

CUDO solution

at a Glance **2016**^{V.6}



INTRODUCTION



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Let's start now:
Think, Develop, Go!

In the global world where planet seems flat, the need of automation is a must. Automation can be done in instant, fast, connectable, easy to implement and off course it must fulfill whatever the function is expected to be.

ATM, Parking ticket dispenser, snack dispenser, GPS tracking, smart light, Hybrid power, Auto parking lot, Flood monitoring, Traffic Management, cash register monitoring, realtime tax monitor and etc have been cross our daily life without our notice.

Welcome to M2M (Machine to Machine) where machine talks to machine automatically and deliver information to us as a user to make our life easier and make our planet more comfortable to live in.

M2M terms has transformed to IoT (Internet of Things) where those M2M devices are connected to Internet, that enables us to monitor, control and manage those M2M devices from anywhere in the world with Internet connection.

In Cudo Communication (a.k.a. CUDOCOMM), we foresaw this trends in the early 2011 and started building the environment of M2M/IoT world by providing The Device, The Platform and The Big Data.

These 3 major pillars of M2M/IoT is represented as "Cudo Solution"

They have been researched, developed and delivered by our team through 3 different business lines: Cloud App., M2M and Big Data divisions, where they are led by different Senior Managers who have different skillful engineers and technicians.

By the year of 2015, Cudo Solution has 2 major products i.e. KLODWARE (Cloud Application) and SQUASH (M2M devices). To differentiate and to focus on to M2M devices, Squash is represented by 4 brands: Squash IAM, Squash Traxy, Asset Watcher, and Firefly.

We do hope that this list of products can be useful to guide and help our customer to create more profitable business through Cloud application, M2M and IoT devices.

Our spirit is to support your business all the way.

OUR PRODUCTS AT A GLANCE

01



02



03



04



05



BUSINESS APPLICATIONS

HUMIDITY, FUEL, WATERLEVEL, WEATHER, FIREDETECTOR, SMOKE DETECTOR, PIR, TEMPERATURE, AC-DCVOLTAGE, AC-DC CURRENT, DOOR OPEN. ETC

SQUASH IAM
SQUASH TRAXY
FIREFLY SMARTLIGHT
ASSET WATCHER
ENERGY WATCHER

KLODWARE FRAMEWORK
INTEGRATING M2M & SENSOR INTO INFOGRAPHIC AT A GLANCE

SENSORS

01

3RD PARTY
SENSOR

SQUASH
TRAXY
Tracking System

SQUASH
Intelligent Asset Management



M2M DEVICES

02

CLOUD APPS FRAMEWORK

03





WWW.SQUASHSYSTEM.COM



WWW.SQUASHTRAXY.COM

<p><i>Smart Cities</i></p>  <p>01</p>	<p><i>Banking</i></p>  <p>02</p>	<p><i>Power Plant</i></p>  <p>03</p>	<p><i>Oil & Gas</i></p>  <p>04</p>	<p><i>Telecom</i></p>  <p>05</p>	<p><i>Transportation</i></p>  <p>06</p>	<p><i>Building Management</i></p>  <p>07</p>
<p><i>Data Center</i></p>  <p>08</p>	<p><i>Mining</i></p>  <p>09</p>	<p><i>Plantation</i></p>  <p>10</p>				
<p><i>Fleet</i></p>  <p>21</p>	<p><i>Personal</i></p>  <p>22</p>	<p><i>Mining</i></p>  <p>23</p>	<p><i>Plantation</i></p>  <p>24</p>	<p><i>Oil & Gas</i></p>  <p>25</p>	<p><i>Smart Cities</i></p>  <p>26</p>	<p><i>Construction</i></p>  <p>27</p>
<p><i>F&B</i></p>  <p>28</p>						



