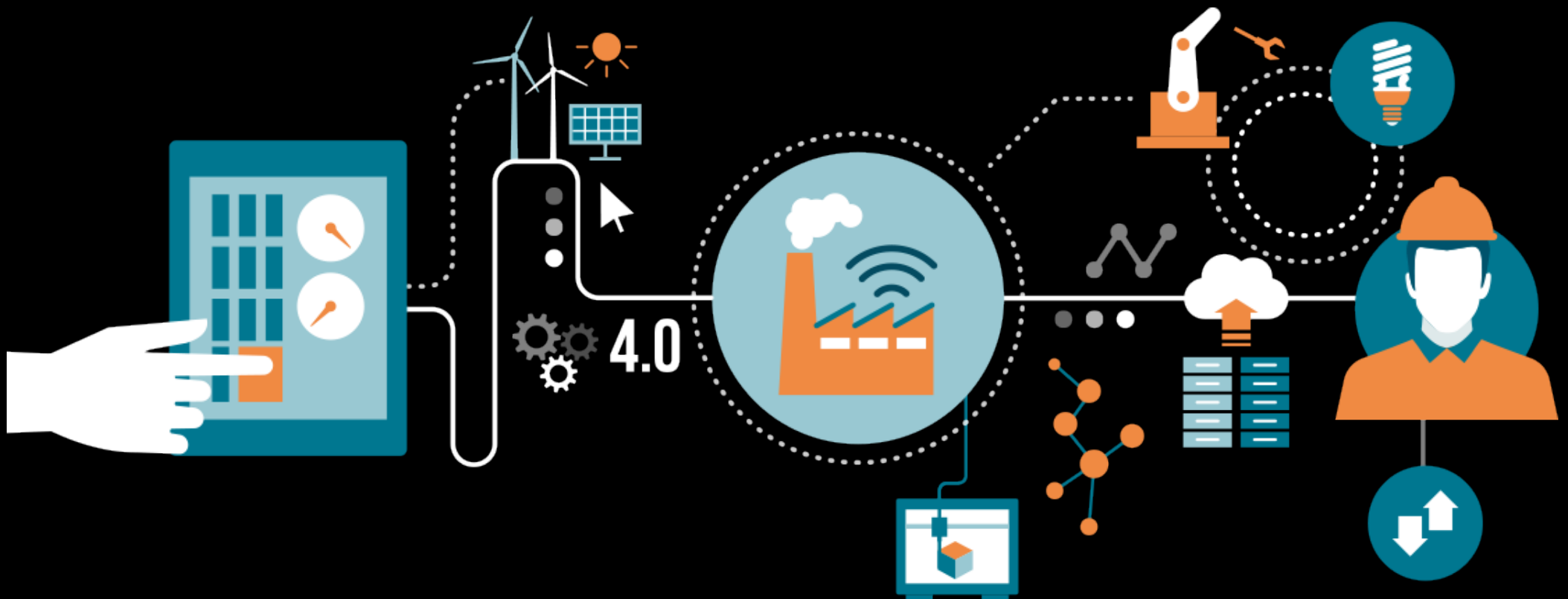


Smart Machine Monitoring System Proposal

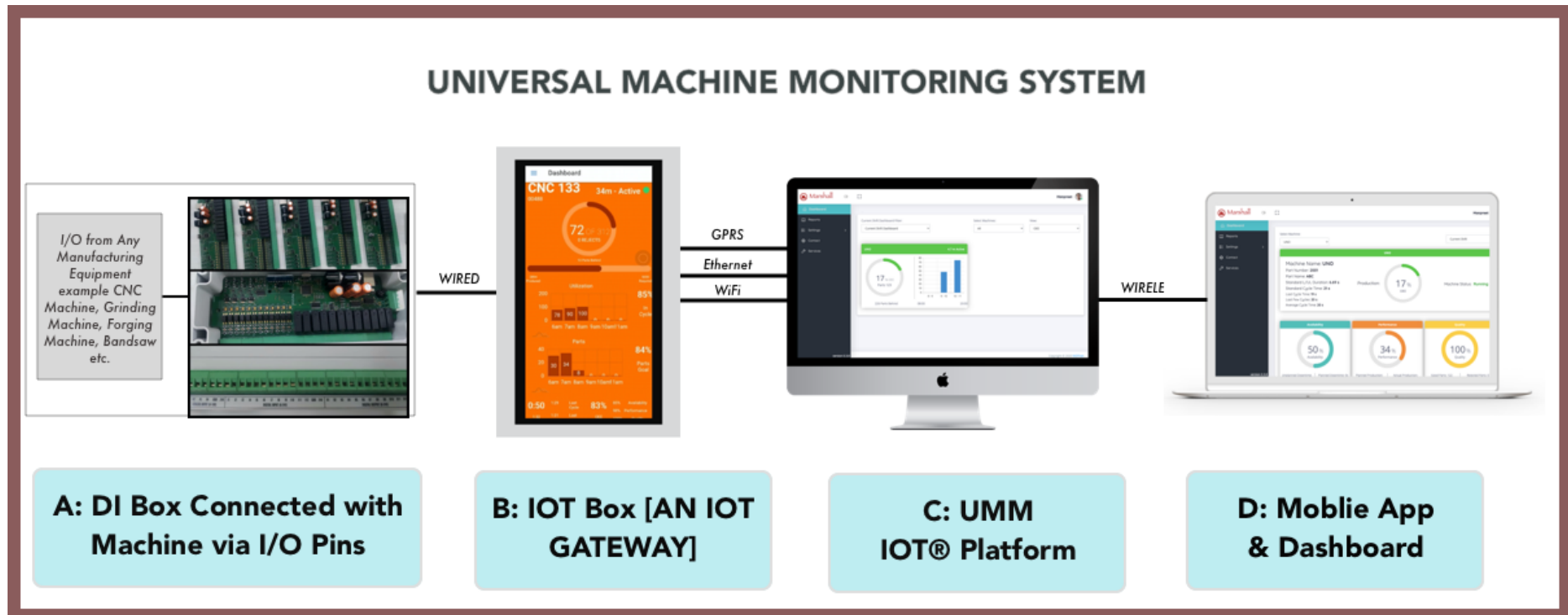
"Harness the Power of Machine Data"



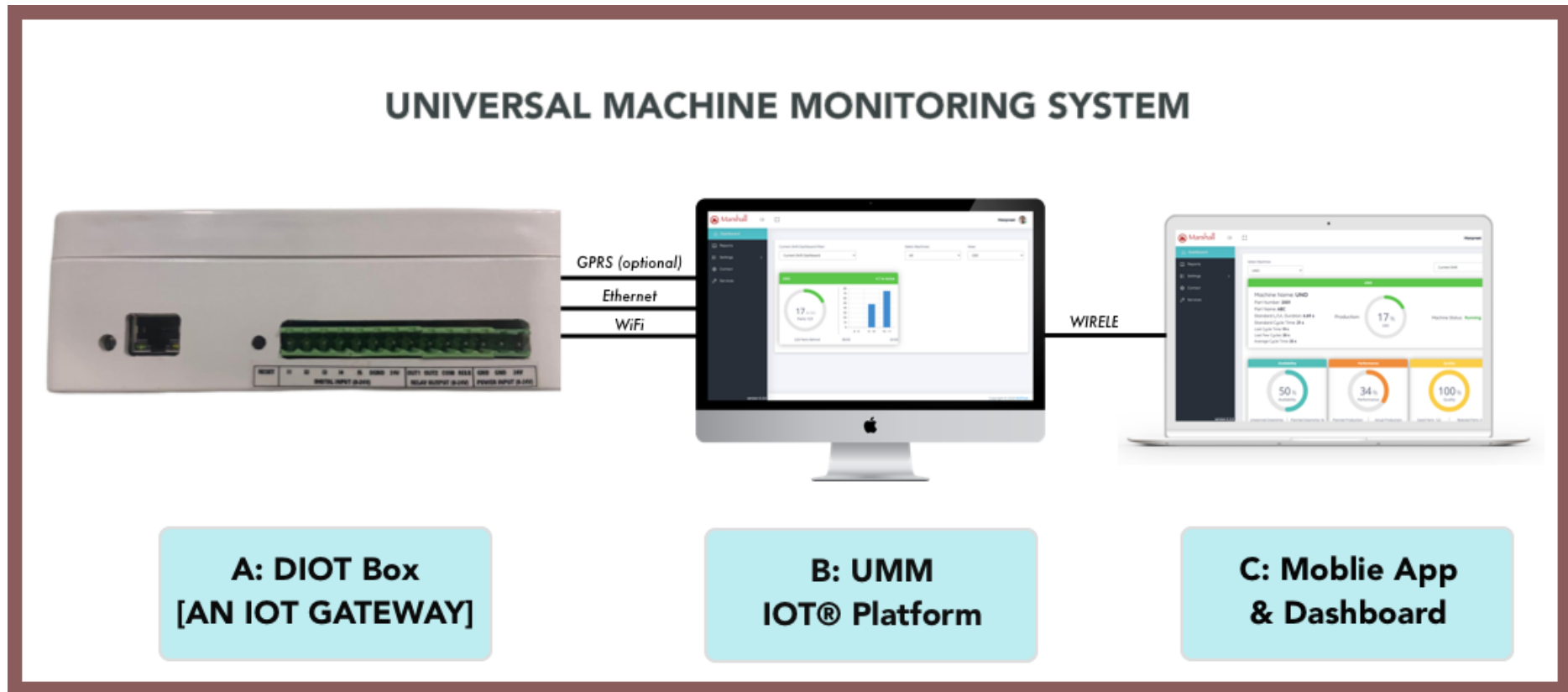
Smart Machine Monitoring System - Accelerating your factory's digital transformation with universal machine monitoring system and flexible Industrial IoT platform. Easily collect data from any piece of manufacturing equipment and transform it into powerful, actionable applications that reduce machine downtime, increase your throughput, and drive profitability.

