



SOHAMSAA SYSTEMS PVT LTD

# Company Brochure

An Electronic System Design & Manufacturing house creating innovative, highly differentiated products — from industrial design and core software to certified, mass-produced hardware.

Delhi, India · [www.sohamsaa.com](http://www.sohamsaa.com)

# Who *We* Are

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## IDENTITY

An Electronic Product Design and Manufacturing house focused on developing innovative and highly differentiated products.

End-to-end capability — industrial design, mechanical & PCB design, core software, wireless technologies, certification and manufacturing.

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## VISION

To be an ESDM house globally respected for Innovation and Excellence in product quality.

## MISSION

We will create superior products in an environment of Fairness, Honesty and Joy for all our stakeholders – Customers, Employees, Partners and the Society.

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*Dream . Design . Deploy*

# Core Expertise & *Services*

## CORE SOFTWARE

Device drivers  
Audio / video decoding  
Stacks & protocols  
Board Support Package (BSP)

## ANDROID / LINUX

Kernel — modules & drivers  
Board bring-up  
Android framework  
App development & integration

## WIRELESS

4G TD-LTE / 3G / 2G  
Wi-Fi 802.11 a/b/g/n/ac  
LoRa · BT · NFC · Zigbee  
GPS / FM

## WIRELESS / OPTICAL

GPON ONU / Router  
Segregator  
IP OTT media gateways

## SERVICES BOUQUET

### PRODUCT ENGINEERING

End-to-end design · Industrial design  
Mechanical CAD · Hardware & PCB design  
New Product Initiation (NPI)  
Logistics & supply chain

### SOFTWARE ENGINEERING

BSP & device-driver integration  
Android porting & app development  
Custom software integration

### CONSULTING

Solution definition  
Value engineering  
System architecture

# Core Engineering *Capabilities*

## ELECTRICAL

System architecture, electrical CAD, electro-mechanical convergence

## MECHANICAL & ID

Experience & industrial design, mechanical system design, mechanical CAD, component design

## RF

Antenna design, RF layout & validation

## CORE SOFTWARE & OS

System boot, firmware, system drivers, peripheral drivers

## APPLICATION

Firmware, Android applications, custom integrations

## VALUE ENGINEERING

BOM optimization, cost optimization

## NPI

Manufacturing process setting, test jigs & test software

## SOURCING

Component sourcing, BOM management, cost optimization strategy

## CERTIFICATION & COMPLIANCE

Technology consulting, certification & compliances, system architecture & definition

## Unique *Proposition*

### *i* Innovation & Design Excellence

Cutting-edge designs with future-ready technology. Scalable development driving multiple variants. Proven process with rapid time-to-market certainty.

### *ii* Custom Design & Localization

Portfolio development aligned with business strategy & roadmap. Exclusivity in features, geography, industrial design. High localization enabling India-based mass production.

### *iii* IP Protection

Rigorous intellectual-property protection — ID, electrical & mechanical design, custom components, custom UI & UX. Strict non-disclosure regime.

### *iv* Control

Customer participation in design and productization processes. Greater clarity on design & production costs to the customer.

# The Metering *Range*

BIS-certified smart and static energy meters — designed, certified and in production.



## THREE PHASE SMART METER

IS:16444 Part 1 · BIS certified · 4G / NB-IoT / RF Mesh · direct & CT-connected



## SINGLE PHASE SMART METER

IS:16444 Part 1 · BIS certified · 4G / NB-IoT / RF Mesh · pre-paid & post-paid



## SINGLE PHASE STATIC METER

IS:13779 (2020) · BIS certified · IRDA · utility-ready, in production

A common, future-ready metering platform – DLMS/COSEM protocol stack, *AES-GCM-128* security, AMI self-healing and remote firmware update – engineered end-to-end in India.