WWW.LAMPUCERDAS.COM

Smart Light



Smart Home



ASSET WATCHER

WWW.ASSETWATCHER.NET

Telecom



Warehouse



Inventory



Government



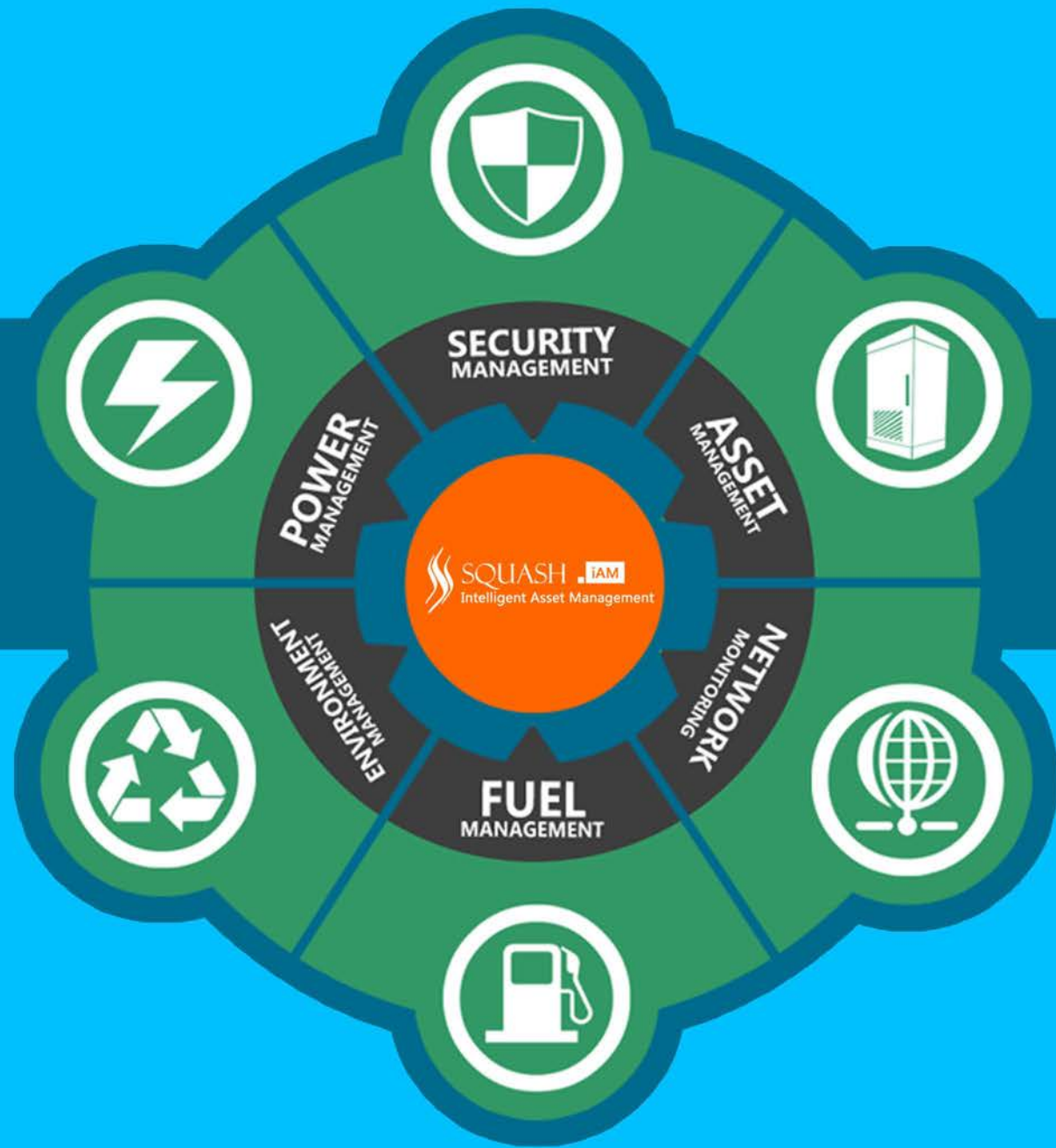
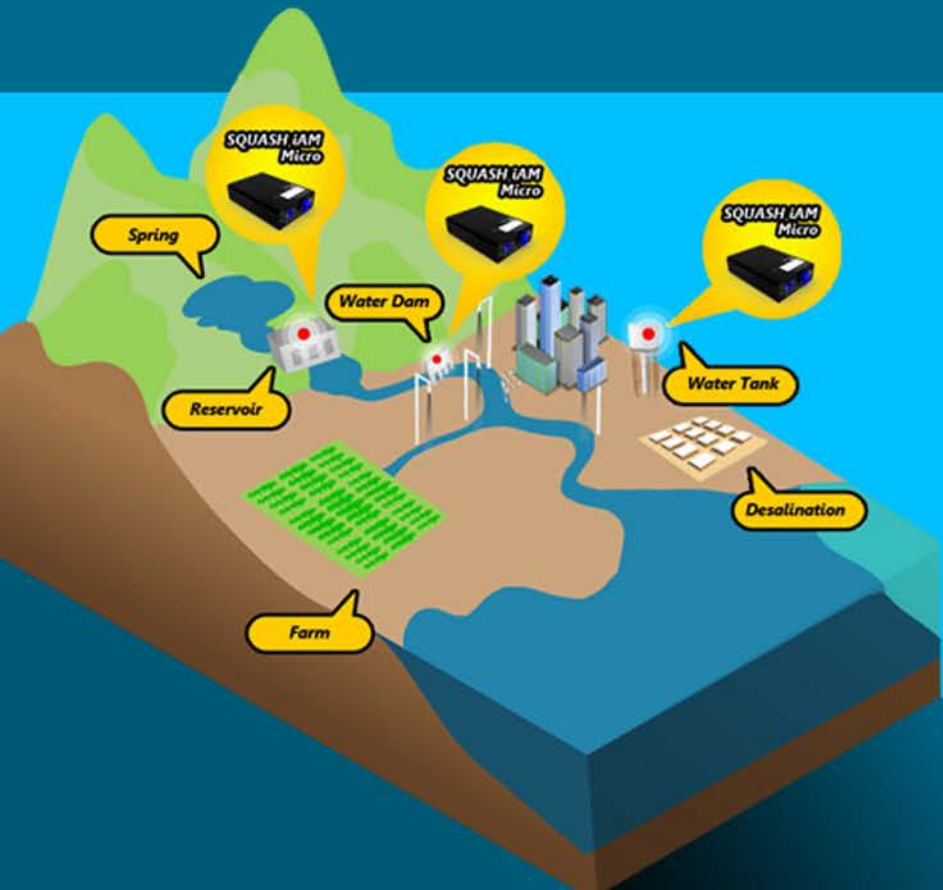
Power Plant



WWW.ENERGYWATCHER.NET

INTELLIGENT ASSET MANAGEMENT

SQUASH IAM



1.1 FLOOD MONITORING
Integrated Flood Monitoring across the city

1.2 WATER LEVEL MONITORING,
Water resources monitoring at spring, lake,
river, reservoir, city water reserve tank.

1.3 FIRE PROTECTION
Cluster-based Independent fire
alert system.

SQUASH IAM FOR BANKING

2.1 **ATM SECURITY MANAGEMENT**
Active ATM security monitoring and
alert through cellular network

2.2 **SALES MONITORING**
Sales Canvasser monitoring with
Digital camera

3.1 **TRAFO MONITORING**
Integrated Transformer Monitoring of Electric
distribution Load and performance

3.2 **POWER MONITORING**
Monitor power output of generator and its
alert/alarm through DGPT and Bucholz Relays.

4.1

GAS PIPELINE MONITORING

Monitor gas leakage, gas flow and gas temperature using wireless network.