How it works -

Connectivity option-1



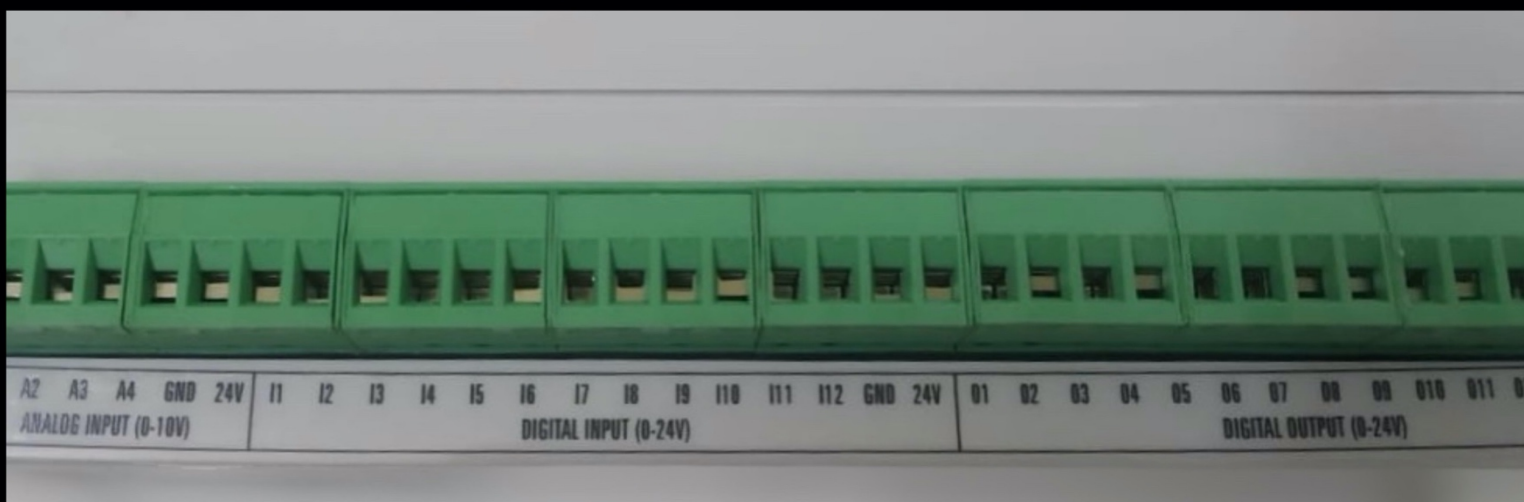
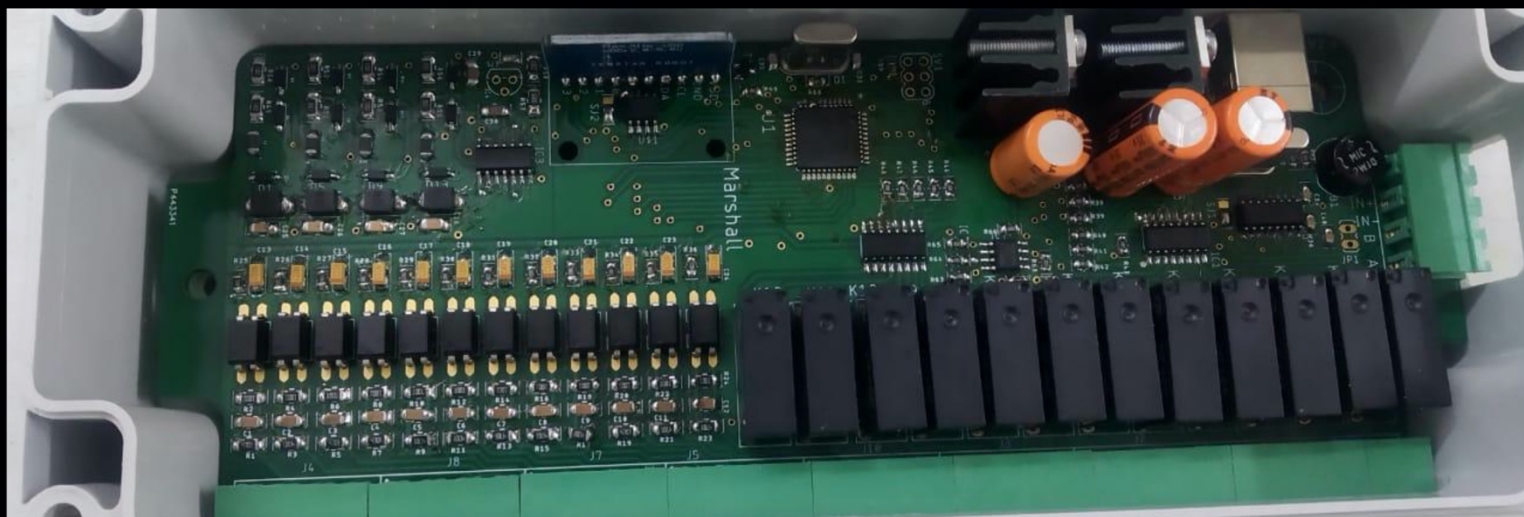
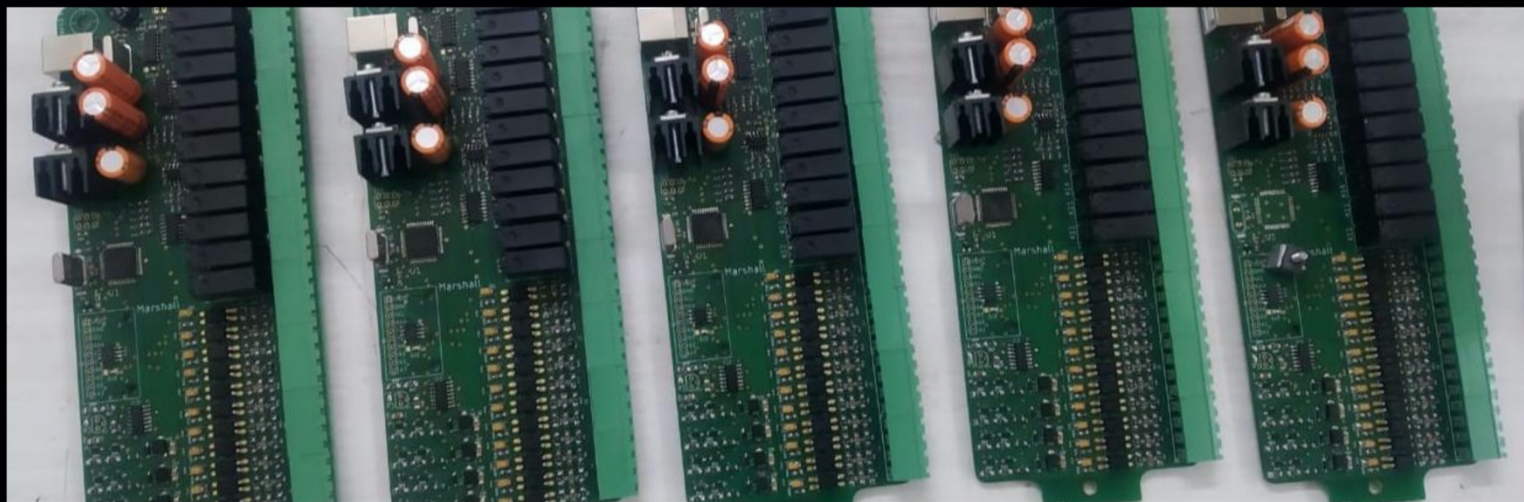
Connectivity option-2



Solution Components

1. Edge Platform – Edge Platform includes connectivity option-1 (**DI box & IOT box**) and connectivity option-2 (**DIOT box**) which provides Plug-and-Play universal machine connectivity automatically transforms, standardizes, processes and analyzes data at the source, providing critical and timely visibility needed to avoid downtime and production losses.
- DI Box – DI is Multifunction Data Acquisition (DAQ) hardware which directly collects data from machines in analog or digital format and sends it to the IOT box via USB or RS485.

