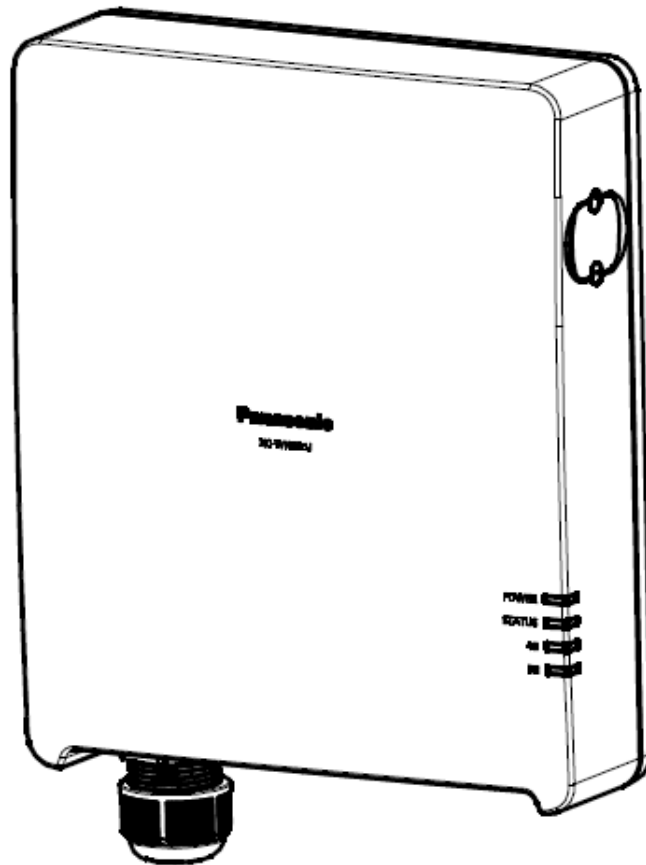


## 取扱説明書（設定編）

### 5G Gateway

品番 XC-WN930J-01



このたびは、パナソニック製品をお買い上げいただき、まことにありがとうございます。

- 取扱説明書（工事編）をよくお読みのうえ、正しく安全にお使いください。
- ご使用前に「安全上のご注意」（5～7 ページ）を必ずお読みください。
- 保証書は「お買い上げ日・販売店名」などの記入を確かめ、取扱説明書とともに大切に保管してください。

# はじめに

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取扱説明書（設定編）（以下、本書という）は、5G Gateway（以下、本装置という）を利用される方が、正しく、安全に運用保守を行えることを目的として書かれています。

本装置を取り扱う前に本書をよく読み、書かれている指示や注意を十分に理解してください。また、本書は必要なときにすぐ参照できるよう使いやすい場所に保管してください。

## ■取扱説明書は以下の4種類です。

- ・「取扱説明書（基本編）」・・・安全上のご注意、基本的な設置方法などを記載しています。
- ・「取扱説明書（工事編）」・・・設置方法、接続方法などを記載しています。
- ・「取扱説明書（設定編）」・・・操作や設定方法などを記載しています。（本書）
- ・「取扱説明書（ツール編）」・・・ツールの操作や設定方法などを記載しています。

## ■商標について

- ・イーサネット/Ethernet は、富士ゼロックス株式会社の登録商標です。
- ・Microsoft とそのロゴ、Windows とそのロゴは米国 Microsoft Corporation の米国およびその他の国における登録商標です。
- ・その他、本文中に記載の各会社名、各製品名は、各社の商標または登録商標です。

## ■お知らせ

- ・本書の内容については、改良のため、予告なく変更する場合があります。
- ・「AC アダプター」は、別売品（XC-WN93AJ-01）のことを示しています。

## ■ご使用にあたっての注意

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本書および本書に記述されている製品および技術には、ソフトウェアおよびフォント技術を含む第三者の知的財産が含まれている場合があります。これらの知的財産は、著作権法により保護されているか、または提供者から当社へライセンスが付与されているか、あるいはその両方です。

## ■ファームウェアについて

ファームウェアにつきましては、当社 HP にて最新版への変更要否を確認し、必要に応じて更新をしてください。

<https://biz.panasonic.com/jp-ja/5g-gw-downloads>

## ■免責事項について

本書または本書に記述されている製品や技術に関してパナソニック株式会社（以下、当社とする）またはそのいずれかの関連会社が行う保障は、製品または技術の提供に適用されるライセンス契約で明示的に規定されている保障に限ります。このような契約で明示的に規定された保障を除き、当社およびそのいずれかの関連会社は、製品、技術、または本書に関して、明示、黙示を問わず、いかなる種類の保障も行いません。これらの製品、技術、または本書は、現状のまま提供され、商品性、特定目的への適合性または第三者の権利の非侵害の黙示の保障を含みそれに限定されない、明示的であるか黙示的であるかを問わない、なんらの保障も、かかる免責が法的に無効とされた場合を除き、行われないものとします。このような契約で明示的に規定されていない限り、当社またはそのいずれかの関連会社は、いかなる法理論もとの第三者に対しても、その収益の損失、有用性またはデータに関する損失、あるいは業務の中断について、あるいは間接的損害、特別損害、付随的損害、または結果的損害について、そのような損害の可能性が示唆されていた場合であっても、適用される法律が許容する範囲内で、いかなる責任も負いません。

- ・ 本装置の故障、誤動作、不具合、あるいは停電時の外部要因によって通話、録音等の機会を逸したために生じた損害等の純粋経済損害につきましては、当社は一切の責任を負いかねますので、あらかじめご了承ください。
  - ・ 地震、雷、風水害などの天災、火災、第三者による行為、その他の事故、お客様の故意、過失および誤用、その他異常な条件下での使用により生じた損害、および本装置の使用または使用不能から生じる付随的な損害について、当社は一切の責任を負いかねますので、あらかじめご了承ください。
  - ・ 本装置は、医療機器、生命維持装置、航空交通管制機器、その他人命に関わる機器・装置・システムでの使用を意図しておりません。本装置をこれらの機器・装置・システムなどに使用され生じた損害について、当社は責任を負いかねますので、あらかじめご了承ください。
  - ・ 取扱説明書に記載されていない方法や、指定の部品を使用しない方法で工事されたことにより事故や損害が生じたときには、当社では責任を負いかねますので、あらかじめご了承ください。
- また、その工事が原因で故障が生じた場合は、製品保証の対象外となります。

# もくじ

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# 安全上のご注意 必ずお守りください

人への危害、財産の損害を防止するため、必ずお守りいただくことを説明しています。



■誤った使い方をしたときに生じる危害や損害の程度を区分して、説明しています。

	<b>警告</b>	「死亡や重傷を負うおそれがある内容」です。
	<b>注意</b>	「軽傷を負うことや、財産の損害が発生するおそれがある内容」です。

■お守りいただく内容を、次の図記号で説明しています。（次は図記号の例です）

	してはいけない内容です。
	実行しなければならない内容です。
	気をつけていただく内容です。

	<b>警告</b>
-------------------------------------------------------------------------------------	-----------

 分解禁止	■分解・改造をしない 火災や感電の原因になります。
 禁止	■自動ドア、火災報知器などの自動制御機器の近くには設置しない 本装置からの電波が自動制御機器に影響を及ぼすことがあり、誤動作による事故の原因になります。
	■医療機器の近くには設置しない 本装置からの電波が医療機器に影響を及ぼすことがあり、誤動作による事故の原因になります。
	■塩害や腐食性ガスの発生する場所に設置しない 取付部が劣化して、落下など事故の原因になります。
	■天井・荷重に耐えられない場所や不安定な場所には設置しない 落下など事故の原因になります。

■雷が発生したときは、本装置・接続したケーブル類に触れない  
感電の原因になります。

## 安全上のご注意 必ずお守りください



### 警告



禁止

- 電源を入れたまま配線工事をしない  
感電の原因になります。
- 指定の PoE インジェクタ以外は使用しない  
火災や感電の原因になります。
- 指定の AC アダプター以外は使用しない  
火災や感電の原因になります。
- 使用を終了した本装置は放置しない  
そのまま放置しておくと、落下など事故の原因になります。
- ブレーカや配線器具の定格を超える使い方はしない  
定格を超えると、発熱による火災の原因になります。
- 電源プラグや PoE ケーブルを破損するようなことはしない  
(傷つける、加工する、熱器具に近づける、無理に曲げる、ねじる、引っ張る、重い物を載せる、束ねる など)  
痛んだまま使用すると、感電・ショート・火災の原因になります。
- SIM カードは乳幼児の手の届くところに置かない  
誤って飲み込むと、けがの原因になります。  
●万一、飲み込んだと思われるときは、すぐに医師にご相談ください。





必ず守る

- 本装置から心臓ペースメーカーの装着部位まで 15 cm 以上離れること  
電波によりペースメーカーの作動に影響を与える場合があります。
- 通常使用状態で人体から 20 cm 以上の距離が確保できる場所に設置してください。  
人体に影響を及ぼす可能性があります。
- 煙が出たり、異常発熱したり、異臭・異音がした場合や落下・破損した場合は、電源を切って、本装置の使用を中止する  
そのまま使用すると、火災や感電の原因になります。  
●すぐに使用を中止し、お買い上げの販売会社・販売店・サービス実施会社へご相談ください。



	<p>■モルタル壁などへの取り付け時、取付金具、ねじ等をメタルラス、ワイヤラスまたは金属板と接触しないように設置する</p> <p>本装置の絶縁が劣化した場合、メタルラス等に漏電し、火災の原因になります。</p>
--	------------------------------------------------------------------------------------------------------------

## 安全上のご注意 必ずお守りください

### 警告

 必ず守る	<p>■電源プラグや PoE ケーブルのほこり等は定期的にとる</p> <p>プラグにほこり等がたまると、湿気等で絶縁不良となり火災の原因になります。</p> <p>●電源プラグや PoE ケーブルを抜き、乾いた布でふいてください。</p>
	<p>■電源プラグや PoE ケーブルは根元まで確実に差し込む</p> <p>差し込みが不完全ですと、感電や発熱による火災の原因になります。</p> <p>●痛んだプラグ、ゆるんだコンセントは使用しないでください。</p>
 ぬれ手禁止	<p>■ぬれた手で、電源プラグや PoE ケーブルの抜き差しはしない</p> <p>感電の原因になります。</p>

### 注意

 禁止	<p>■工事中に本装置を落下させない</p> <p>けがの原因になることがあります。</p>
	<p>■高温になる場所に設置しない</p> <p>本装置内部の温度が上がり、火災や感電の原因になることがあります。</p>
	<p>■金属のエッジを手でこすらない</p> <p>強くこすると、けがの原因になることがあります。</p>
 必ず守る	<p>■設置をするときは指定の固定方法で取り付ける</p> <p>正しく設置しないと、ゆるみやはずれで落下し、事故の原因になります。</p> <p>●設置方法については、必ず本書をお読みください。</p>
	<p>■長時間使用しないときや、お手入れ、保守をするときは必ず電源を切る</p> <p>漏電や感電の原因になることがあります。</p>



# 設置・使用上のお願い

本装置を正しくご使用いただくために、次の点をお守りください。

## ■設置工事のお願い

- ・ 施工工事は、法令や各種基準に従い、施工業者様の責任において行ってください。

## ■設置場所・使用上のお願い

- ・ 通常使用状態で人体から 20 cm 以上の距離が確保できる場所に設置してください。
- ・ 本装置は付属の取付金具を用い、指定の設置方法で使用してください。
- ・ 設置工事業者以外は取付工事を行わないでください。正しく設置を行わないと、ゆるみやはずれで落下し、事故の原因になります。
- ・ 暖房設備、ボイラーなどの、特に温度の上がる場所に置かないでください。本装置の表面や部品が変形、劣化し、故障の原因になります。
- ・ 火気を近づけないでください。本装置の表面や部品が変形、劣化し、故障の原因になります。
- ・ 硫化水素、リン、アンモニア、硫黄、炭素、酸、塵埃、その他有毒ガスなどの発生する場所に置かないでください。
- ・ 電磁波発生源や磁気を帯びたもののある場所に置かないでください。(高周波ミシン・電気溶接機・磁石など) 雑音の発生や故障の原因になります。
- ・ 機器に強い衝撃や振動を与えないでください。落としたり、ぶつけたりして強い衝撃が加わると、故障や破損の原因になります。
- ・ 廃棄時は、産業廃棄物として適切に処理してください。

## ■お手入れについて

- ・ お手入れは、必ず電源を切った状態で行ってください。
- ・ 本装置の汚れは、乾いた柔らかい布でふいてください。汚れがひどい場合は、台所用中性洗剤を薄めた水に布を浸し、固く絞ってから軽くふき、乾いた柔らかい布で仕上げてください。
- ・ アルコール、シンナー、ベンジン、ワックス、石油、石けん、みがき粉、熱湯、粉石けんは使用しないでください。化学ぞうきんを使用するときは、その注意書きに従ってください。

## ■ネットワークに関するお願い

本装置はネットワークへ接続して使用するため、以下のような被害を受けることが考えられます。

- ①本装置を経由した情報の漏洩や流出
- ②悪意を持った第三者による本装置の不正操作
- ③悪意を持った第三者による本装置の妨害や停止

このような被害を防ぐため、お客様の責任の下、下記のような対策も含め、ネットワークセキュリティ対策を十分に行ってください。

- ・認証情報(ユーザー名、パスワード)を第三者の目に触れないように、適切に管理する。
- ・管理者で本装置にアクセスした後は、必ずすべてのブラウザを閉じる。
- ・本装置、ケーブル等が容易に破壊されるような場所には設置しない。
- ・本装置が容易に第三者により初期化スイッチを操作されるような場所には設置しない。

本装置は無線ネットワーク(4G/5G)へ接続する製品のため無線通信品質、ネットワークの運用状態により本来の機器性能が十分に保証できない場合あるいは本来の機能が提供できない場合があります。

## ■修理、譲渡、廃棄される場合のご注意

本装置には、お客様固有の情報を保存することができます。本装置内に保存された情報の流出を防止するために、本装置を修理、譲渡、廃棄される場合は、本装置内に保存された情報を消去してください。また、機器内のSIMを抜いてください。

### 情報の消去方法

- ・設定情報の消去方法については、「5.6 本装置の初期化」をご参照ください。
- ・ログ情報の消去方法については、「5.3.2 ログの初期化」をご参照ください。

また、消去する前に、本装置内に保存された情報を取得してパソコンに保存することができます。

### 情報の取得方法

- ・設定情報の取得方法については、「5.1.1 設定ファイルの読み出し」をご参照ください。
- ・ログ情報の取得方法については、「5.3.1 ログの読み出し」をご参照ください。

修理を行う際に、機器内の情報が失われる可能性があります。修理に出される場合は事前に機器内の情報を取得しておくことをお奨めします。

# 第 1 章 概要

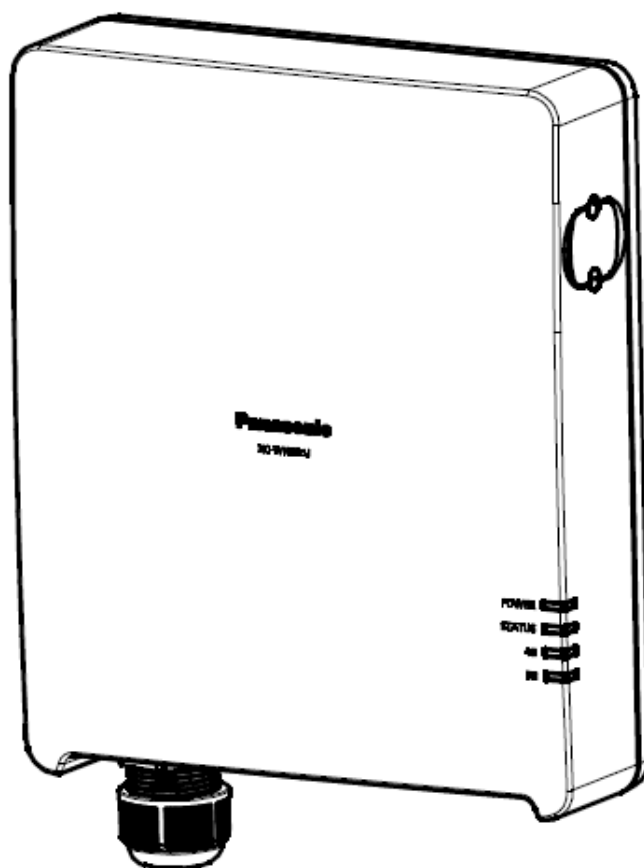
---

本装置の製品構成および特徴を紹介します。

## 1.1 製品構成

---

本装置は、5G Gateway 装置本体のみで構成されます。



5G Gateway 装置  
XC-WN930J-01

### 重要

- 本装置は、PoE 給電または AC アダプター（別売）にて動作します。
- PoE 給電させるには、別途 PoE 給電に対応したハブや PoE インジェクタとの接続が必要です。

## 1.2 特長

---

本装置の主な特長は以下となります。

### ◆バンド対応

国内各通信事業者、および国内ローカル 5G 用のバンドに対応します。

### ◆高速データ伝送対応

セルラーインターフェースでは、4G(下り最大 5CA)、および 5G に対応し下り最大約 4Gbps 弱の高速伝送に対応します。有線インターフェースでは 5G-BASE-T、USB3.0 に対応します。

### ◆設置性

- ・電源については PoE 給電、DC 供給に対応します。(指定の PoE インジェクタ、AC アダプターを使用してください。)
- ・防水仕様(IP66)となっており、屋外での設置が可能です。
- ・4G/5G/GNSS アンテナを全て内蔵しており設置性に優れています。
- ・より簡単に設置を行うことができる保守ツールをご提供しております。
- ・より簡単に初期設定を行うことができるキッティングツールをご提供しております。

### ◆遠隔監視制御対応

別途ご購入の NMS(Network Management system)との監視インターフェースを搭載し、遠隔での監視制御を行うことができます。

## 1.3 機能一覧

本装置が提供する機能は、以下の通りとなります。

表 1.3-1 機能一覧

分類	機能	詳細	対応コマンドリファレンス章番号
デバイス IF	セルラーIF	RAT 選択機能 (4G、4G+5G)、無線品質表示、統計情報表示	2.1、2.2
	SIM	SIM フリー (キャリア網、ローカル網対応)	2.5
	Ethernet	5G-Base-T、統計情報表示	2.3
	USB3.0	Device モード、RNDIS ドライバ、USB リセット機能、統計情報表示	2.4
	CONSOLE	保守 IF (CLI) 用	
	GNSS	GPS 時刻/位置情報表示	2.6
ネットワーク機能	Router (NAT)	WAN (セルラー) /LAN (Ethernet、USB)	3.1
	Bridge	Ethernet-USB 間	
	DHCP サーバ	最大 512 クライアント	3.3
	ポートマッピング	最大 10 エントリ	3.2
	リンクパススルー		3.4
保守/監視機能	SSH	CLI	5.1
	HTTPS	GUI	5.2
	SFTP クライアント	FW 更新、コンフィグ一括設定/読み出し、ログ読み出し、証明書インポート/エクスポート	5.4
	TR-069	FW 更新、コンフィグ一括設定/読み出し、ログ読み出し、死活監視、アラーム監視、個別パラメータ設定/読み出し	5.3
システム機能	状態表示	システム情報表示、LED	4.1
	アカウント制御	ユーザー名/パスワード管理 (管理ユーザー、一般ユーザー)	4.2
	初期化	工場初期化、ログ初期化、本装置再起動	4.3、4.4、4.5