### STANDARDS

IS 16444 · IS 13779 · IS 15959 · IS 15884 · CBIP 325 · IEC 62052 / 62053 / 62056

### SECURITY

AES-GCM-128 encryption · AES-128 key wrap · tamper detection suite

### COMMUNICATIONS

4G / 2G · NB-IoT · RF Mesh · plug-in NIC architecture

# Three Phase Smart *Energy* Meter

IS:16444 Part 1 · BIS Certified · 4G / NB-IoT / RF Mesh



## KEY FEATURES & SPECIFICATIONS

<b>Ratings</b>	10(60)A, 10(100)A — Direct & CT-connected
<b>Communication</b>	4G/2G, NB-IoT, RF Mesh (plug-in NIC)
<b>Protocol</b>	DLMS/COSEM · Plug & Play · Self-register
<b>Security</b>	AES-GCM-128 encryption + AES-128 Key Wrap
<b>Tamper Detection</b>	Magnet · AC/DC chopping · Connection tampers
<b>Load Control</b>	Latching relay >10,000 cycles · Remote switch
<b>Metering Modes</b>	Pre-paid & post-paid · TOU up to 8 rates
<b>AMI</b>	Self-healing · Remote FW update · Auto-register
<b>Enclosure</b>	Ultrasonic welded · 35kV surge immune · IP54

# Three Phase – Technical *Specifications*

Parameter	Value / Range
Reference Standards	IS 16444, IS 13779, IS 15959, IS 15884, CBIP 325, IEC 62052-11, IEC 62053-21/22, IEC 62056 (DLMS)
Voltage (Direct)	3×220/380V – 3×240/415V
Voltage (CT)	3×57.5/100V – 3×240/415V
Current (Direct)	10(60)A, 10(100)A
Current (CT)	1(5)A, 5(6)A, 5(10)A, 1(10)A
Starting Current	0.2% Ib (Direct)   0.1% Ib (CT)
Frequency	50 Hz / 60 Hz
Accuracy Class	Active: Class 1 (Direct) / 0.5S (CT)   Reactive: Class 2
Ingress Protection	Up to IP 54
Operating Temperature	-25°C to +70°C
Storage Temperature	-40°C to +80°C
Relative Humidity	≤ 95%
Local Interfaces	Optical port (sealable) · Optional: RS485, RS232, BLE
Remote Communication	RF Mesh / GPRS / 3G / 4G / NB-IoT
Dimensions	232 mm × 164 mm × 73.5 mm

# Single Phase Smart *Energy* Meter

IS:16444 Part 1 · BIS Certified · 4G / NB-IoT / RF Mesh



## KEY FEATURES & SPECIFICATIONS

<b>Ratings</b>	5(30)A, 5(40)A, 5(60)A, 10(60)A
<b>Communication</b>	4G/2G, NB-IoT, RF Mesh (plug-in NIC)
<b>Protocol</b>	DLMS/COSEM · Plug & Play · Self-register
<b>Security</b>	AES-GCM-128 encryption + AES-128 Key Wrap
<b>Tamper Detection</b>	Magnet · AC/DC chopping · Connection tampers
<b>Load Control</b>	Latching relay >10,000 cycles · Remote switch
<b>Metering Modes</b>	Pre-paid & post-paid · TOU up to 8 rates
<b>AMI</b>	Self-healing · Remote FW update · Auto-register
<b>Enclosure</b>	Ultrasonic welded · 35kV surge immune · IP54

# Single Phase – Technical *Specifications*

Parameter	Value / Range
Reference Standards	IS 16444, IS 13779, IS 15959, IS 15884, CBIP 325, IEC 62052-11, IEC 62053-21, IEC 62056 (DLMS)
Voltage	Operating range 110V - 240V
Current	5(30)A, 5(40)A, 5(60)A, 10(60)A (other combinations on request)
Starting Current	0.2% Ib
Frequency	50 Hz / 60 Hz
Accuracy Class	Active: Class 1   Reactive: Class 2 (optional)
Ingress Protection	Up to IP 54
Operating Temperature	-25°C to +70°C
Storage Temperature	-40°C to +80°C
Relative Humidity	≤ 95%
Local Interfaces	Optical port (sealable) · Optional: RS485, RS232, BLE
Remote Communication	RF Mesh / GPRS / 3G / 4G / NB-IoT
Dimensions	232 mm × 164 mm × 73.5 mm