5.1

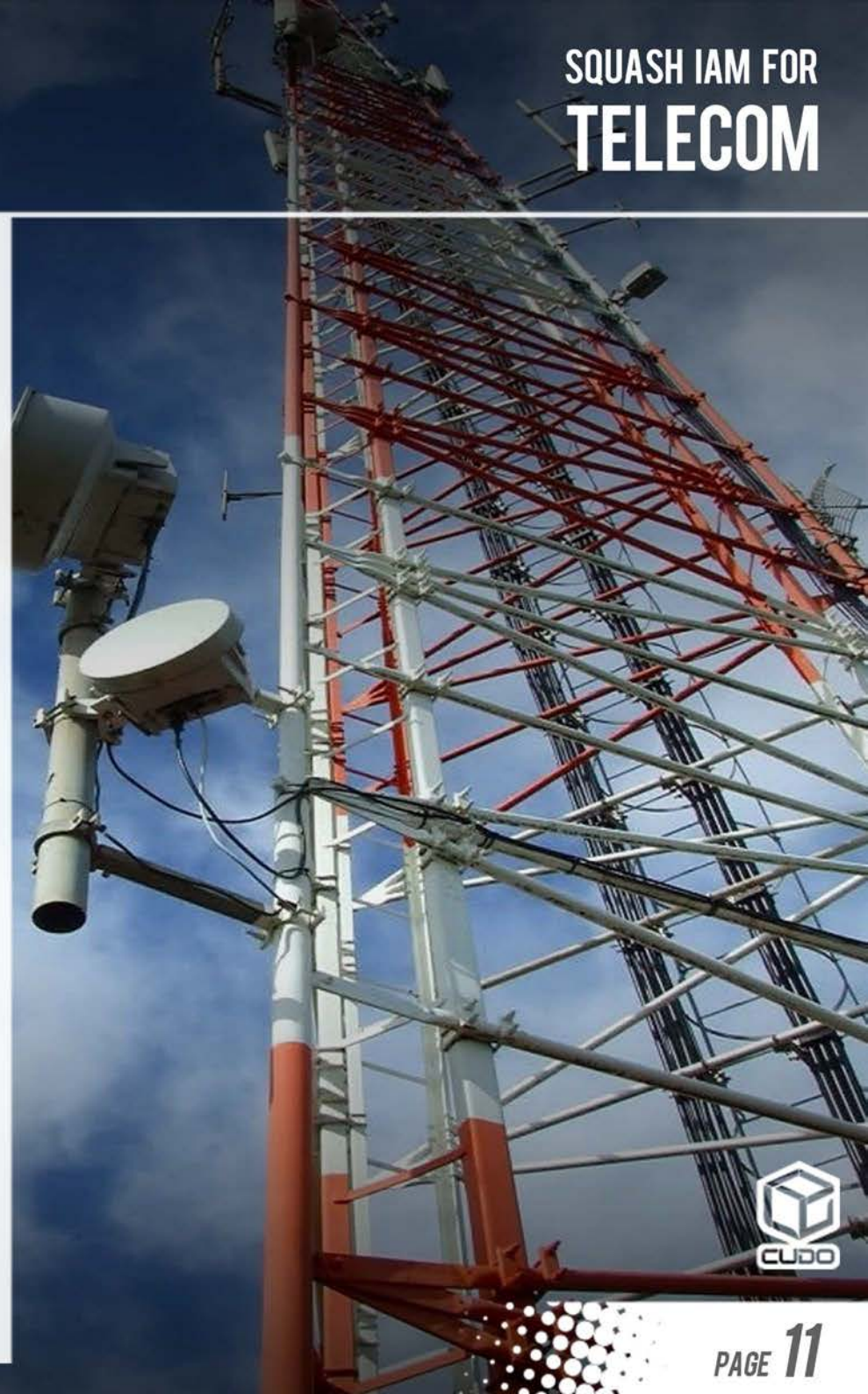
SITE MONITORING

Integrated and comprehensive monitoring of Power, Fuel, Environment, Access, Communication and Security system.

5.2

HYBRID POWER (CDCCYCLES)

Hybrid power mechanism through Charge-Discharge Cycles for green and efficient power supply.



SQUASH IAM FOR TRANSPORTATION

6.1 **BRIDGE PROTECTION**
Bridge protection system against over load vehicles and cracking

6.2 **HIGHWAY MONITORING**
Safety and security camera system for highways
Road ticketing system for road access violation and speeding violation