## 1.4 機器接続

本装置の各インターフェースにおける各機器接続の用途は、以下の通りとなります。具体的な接続方法については取扱説明書(工事編)を参照してください。

表 1.4-1 機器接続

インターフェース	保守		通信サービス	説明
	CLI	GUI		
Ethernet コネクタ	○	○	○	PoE インジェクタにより電源供給も可能です。 5Gbase-T 対応機器を使用すれば高速通信が可能です。 複数機器を接続する場合はスイッチを使用してください。 保守(CLI)に関しては 2.7 章を参照してください。 保守(GUI)に関しては 2.3 章を参照してください。
CONSOLE コネクタ	○	×	×	2.7 章を参照してください。
USB コネクタ	○	○	○	対応 OS : Microsoft® Windows® 10 USB ドライバのインストールは不要です。 USB3.0 対応機器を使用すれば高速通信が可能です。 保守(CLI)に関しては 2.7 章を参照してください。 保守(GUI)に関しては 2.3 章を参照してください。

## 第2章 設定の準備

---

本装置設定のための準備について説明します。



## 2.1 UI の種類

---

本装置には GUI と CLI の二つの UI があります。

GUI は、主に情報の確認のために使用します。管理ユーザーと一般ユーザーが利用できますが、一部の機能は管理ユーザーのみとなっています。

CLI は、本装置の全ての機能を制御することができます。使用できるのは、管理ユーザーのみとなっています。

## 2.2 GUI コンソール用パソコン、ブラウザの設定

GUI コンソール用パソコンの接続方法と本装置の設定について説明します。

表 2.2-1 GUI コンソール用パソコンの推奨環境

OS および TCP/IP ソフトウェア	Microsoft® Windows® 10 TCP/IP ソフトウェアは OS に付属しています。別途ご用意いただく必要はありません。
WWW ブラウザ	以下の WWW ブラウザをご用意ください。 <ul style="list-style-type: none"><li>• Microsoft® Edge®</li><li>• Google® Chrome®</li></ul> ※複数個所の WWW ブラウザからの同時アクセスは 管理ユーザーと一般ユーザー各 1 名のみ可能となっております。

### ◆TCP/IP プロトコルの設定

GUI を使用するには、GUI コンソール用パソコンで IP アドレスおよびサブネットマスクの設定を済ませておく必要があります。設定の手順はパソコンの OS によって異なります。本書では、Microsoft® Windows® 10 を例に説明します。

パソコンの TCP/IP 設定を行います。

## 設定手順

手順 1 「スタート」メニューの「Windows システムツール」から「コントロールパネル」ウインドウを開き、「ネットワークと共有センター」をクリックします。

手順 2 「アダプターの設定の変更」をクリックすると、「ネットワーク接続」が表示されます。パソコンに USB 機器が接続されていて、Remote NDIS ドライバがインストールされている場合は、Ethernet と USB 接続が異なるデバイス名でネットワーク接続に表示されます。



図 2.2-1 ネットワーク接続

手順 3 ネットワーク接続を右クリックして表示されたリストから使用するインターフェースの「プロパティ」を選択します。「イーサネットのプロパティ」ダイアログボックスが表示されます。

手順 4 一覧にインターネット プロトコルバージョン 4 (TCP/IPv4) が含まれていることを確認します。一覧にインターネット プロトコルバージョン 4 (TCP/IPv4) が表示されていない場合は、TCP/IP のインストールが必要です。Microsoft® Windows® 10 のマニュアルを参照して、インストールしてください。

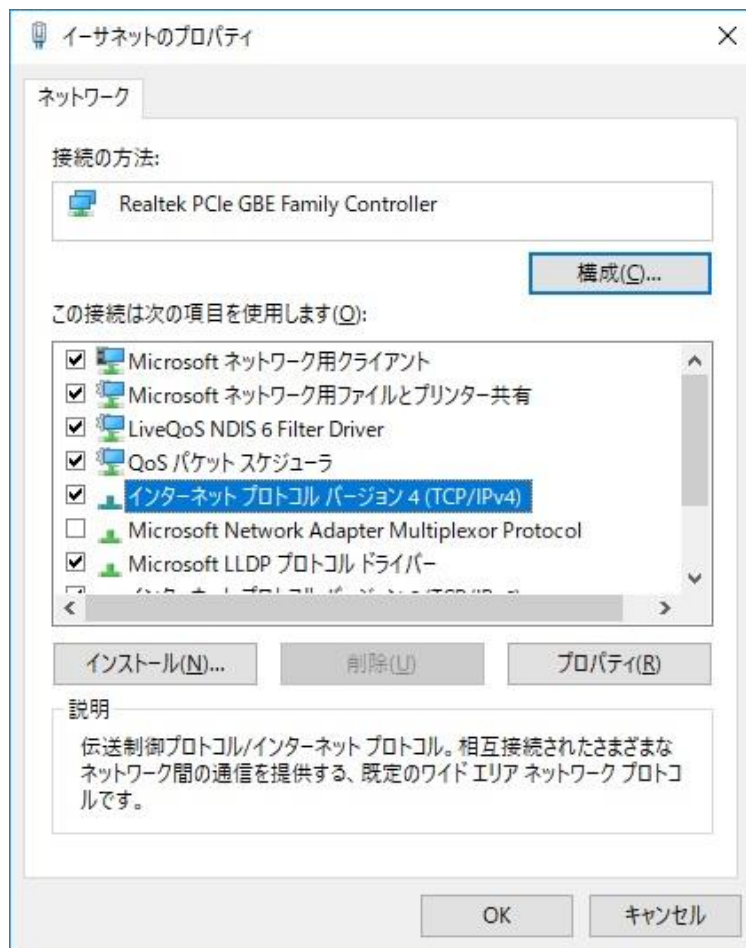


図 2.2-2 イーサネットのプロパティ

手順 5 一覧から「インターネット プロトコル バージョン 4 (TCP/IPv4)」をクリックして選択し、「プロパティ」ボタンをクリックします。「インターネット プロトコル バージョン 4 (TCP/IPv4) のプロパティ」ダイアログボックスが表示されます。

手順 6 パソコンの IP アドレスを設定します。IP アドレスの設定は、本装置の DHCP サーバを使う設定にしてください。

以下に DHCP サーバを使う設定画面を示します。

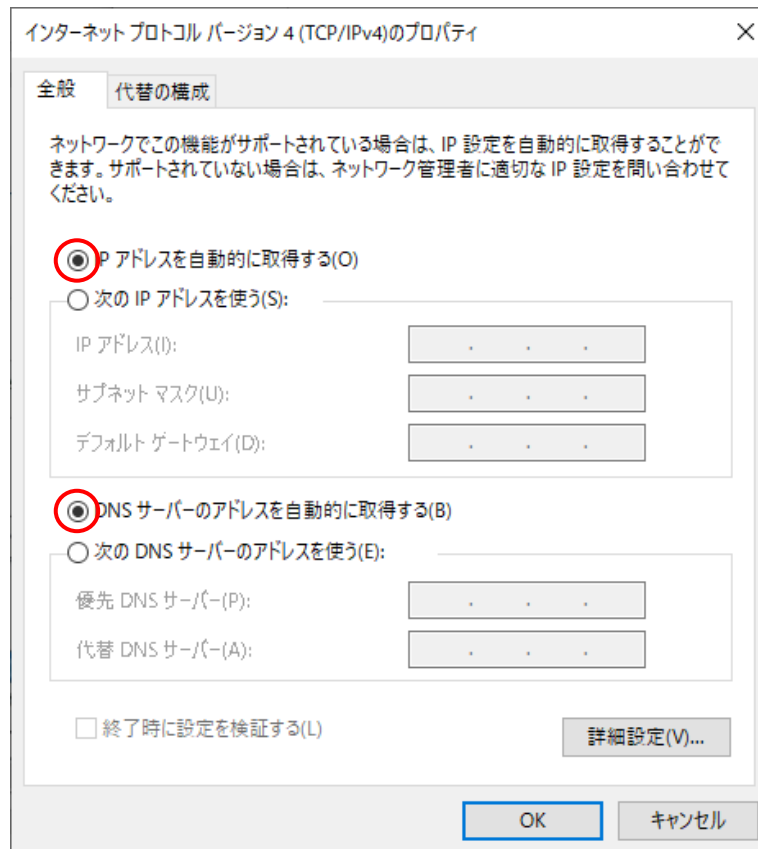


図 2.2-3 インターネット プロトコル バージョン 4 (TCP/IPv4) のプロパティ

手順 7 [OK] ボタンをクリックして、[インターネット プロトコル バージョン 4 (TCP/IPv4) のプロパティ] を閉じます。 手順 8 [イーサネットのプロパティ] の [OK] ボタンをクリックして、[イーサネットのプロパティ] を 閉じます。

手順 8 [イーサネットのプロパティ] の [OK] ボタンをクリックして、[イーサネットのプロパティ] を閉じます。

手順 9 [ネットワーク接続] の右上 [閉じる] ボタンをクリックして、設定を終了します。

## ◆WWW ブラウザの準備

設定の手順はパソコンの OS によって異なります。本書では、Microsoft® Windows® 10 を例に説明します。

### 設定手順

手順 1 「スタート」メニューの「Windows システムツール」から「コントロールパネル」ウインドウを開き、「インターネットオプション」をクリックします。「インターネットのプロパティ」ダイアログボックスが表示されます。

手順 2 「接続」タブを選択し、「LAN の設定」ボタンをクリックします。「ローカルエリアネットワーク (LAN) の設定」ダイアログボックスが表示されます。

手順 3 「LAN にプロキシサーバーを使用する」がチェックされていないことを確認します。

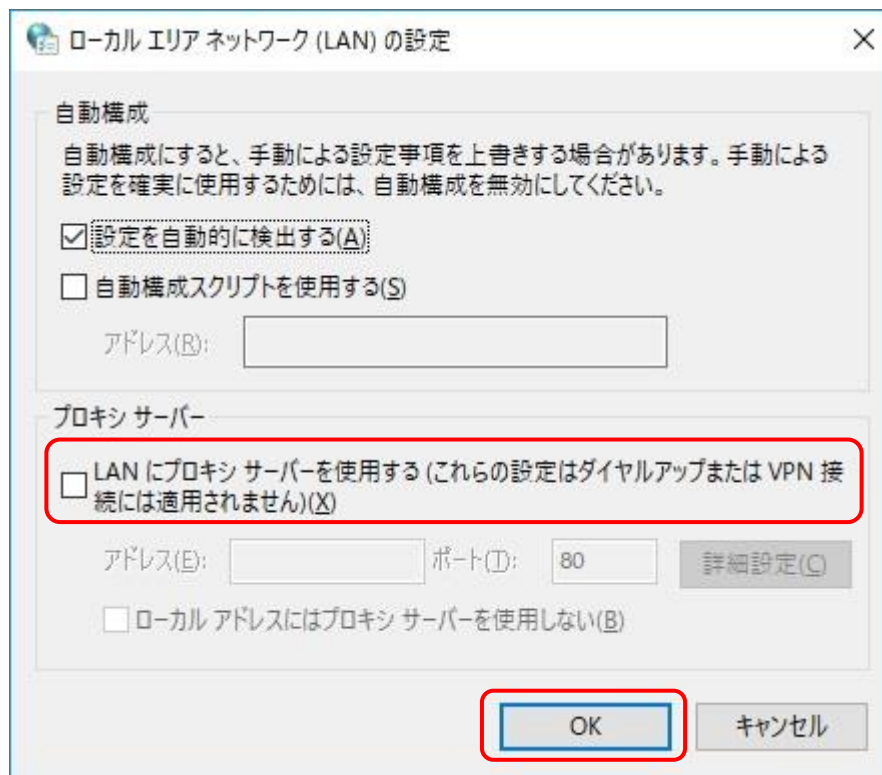


図 2.2-4 ローカルエリアネットワークの設定 (LAN)

プロキシサーバーを利用する場合は、手順 4～手順 8 を実施し、本装置だけプロキシの対象外として設定してください。

手順 4 「LAN にプロキシサーバーを使用する」をチェックし、「詳細設定」ボタンをクリックします。「プロキシの設定」ダイアログボックスが表示されます。

手順 5 例外の「次で始まるアドレスにはプロキシを使用しない」に本装置の IP アドレスを指定します。

手順 6 「OK」 ボタンをクリックして、「プロキシの設定」を閉じます。

手順 7 「ローカルエリアネットワーク（LAN）の設定」の「OK」 ボタンをクリックして閉じます。

手順 8 「インターネットのプロパティ」の「OK」 ボタンをクリックして閉じます。

## 2.3 GUI コンソール用パソコンの接続

ここでは、GUI コンソール用パソコンの接続方法について説明します。

### ◆GUI コンソールパソコンの接続方法

本装置と GUI コンソール用パソコンを接続するには、Ethernet ケーブルで本装置の Ethernet ポート（ETH(PoE)）とコンソール用パソコンの Ethernet ポートを接続するか、USB ケーブルで本装置の USB ポートとコンソール用パソコンの USB ポートを接続し、ネットワーク経由でリモートログインします。USB 接続の場合、USB ドライバのインストールは不要です。

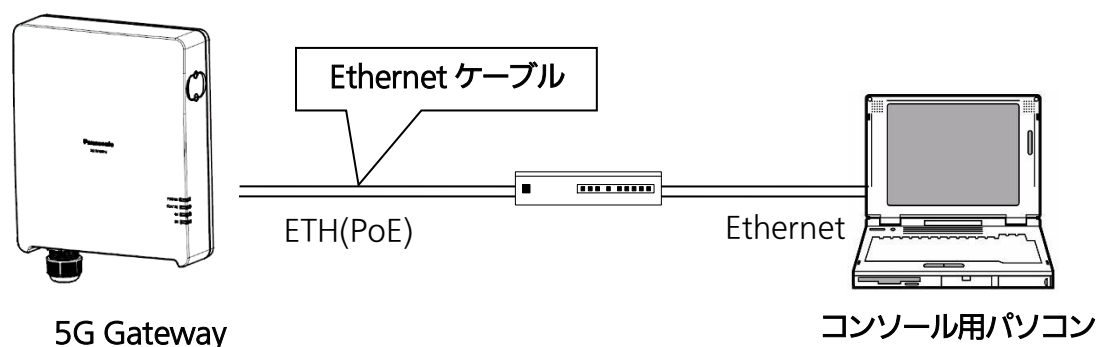


図 2.3-1 GUI コンソール用パソコン接続例(Ethernet)

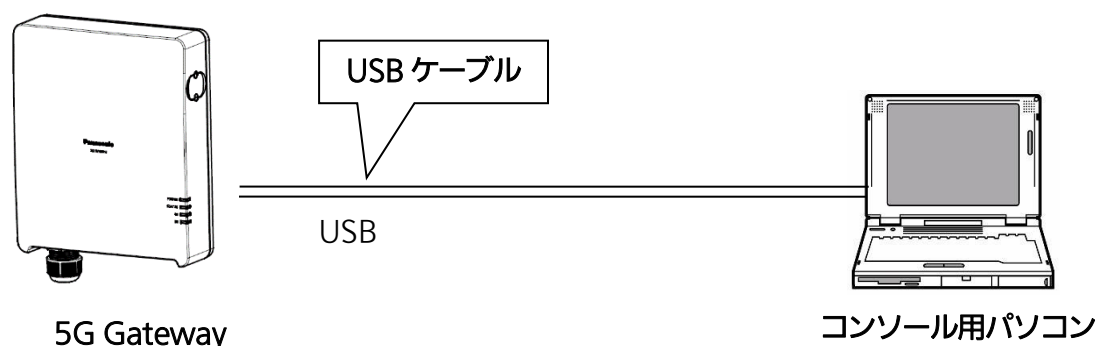


図 2.3-2 GUI コンソール用パソコン接続例(USB)



## 重要

- 本装置の CONSOLE コネクタや USB コネクタにパソコンを接続する際は、下記の手順を守ってください。  
本装置が給電状態のままでパソコンを接続すると本装置が再起動することがあります。
  1. 本装置の電源を落とす。(AC アダプターを抜く、又は、PoE 給電を止める)
  2. 本装置とパソコンをコンソールケーブル、又は USB ケーブルで接続する。
  3. 本装置に電源を接続する。(AC アダプターを挿す、又は、PoE 給電を開始する)
- Ethernet ケーブルを接続し、さらに Ethernet ケーブル抜いてから同一のパソコンで USB 接続を行う場合に USB 接続ができなくなる場合があります。その場合はパソコンを再起動してください。

## 2.4 GUI コンソールのログイン・ログアウト

### ◆ユーザー種別

ユーザーアカウントには、権限の異なる管理ユーザーと一般ユーザーの 2 種類があります。表 2.4-1 に各ユーザーのユーザー名、パスワードの初期値を示します。

表 2.4-1 ユーザー種別

	ユーザー名	パスワード	権限
管理ユーザー	admin	Admin1234	全ての操作が可能
一般ユーザー	normal	Normal1234	一部の操作と状態の表示が可能

### 重要

- ユーザー名・パスワードは初期値の設定から必ず変更し、適正に管理してください。ユーザー名・パスワードの変更方法については、「2.5 ユーザー名・パスワードの変更」を参照してください。
- なりすましによるパスワードの漏洩を回避するためブラウザのフィッシング対策機能を有効にすることを推奨します。
- カスタマーサポートからユーザー名およびパスワードを聞き出すことはありません。

### ◆IP アドレス（初期値）

表 2.4-2 に本装置の IP アドレスの初期値を示します。

表 2.4-2 IP アドレス（初期値）

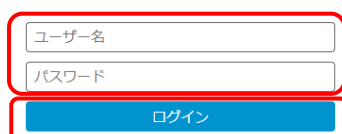
IP アドレス	192.168.0.3
サブネットマスク	255.255.255.0
デフォルトゲートウェイ	—

## ◆ログイン

WWW ブラウザに本装置の IP アドレス（初期設定は、表 2.4-2 に記載。初期 IP アドレス：192.168.0.3, URL: https://192.168.0.3:58730）を入力すると、ログイン画面（図 2.4-1）が表示されます。ユーザー名とパスワード（初期設定は、表 2.4-1 に記載）を入力してください。また、初期パスワードでログイン時はパスワード変更画面に移動しますので、初期パスワードを変更してください。（「2.5 ユーザー名・パスワードの変更」を参照）

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ユーザー名、パスワードを入力して  
ログインしてください。



The login form consists of three vertically stacked rectangular boxes. The top box is labeled 'ユーザー名' (User Name), the middle box is labeled 'パスワード' (Password), and the bottom box is a blue button labeled 'ログイン' (Login). All three boxes are enclosed within a red rectangular border.