Sr. No.	Name of PIN	Function	Power	Description
1.	IN1 & IN2 (no polarity)	INPUT POWER Supply	0V to 12V/15V	This pin is use for powering the DI Box.
2.	POWER LED	Power Status	-	To check if Box is ON (Blue)/OFF.
3.	A1 to A4	ANALOG INPUT	0V to 10V	All the four channels are configured as Analog input.
4.	I1 to I12	DIGITAL INPUT	0V to 24V	All the 12 channels are configured as Digital inputs with respect to their ground pin (GND).
5.	O1 to O12	DIGITAL OUTPUT	0V to 24V	All the 12 channels are configured as Digital Outputs with respect to their ground pin (GND)(maximum load up to 3A).
6.	A & B	Rs485	-	This for rs485 Serial Communication. This pin is Reserved Pin.
7.	USB	OUTPUT	-	From DI Box to IOT box for Serial Communication.



- IOT Box - IOT Box is an Industry4.0 gateway act as a main central unit equipped with smart 4G tablet for machine operators to feed downtime reasons instantly and if required do some local settings on the go.

The Main task of IOT box is to collect data from DI box and processes that data in real-time, store in local memory and streams data securely to the hIOTron Industrial IoT platform using Wi-Fi, Ethernet & GSM (2G,3G & 4G).

Standard	Sr. No.	Name	Function	Power	Description
	1	Power Supply	Power supply input	230V	To power the IOT Box must give 230V.
	2	Ethernet	Ethernet Cable	-	For connectivity purpose use Ethernet
	3.	RS485	INPUT	-	Form DI box to IOT Box for Serial Communication.
Advance (Optional)	4	OPC or FOCAS	INPUT	-	Direct collect data from the machine