6.3 **WEIGHT IN MOTION**
Monitoring Load of Fleet Over Bridge

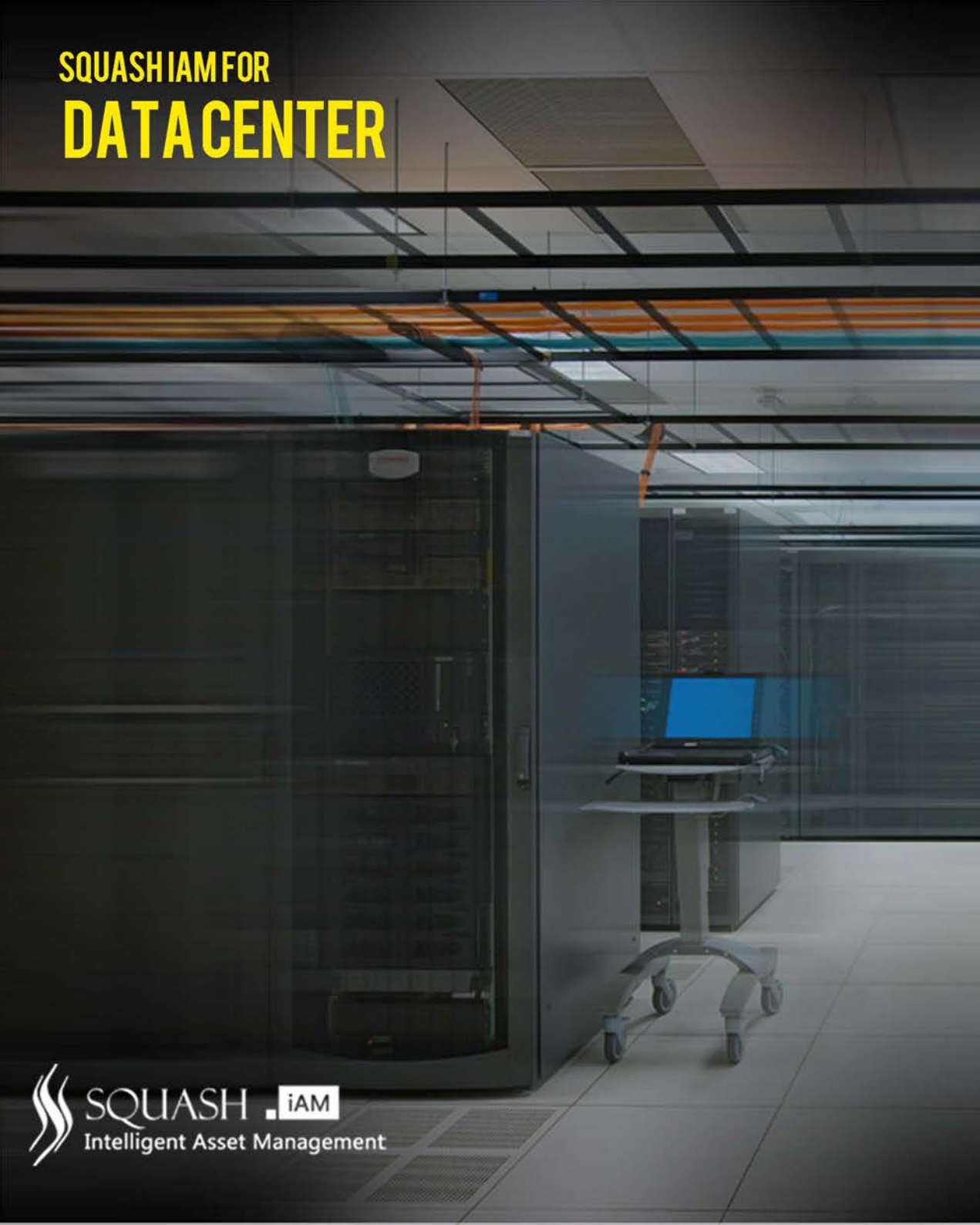
6.4 **BUSWAY SYSTEM**
Busway system including ticketing, queuing, information and security

SQUASH IAM FOR BUILDING MANAGEMENT

7.1 SMART BUILDING

Office building or Malls Utility Management
i.e. power, air conditioning, gas, access,
lighting, security and etc.

SQUASH IAM FOR DATA CENTER



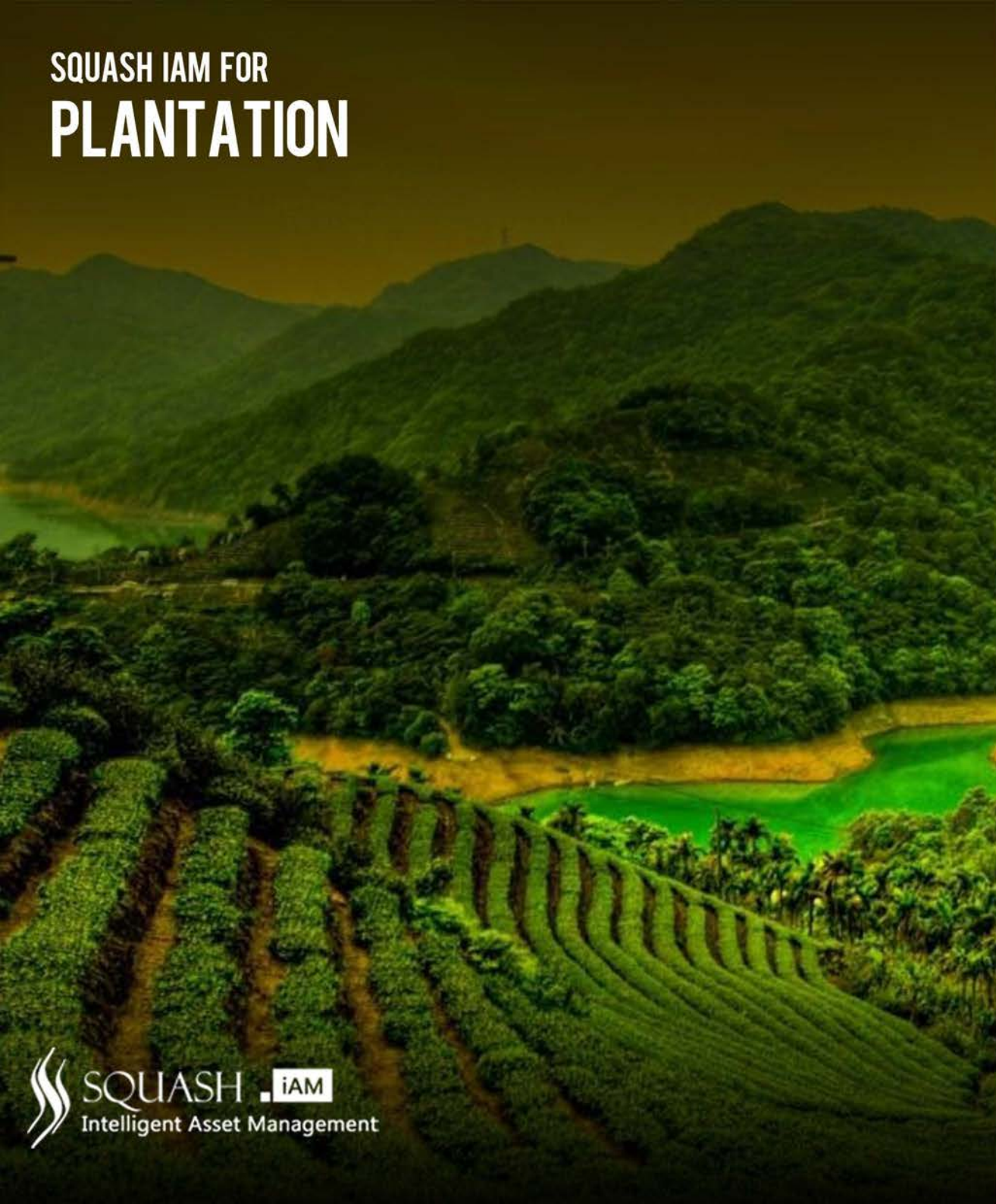
8.1 UPS MONITORING
UPS Rectifier and Battery monitoring