図 2.4-1 ログイン画面

### 重要

- ログインしたままパソコンを放置されますと、意図せず設定等が変更される危険があります。操作をしない場合は、速やかにログアウト等をし、設定等の破壊、改ざんまたは消去からの対策をとってください。なお、一定時間操作しないと、自動的にログアウトいたします。
- 接続しようとした際には証明書の設定を行っていないため、WWW ブラウザから警告（図 2.4-2 および図 2.4-3）が表示されます。詳細からそのまま接続してください。

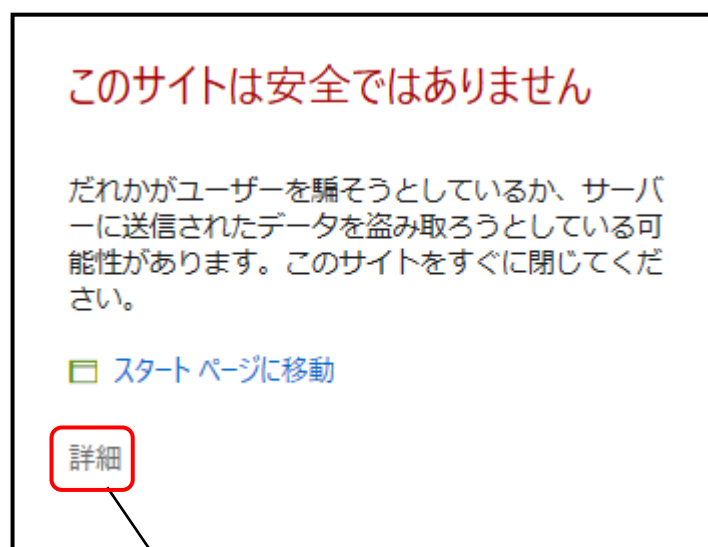


図 2.4-2 警告画面（1）

順番にクリックしてログイン画面に遷移

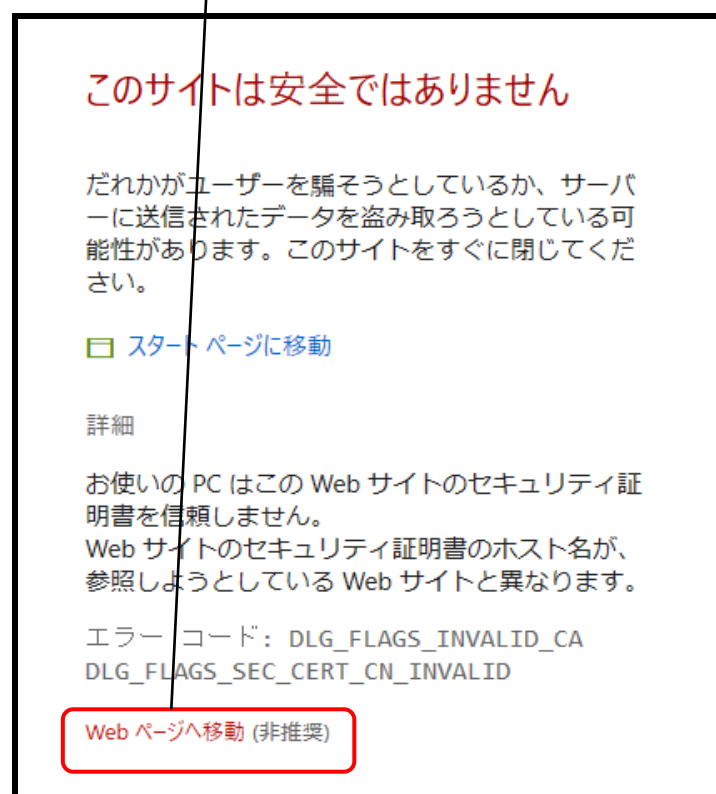


図 2.4-3 警告画面（2）

ユーザー名とパスワードが正しい場合、GUI コンソールメイン画面（図 2.4-4）が表示され、該当するユーザーレベルでのコンソール操作が可能となります。また、本装置のアカウントは、ユーザー権限ごとに、1つのアカウントが使用できます。どの画面でも、「TOP」メニューをクリックすると、この GUI コンソールメイン画面に戻ります。

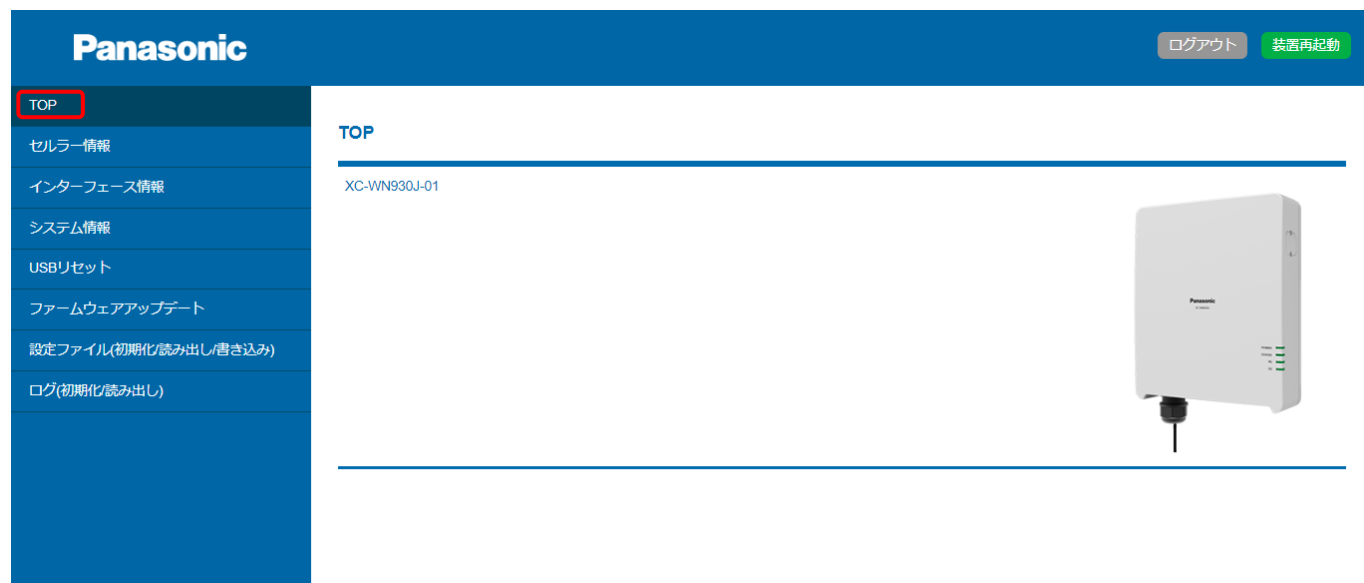


図 2.4-4 GUI コンソールメイン画面

#### ◆ログイン失敗

ログイン失敗時は、以下のメッセージが表示されます。

〔OK〕をクリックして、再度ログイン処理を行ってください。

なお、ログインを連続して3回失敗した場合は、10 秒間アクセスができなくなりますのでご注意ください。

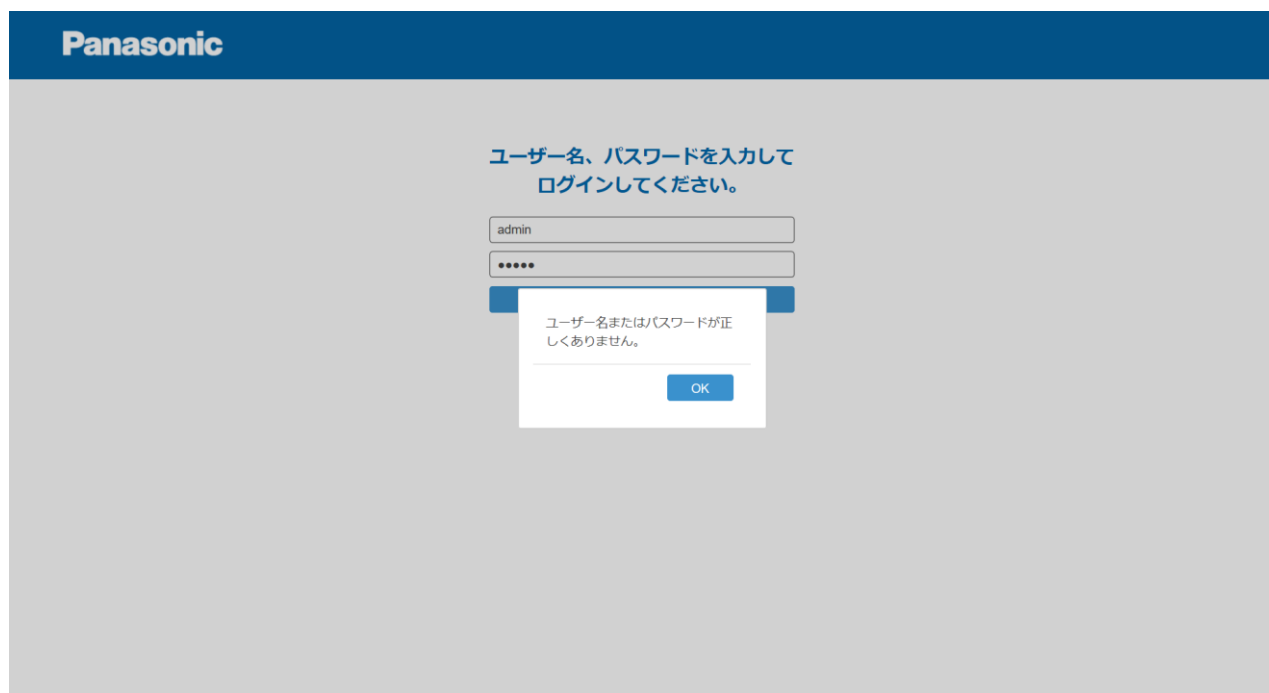


図 2.4-5 ログイン失敗

## ◆ログアウト

GUI コンソール画面の右上の「ログアウト」をクリックしてください。

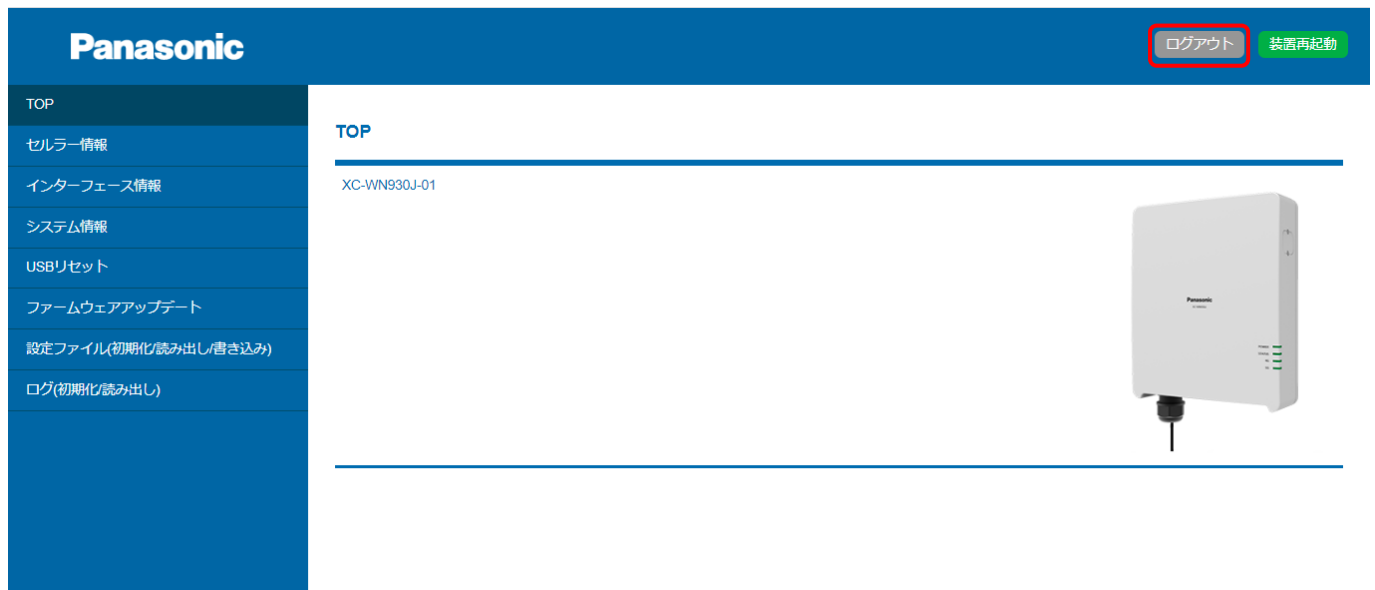


図 2.4-6 GUI コンソールメイン画面（ログアウト）

IP アドレスの変更を行った場合、再度接続するには変更した IP アドレスを指定する必要があります。

## ◆強制ログアウト

GUI、CLI でログイン中に、無操作時間が連続して3分を経過すると強制的にログアウトされます。操作を続けたい場合は、再度ログインが必要です。

## 2.5 ユーザー名・パスワードの変更

---

本装置へ初めてログインした時は、初期値のパスワードを変更する必要があります。初期パスワードの変更は、管理ユーザー、一般ユーザーともに実施する必要があります。

また、初回のログイン以降も本装置へのログインに必要なアカウント情報（ユーザー名・パスワード）は、以下の条件にて設定することができます。

### パスワード

- 8文字以上であること
- 半角英大・小文字、半角数字、記号( ~ ! @ # \$ % ^ & \* ( ) \_ + \ | } { } [ < > . , / ? ` ) から3種類以上を使用すること
- ユーザー名の一部または全部と一致しないこと
- 初期値以外の文字列とすること

### ユーザー名

- 1～24文字であること
- 入力可能文字は半角英大・小文字、半角数字



## ◆初めてログインした時のパスワード変更

### 設定手順（GUI）

---

手順 1 「ログイン画面」 → 初期値のパスワードでログインします。

手順 2 初期パスワードの変更画面が表示されます。

手順 3 新しいパスワードを「新しいパスワード」と「確認用パスワード」の2か所に入力して「設定」をクリックします。

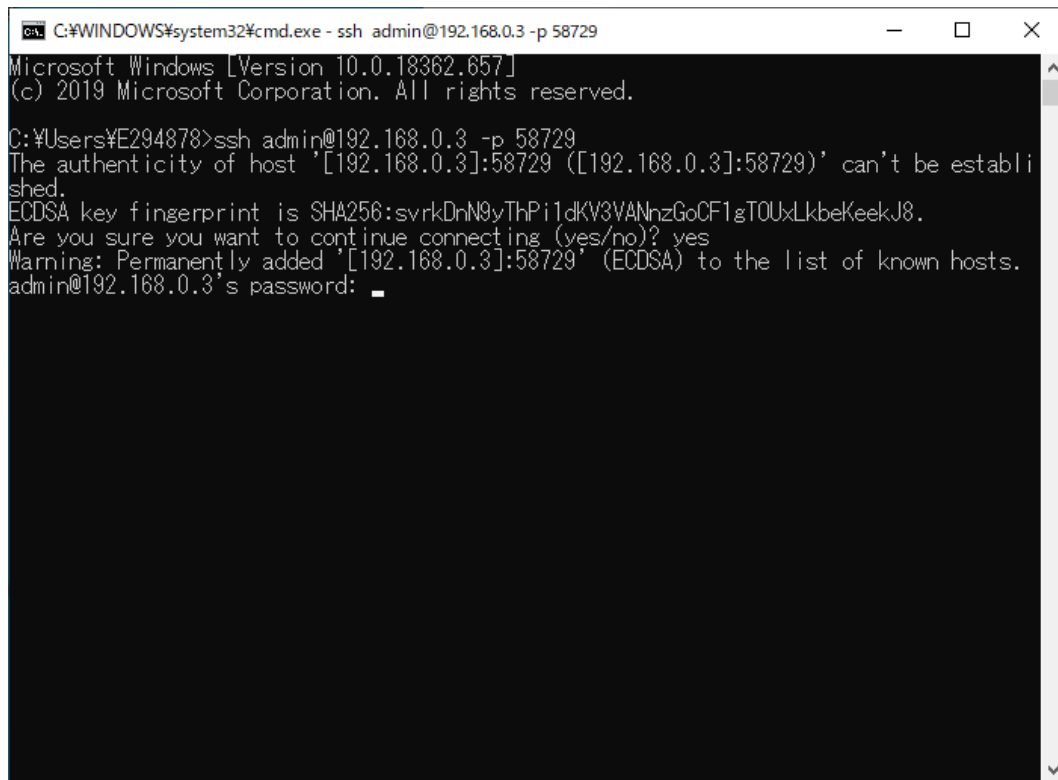
図 2.5-1 パスワード変更画面（GUI）

## 設定手順 (CLI)

手順1 本装置とコンソール用パソコンを接続して、SSH でログインします。

※接続については「2.7 CLI コンソールの接続」「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 ログインユーザーの初期パスワードを入力します。

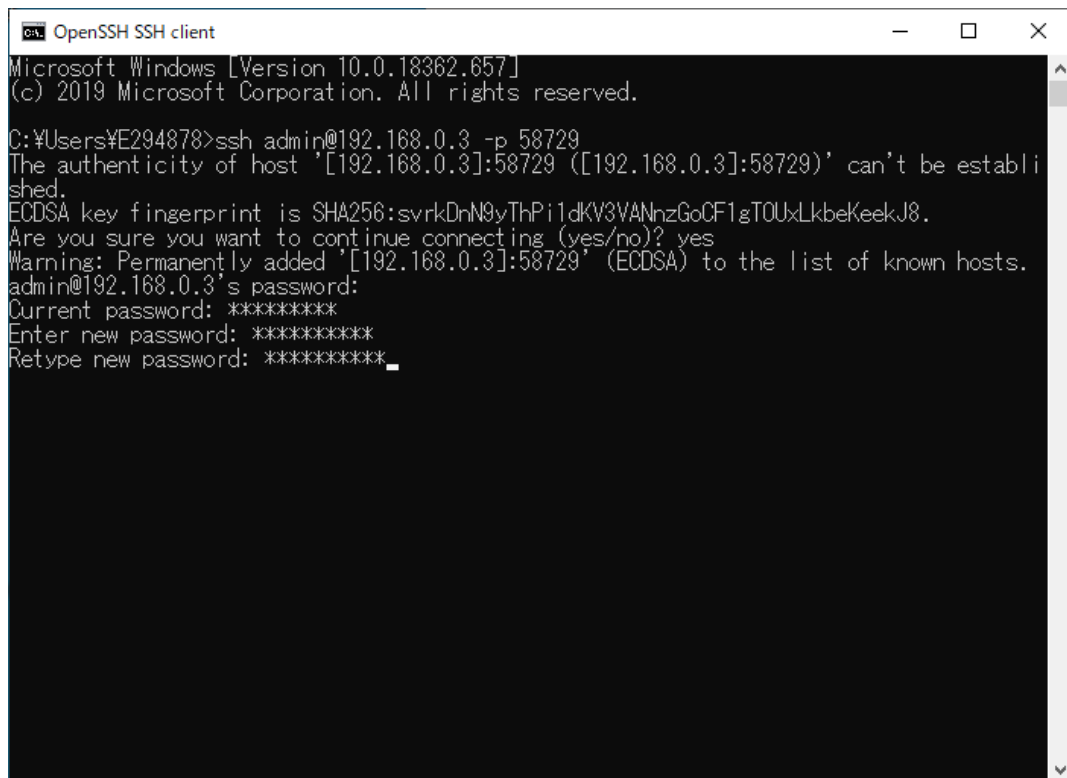


```
C:\WINDOWS\system32\cmd.exe - ssh admin@192.168.0.3 -p 58729
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
The authenticity of host '[192.168.0.3]:58729 ([192.168.0.3]:58729)' can't be established.
ECDSA key fingerprint is SHA256:svrkDnN9yThPi1dKV3VANhzGoCF1gTOUxLkbeKeekJ8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '[192.168.0.3]:58729' (ECDSA) to the list of known hosts.
admin@192.168.0.3's password: _
```