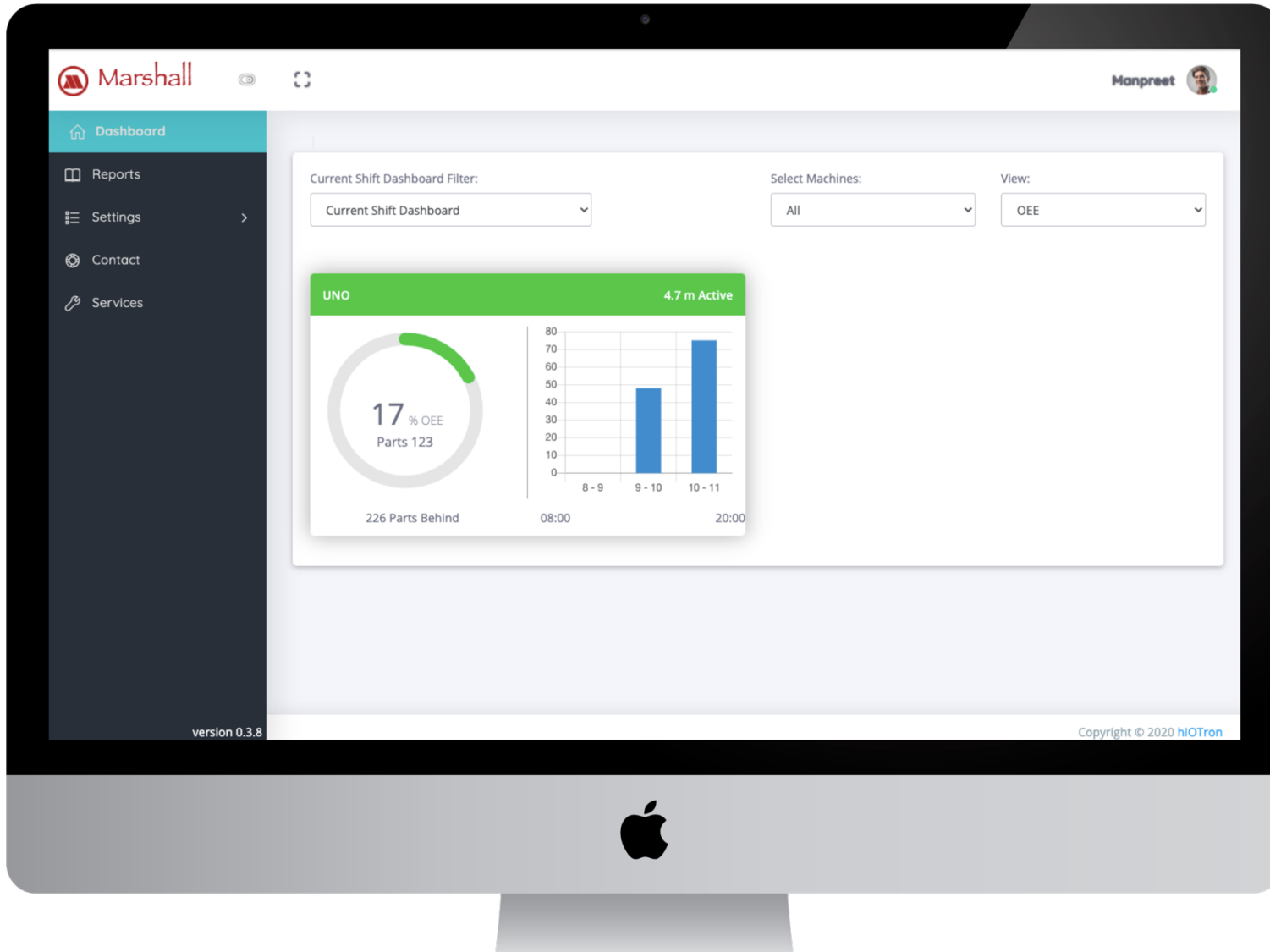


- DIOT Box – DIOT Box is compact version of DI & IOT box act as a standalone Industry4.0 gateway which collect data from machines via PLC in digital format and processes that data in real-time, store in local memory and streams data securely to the hIOTron Industrial IoT platform using Wi-Fi, Ethernet & GSM (optional).