8.2 EMS SMART MANAGEMENT
Environment Monitoring System
(e.g. temperature, humidity, water presence, flame, smoke, power consumption, grounding and etc)

9.1 COAL CONVEYOR SYSTEM MANAGEMENT

Coal loading to vessel monitoring
through temperature and vessel water
level

SQUASH IAM FOR PLANTATION



10.1 CROPCOUNTER Fresh Fruit Bunch (FFB) Crop Counter for Palm Oil Plantation





TRACKING SYSTEM
SQUASH TRAXY



SQUASH TRAXY FOR FLEET

21.1 FLEET MANAGEMENT

Manages your fleet through integrated application on operation, targeted revenue and cost through GPS and internal data (delivery, spare part, maintenance, basic cost) into simple manageable dashboard

SQUASH TRAXY FOR PERSONAL

22.1 KIDS AND SENIOR TRACKING SYSTEM

Monitor Kids, senior people, Hajj pilgrims through power saving GPS tracker or Android Smartphone

**SQUASH
TRAXY**
Tracking System

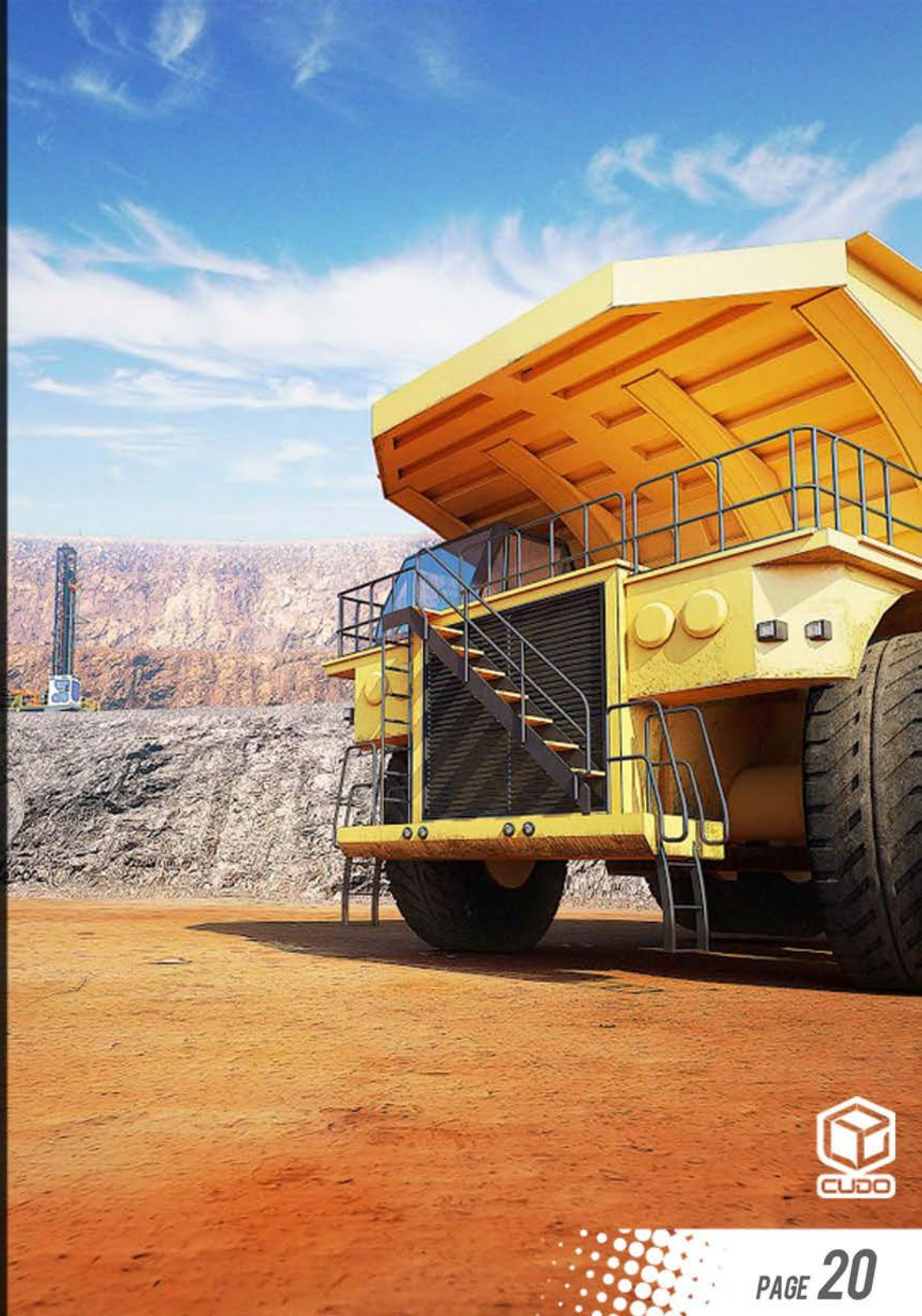


SQUASH TRAXY FOR MINING

23.1

TRANSPORT TRACKING

Vehicle tracking with Load monitor, weighing info, job order display, idle vehicles, road camera, fuel sensor, vibration sensor and etc.