図 2.5-2 ログイン (CLI)

手順3 初期パスワード入力後、新しいパスワードを2回入力してパスワードを変更します。

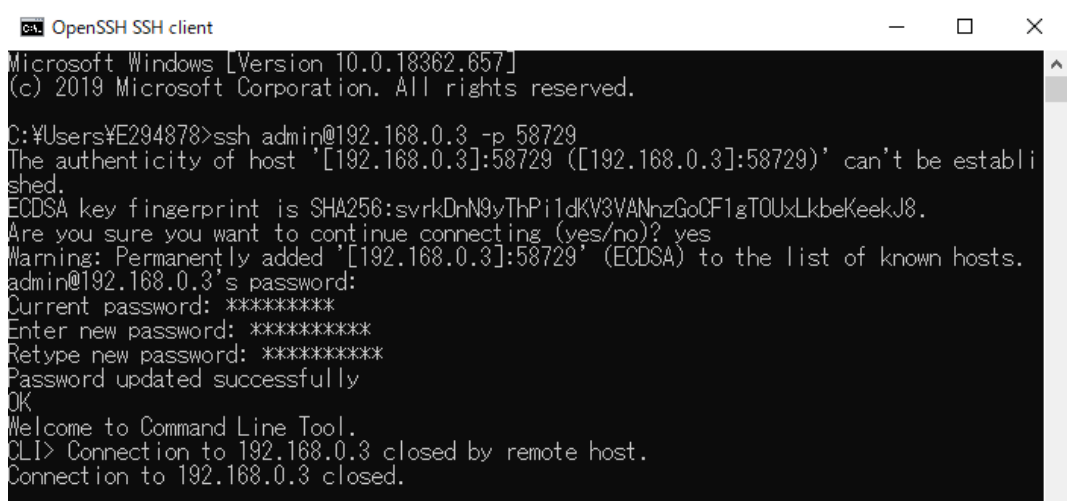


```
OpenSSH SSH client
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
The authenticity of host '[192.168.0.3]:58729 ([192.168.0.3]:58729)' can't be established.
ECDSA key fingerprint is SHA256:svrkDnN9yThPi1dKV3VANhzGoCF1gTOUxLkbeKeekJ8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '[192.168.0.3]:58729' (ECDSA) to the list of known hosts.
admin@192.168.0.3's password:
Current password: *****
Enter new password: *****
Retype new password: *****
```

図 2.5-3 パスワード変更 (CLI)

手順4 新しいパスワードを2回入力後、本装置との接続が切断されて SSH が終了します。必要に応じて、再接続してください。



```
OpenSSH SSH client
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
The authenticity of host '[192.168.0.3]:58729 ([192.168.0.3]:58729)' can't be established.
ECDSA key fingerprint is SHA256:svrkDnN9yThPi1dKV3VANhzGoCF1gTOUxLkbeKeekJ8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '[192.168.0.3]:58729' (ECDSA) to the list of known hosts.
admin@192.168.0.3's password:
Current password: *****
Enter new password: *****
Retype new password: *****
Password updated successfully
OK
Welcome to Command Line Tool.
CLI> Connection to 192.168.0.3 closed by remote host.
Connection to 192.168.0.3 closed.
```

図 2.5-4 パスワード変更完了 (CLI)

## ◆初回以降のパスワード変更

初回以降のパスワード変更は、CLI からのみとなっています。

### ■設定手順

---

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

手順2 CLI のプロンプトが表示されたら、以下の書式に従ってパスワード変更コマンドを入力/実行します。

#### 一般ユーザーの場合

```
CLI> password user      ← 一般ユーザーのパスワード変更コマンドを入力します。  
Current password:         ← 現在の一般ユーザーのパスワードを入力します。  
Enter new password:       ← 新しい一般ユーザーのパスワードを入力します。  
Retype new password:      ← 再度、新しいパスワードを入力します。  
Password updated successfully  
CLI>
```

#### 管理ユーザーの場合

```
CLI> adminpassword admin ← 管理ユーザーのパスワード変更コマンドを入力します。  
Current password:         ← 現在の管理ユーザーのパスワードを入力します。  
Enter new password:       ← 新しい管理ユーザーのパスワードを入力します。  
Retype new password:      ← 再度、新しいパスワードを入力します。  
Password updated successfully  
CLI>
```

## ◆ユーザー名変更

ユーザー名変更は、CLI からのみとなっています。

### ■設定手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

手順2 CLI のプロンプトが表示されたら、以下の書式に従ってユーザー名変更コマンドを入力/実行します。

#### 一般ユーザーの場合

```
CLI> username user wnc
```

↑ 一般ユーザー名変更コマンドを入力します。  
(user から wnc へ変更の例)

#### 管理ユーザーの場合

```
CLI> adminname admin wnc
```

↑ 管理ユーザー名変更コマンドを入力します。  
(admin から wnc へ変更の例)

## 重要

- 初期パスワードの変更は、一般ユーザー、管理ユーザーそれぞれで実施する必要があります。
- 管理ユーザーのアカウント情報は、厳重に管理願います。管理ユーザー のアカウント情報がわからなくなった場合、ログインによる再設定ができません。
- パスワード入力時は、第三者にのぞき見されないようご注意ください。
- パスワードはできる限り推測されにくいものにしてください。また、ユーザー名とパスワードを同じ内容にするのは避けてください。
- セキュリティー上、「管理ユーザー」「一般ユーザー」のパスワードを定期的に変更するようお願いいたします。
- ユーザー名およびパスワードについては使いまわしや共有をしないよう適切に管理してください。

## 2.6 ユーザータイプと可能な操作

本装置では、ユーザータイプによって実施可能な操作が異なっております。管理ユーザーは、全ての操作が可能となっておりますが、一般ユーザーは一部の操作を除いて表示に関する操作のみが可能となっております。

表 2.6-1 ユーザータイプ別可能操作一覧

操作		ユーザータイプ	
		一般ユーザー	管理ユーザー
CLI		×	○
GUI	セルラー情報表示	○	○
	インターフェース情報表示	○	○
	システム情報表示	○	○
	USB リセット	○	○
	ファームウェアアップデート	×	○
	設定ファイル(初期化/読み出し/書き込み)	×	○
	ログ(初期化/読み出し)	×	○
	ログアウト	○	○
	装置再起動	○	○

○：操作可    ×：操作不可

## 2.7 CLI コンソールの接続

本装置の各種設定を行うには、CLI コンソール（コマンドライン・インターフェース・コンソール）を使用します。ここでは、CLI コンソールの準備、ログイン・ログアウト方法について説明します。

設定の手順はパソコンの OS によって異なります。本書では、Microsoft® Windows® 10 を例に説明します。

### ◆コンソールの接続方法

コンソールとは、通信ソフトがインストールされているパソコンなどを指します。本装置とコンソールを接続するには、コンソールケーブル（RJ45-USB）でコンソールポートとシリアル接続する方法と、Ethernet ケーブルあるいは USB ケーブルで接続し、ネットワーク経由で SSH によりリモートログインする方法があります。SSH によるリモートログインには、「2.2 GUI コンソール用パソコン、ブラウザの設定」に記載したパソコンの TCP/IP 設定が必要です。USB ケーブル接続(SSH)の場合、USB ドライバのインストールは不要です。コンソールケーブル接続の場合、使用するケーブルにより USB ドライバのインストールが必要な場合がありますので、ケーブルの取扱説明書に従って USB ドライバをインストールしてください。

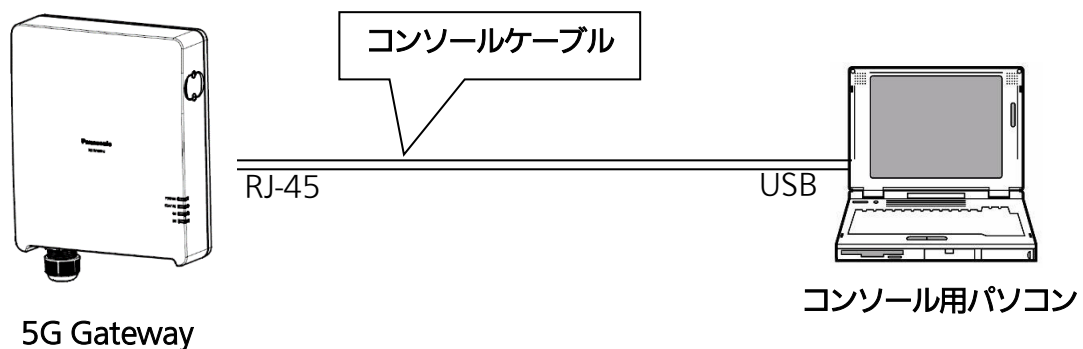


図 2.7-1 コンソール接続例（シリアル接続）

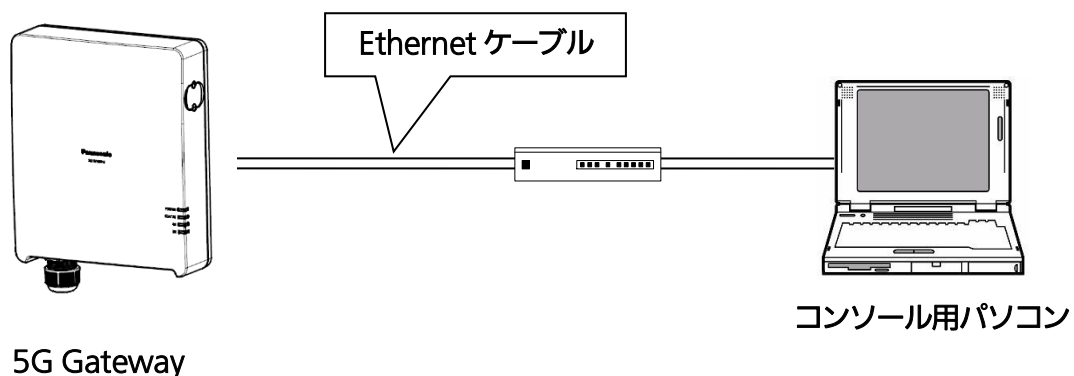


図 2.7-2 コンソール接続例（Ethernet/SSH 接続）

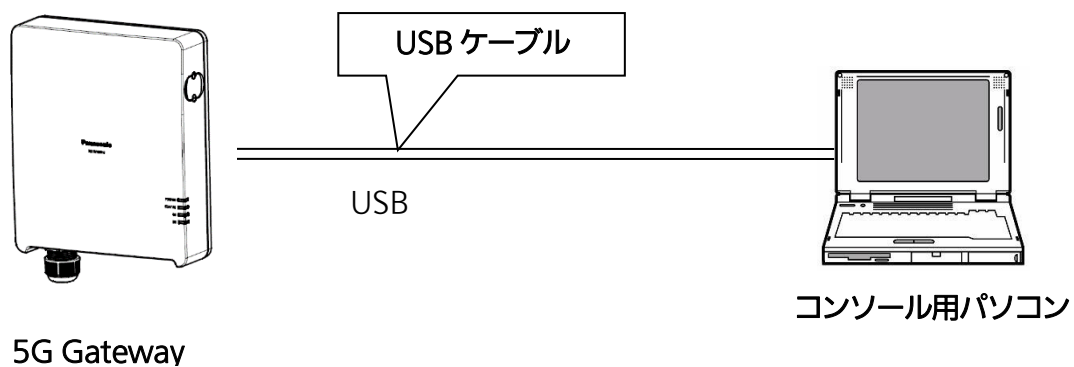


図 2.7-3 コンソール接続例（USB/SSH 接続）

## 重要

- 本装置の CONSOLE コネクタや USB コネクタにパソコンを接続する際は、下記の手順を守ってください。  
本装置が給電状態のままでパソコンを接続すると本装置が再起動することがあります。
  1. 本装置の電源を落とす。（AC アダプターを抜く、又は、PoE 給電を止める）
  2. 本装置とパソコンをコンソールケーブル、又は USB ケーブルで接続する。
  3. 本装置に電源を接続する。（AC アダプターを挿す、又は、PoE 給電を開始する）
- Ethernet ケーブルを接続し、さらに Ethernet ケーブル抜いてから同一のパソコンで USB 接続を行う場合に USB 接続ができなくなる場合があります。その場合はパソコンを再起動してください。



#### ◆シリアル接続コンソールの通信ソフト設定

コンソール用 パソコン 上の通信ソフトを起動して、シリアルポートの設定を以下のように設定してください。

通信ソフトの例として、フリーウェアの「Tera Term」等があります。

表 2.7-1 コンソールの通信ソフト設定

設定項目	内容
シリアルポート	本装置と接続しているポート番号
通信速度（ボー・レート）	115200 bit/s
データ長	8 bit
パリティ	なし
ストップビット	1 bit
フロー制御	なし

## 2.8 CLI コンソールのログイン・ログアウト

### ◆ユーザー種別

ユーザーアカウントには、権限の異なる管理ユーザーと一般ユーザーの2種類があります。表 2.4-1 に各ユーザーのユーザー名、パスワードの初期値を示します。

#### 重要

- ユーザー名・パスワードは初期値の設定から必ず変更し、適正に管理してください。ユーザー名・パスワードの変更方法については、「2.5 ユーザー名・パスワードの変更」を参照してください。

### ◆パラメータの初期値

ネットワーク経由で SSH によりリモートログインする方法で、CLI コンソールを接続するために必要なパラメータの初期値は、表 2.8-1 に記載します。

表 2.8-1 CLI コンソール接続情報（初期値）

IP アドレス	192.168.0.3
SSH ポート番号	58729

## ◆SSH でのログイン

本書では、ネットワーク経由で SSH によりリモートログインする方法を例に説明いたします。

本装置の IP アドレス、SSH のポート番号（ともに初期設定は表 2.8-1 に記載）を入力すると、ログインメッセージが表示されます。ユーザー名とパスワード（初期設定は、表 2.4-1 に記載）を入力してください。また、初期パスワードでログイン時はパスワード変更を促すメッセージが表示されますので、初期パスワードを変更してください。手順は「2.5 ユーザー名・パスワードの変更」を参照してください。

### ■ 操作手順

手順 1 Windows のスタートメニューより、Windows システムツールを選択し、〔コマンドプロンプト〕を起動します。

手順 2 〔コマンドプロンプト〕が表示されます。SSH を使用し、本装置とリモート接続します。  
「SSH」のあとにログインユーザー名と本装置の IP を入力し実行してください。例として、ログインユーザーを管理者権限「admin」、本装置の IP アドレスを「192.168.0.3」、SSH のポート番号を「58729」とした場合のコマンド入力例を示します。

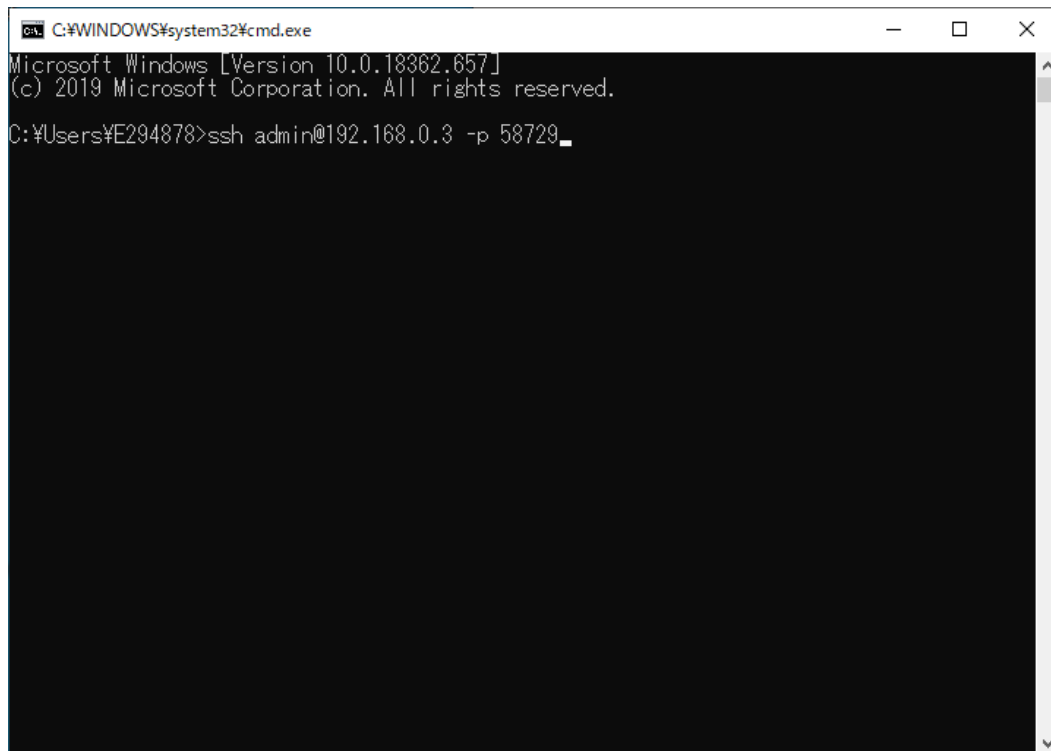
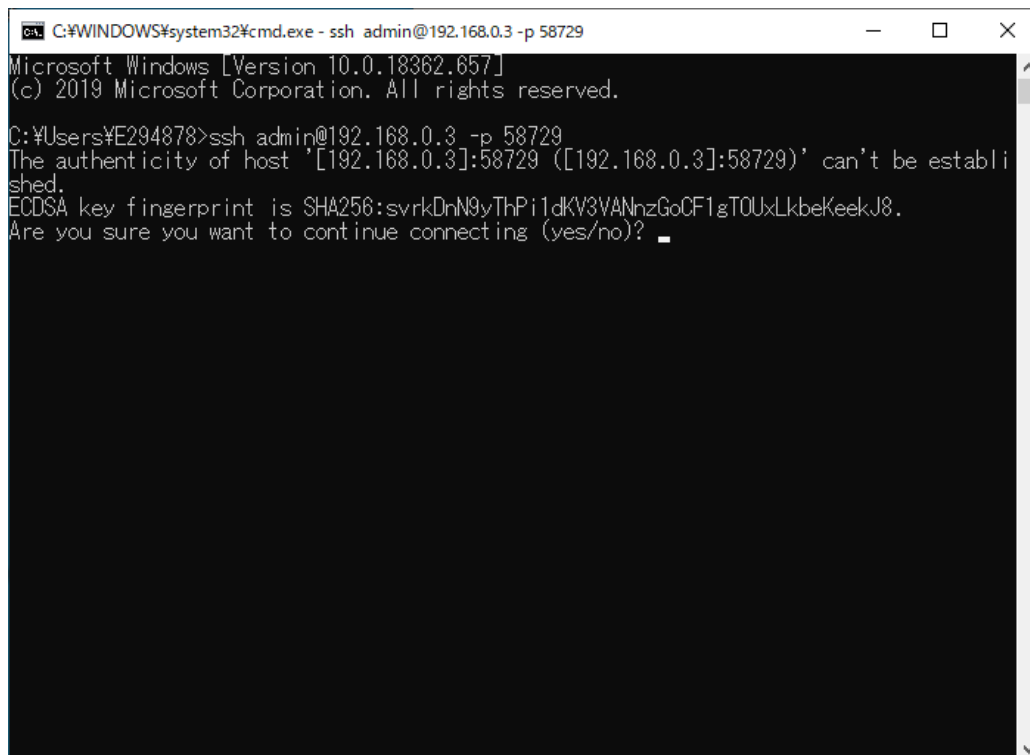


