



DR- 7208

IOT/IFD (INTELLIGENT FIELD DEVICE) FOR IR-NIYANTRAC APPLICATION

Image shown is a representation only

INTRODUCTION

The DR7208 IoT gateway serves as a comprehensive solution for field and industrial serial data transmission through various channels such as Ethernet, RS485 remote control, and monitoring IO. This product integrates multiple hardware interfaces, including Ethernet port, RS485, 8 digital inputs, 4-way Analog input, and 8-channel digital output. Built on the FreeRTOS operating system, it incorporates essential components like webpages, IOTService, TCP/IP protocol stack, Modbus TCP, and Modbus RTU protocol. With its feature-rich design, the DR7208 facilitates remote data acquisition and monitoring.

Our IoT gateway enhances field data acquisition and analytics capabilities, empowering users to make informed decisions. The user-friendly dashboard, equipped with report generation and data filtering, simplifies the management of various electrical parameters. The bidirectional communication between the device and the Niyantac application, along with data scan configuration capabilities, ensures seamless connectivity with sensors, actuators, and IFDs through wired or wireless connections.

The security of the DR7208 IoT Gateway is paramount, offering protection against cyber attacks, unauthorized access, and firmware vulnerabilities. Adhering to TEC code practices, we prioritize consumer data protection in the expansive realm of the Internet of Things (IoT).

APPLICATION

- FRTU (Field Remote Terminal Unit): Facilitating remote monitoring and control of field devices.
- Machine Vision: Enabling advanced visual perception systems in industrial settings.
- DCU (Data Concentrator Unit): Serving as a central hub for aggregating and transmitting data from multiple sources.
- Street Light Monitoring: Enabling remote monitoring and control of street lighting infrastructure.
- Energy Monitoring: Optimized for applications focused on monitoring and managing energy consumption.
- IoT Applications: Supporting a wide range of IoT applications, ensuring connectivity and data management.

By incorporating the DR7208 IoT Gateway, users can streamline equipment data monitoring across diverse applications, making it a versatile and efficient solution in the fields of smart grids, energy monitoring, and industrial automation.

FEATURES

- Dual mode Quad-SPI memory interface running up to 133 MHz
- Up to 2M bytes of flash memory, 1Mbyte of RAM
- cryptography hardware acceleration algorithms
- On board RTC and 8KB, EEROM
- Support 2X RS485 transmission Use Modbus protocol to control 8 Dis, 8 AI interfaces and control 8 Dos Support STA/AP/AP+STA Mode
- Support Modbus RTU and Modbus TCP protocol / MQTT
- Support web page, PC software IOT Service configuration
- Support web OTA wireless upgrade
- Wide voltage 12-24 V DC power supply

DR- 7208 IOT GATEWAY

SPECIFICATIONS



System Information

Processor/Frequency	32-bit Arm® 32-bit Cortex®-M4 core with FPU, (ART Accelerator) for ° internal flash memory and external memories, frequency of 240 MHz up to 480MHz, MPU.
Operating System	Free RTOS, Azure RTOS e Energy Monitoring

System Information

Port Number	1RJ45 10/100 Mbps
Interface Standard	10/100M Base-T Auto-Negotiation
Protection	Electrostatic: 8KV contact discharge, 15KV air discharge Surge: Differential Mode 4KV, Common Mode 6KV
Transformer	Integrated
Network Protocol	IP, TCP, DHCP, DNS, ARP BOOTP, Auto IP, ICMP, Telnet, uPNP, NTP
Security Protocol	TLS v1.2, AES 128Bit DES3, ROP, PC-ROP, active tamper

Wi-Fi Interface

Standard	802.11 b/g/n
Frequency	2.412GHz-2.484GHz
Security	WEP/WPA2PSK/WPA2PSK
Encryption	WEP64/WEP128/TKIP/ AES
Tx Power	802.11b: +20dBm (Max.) 802.11g: +18dBm (Max.) 802.11n: +15dBm (Max.)
Antenna	External: 3dBi antenna
Rx Sensitive	802.11b: -89dBm 802.11g: -81dBm 802.11n: -71dBm
Antenna	External: 3dBi antenna

4G LTE modem (Optional)

Band	LTE FDD bands —1/3/5/8 and LTE TDD bands 38 / 40 / 41 and Dual Band GSM 900 MHz and 1800 MH
Radio Sensitivity	For LTE (-101dBm) and for GSM/GPRS (-109dBm)
Power	Maximum Output Power For LTE (23dBm+2dB) and for GSM / GPRS (33dBm+2dB)

LCD Display (Optional)

Type of Display	2.5", 4.3", 5".7" RGBTTL or MIPI LCD
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SD Card

Data Storage	32GB on External SD card
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Serial Port

Port Number	2
Interface Standard	RS485 isolated
Data Bits8	Stop Bit1
Check Bit	None
Baud Rate	9600bps
Flow Control	No flow control
Protocol	Electrostatic: 8KV contact discharge, 15KV air discharge Surge:Diffrential Mode 4 KV,Common Mode 6KV

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SPECIFICATIONS



I/O Technical Parameters

Number of digital input	8 Nos.
I/O mode	DI
Isolation protection	6KVrms
Counter frequency	1000Hz, Power-off storage
Digital Output, Relay output routes	8 Nos.
Relay type	Normally open NO, Normally close NC
Contact resistance load	10A@28VDC\30VDC\IZ5VAC\250VAC
Initial insulation resistance	1000 m ohms (min.) @ 500 VDC
Contact resistance	100 m ohms (max.)
Pulse output	1 Hz at rated load
Analog input number of ways	4 Nos.
Resolution	16 bit Resolutions
Input mode	Voltage and current
Enter the range	0-10V,4-20 mA
Analog Output	1 Nos.
Output mode	4-20ma DAC 12 Bit
Accuracy	+0.1% FSR

Software

Web Pages	Http Web Configuration Customization of HTTP Web Pages
Configuration	Web, XML, Telnet, IOT Service
Firmware Upgrade	Web, OTA

Basic Parameter

Size	225 mm X 100 mm X 35 mm
Operating Temp	-40 " 85°C
Storage Temp	-45% 105°C, 5% " 95% RH (no condensation)
Input Voltage	5-40 VDC, Anti-reverse power protection
Working Current	-20mA@10V

ABOUT US

Digital Reach enables the IoT devices to interconnect the embedded systems to the internet. The IoT devices are fully programmable as per customer requirements and it can be deployed in nearly all the areas like Manufacturing, Energy & Utility, Health Care, Home Automation, Retail etc. With our expertise in embedded hardware development, embedded software development, system integration, and project execution, we bring in our experience, commitment and team work to exceed our customer expectation in every customer engagement.

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