SQUASH TRAXY FOR PLANTATION

24.1

PLANTATION FLEET MANAGEMENT

Integrated fleet management for Tractors, Excavator, Road Grinder and etc, to measure daily job completion, plant and harvest schedule

25.1 FUEL/GAS STORAGE & DISTRIBUTION MANAGEMENT

Manage the capacity of Fuel/Gas Main Storage and Quantity of transported Fuel/Gas to depo, field reserved tanks and also distributed fuel in each vehicles

SQUASH TRAXY FOR SMART CITY

26.1

GARBAGE MANAGEMENT

Manage garbage collection from large housing complex or whole city. KPI and payment is based on collection performance.

26.2

COMPOUND/CLUSTERED SECURITY MONITORING

Integrated security system in a clustered area through access control, CCTV monitoring, blank spot camera, vehicle tag system, SOS button, guest filtering system, Fire alarm, Guard patrol system and security dispatch alarm.

26.3

SMART PARKING

Road side smart parking system with online payment and subscription.

SQUASH TRAXY FOR CONSTRUCTION

27.1

CEMENT FLEET MANAGEMENT

Cement Fleet monitoring with management of Job order, Access, Security, ETA prediction, Trip plan and Load protection.

27.2

CONSTRUCTION SITE SECURITY

Mobile and Portable CCTV system for construction site.

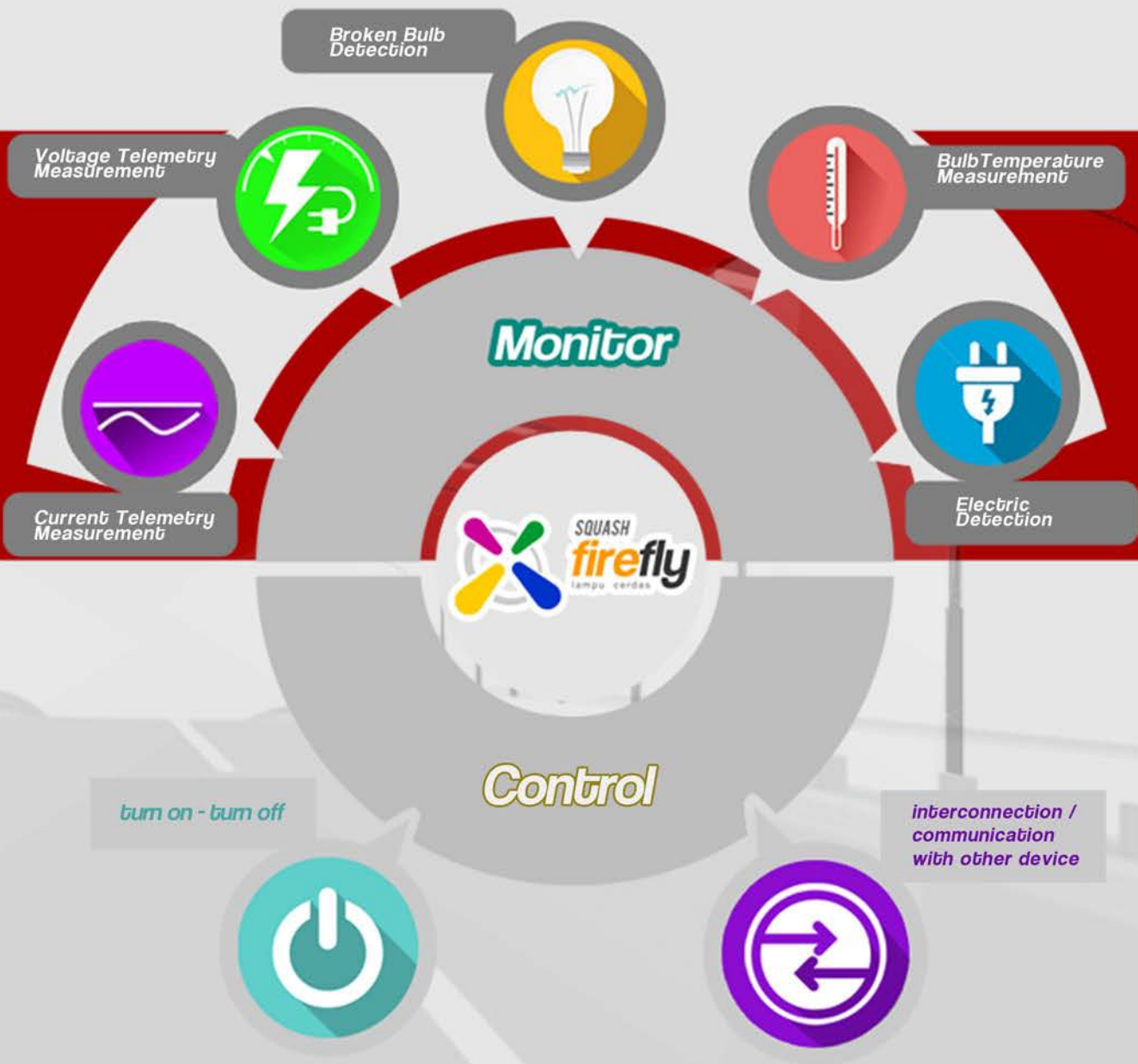
SQUASH TRAXY FOR FOOD & BEVERAGES

28.1

VENDING MACHINE AND COLD STORAGE

Remote monitoring of Location, temperature and content quantity of Vending Machine and Cold Storage

FIREFLY™



31.1 **FIREFLY DATABASE**
Provide GUI database for Streetlight components

31.2 **FIREFLY POWERMETER**
Online power consumption monitoring

31.3 **FIREFLY DIMMER**
Auto dimmer system through pre-set schedule

31.4 **FIREFLY LAMP SENSE**
Online and wireless bulb alert and availability management

31.5 **FIREFLY ADAPTIVE SENSE**
Advanced Lamp Sense Dimming Solution for Moving Object