図 2.8-1 SSH 操作①

手順 3 初回接続時には、本装置の情報がコンソール用 パソコン に登録されていないため、以下のような警告メッセージが表示されます。接続を続行するために「yes」を入力し、実行します。

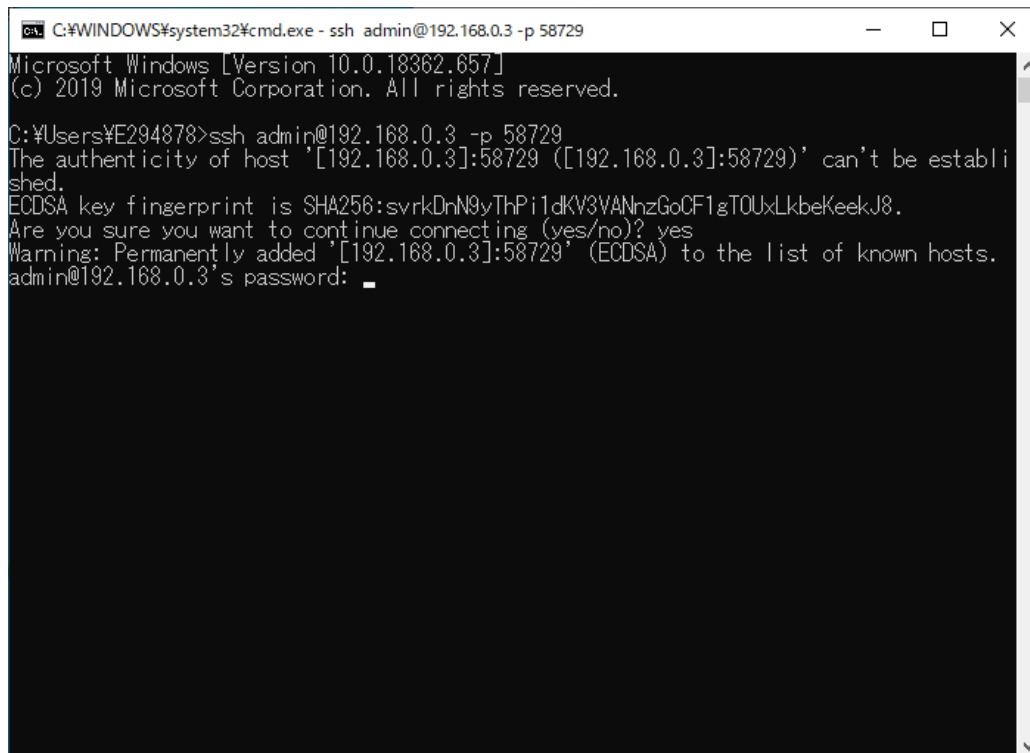


```
C:\WINDOWS\system32\cmd.exe - ssh admin@192.168.0.3 -p 58729
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
The authenticity of host '[192.168.0.3]:58729' ([192.168.0.3]:58729)' can't be established.
ECDSA key fingerprint is SHA256:svrkDnN9yThPi1dkV3VANhzGoCF1gTOUxLkbeKeekJ8.
Are you sure you want to continue connecting (yes/no)?
```

図 2.8-2 SSH 操作②

手順 4 パスワードを入力し、実行します。パスワード入力時、画面に入力内容は表示されません。



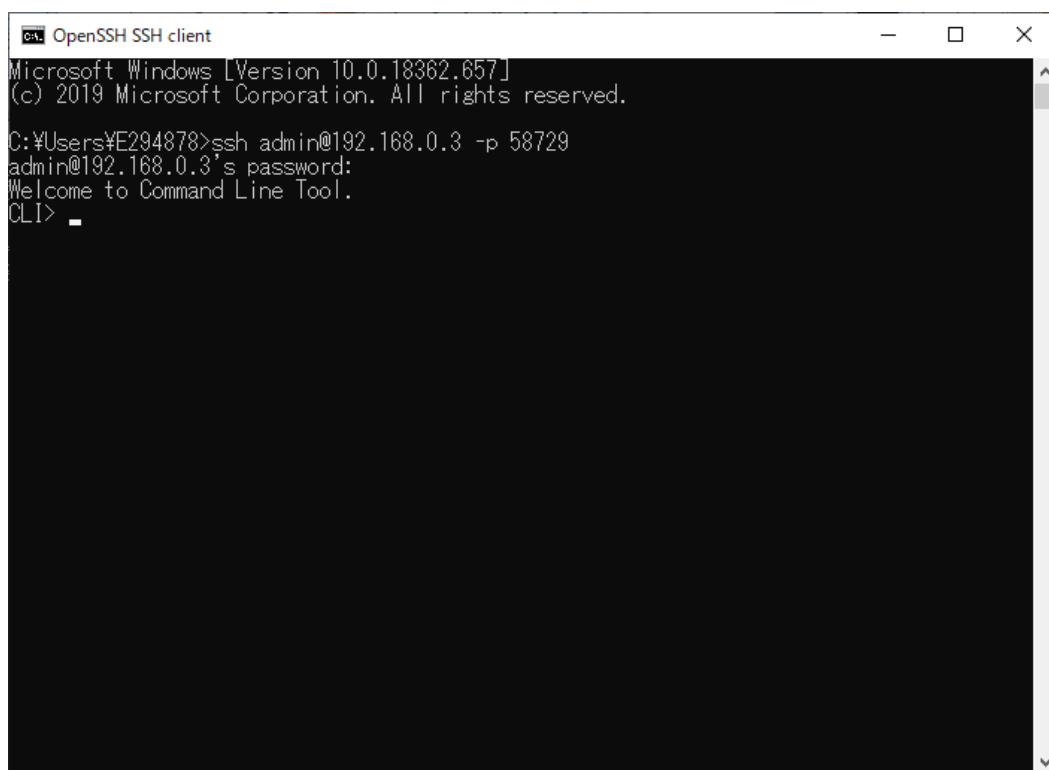
```
C:\WINDOWS\system32\cmd.exe - ssh admin@192.168.0.3 -p 58729
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
The authenticity of host '[192.168.0.3]:58729' ([192.168.0.3]:58729)' can't be established.
ECDSA key fingerprint is SHA256:svrkDnN9yThPi1dkV3VANhzGoCF1gTOUxLkbeKeekJ8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '[192.168.0.3]:58729' (ECDSA) to the list of known hosts.
admin@192.168.0.3's password:
```

図 2.8-3 SSH 操作③

手順 5 ログインが成功した場合は、下記画面が表示され、該当するユーザーレベルでのコンソール操作が可能となります。

初回ログイン時は、初期パスワード入力後にパスワード変更メッセージが表示されます。手順は、「2.5 ユーザー名・パスワードの変更」を参照してください。



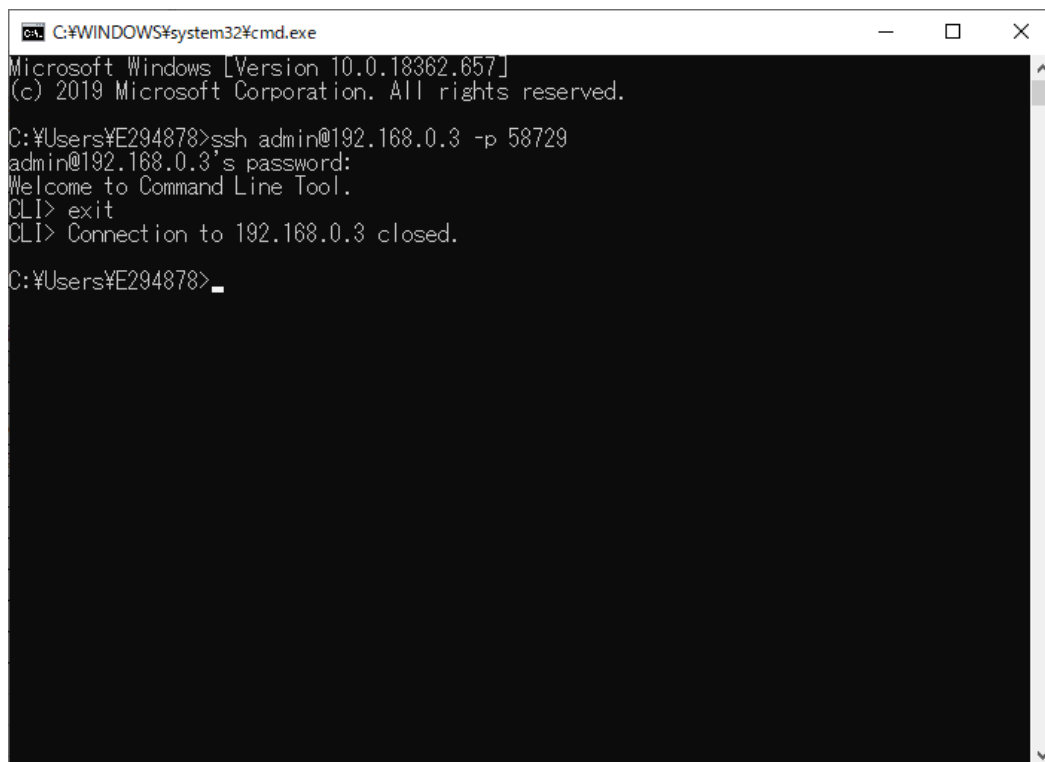
```
OpenSSH SSH client
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\¥E294878>ssh admin@192.168.0.3 -p 58729
admin@192.168.0.3's password:
Welcome to Command Line Tool.
CLI> _
```

図 2.8-4 SSH 操作④

## ◆SSH でのログアウト

手順1 リモート接続を切断し、SSH を終了します。「exit」入力し、実行します。



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.18362.657]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\E294878>ssh admin@192.168.0.3 -p 58729
admin@192.168.0.3's password:
Welcome to Command Line Tool.
CLI> exit
CLI> Connection to 192.168.0.3 closed.

C:\Users\E294878>_
```

図 2.8-5 SSH 操作⑤

### 重要

- ログインしたままパソコンを放置されますと、意図せず設定等が変更される危険があります。操作をしない場合は、速やかにログアウト等をし、設定等の破壊、改ざんまたは消去からの対策をとってください。

## 第 3 章 本装置の基本設定

---

本装置を動作させるための必要最低限の設定手順について、説明します。

## 3.1 基本設定の流れ

---

本装置の基本的な設定は、以下の手順で行います。

本装置の設定は CLI でのみ可能なため、CLI コンソールに管理ユーザーでログインして操作を行います。

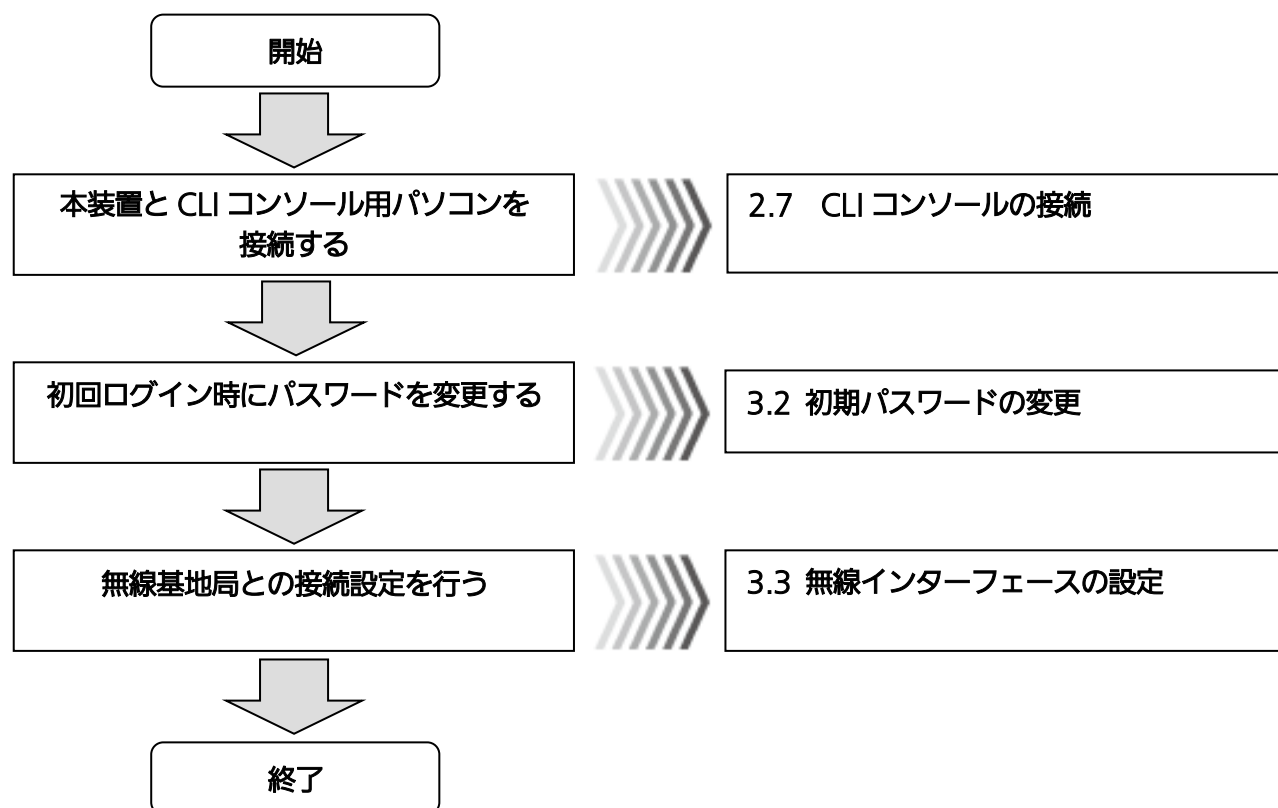


図 3.1-1 基本設定の流れ

その他の詳細な設定が必要な場合は、別冊の「XC-WN930J-01 コマンドリファレンス」を参照してください。



## 3.2 初期パスワード変更

---

本装置に初めてログインする際には、出荷時のパスワードからの変更が必要となります。パスワード変更は、管理ユーザー、一般ユーザーそれぞれにて実施する必要があります。

初期パスワードの変更は、GUI、CLI のどちらでも可能です。

詳細については、「2.5 ユーザー名・パスワードの変更」を参照してください。

### 重要

- アカウント設定；本設定を誤った場合、本装置への設定/状態確認の機能を使用できなくなります。
- なりすましによるパスワードの漏洩を回避するためブラウザのフィッシング対策機能を有効にすることを推奨します。
- カスタマーサポートからユーザー名およびパスワードを聞き出すことはありません。

## 3.3 無線インターフェースの設定

ここでは、基地局と接続するための無線インターフェースの設定方法を説明します。

本装置は 4G（LTE）と 5G（NR）での接続が可能となっており、5G は sub6 とミリ波に対応しています。

### 設定手順

#### ◆APN の設定

本装置に挿入されている SIM カードのキャリアに応じたアクセスポイント情報を設定し、対象の基地局に無線接続できるようにします。

#### コマンド仕様

コマンド	apn [apn name] [auth type] [user name] [password] [pdp type]
引数	apn name : APN 名 auth type : none/pap/chap/auto user name : 認証時のユーザー名 password : 認証時のパスワード pdp type : ipv4/ipv4+ipv6(PDP Type IPv6 cannot be selected.)
内容	APN 情報を設定する

#### 設定例

```
CLI> apn internet pap "" "" ipv4
OK      ↑   APN コマンドを入力します。
CLI>
```

上記の設定例では、次の内容で設定を行っています。

[apn name] : internet  
[auth type] : pap  
[user name] : なし  
[password] : なし  
[pdp type] : ipv4

## ◆設定した APN の確認方法

### コマンド仕様

コマンド	show status apn
引数	—
内容	APN の設定値を表示する

### 表示例