# Single Phase *Static* Energy Meter

IS:13779 (2020) · BIS Certified · IRDA Communication



*Utility-ready static metering – proven, certified, in production.*

<b>Standard</b>	IS:13779 (2020) — BIS Certified
<b>Ratings</b>	5–30A direct connected
<b>Communication</b>	IRDA optical interface
<b>Billing</b>	Monthly billing — utility ready
<b>Tamper Detection</b>	Magnet · AC/DC chopping · Connection & utility-specific tampers
<b>Accuracy</b>	Active: Class 1
<b>Enclosure</b>	Ultrasonic welded · 35kV surge immune · IP54
<b>Dimensions</b>	163 mm × 133 mm × 68 mm

# Identity & *Fintech* Devices



## **bioTAB**

*Biometric-enabled tablet*

7" Android tablet · STQC / UID-certified optical finger sensor · 3G, Wi-Fi, BT, GPS



## **TRITON**

*Handheld terminal*

Android POS · integrated 2" thermal printer · NFC, smart cards, Aadhaar identification



## **EFFICA**

*Modular thermal printer*

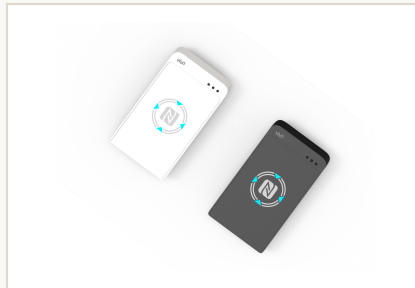
2" thermal printer · BLE, NFC, USB · optional biometric sensor & MSR



## **bioBT**

*Bluetooth biometric sensor*

Portable OTT device · STQC-certified sensor · last-mile eKYC & DBT



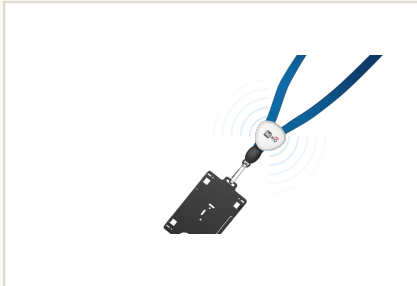
## **VIVO**

*NFC card reader*

NFCIP-1/2 · ISO 14443 A/B, 15693, FeliCa™ · BLE & USB · 3 operating modes

Deployed across PDS & fair-price-shop automation, Aadhaar-based candidate validation, attendance systems, last-mile banking, DBT disbursements and contactless payment acquisition.

# IoT & *Sensing* Devices



## TAGPRO

*BLE attendance tag*

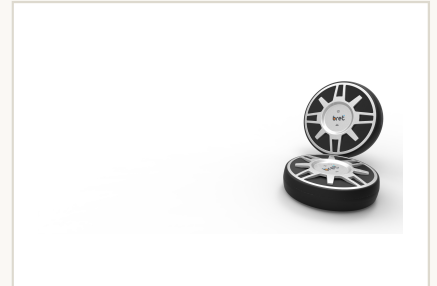
Coin-cell BLE proximity tag · ARM Cortex-M0 · attendance, safety & tracking



## BEACON

*Proximity sensing*

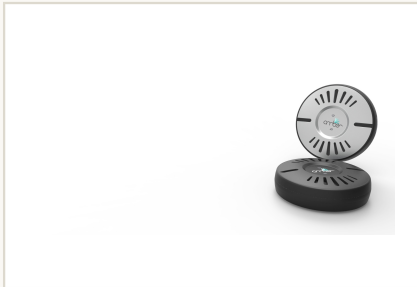
BLE beacon · immediate / near / far zones · retail, tourism & indoor navigation



## BRET

*Temp & humidity sensor*

BLE 4.0 + LoRa to 10 km · cloud via LoRaWAN · data centers, hospitals, cold chain



## AMBER

*Motion sensor*

BLE 4.0 + LoRa · rechargeable · security, asset & aquaculture monitoring



## THE HUB

*Home automation hub*

Connects sensors up to 10 km · Wi-Fi, LoRa, 2G/3G · Ethernet & SLIC

IoT modules in production include the SSBT series (classic, dual-mode and low-energy Bluetooth) and SSLR series (LoRa 868 MHz transceivers).