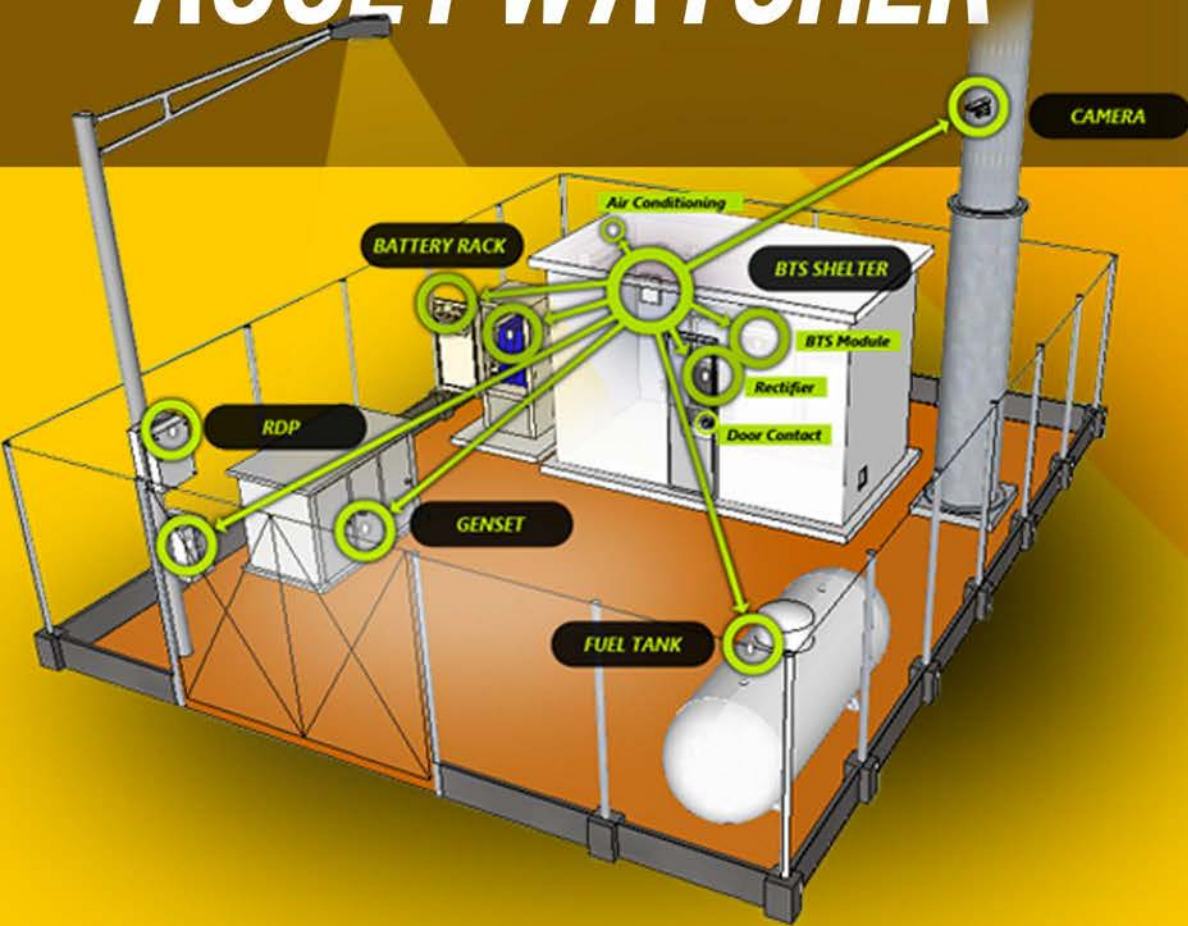
32.1 HOME SECURITY

Online and integrated Home security on gates, doors, windows, yards, parked vehicles, indoor movement, through wireless sensors.

32.2 HOME AUTOMATION

Automate lamp, Air Cond, water heater, exhaust, garage door, sprinkler, pool pump, power outlet and etc through scheduled and remote control via Android device or Web Internet access.

ASSET WATCHER



TELECOM

41.1

SITE ASSET MANAGEMENT

Manage BTS/Node Power, Fuel, Access and Security and also monitor environment and link back haul through 46 different sensors.



ASSET WATCHER



WAREHOUSE

42.1

WEAPON/TOOL MANAGEMENT

Weapon or Tool asset tagging management. Suitable for police, laboratory, workshop, museum and stores.

42.2

WAREHOUSE STORING

Warehouse management through in/out flow gate, weighing system, lot location tracking, quantity real time reporting and etc. Suitable for few places with huge item quantity.

42.3

ASSET MANAGEMENT

Asset tracking Management through combined RFID, GPS and BLE. Suitable for many places with small item quantity.



ASSET WATCHER



INVENTORY

43.1

MOBILE ASSET TAGGING

Online Asset tagging system, with mobile phone for periodic asset audit.



GOVERNMENT

44.1

POS MONITORING

Online POS (Point Of Sales) transaction monitoring and reporting, suitable for retail sales or government tax monitoring system



ASSET WATCHER



Energy Watcher



POWERPLANT

51.1 POWER PLANT NETWORK MONITORING

Online Monitoring Of Power Plant and
Electric City Network with NOC
(Network Operation Center)
For Smart Grid Environment