```
CLI> show status apn  
APN Name: internet  
Auth Type: pap  
Username:  
Password:  
PDP Type: ipv4  
CLI>
```

## 重要

- APN 設定：本設定を誤ると無線ネットワーク(4G/5G)へ接続できなくなります。
- 本装置は無線ネットワーク(4G/5G)へ接続する製品のため無線通信品質により本来の機器性能が十分に保証できない場合あるいは本来の機能が提供できない場合があります。
- 本装置は無線ネットワーク(4G/5G)へ接続する製品のためネットワークの運用状態により本来の機能が提供できない場合があります。
- 不正アクセスを監視する必要がある場合は、本装置のログ収集機能に加え弊社 NMS(別売)などの上位の監視装置を併用いただくことを推奨します。

## 第4章 GUI 画面説明

---

本装置の GUI 画面で表示される内容、実施できる操作について、説明します。

## 4.1 ログイン画面

---

手順1 ブラウザにて、本装置の IP アドレスと https ポート番号を指定（例：  
https://192.168.0.3:58730/）すると、以下のログイン画面が表示されます。

The image shows the Panasonic login interface. At the top is a blue header with the 'Panasonic' logo. Below the header, a blue instruction box contains the text 'ユーザー名、パスワードを入力して ログインしてください。' (Enter username and password to log in). Underneath are three input fields: 'ユーザー名' (Username), 'パスワード' (Password), and a blue 'ログイン' (Login) button. To the right of these fields, three numbered boxes are connected by lines: '手順2' (Step 2) points to the Username field, '手順3' (Step 3) points to the Password field, and '手順4' (Step 4) points to the Login button.

図 4.1-1 ログイン画面

手順2 ユーザー名欄に管理ユーザー、一般ユーザーのいずれかを入力します

手順3 手順2 で入力したユーザーに対応するパスワードをパスワード欄に入力します

手順4 「ログイン」をクリックします  
既にログインしたことがある場合は、TOP 画面が表示されます。

手順5 初めてログインした場合（設定ファイルの初期化した後も同様）、パスワード変更画面が表示されます。新しいパスワードを設定してください。  
詳細は「2.5 ユーザー名・パスワードの変更」を参照してください。

## 4.2 メイン画面

ログインすると、本画面が表示されます。

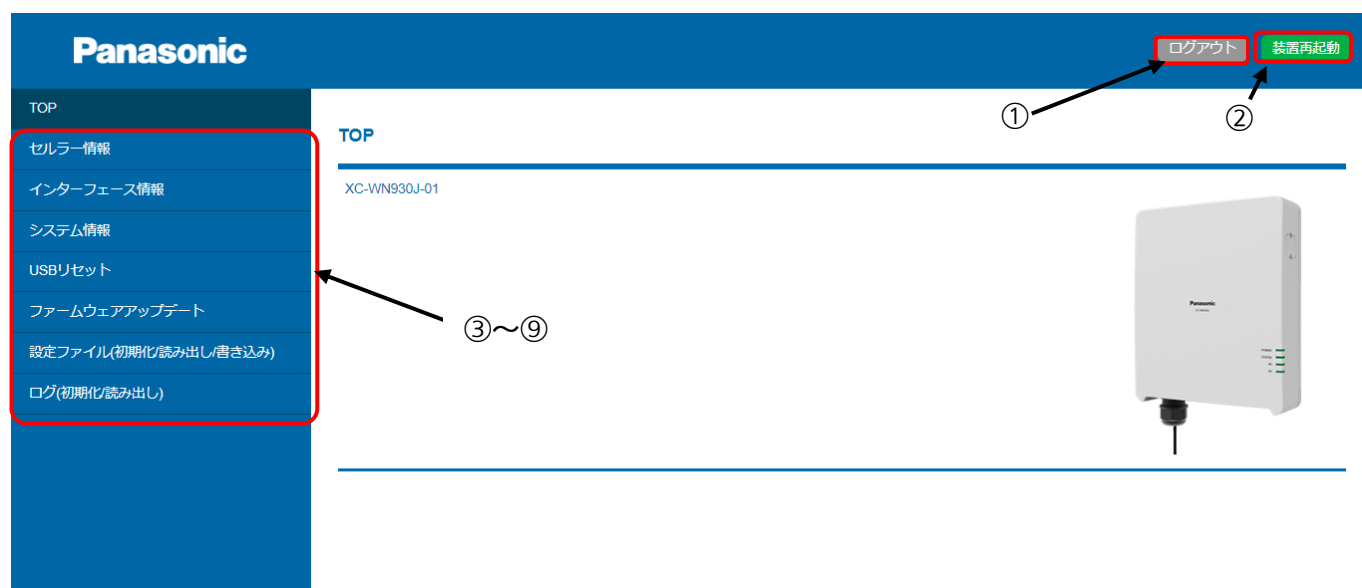


図 4.2-1 メイン画面

### ① ログアウト

GUI 画面での操作を終了するとき、画面右上の「ログアウト」をクリックすることで、操作を終了することができます。

### ② 本装置再起動

手順1 GUI 画面右上の「装置再起動」をクリックすることで、本装置を再起動します。

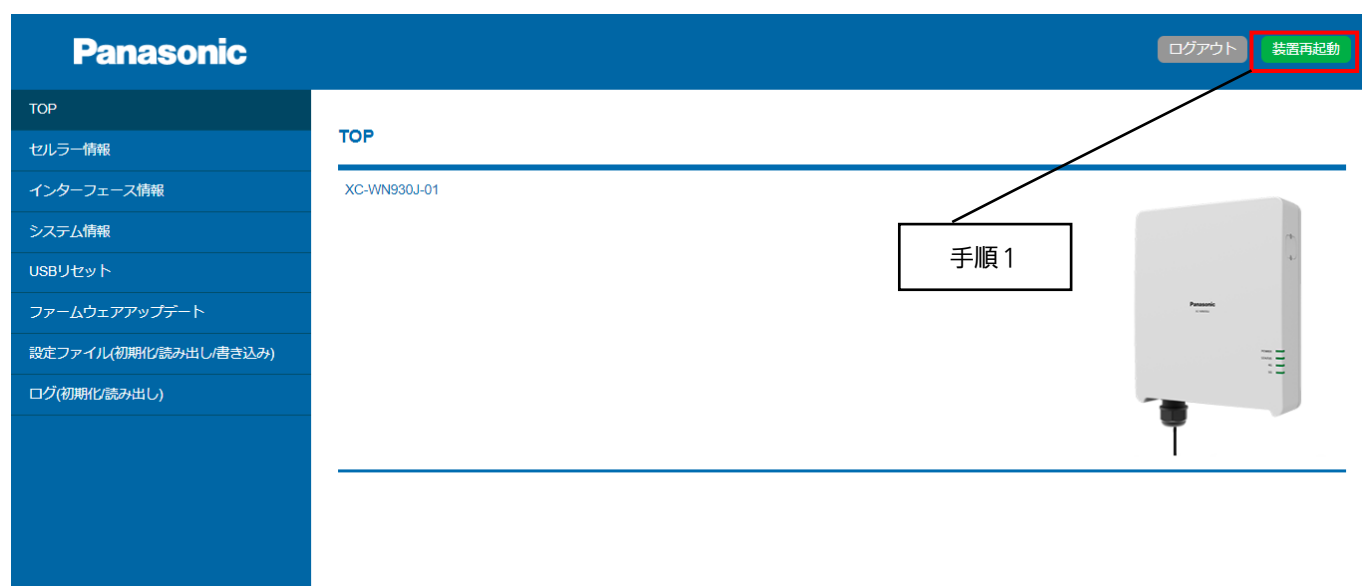


図 4.2-2 本装置再起動

手順2 確認メッセージの [OK] をクリックします。



図 4.2-3 再起動確認メッセージ

手順2 実施後、本装置が再起動します。

画面左側のメニューは、各メニューをクリックするとそれぞれの画面に遷移します。

- セルラー情報
- インターフェース情報
- システム情報
- USB リセット
- ファームウェアアップデート
- 設定ファイル（初期化/読み出し/書き込み）
- ログ（初期化/読み出し）

## 4.3 セルラー情報画面

無線基地局との接続状況などを表示する画面です。

本画面の操作は、管理ユーザー、一般ユーザーともに実施できます。

手順1 TOP画面のメニューから、[システム情報] をクリックします。



図 4.3-1 TOP 画面（セルラー情報）

以下のセルラー情報画面が表示されます。

セルラー接続時は、接続先（4G または 4G+5G）に合わせた情報表示がされます。

※以下の画面は 4G 接続時のものです。



Panasonic

ログアウト 装置再起動

TOP

セルラー情報

インターフェース情報

システム情報

USBリセット

ファームウェアアップデート

設定ファイル(初期化済み出し/書き込み)

ログ(初期化済み出し)

セルラー情報

受信レベル

IMEI

SIM情報

挿入状態

IMSI

オペレータ名

MSISDN

APN情報

接続情報

在圏情報

ネットワーク時刻(JST)

4G バンド情報

コンポーネントキャリア1

Band

EARFCN

Bandwidth

4G 無線品質情報

EARFCN

Physical cell ID

RSRP

RSRQ

RSSI

SINR

RSSI (antenna 1)