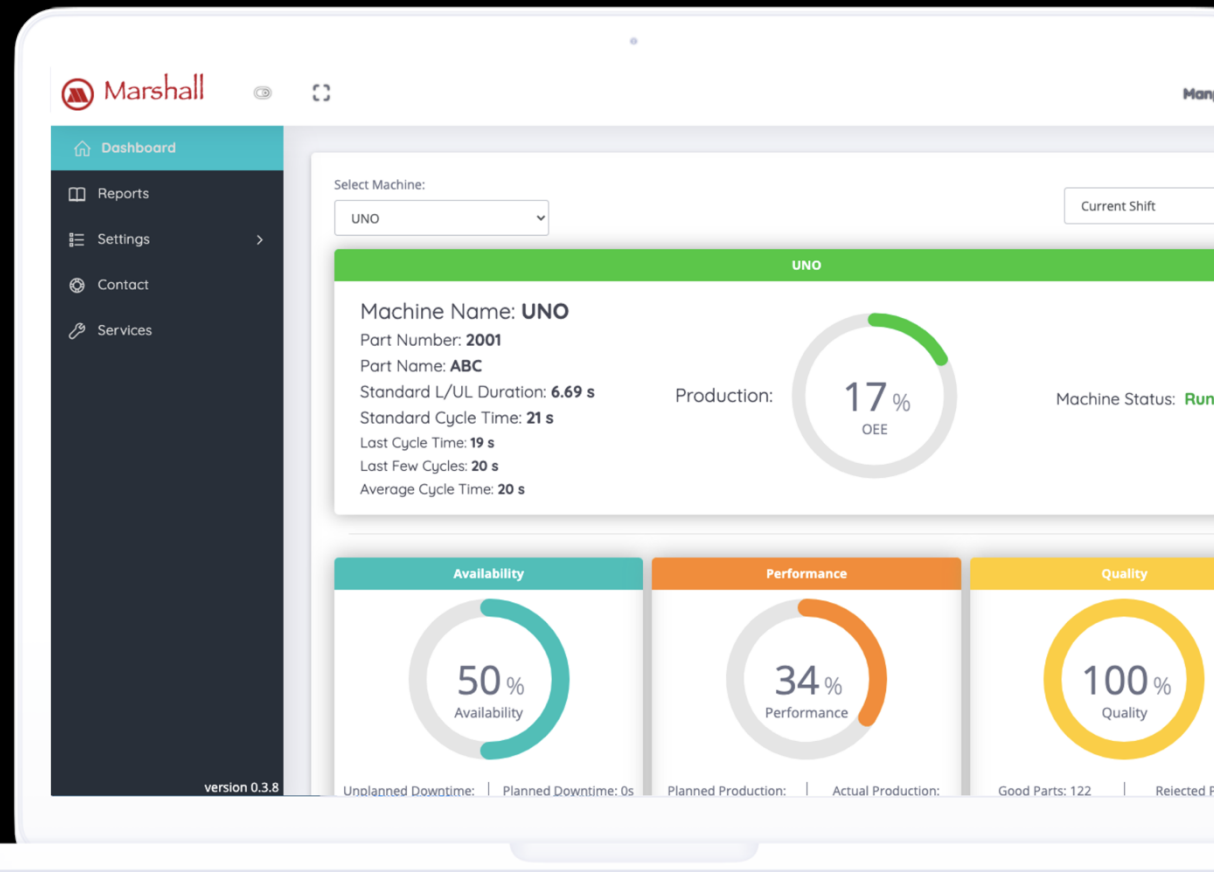
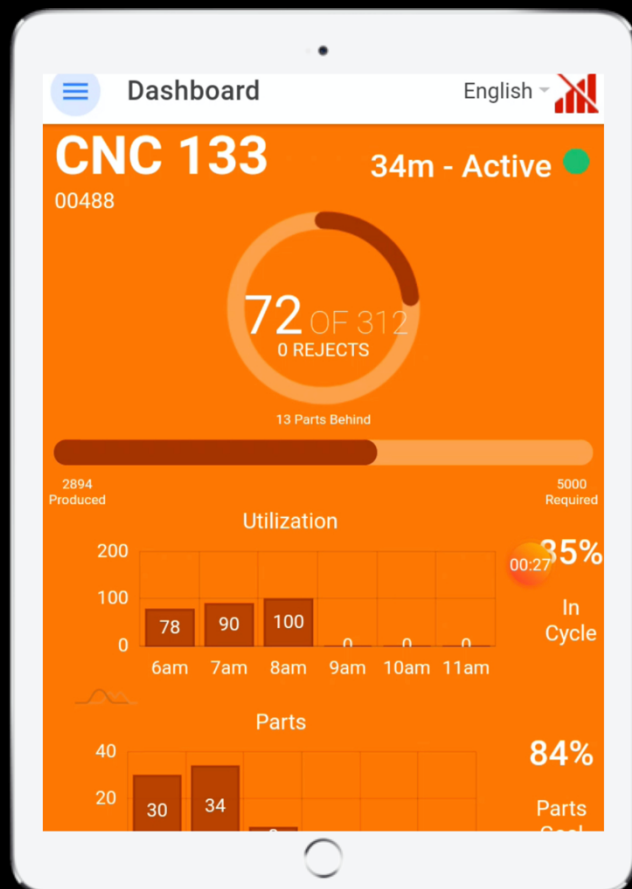
Name	Function	Description
Power supply	24v	To power the DIOT box
I1-I5	DIGITAL INPUT (0-24v)	All the 5 channels are configured as Digital inputs with respect to their ground pin (GND).
o1&o2	DIGITAL OUTPUT (0-24v)	2 channels are configured as Digital Output with respect to their ground pin (GND).
Connectivity options	<ul style="list-style-type: none"> • Wi-Fi • Ethernet • GSM (optional) 	



2. Industrial IOT Platform - Multi-tenant cloud platform enables instant analytics and insights from anywhere, including machine performance and condition monitoring, reporting via APIs, and BI-tool integrations



3. Dashboard & Mobile Application - Leverage out-of-the-box Dashboard & mobile applications which drives immediate actionability including real-time dashboards, historical reporting, rules-based workflows, and text/email notifications to factory workers.



Solution Benefits -

- **Machine Monitoring** - Real-time to track plan, target & actual production
- **Identifying Bottlenecks** - To improve process flow on the shop floor
- **Eliminating Gaps** - between shop floor & plant manager with accurate data
- **Improving Availability** - by fast response to downtimes
- **Generating Reports** - hourly/weekly/monthly, OEE, Production, Downtime, Rejections
- **Data Analysis** - on data to provide insights & alerts
- **Preventive Maintenance** - Trigger for time & condition-based maintenance & health monitoring.
- **Alerts & Notifications** - Condition and role based real time alerts in the form of SMS and Emails.

