete customer satisfaction has been the key to the success of Crystalline. He is M. Tech. from IIT, Mumbai.
		E-mail - <a href="mailto:nitin@crystalindia.com">nitin@crystalindia.com</a>
Anant Gokhale	C.T.O & Director	Anant is a founder member of Crystalline and Chief Technology Officer. His key contribution is towards identifying new technologies for Crystalline and their absorption in the enterprise. He also plays an active role in design and execution of key projects, particularly those involving embedded systems & product development. He has 19 years of professional experience in hardware/Software Development and Project Management. Medical Electronics, Data-communication & Networking are his areas of specialization. He is M. Tech. from IIT, Mumbai.
		E-mail - <a href="mailto:anant@crystalindia.com">anant@crystalindia.com</a>
Surendra Joshi	C.O.O.	Surendra has long experience in development of products for Research Laboratory applications and also for Building Automation Domain before switching to marketing carrier. He carries a total experience of 17 years behind him. Surendra is responsible for pre-sales, marketing & business development.
Amod Mujumdar	PM	Amod leads the team of hardware and firmware engineers and handles project execution tasks. He has 13 years of experience in electronic product development.
Tushar Barhate	PM	Tushar leads the team of hardware and firmware engineers. He is responsible for project management and deliveries. Tushar holds Masters Degree in Engineering from COEP, Pune.

## Board of Advisors

Commodore Anand Khandekar	CEO of Pace Soft Silicon Pvt. Ltd.	Commodore Khandekar is Ex. Indian Navy Officer. He has served on the board of several large organizations like Motorola India, MELTRON, Yojana Systems, and Cradle Technologies etc. He is currently on the boards of KPIT Cummins and Chairman of Pace Soft Silicon. He has nearly 40 years of professional experience.
Prof. Shekhar Gadgil	Professor of Instrumentation dept, College of engineering., Pune.	Prof. Gadgil is professor at Dept. of Instrumentation at COEP, Pune. He specializes in Bio-medical instrumentation. He is one of the founders of Bio-Medical Engineering Society of India & Instrumentation Society of India.

## **Infrastructure**

### **Facilities for embedded systems development**

- Hardware design tools e.g. OrCAD, Circuit maker, PADS
- Hardware test and measuring instruments
- Digital Storage 100 MHz Oscilloscope.
- Multimeters
- Network Analyzer
- Logic Analyzer
- In circuit Programmers
- Product Testing and Approval Facility (CE & UL) \*

(\* Facilities available in Pune with Associates)

## **Focus areas**

### **Product Development Services**

- Design & Development of microprocessor based equipments.
- Hardware/Software Testing.

### **Device drivers and interfaces for digital communication**

- T1/E1/J1 standards.
- Fax Protocols: T.4, T.30 FoIP: T.37, T.38
- USB
- RS232/ RS422/ RS485
- Ethernet

### **RF (Wireless)**

- ISM Band RF Communication / Telemetry
- RFID
- ZigBee, Bluetooth, 802.11

### **Industrial Automation**

- Protocol Gateways / converters for MODBUS, Honeywell ABC, IEC60870-5-103, IEC1107, SECS SEMI protocols
- Interface Converters
- TCP/IP and Industrial Ethernet

### **Security, Safety & Surveillance**

- Intrusion Protection
- Access Control
- Gate Automation
- Fire Protection
- Video Surveillance

## Technology Areas

- Digital Signal Processing
- Radio Frequency Identification
- Wireless Communication
- GPS & Tracking
- Biometric Security
- Battery Management
- Process Control
- User Interface / HMI Up gradation
- Power Control & Management
- Automotive Electronics
- Healthcare Bio-tech Instruments
- Medical Training Equipments

## Skill set

<b>Processors/ DSP</b>	Microchip, Atmel, Uvicom, Cradle, TI, Analog Devices, Rabbit Semiconductor, Renesas, ARM, PowerPC, Luminary Micro
<b>Operating systems</b>	VxWorks, mCOS, eCos, Windows CE, Embedded Linux, ITRON, JCOP
<b>Device drivers</b>	USB Controllers for various class types, Serial, PCI
<b>Communication</b>	USB, Serial, 802.11b/g, Bluetooth, SDH/SONET, ATM, SECS, GEM, Modbus, CAN, Profibus, ARINC 429, MIL-STD 1553, RS-232,RS-422,2-wire,4-Wire 485, Ethernet, ISA, PCI,AC,T1/E1/J1, T3
<b>VOIP / FOIP</b>	H.323, G.7xx, SIP, MGCP, T.37, T.38.
<b>Modem/Fax</b>	V.90, T.4, T.30.
<b>Security technologies</b>	PKI Technology, PKIX, CMP, OCSP, PKCS, Digital Signatures & Certificates, X509, Encryption Standards & Algorithms, AES,DES, RSA, SHA
<b>Smartcard technology</b>	ISO 7816, GSM, PC/SC specification, USB Chip/Smart Card Interface Devices (CCID) Specification Microsoft Smart Card APIs suit
<b>Board design and development</b>	MCU / MPU chip eval boards with FPGA / CPLD
<b>Networking Protocols</b>	TCP/IP, DNS, DHCP, HTTP, FTP, SMTP

## Design Partnerships:



TEXAS INSTRUMENTS

zilog

MAXIM

iButton®  
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## **Manufacturing / New Product Introduction (NPI) Services**

### **Product Range**

#### Power Electronics

Linear Regulated D.C. Power Supplies, Float-cum-Boost (Battery) Chargers, Switched Mode Power Supplies, DC-to-DC Converters, Sine / Square Wave Inverters, Sine Wave Frequency Converters and Encapsulated Power Modules, Touch Electrical Switches with Remote Control, etc.

#### Security and Surveillance

LPG Detector, CO<sub>2</sub> Detector, Intrusion Alarms, Wireless Zone Expander, PIR sensor, etc.

#### Interface Converters

RS232 to RS485/RS422, RS232/RS485/RS422 to Ethernet, RS232/RS485/RS422 to Fibre, RS232/RS485/RS422 to Wi-Fi, RS232 to USB, Fire Panel Gateways, etc.