APPLICATION / SENSOR

SQUASH IAM

	Applications	Sensors
SMART CITIES	01.1 FLOOD MONITORING	Level sensor, temperature sensor, still camera/CCTV, solar panel
	01.2 WATER LEVEL MONITORING	Level sensor, temperature sensor, still camera/CCTV, solar panel
	01.3 FIRE PROTECTION	flame sensor, temperature sensor, Fire alarm Button, Siren, still camera/CCTV Solar panel
BANKING	02.1 ATM SECURITY MANAGEMENT	Still camera, movement sensor, switch, RFID reader, Still camera
	02.2 SALES MONITORING	Still camera, GPS, access button
POWER PLANT	03.1 TRAF0 MONITORING	Power sensor, voltage and current sensor, temperature, still camera, access switch, Shunt trip, CT
	03.2 POWER MONITORING	Power sensor, voltage and current sensor, temperature, battery sensor, CT, MPF, Relays,
OIL AND GAS	04.1 GAS PIPE MONITORING	Temperature sensor, Pressure sensor, Flow meter, GPS
TELECOM	05.1 HYBRID POWER (CDC CYCLES)	Power sensor, voltage and current sensor, temperature, CT, MPF, Relays
	05.2 SITE MONITORING	Power sensor, voltage and current sensor, temperature, battery sensor, CT, MPF, Relays, Still camera, PIR, Humidity, Air Cond. controller, Speed controller, RS-485 surge arrester, Fuel sensor, Water in Diesel sensor, Fuel cap switch, DC load sensor, Feeder loss sensor, Grounding protection switch, RFID access, Ventilation controller, Generator controller
TRANSPORTATION	06.1 BRIDGE PROTECTION	Vibration sensor, crack sensor, WIM sensor
	06.2 HIGHWAY MONITORING	PIR sensor, CCTV, Still camera, GPS, Solar panel
	06.3 WEIGHT IN MOTION	WIM sensor, CCTV, Still camera
	06.4 BUSWAY SYSTEM	GPS, CCTV/Still camera, gate switch, proximity sensor, RFID.

APPLICATION / SENSOR

SQUASH IAM

	Applications	Sensors
BUILDING MNGMNT	07.1 SMART BUILDING	Clustered relays, KWH meter, light sensor
DATA CENTER	08.1 UPS MONITORING	Battery sensor, Power sensor, Temperature sensor, CT, Voltage & current sensor
	08.2 EMS SMART MANAGEMENT	Temperature, power consumption, water drip sensor, humidity, movement, access switch
MINING	09.1 COAL CONVEYOR SYSTEM MANAGEMENT	Water level sensor, fuel sensor, weight sensor, temperature sensor
PLANTATION	10.1 CROP COUNTER	Counter switch

703



APPLICATION / SENSOR

SQUASH TRAXY

	Applications	Sensors
FLEET TRACKER	21.1 MANAGEMENT, DATA MINING AND BIGDATA ANALYSIS FOR YOUR FLEET	Access, GPS, trip meter adapter,
PERSONAL TRACKER	22.1 MONITOR KIDS, SENIOR PEOPLE OR MEMBERS OF HAJJ	GPS
MINING	23.1 TRANSPORT TRACKING	GPS, Fuel sensor
PLANTATION	24.1 PLANTATION FLEET MANAGEMENT	GPS, Fuel sensor, proximity sensor
OIL & GAS	25.1 FUEL/GAS STORAGE DISTRIBUTION MANAGEMENT	GPS, Fuel sensor, Fuel level, Temperature sensor, Pressure sensor, Gas leakage sensor, Fuel hatch switch.
SMART CITIES	26.1 GARBAGE MANAGEMENT	GPS, RFID
	26.2 COMPOUND/CLUSTERED SECURITY MONITORING	GPS, RFID, ProXcudo, CCTVs, Movement sensor, Siren, Emergency button with BLE.
	26.3 SMART PARKING	GPS, RFID
CONSTRUCTION	27.1 CEMENT FLEET MANAGEMENT	Sensors: GPS Tracker, Fuel sensor, RFID tags, Camera, Proximity sensors.
	27.2 CONSTRUCTION SITE SECURITY	Camera, Solar Panel System, 3G/Wifi Communication, Mobile Baseplate Pole
FOOD & BEVERAGE	28.1 VENDING MACHINE AND COLD STORAGE	GPS Tracker, Counter Switch, Temperature Sensor



APPLICATION / SENSOR

FIREFLY SMARTLIGHT

	Applications	Sensors
SMART LIGHT	31.1 PUBLIC ROAD SMARTLIGHT	End Device, Routers and Coordinator, Dimmer, 3-phase KWH meter, Voltage, Current and Temperature sensor
SMARTHOME	32.1 HOME SECURITY	Wireless ZB Outlet, ZB lamp fittings, ZB switch, ZB Relay, ZB router
	32.2 HOME AUTOMATION	3 Digital inputs and 3 digital relays output



APPLICATION / SENSOR

ASSET WATCHER

	Applications	Sensors
TELECOM	41.1 SITE ASSET MANAGEMENT	Temperature, Humidity, Voltage, Current, Power, Grounding, Feeder Lost, Air cond, DC ventilation, Fuel level, Fuel latch, Water in Diesel, Camera, PIR, Starter relay and etc
WAREHOUSE	42.1 GUN/TOOLMANAGEMENT	RFID Reader and Tags
	42.2 WAREHOUSE STORING	RFID Reader and Tags
	42.3 ASSET MANAGEMENT	RFID Reader and Tags
INVENTORY	43.1 MOBILE ASSET TAGGING	Android smartphone
GOVERNMENT	44.1 POINT OF SALES MONITORING	POS Data Sniffer, Accellerometer, Tamper Sensor



APPLICATION / SENSOR

ENERGY WATCHER

	Applications	Sensors
POWER PLANT	51.1 TRAF0 MONITORING	Power sensor, voltage and current sensor, temperature, still camera, access switch, Shunt trip, CT
	51.2 POWER MONITORING	Power sensor, voltage and current sensor, temperature, battery sensor, CT, MPF, Relays,





Micro



PICO - D



Mini



PICO - W



FLEET & VESSEL



TXV-500



TXV-322



TXC-100

PERSONAL



TXP-100



LAMP SENSE



ADAPTIVE SENSE



POWER METER



DIMMER



MOBILE FIREFLY



FIXED-AW



MOBILE-AW



TRACKER-AW



EW 3000



EW 5000-PDR



EW 1000-TR



EW 3000-MD3



WWW.CUDOCOMM.COM

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INDONESIA*

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