IoT Gateway Specifications and Configuration Guide

Summit Digital Solutions, Inc.

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Document Classification: Confidential

1. Introduction and Scope

1. This IoT Gateway Specifications and Configuration Guide ("Guide") is a proprietary document of Summit Digital Solutions, Inc. ("Company") that defines the technical specifications, configuration requirements, and operational parameters for the Company's Peak Performance Platform IoT Gateway devices ("Gateway").

2. This Guide is subject to the Company's standard confidentiality provisions and intellectual property protections as set forth in the Master Services Agreement.

2. Gateway Hardware Specifications

1. Physical Specifications

-        Dimensions: 160mm x 110mm x 55mm

-        Weight: 450g

-        Operating Temperature: -20 C to 60 C

-        Humidity Range: 5% to 95% non-condensing

-        Input Power: 12-24V DC

2. Processing Capabilities

-        Main Processor: ARM Cortex-A53 quad-core

-        Clock Speed: 1.2 GHz

-        RAM: 2GB DDR4

-        Storage: 32GB eMMC Flash

-        Backup Memory: 256KB EEPROM

3. Connectivity

-        Ethernet: 2x 10/100/1000 Mbps

- Wi-Fi: IEEE 802.11 a/b/g/n/ac

- Cellular: 4G LTE Cat-4

- Bluetooth: v5.0

- RS-485: 2 ports

- USB: 2x USB 3.0

3. Software Configuration Requirements

1. Operating System

- Linux Kernel version 5.10 LTS

- Summit Digital Solutions Proprietary Gateway OS v3.2

- Secure Boot Implementation

2. Security Protocols

- TLS 1.3 encryption

- X.509 certificate-based authentication

- Hardware security module (HSM) integration

- AES-256 data encryption

3. Network Configuration

- DHCP/Static IP support

- VPN tunnel capability

- MQTT/MQTTS protocol support

- CoAP protocol support

- OPC-UA compatibility

4. Data Management Specifications

1. Data Collection

- Maximum sensor connections: 500

- Data sampling rate: Up to 1000 samples/second

- Local data buffer: 7 days

- Edge processing capability: Up to 10,000 events/second

2. Data Transmission

- Compression ratio: Up to 10:1

- Maximum throughput: 50 Mbps

- Store-and-forward capability

- Automatic failover support

5. Security Requirements

1. Access Control

- Role-based access control (RBAC)

- Multi-factor authentication support

- Administrative access logging

- Session timeout controls

2. Compliance Features

- GDPR compliance mode

- HIPAA security controls

- ISO 27001 conformance

- SOC 2 Type II controls

6. Implementation Guidelines

1. Initial Setup

- Factory reset procedure

- Network configuration wizard

- Security certificate installation

- Sensor registration process

2. Maintenance Requirements

- Quarterly firmware updates

- Monthly security patches

- Daily backup procedures

- System health monitoring

7. Warranty and Support

1. The Gateway is warranted according to the terms specified in the Company's Standard Hardware Warranty Agreement.

2. Technical support is provided pursuant to the customer's Support Level Agreement (SLA).

8. Legal Disclaimers

1. PROPRIETARY NOTICE: This document contains confidential and proprietary information of Summit Digital Solutions, Inc. Any unauthorized reproduction, use, or disclosure is strictly prohibited.

2. WARRANTY DISCLAIMER: The specifications contained herein are subject to change without notice. The Company makes no warranties, express or implied, regarding the accuracy or completeness of this information.

9. Document Control

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10. Execution

IN WITNESS WHEREOF, the undersigned acknowledges receipt and understanding of this Guide.

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SUMMIT DIGITAL SOLUTIONS, INC.

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Name: Michael Chang

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