

IOT SOLUTION PACKAGE FOR FERRY FUEL MANAGEMENT

SKU: IOTPK-FMF



IoT solution package for ferry fuel is hardware and software system which applies IoT technology to monitor fuel level, volume, filling and consumption for tanks on ferry. This solution is also applied for daily fuel tank and storage tank in factory, based telecommunication station, building, fuel station, construction site, farm... In this system, 3G iConnector IoT gateway connects to tank fuel level sensors and it transmits data to cloud server or on premise server for storing, analyzing, reporting, alarm, monitoring and managing fuel in tanks.

The IoT solution package provides updated and reliable fuel consumption report and assists to discover fuel theft. The package also enhances effectiveness of fuel distribution and lowers labor cost. Additionally, the solution heightens effectiveness of main engine maintenance as well as optimizes fleet coordination.

- ✓ **ANYWHERE, ANYTIME MONITORING**
The system automatically collect data 24/7 and monitor from any place on any device (desktop, laptop, tablet)
- ✓ **EASY UPGRADE AND EXPANSION**
The system could be upgraded functions, reports and expanded monitoring scope
- ✓ **QUICK SYSTEM DEPLOYMENT**
The deployment is implemented through two simple steps
- ✓ **INVESTMENT OPTIMIZATION**
The solution packages are designed to optimize cost and suitable for monitoring from few to large number of ferries
- ✓ **CUSTOMIZED AND SPECIALIZED SOFTWARE**
Software interfaces are friendly, specialized, and customized
- ✓ **CONVENIENT DATA EXCHANGE**
The system pushes data to third-party software via API or csv file

IoT SYSTEM DIAGRAM



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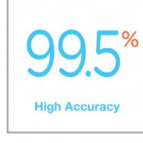
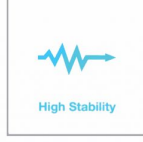
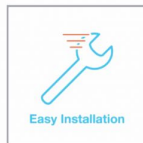
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SPECIFICATION

HARDWARE	
Fuel level sensor	Measure fuel level in tank and convert signal to RS485 Modbus RTU signal.
iConnector IoT gateway	Transmit data from different fuel level sensor to cloud server or on premise server through 3G cellular network. Connect maximum 20 fuel level sensors and monitor up to 70 parameters. 2MB internal memory, power 7..48VDC, avg 200mA, IP 67
Server	Cloud server service or on premise server to install IoT Globiots software system. Server capacity depends on total monitored parameters, number of iConnector and expansion plan for near future. There are 3 types of server: 1. Daviteq's cloud server: suitable for monitoring from some parameters to some thousand parameters, operated and maintained by Daviteq's IoT system specialists, backup operation with high reliability. 2. Daviteq's industrial server: industrial standard, durable, reliable, fanless server, operated in tough environment, place in any location, three types of server: NANO server for maximum 1000 parameter monitoring, MICRO server for max 2000 parameters, MINI server for max 6000 parameters. 3. Customer's available server: suitable for big customer, monitoring for some hundred parameters and strict security policy.
SOFTWARE	
IoT Globiots software system	Collect and analyze data, visualize dashboard and report, notify alarm and event. Configure remotely system, iConnector, parameter, event, alarm, dashboard, report, and user authority. Send alarm, event by email, SMS. Push data to third-party software/application using API. Basic reports as below: 1. Current fuel level and volume report 2. Historical trend for fuel volume during selected period 3. Fuel consumption, filling report during selected period 4. Alarm, event list report during selected period

FUEL LEVEL SENSOR



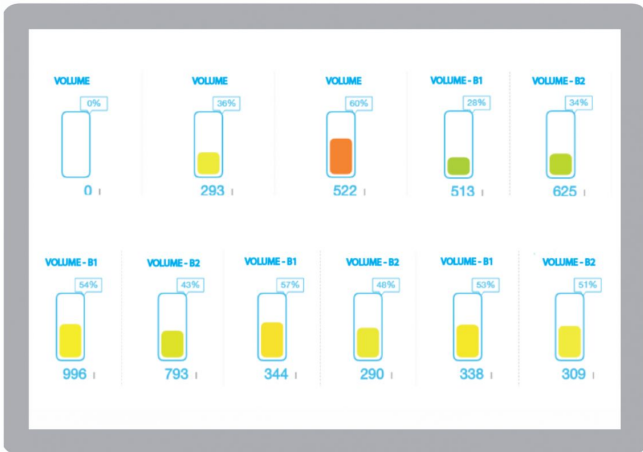
iCONNECTOR IoT GATEWAY



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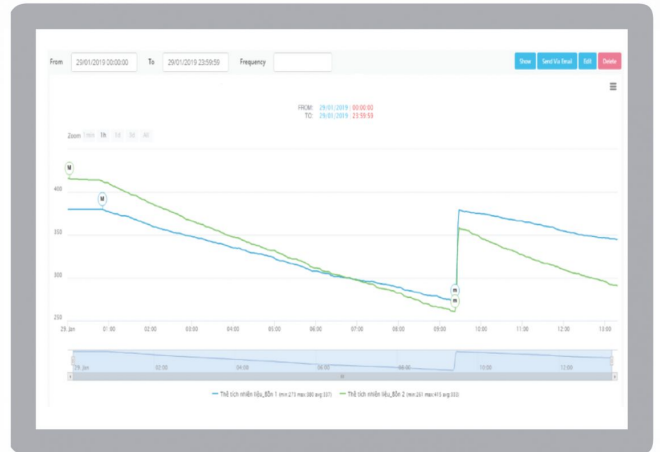
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CURRENT FUEL LEVEL AND VOLUME REPORT