RSSI (antenna 2)

RSSI (antenna 3)

RSSI (antenna 4)

Tx power

5G バンド情報

Band

NR-ARFCN

Bandwidth

5G 無線品質情報

NR-ARFCN

Physical cell ID

SS-RSRP

SS-RSRQ

SS-SINR

CSI-RSRP

CSI-RSRQ

CSI-SINR

隣接セル情報(4G)

統計情報

受信バイト数

送信バイト数

受信パケット数

送信パケット数

受信パケット数(エラーを含む)

送信パケット数(エラーを含む)

受信オーバーフローパケット数

送信オーバーフローパケット数

4G

図 4.3-2 セルラー接続時の画面

セルラー接続されていない場合は、受信レベルが以下のように表示され、各種情報欄も空欄となります。

Panasonic

ログアウト 装置再起動

TOP

セルラー情報

インターフェース情報

システム情報

USBリセット

ファームウェアアップデート

設定ファイル(初期化済み出し/書き込み)

ログ(初期化済み出し)

セルラー情報

受信レベル

IMEI

SIM情報

挿入状態

挿入

IMSI

001010123456789

オペレータ名

COMPRION

MSISDN

APN情報

APN

APN 認証タイプ

APN ユーザ名

APN PDPタイプ

接続状態

接続時間

IPアドレス

サブネットマスク

DNSサーバアドレス

デフォルトゲートウェイ

接続状態

切断

接続情報

接続時間

IPアドレス

サブネットマスク

DNSサーバアドレス

デフォルトゲートウェイ

位置情報

位置状態

圏外

RAT

図 4.3-3 セルラー切断時の画面

## 4.4 インターフェース情報画面

本装置の情報を表示します。

本画面の操作は、管理ユーザー、一般ユーザーともに実施できます。

手順1 メイン画面のメニューから、[インターフェース情報] をクリックします。



図 4.4-1 メイン画面（インターフェース情報）

インターネット接続情報

Ethernet情報	リンク状態		up	
	オートネゴシエーション		100Mbps	
	IP設定	IPアドレス	192.168.0.3	
		サブネットマスク	255.255.255.0	
		デフォルトゲートウェイ		
	MACアドレス	00:0A:E4:5E:C7:24		
	統計情報	受信バイト数	142078	
		送信バイト数	2440904	
		受信パケット数	1113	
		送信パケット数	3331	
受信パケット数(エラーを含む)		0		
送信パケット数(エラーを含む)		0		
受信オーバーフローパケット数		0		
送信オーバーフローパケット数		0		
USB情報	ホストデバイス		デバイス	
	デバイス接続状態		接続なし	
	リンク状態		down	
	IP設定	IPアドレス	192.168.0.3	
		サブネットマスク	255.255.255.0	
		デフォルトゲートウェイ		
	統計情報	受信バイト数	0	
		送信バイト数	0	
		受信パケット数	0	
		送信パケット数	0	
		受信パケット数(エラーを含む)	0	
		送信パケット数(エラーを含む)	0	
		受信オーバーフローパケット数	0	
		送信オーバーフローパケット数	0	
	測位情報	測位状態		無効
位置情報		時刻(UTC)		
		緯度		
		経度		

図 4.4-2 インターフェース情報

## 4.5 システム情報画面

本装置のシステム情報を表示します。

本画面の操作は、管理ユーザー、一般ユーザーともに実施できます。

手順1 メイン画面のメニューから、[システム情報] をクリックします。



図 4.5-1 メイン画面（システム情報）

Panasonic		ログアウト	装置再起動
TOP	システム情報		
セルラー情報	モデル名 XC-WN930J-01		
インターフェース情報	製品シリアル番号 0123456789		
システム情報	ハードウェアバージョン DL5P1-v0.00-00		
USBリセット	ソフトウェアバージョン v05.01.202900_1a45002		
ファームウェアアップデート	4G 動作状態 4G RF 通常動作中		
設定ファイル(初期化/読み出し/書き込み)	CPU 通常動作中		
ログ(初期化/読み出し)	5G 動作状態 5G Sub6 RF 通常動作中		
	CPU 通常動作中		
	5G mmWave RF0 通常動作中		
	5G mmWave RF1 通常動作中		
	5G mmWave RF2 通常動作中		
	ACS適用状態		
	装置情報		

図 4.5-2 システム情報

## 4.6 USB リセット画面

USB ポートのリセットを行います。リセット後、USB ポートは USB デバイス挿入時と同じ状態になります。

本画面の操作は、管理ユーザー、一般ユーザーともに実施できます。

手順1 メイン画面のメニューから、[USB リセット] をクリックします。

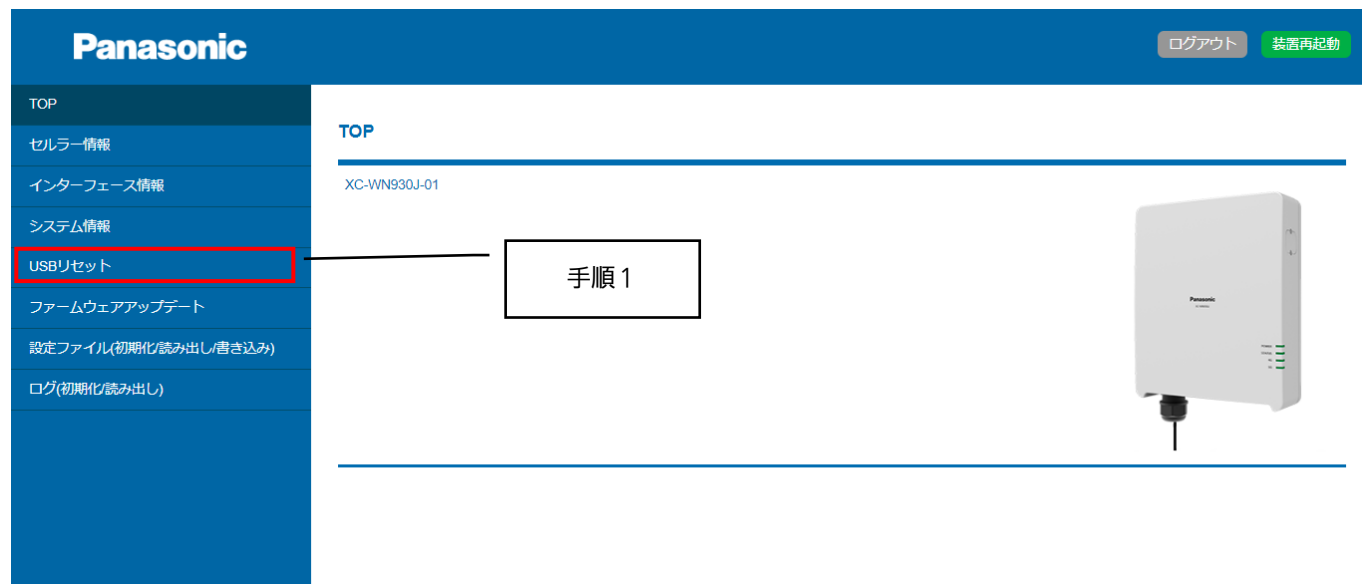


図 4.6-1 メイン画面（USB リセット）

手順2 [USB リセット] 画面の [リセット] をクリックします。

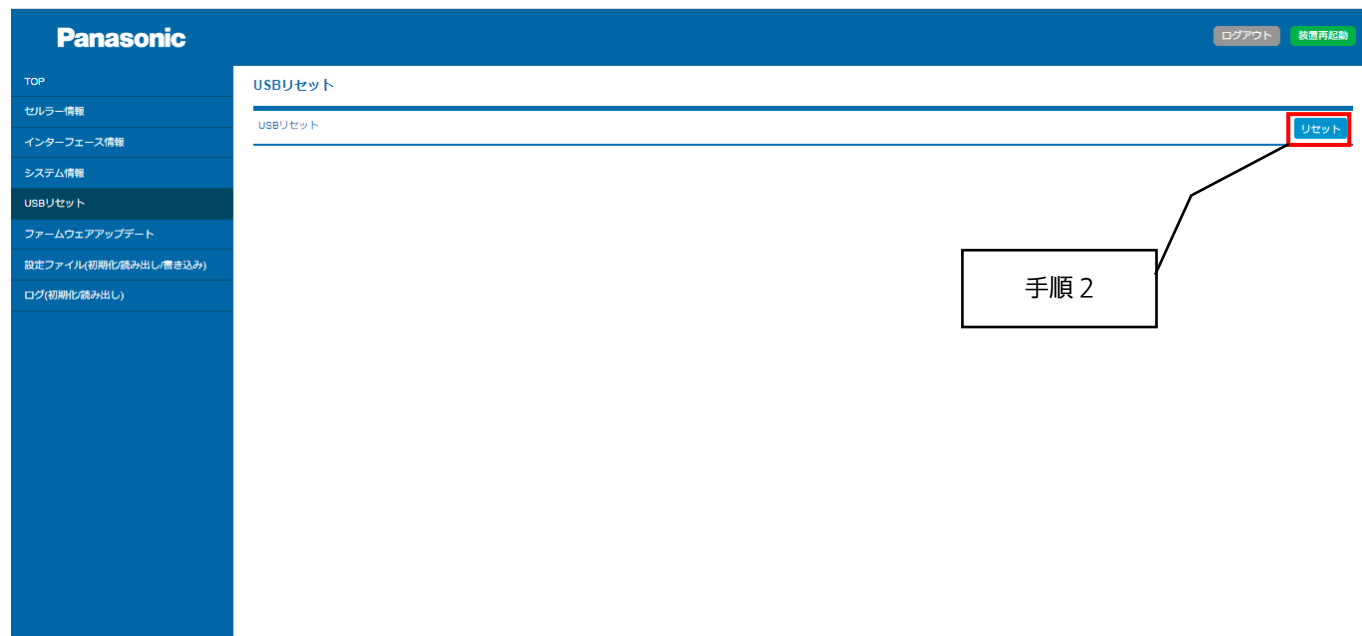


図 4.6-2 USB リセット

手順3 確認画面が表示されるので、[OK] をクリックします。