Commercials - Solution Commercial includes 2 costing parameters such as

- Regular Costing factors - Hardware cost

Model Name	Model Number	50units (MOQ)	100 units	500 units	1000 Or More
DI Box	Hi-17101N	INR7,500	INR6,500	INR5,500	INR5,000
IOT Box	Hi-17101G	INR17,500	INR16,500	INR15,500	INR15,000
DIOT Box	HI-1810G	INR10,000	INR9,500	INR9,000	INR8,500

- Operation Costing factor - Software & Platform Cost

Device Type	Data Type	No. of Messages (Daily)	Each message size	Data-Base Backup
Gateway	Monitoring/ Control	5000 (Every minute interval)	4KB	Up-to 90 Days
<ul style="list-style-type: none"> ✓ Free Devices firmware, Platform & Mobile Application Maintenance ✓ Free online support. ✓ Operation cost INR1000/month/machine. 				

Terms & Conditions

- **Tax** - All above charges for service & material excluding 18% GST.
- **Payment terms** - 70% advance & 30% after deployment.
- **Intellectual Property** - Hardware & Software will be Fully-white labelled under OEM brand as a final product whereas the IP of hardware as well as software remain with hIOTron India Pvt. Ltd.
- **Maintenance & Upgradation** - Platform operational free upgradation and maintenance will be taken by hIOTron[®] after project completion.
- **Custom Changes** - Any custom changes in the hardware, hardware firmware or software charged based on efforts/hour.
- **Validity** - Quotation Validity up-to 2 Weeks.
- **Certifications** - Device Certification like CE, FC or any other charges would be separate if required.
- **Manufacturing Warranty** - Hardware Devices will come with 12-months Return warranty- excluding batteries - commencing on the date of shipping ("Warranty Period"). If Gateway fail at any point of time during the Warranty Period due to a production fault, we will replace them free of charge, including the shipping of replacement hardware ("Warranty"). Please mind that the Warranty is not binding if the approximate cost of shipping exceeds the price of the hardware you want to service, and we may refuse to replace them in such case. (Read complete Return & Warranty Policy; <https://www.hiotron.com/return-warranty-policy/>)
- **Data Privacy policy** - We will not share or sell Information such user id, password, device details, device data, mail, message and other data which passes through www.platform.hiotron.com

without your express. Read more about our data privacy policy

<https://www.hiotron.com/iot/hioton-privacy-policy/>

- **Service & Support** - We provide SOP/Videos/Manuals/offline training/Workshop for product installation & support (up-to L1 & L2 level) to our clients/partners/strategic-partners/investors initially at the time of project submission and then once in a 6 or 12 months or year based on both party's feasibility and requirements we update them likewise for any new feature in product or anything. We also have free online ticket-based support which helps/manages Hardware/Platform/Software related queries within 24 hours if case is up-to L1 or L2. Otherwise, for L3 level [No on-site fault for fulfilling the prior requirement of device such as power supply, handling, placing temperature and various other factors] if device is in warranty (One Year) then we replace it otherwise, buyer has to buy new devices.

Date - 1st January 2021

Industrial Testimonial

"It is clear that the power and capability of the hIOTron IoT platform is immediately applicable to address the requirements of even the largest scale cyber physical systems in commercial and government applications. "hIOTron is a technological tour de force."

Ibrahem Jabour
CEO & Co-founder
Tahkom Company
Riyadh, Saudi Arabia



"BAGIC and hIOTron are pushing the frontiers of Logistic solutions to empower private and public sector organizations to uncover valuable and actionable insights."

Praveen Kadam, Vertical head:
Connected Ecosystem at
Bajaj Allianz General
Insurance Co. Ltd.



"Our additional investment in hIOTron reflects our ongoing confidence in the company's unmatched capabilities, best-in-class technical team, and significant growth potential. hIOTron is transforming industries, creating competitive advantages for its customers, and generating significant, measurable social impact in important areas such as healthcare and energy."

Parimal Shah | Vice President |
International Operations MK Jokai
Agri Plantations Pvt. Ltd.



"We approached hIOTron to develop TM-Black BOX which can simply communicate to cloud using GSM to accurately deliver the arcade games card swap & tickets/coin counts. We really surprised with the level of service right from custom PCB designed to the custom enclosures with entire software stack covered so smooth & easily for such a complex task."

Anup Tapadia,
Founder & Chief Technology
TouchMagix™





INTERNET OF THINGS
hiOTron

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