# Connectivity & *Media* Devices



## MIFI ROUTER

*Pocket 4G router*

CAT4 150/50 Mbps LTE · 2×2 MIMO Wi-Fi ·  
6+ users · 6+ hrs battery



## GPON ONT

*Single-port fiber terminal*

Gigabit fiber input · 1 GigE output · BOSA &  
transceiver options · low-cost CPE



## MEDIA GATEWAY

*Home media gateway*

Fiber input · 3× GigE · 3×3 MIMO Wi-Fi ·  
USB storage · optional LTE & DECT



## CUBECAST

*HD streaming*

Android dual-core · 1080p over HDMI · app-  
controlled streaming & shared media



## GPS TRACKER

*Tracker & distress device*

GSM/GPRS + GPS · SMS/GPRS distress  
alerts · power bank & LED flashlight

Designed for telecom operators, ISPs and consumer-electronics brands — with BOSA-based cost engineering and India-localized manufacturing.

# Solutions that *complete* the hardware

*i*

## LeZgo!

*Incredible experience, lasting memories*

Android travel solution reshaping the tourist experience — integrated with Sohamsaa beacons for immersive, location-aware content.

### USE CASES

Pre-travel, on-travel & post-travel tools  
Rich attraction content for Indian tourism  
Covered by national media at Rajasthan launch

*ii*

## Authintik

*KYC and validation solutions*

Aadhaar-based KYC and validation suite on Windows and Android, using the Sohamsaa AUA for real-time Aadhaar access.

### USE CASES

Works with all major fingerprint modules  
Hotel & tourism guest validation  
Contract-worker and retail KYC

*iii*

## Pigmy

*Automating small savings*

Fully automates the pigmy small-savings collection process, integrated with core-banking software of co-operative banks.

### USE CASES

BT-integrated with EFFICA thermal printer  
Cloud dashboard for fraud reduction  
Micro-finance, NBFC & chit-fund collections

Every Sohamsaa device ships with the software that makes it productive — from firmware and Android applications to cloud dashboards and core-banking integrations.

# Partnerships & *Recognition*

## CHIP & SUB-SYSTEM PARTNERS

Strategic partnerships with global semiconductor majors — including a published partnership with ST Microelectronics for IoT and smart devices.

## COMPONENTS

Long-standing component partnerships across India, US, EU and China for resilient sourcing.

## 3G & 4G LICENSING

Licensed cellular technology partnerships enabling 2G / 3G / 4G product lines.

## DISTRIBUTION

Distribution partnerships taking Sohamsaa designs to customers across markets.

## AWARDS, ACCOLADES & PRESS

### *i* Best Booth Award

Winner of the Best Booth Award for Innovative Products at the Global ARM Technology Symposia, Bangalore — Nov 2013.

### *ii* Key ESDM Player

Featured among 24 Indian companies to watch in the “Semiconductor Market in India 2014–2020” research report.

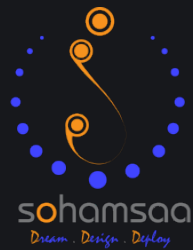
### *iii* ST Microelectronics

Press release by ST Microelectronics, a global semiconductor giant, on its key partnership with Sohamsaa to develop IoT and smart devices.

### *iv* National Press

LeZgo! travel app covered by The Hindu, NDTV, India Today, Financial Express and Business Standard at its Rajasthan tourism launch.

*Representative customers — Business Worldwide.*



# Thank *You*

For further information and discussions, please contact

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