IOTPK-FMF-EN-H5.PNG

TANK VOLUME HISTORICAL REPORT



IOTPK-FMF-EN-H6.PNG

FUEL CONSUMPTION REPORT

Mã phương tiện: 12160121151 Tên điểm đo: B07_B0N 1
 Tên phương tiện: AG12623_B07 Thời gian báo cáo: 29-01-2019 13:48:40

TT	Thông Tin	Thời điểm bắt đầu	Thời điểm kết thúc	Thể tích (lit)
I Tổng hợp				
L1	Số dư đầu kỳ	25/01/2019 10:00:00		529.44
L2	Số dư cuối kỳ		25/01/2019 11:00:00	520.49
L3	Tổng cấp dầu	25/01/2019 10:00:00	25/01/2019 11:00:00	44.24
L4	Tổng xả mức cấp	25/01/2019 10:00:00	25/01/2019 11:00:00	45.6
L5	Tổng tiêu thụ	25/01/2019 10:00:00	25/01/2019 11:00:00	6.58
II Chi tiết cấp dầu				
II.1	Cấp dầu lần 1	25/01/2019 10:03:00	25/01/2019 10:07:00	20.91
II.2	Cấp dầu lần 2	25/01/2019 10:11:00	25/01/2019 10:13:00	10.17
II.3	Cấp dầu lần 3	25/01/2019 10:18:00	25/01/2019 10:20:00	13.15
III Chi tiết xả mức cấp				
III.1	Xả mức cấp lần 1	25/01/2019 10:07:00	25/01/2019 10:09:00	10.16
III.2	Xả mức cấp lần 2	25/01/2019 10:27:00	25/01/2019 10:29:00	10.76
III.3	Xả mức cấp lần 3	25/01/2019 10:41:00	25/01/2019 10:44:00	25.68

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ALARM, EVENT LIST REPORT

Event Management

Device: AG12623_B07

From: 01/01/2019 To: 25/01/2019

No.	Time	Date	Device Name	Event ID	Priority	Event Name	Status	Parameter	Parameter Value
1	19:02:19	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	899
2	18:47:32	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	906
3	18:06:51	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	893
4	17:52:28	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	908
5	15:26:50	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	900
6	15:22:40	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	906
7	13:44:07	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	893
8	13:31:43	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	901
9	12:36:23	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	896
10	12:29:21	25/01/2019	AG12623_B07	1	1	BỒN 1 MỨC DẦU CAO > 550 lit	FAIL	CBF-LEVEL DAMPING (2000)	902

IOTPK-FMF-EN-H8.PNG

ORDERING INFORMATION

ITEM CODE	DESCRIPTION
STANDARD PACKAGE	
I. CAP10CNR1500F	Fuel Level Sensor PulseCAP10CN, M12-Male connector, extension up to 4000mm, L = 1500mm, output RS485/ModbusRTU
II.STHC-ISG02DB-NC	iConnector 3G Dual Band, internal antenna, with 02 relays, no M12 cables
III. SERVER AND SOFTWARE	Select one of server + software or software only or cloud server based on number of monitored parameters
ISV-NANO-0100	Industrial NANO Globiots Server included software, 0100 parameters, can be upgraded to 1000 parameters
ISV-MICRO-0300	Industrial MICRO Globiots Server included software, 0300 parameters, can be upgraded to 2000 parameters
ISV-MINI-0500	Industrial MINI Globiots Server included software, 0500 parameters, can be upgraded to 6000 parameters
CS-PREGLOBIOTS-0100	Premium Globiots software package, 0100 Parameters, max 10 device(s), max 10 sub-account(s), max 11 user(s), unlimited emails for alarm/event, No SMS, upgradable to unlimited***
CS-CLOUDGLB-01Y-00XX	CloudGlobiots subscription for 1 year operation, unlimited both email and alarm/event, excluded SMS package
IV. ACCESSORIES	
SIMMOBI-3G	Mobifone Data SIM CARD, only SMS receiving mode. Only use with iConnector 3G
SIMMOBI-10K-01Y	12-month data plan for SIM CARD, unlimited data, GPRS/EDGE/UMTS/HSPA. Only use with iConnector 3G
OPTIONS	
RS485-FM12-USB-1	RS485/USB multi-purpose Configuration cable with connector m12 male, female and flying leads, with Power adapter 12VDC/2.0A
CAP10EXT0500	Extension Probe for CAP10, L=500mm
CAP10EXT1000	Extension Probe for CAP10, L=1000mm
CAP10EXT1500	Extension Probe for CAP10, L=1500mm
CS-PREGLOBIOTS-0050	License for additional parameters of Premium Globiots software, 0050 Parameters, max 5 device(s), max 5 sub-account(s), max 5 user(s), unlimited emails for alarm/event, No SMS
BOX-203014-OP-01	Plastic Box IP67, 200x300x140, PC/ABS, plastic lock and hinge, grey color. Including CB, power supply 35W
PWR-24-2-1	12VDC/2A power adapter 110/220VAC with M12-female connector
CS-SMSVIE-MBF	SMS notification package, 100 SMS in Vietnam
FIRST-ANALYTIC-USER-1	01 user for advanced analysis and report

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