図 4.6-3 USB リセット確認画面

## 4.7 ファームウェアアップデート画面

本装置のファームウェアをアップデートすることができます。本画面の操作は、管理ユーザーのみ可能となっています。

アップデートは、本装置内のファームウェアより新しいバージョンのものに限り、行うことができます。（古いファームウェアへの更新はできません）ファームウェアは、事前に当社 HP からダウンロードした zip ファイルを解凍して、任意のフォルダに配置します。

手順1 TOP 画面のメニューから、[ファームウェアアップデート] をクリックします。



図 4.7-1 メイン画面（ファームウェアアップデート）



手順2 「ファームウェアアップデート」画面の「選択ファイル」欄にある「ファイル選択」をクリックします。

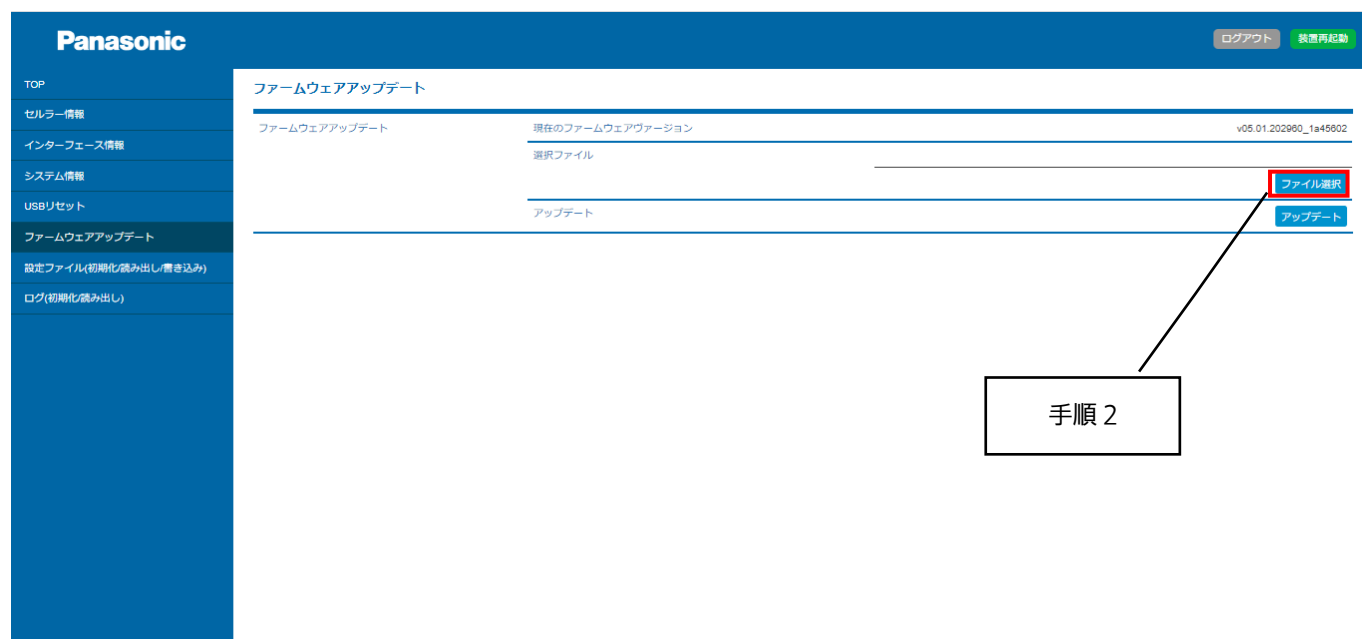


図 4.7-2 ファームウェアファイル選択

手順3 更新するファームウェアを指定する画面が表示されるので、対象ファイルを選択して「開く」をクリックします。

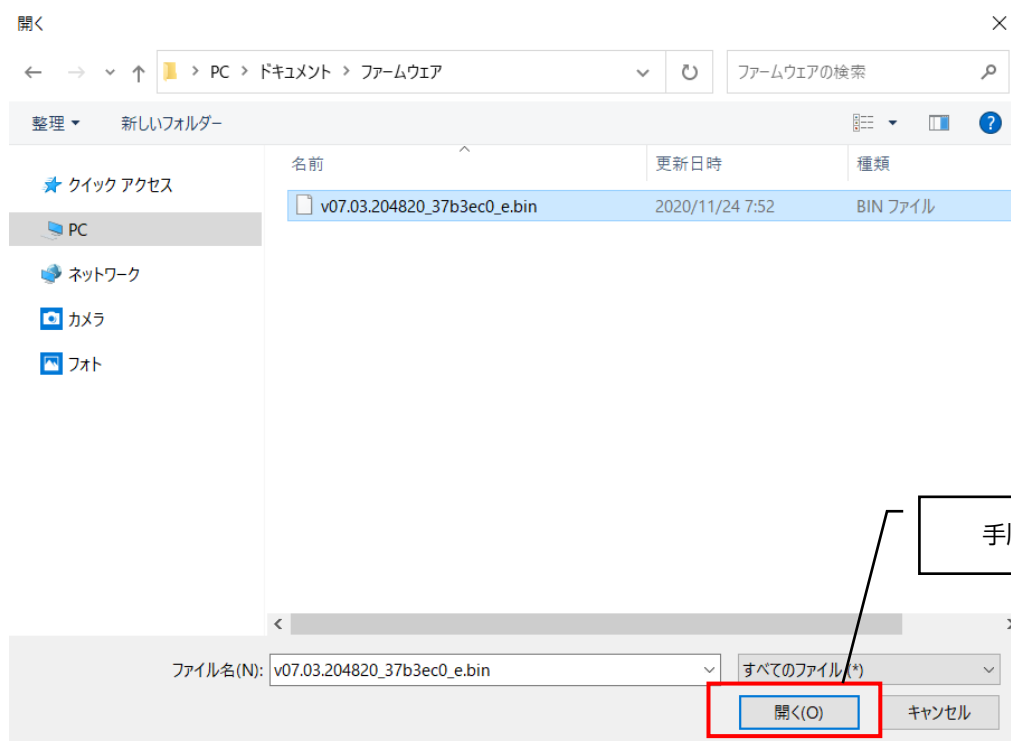


図 4.7-3 ファームウェアファイル選択

手順4 アップデート欄の「アップデート」をクリックします。

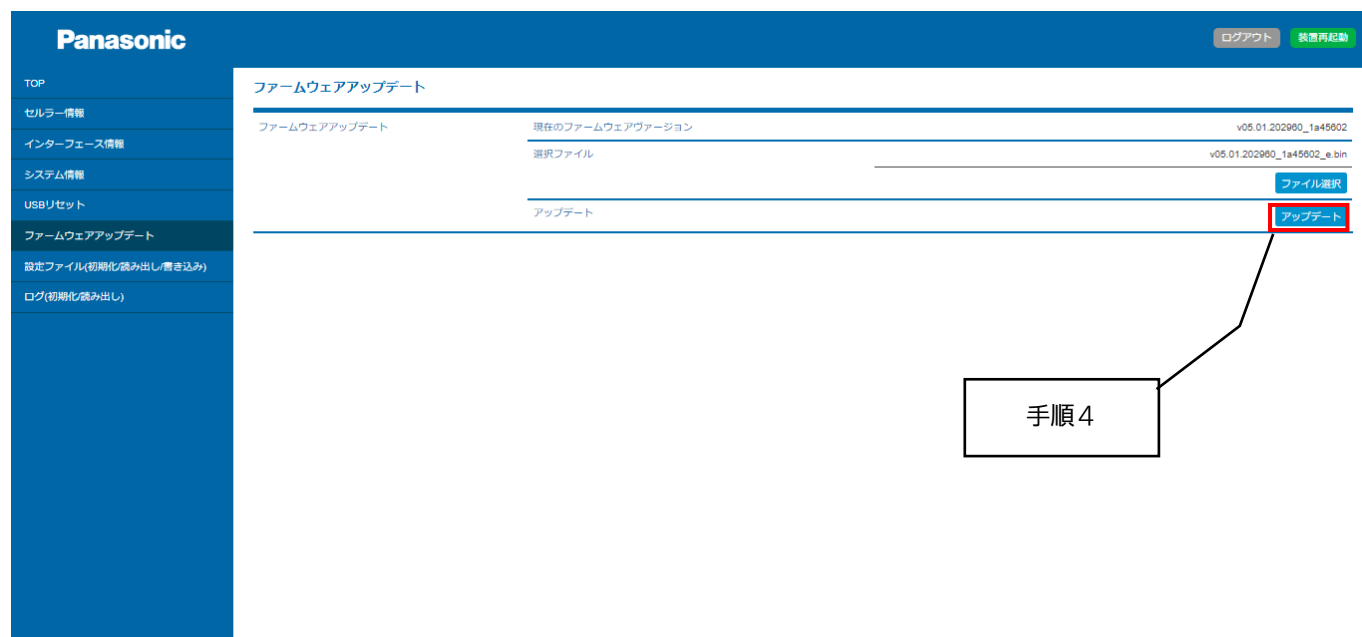


図 4.7-4 ファームウェアアップデート

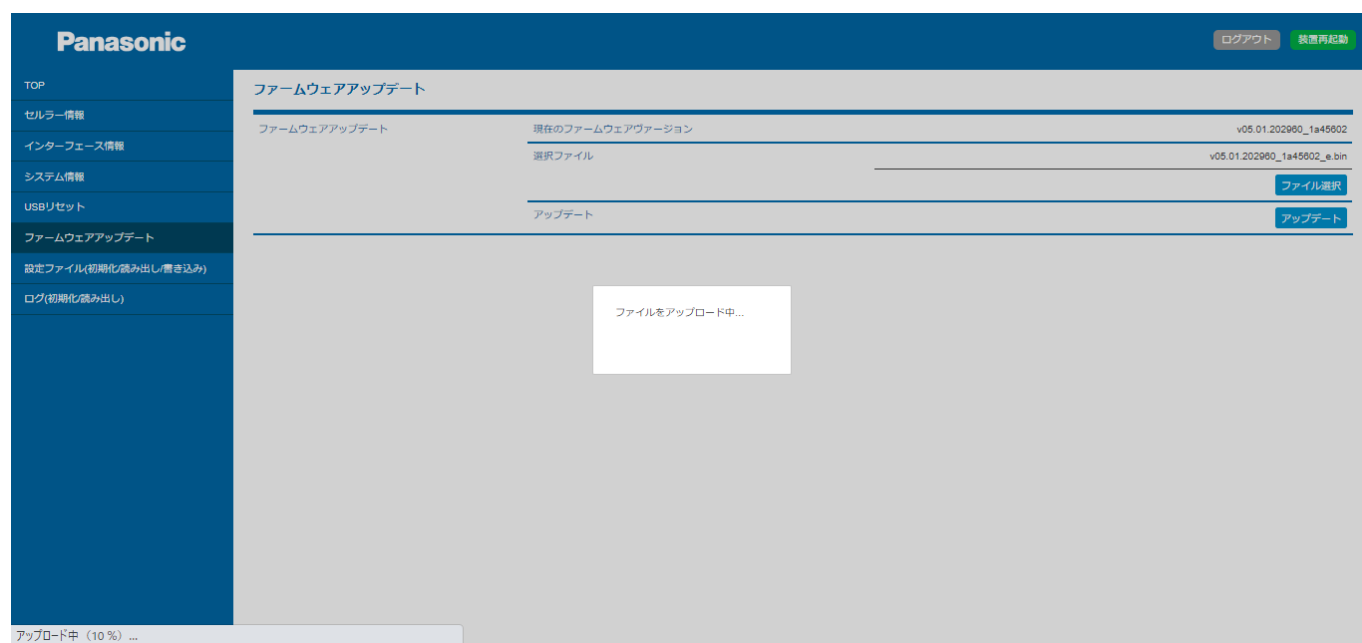


図 4.7-5 アップロード中表示

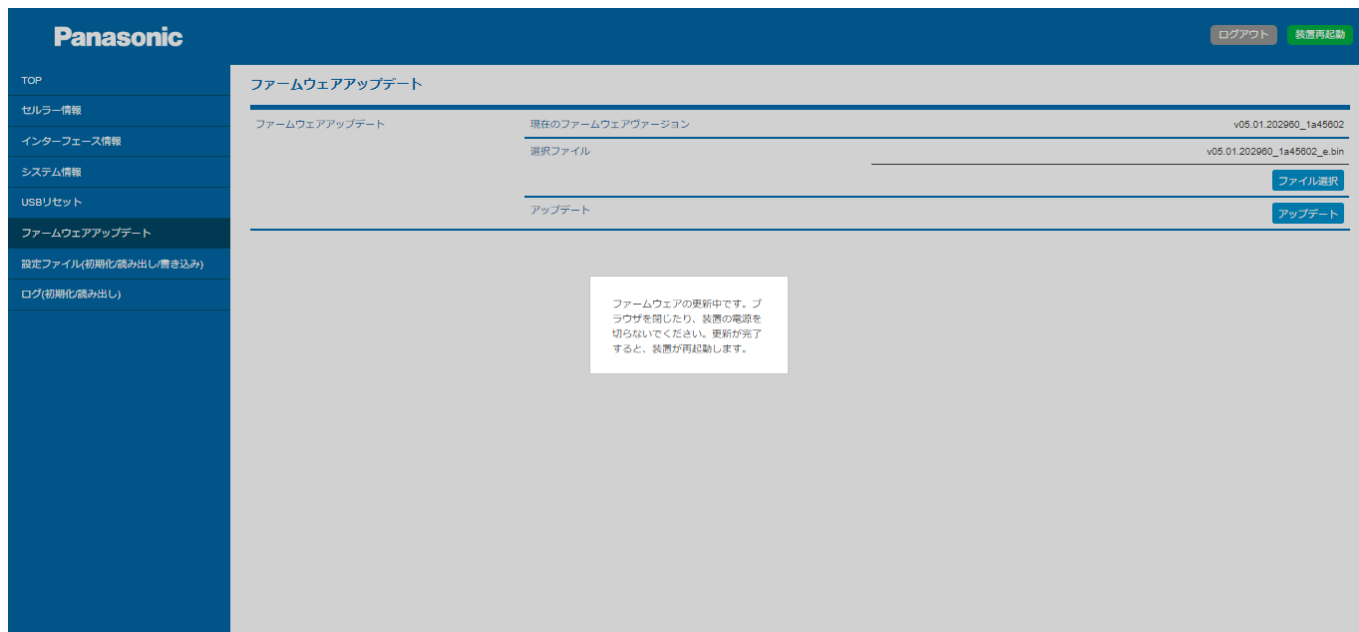


図 4.7-6 ファームウェアアップデート中

更新処理中に本装置が再起動します。再起動後は、ログイン画面が表示されます。  
状態 LED が緑点灯になりましたら、起動が完了しています。

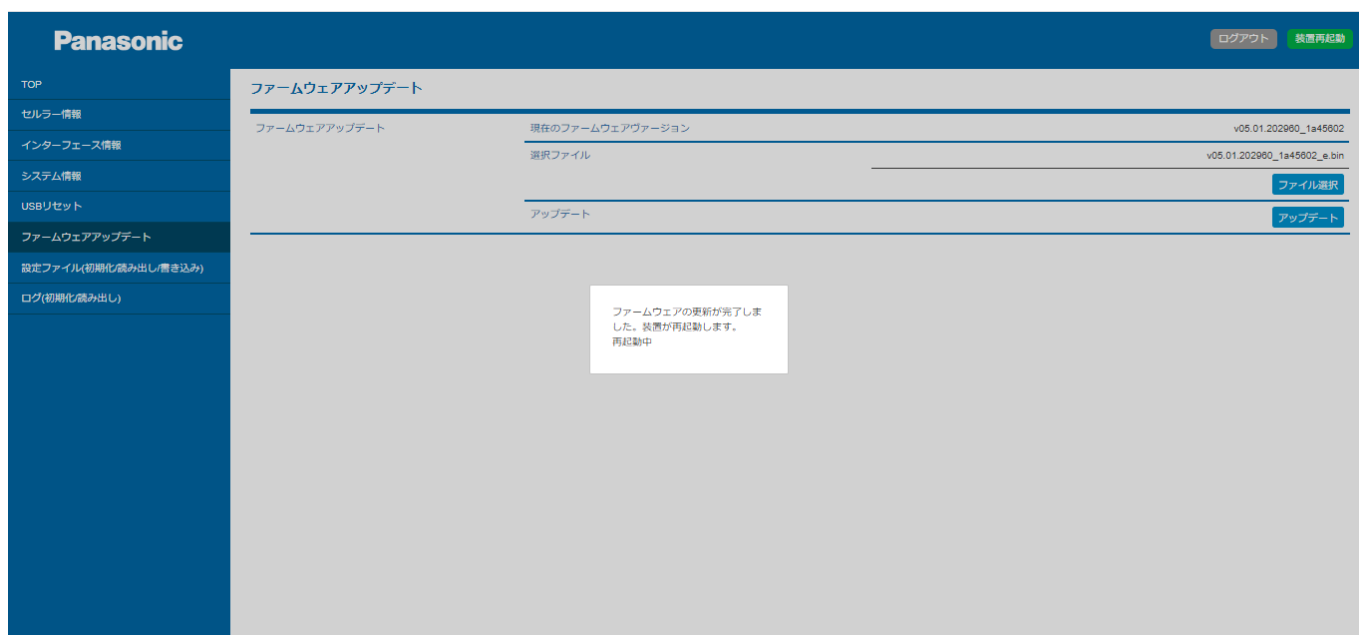


図 4.7-7 ファームウェアアップデート後再起動

## 4.8 設定（初期化／読み出し／書き込み）画面

設定ファイルの初期化と読み出し、書き込みを行うことができます。本画面の操作は、管理ユーザーのみ可能となっています。

手順1 TOP画面のメニューから、[設定（初期化/読み出し/書き込み）] をクリックします。



図 4.8-1 メイン画面（設定ファイル）

以下の設定（初期化/読み出し/書き込み）画面が表示されます。

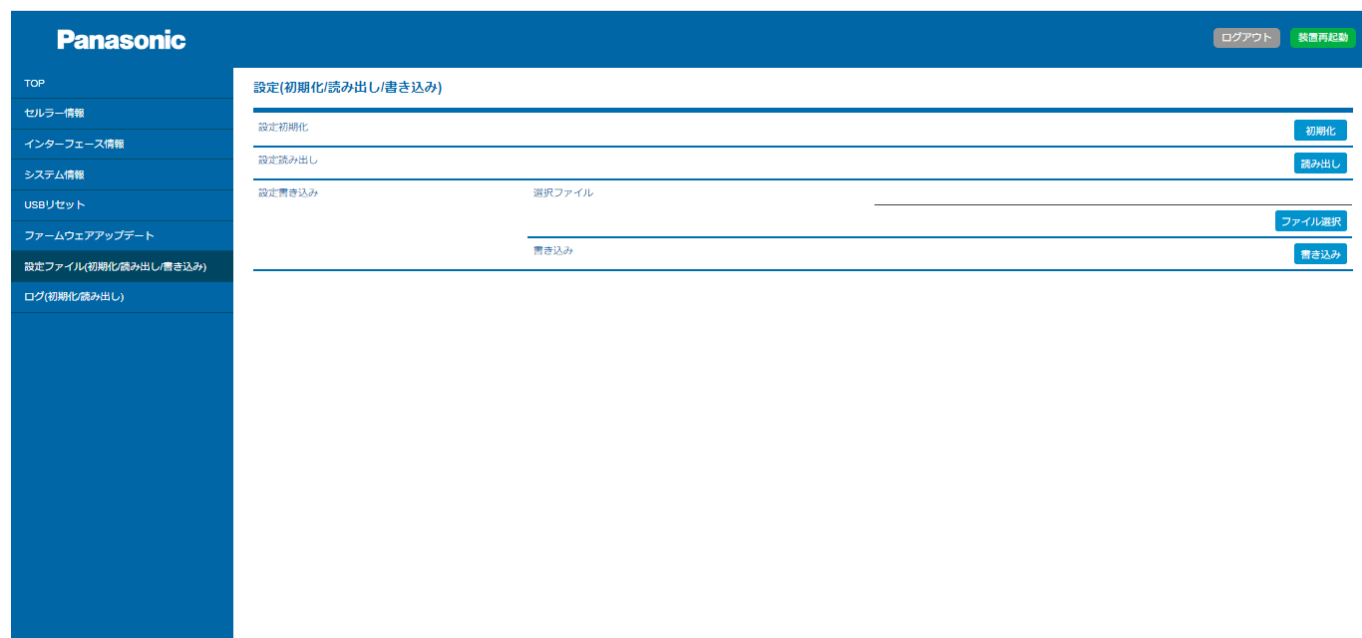


図 4.8-2 設定画面

## ◆初期化

設定情報を出荷時の状態に戻します。

手順 1 図 4.8-2 の設定画面にて、設定初期化欄の「初期化」をクリックします。

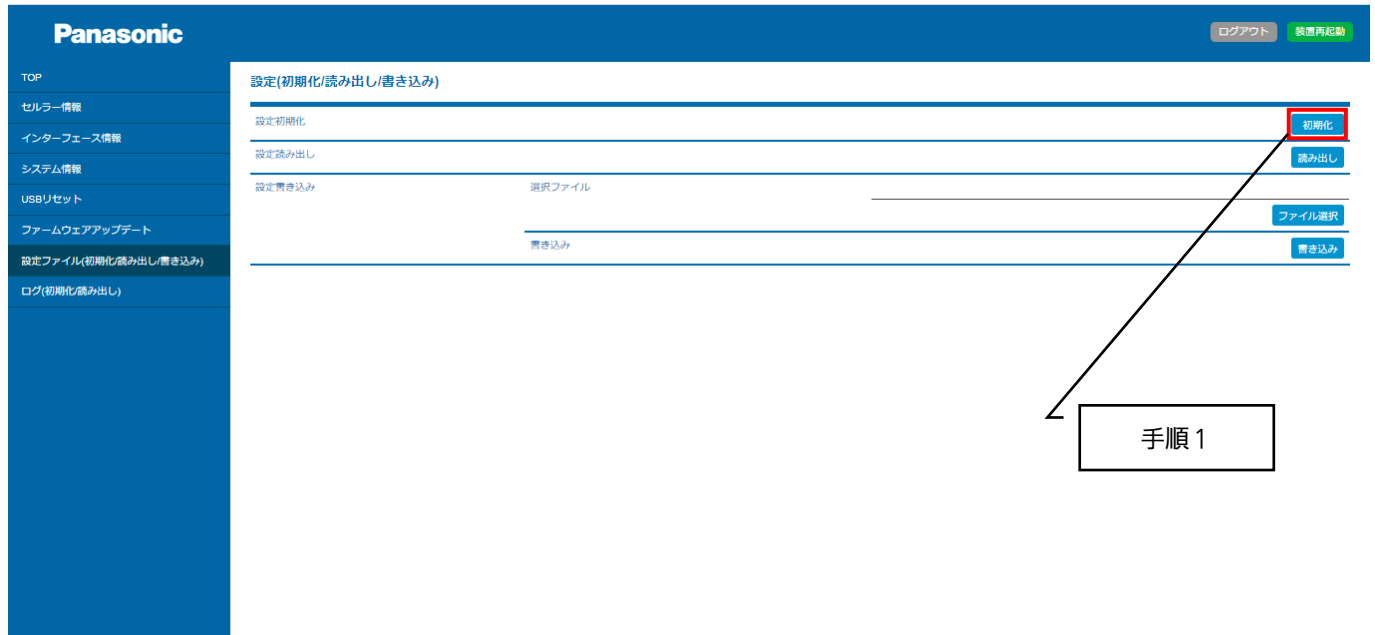


図 4.8-3 設定初期化（1）

手順 2 設定初期化の確認画面が表示されるので、「OK」をクリックします。

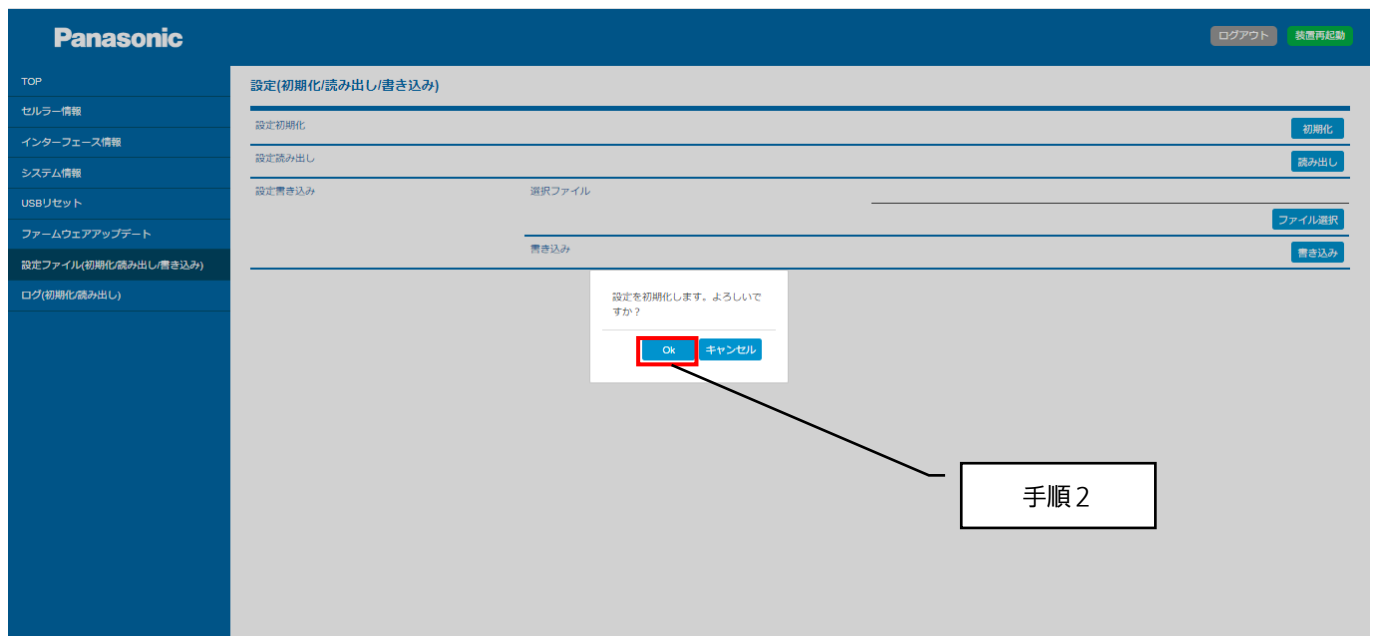


図 4.8-4 設定初期化（2）

初期化処理中に本装置が再起動します。

状態 LED が緑点灯になりましたら、起動が完了しています。

## ◆読み出し

設定ファイルの読み出し（バックアップ）を行います。ファイルは zip 形式で圧縮されています。  
解凍すると「config\_file」が出力されます。

手順 1 図 4.8-2 の設定画面にて、「読み出し」をクリックします。

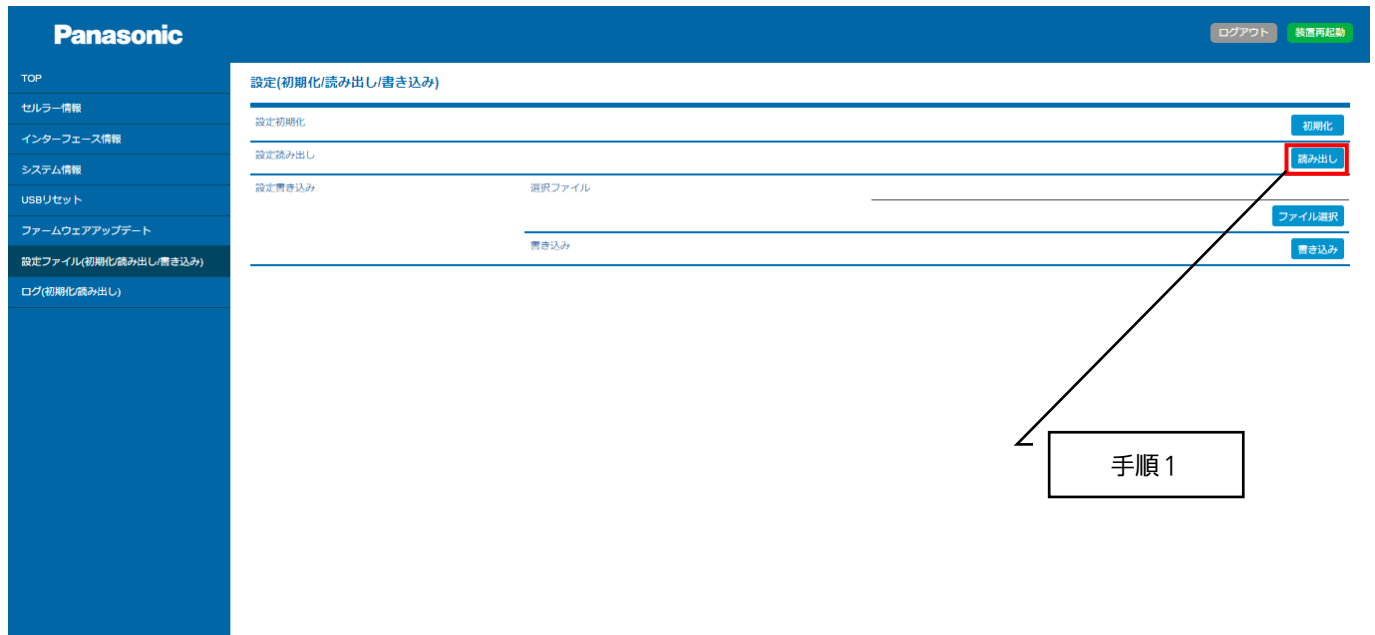


図 4.8-5 設定読み出し（１）

手順 2 ファイルの操作を選択するメッセージが表示されるので、「保存」または「名前を付けて保存」をクリックします。（メッセージの表示はブラウザの設定によります）  
ファイル名の初期値は、profile\_backup.zip です。

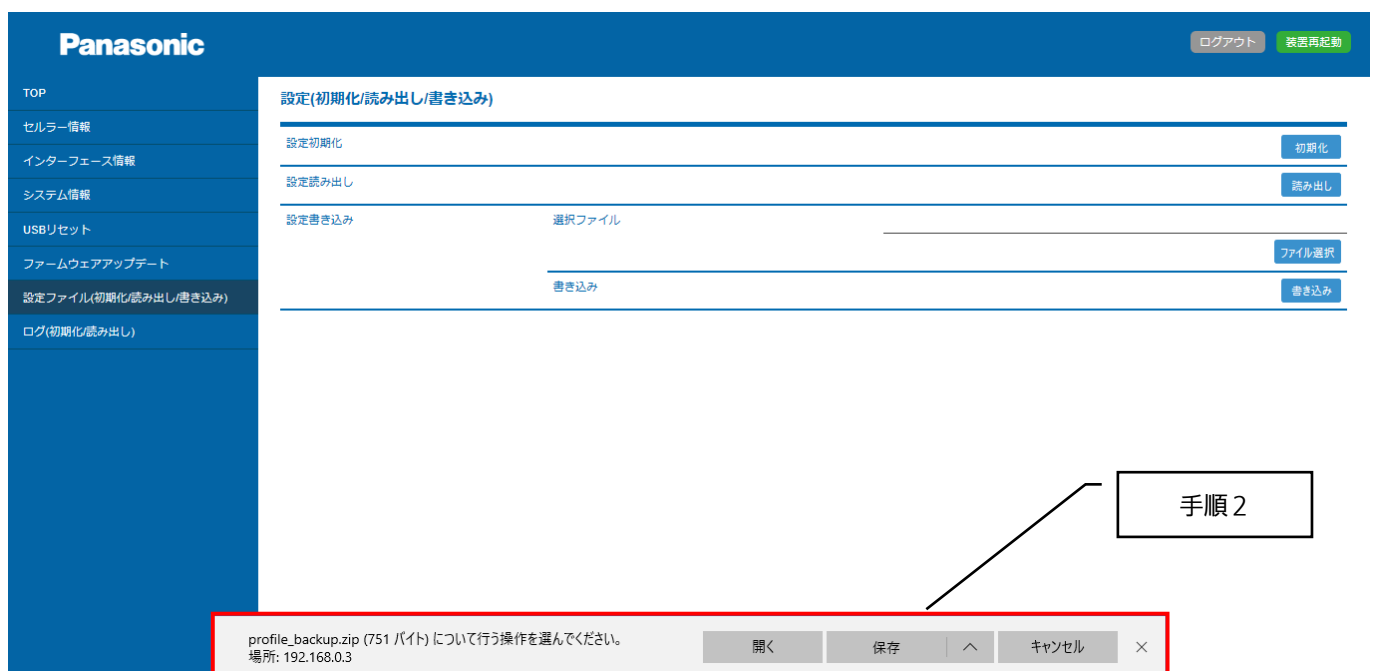


図 4.8-6 設定読み出し（２）

手順3 「名前を付けて保存」をクリックした場合は、保存先とファイル名を設定する画面が表示されます。希望するディレクトリ・ファイル名を指定して、「保存」をクリックします。



図 4.8-7 設定読み出し（3）

読み出し処理が完了すると画面下部にメッセージが表示されますので、操作を選択してください。

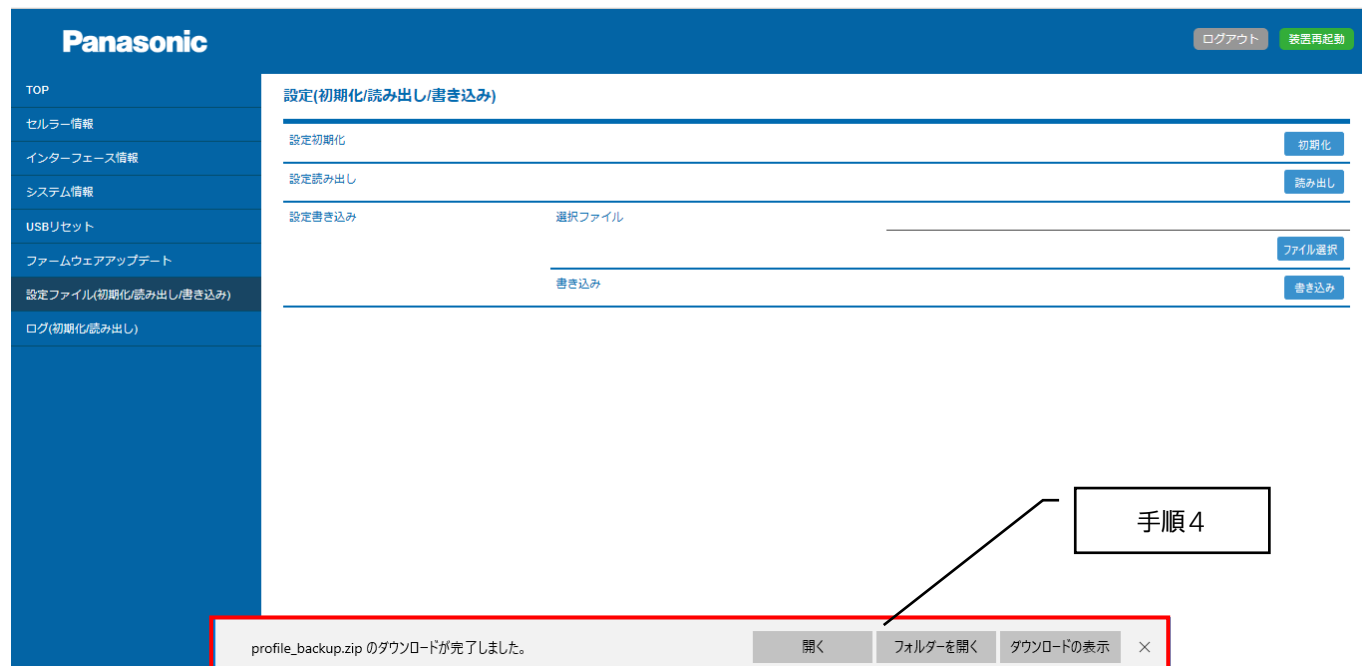


図 4.8-8 設定読み出し（4）

## ◆書き込み

設定ファイルを本装置に書き込むことで、設定ファイルに指定したパラメータが本装置に反映されます。

手順1 図 4.8-2 の設定画面にて、設定書き込み欄の「ファイル選択」をクリックします。

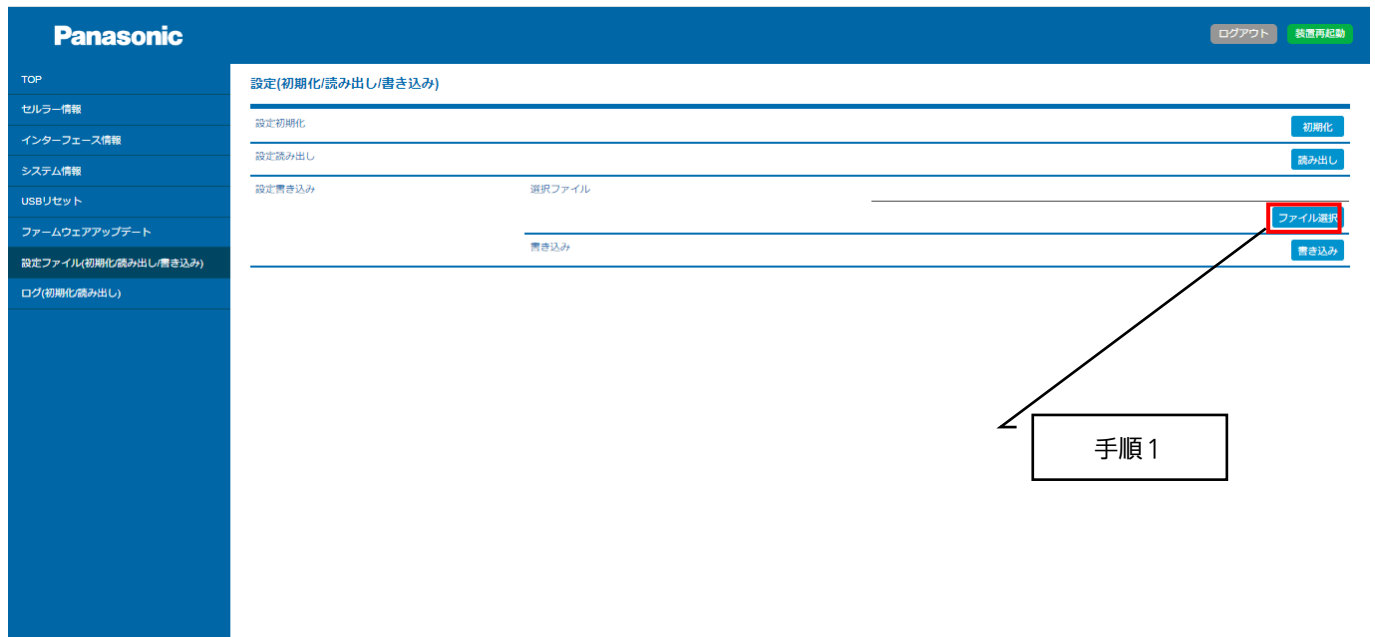


図 4.8-9 設定ファイル選択（1）

手順2 書き込みファイルを指定する画面が表示されるので、対象ファイルを指定して「開く」をクリックします。



図 4.8-10 設定ファイル選択（2）



手順3 書き込み欄の「書き込み」をクリックします。

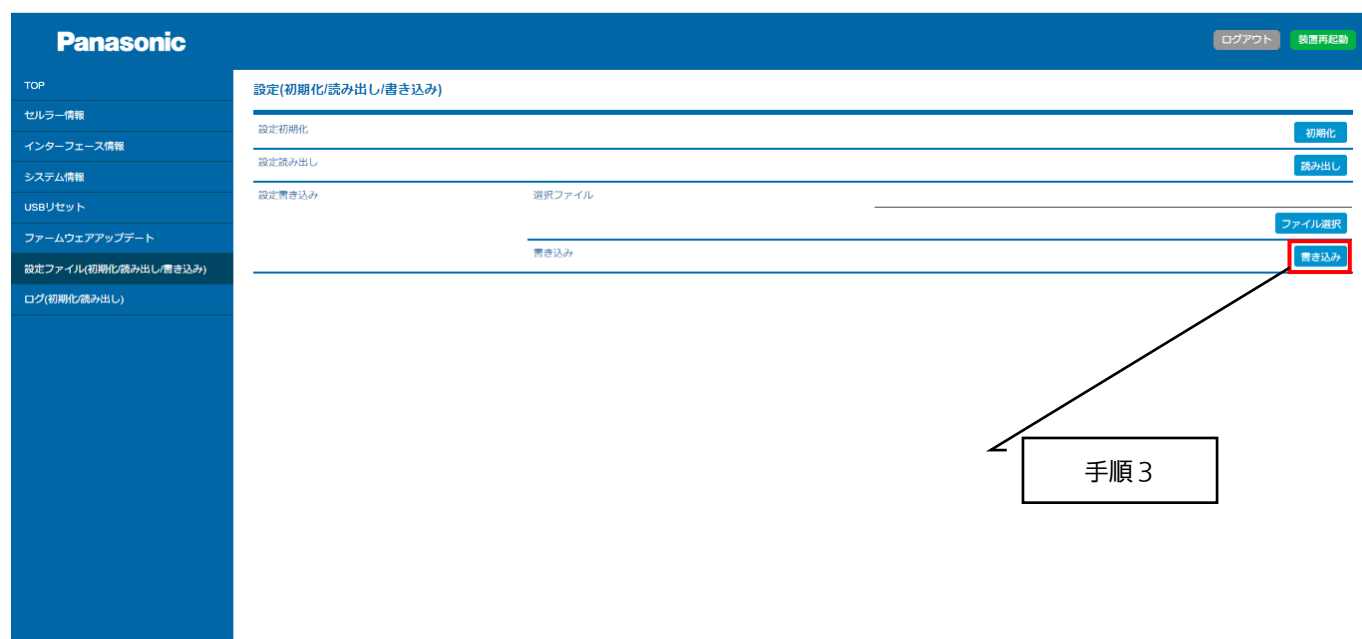


図 4.8-11 設定ファイル書き込み

書き込み処理中に本装置が再起動します。

状態 LED が緑点灯になりましたら、起動が完了しています。

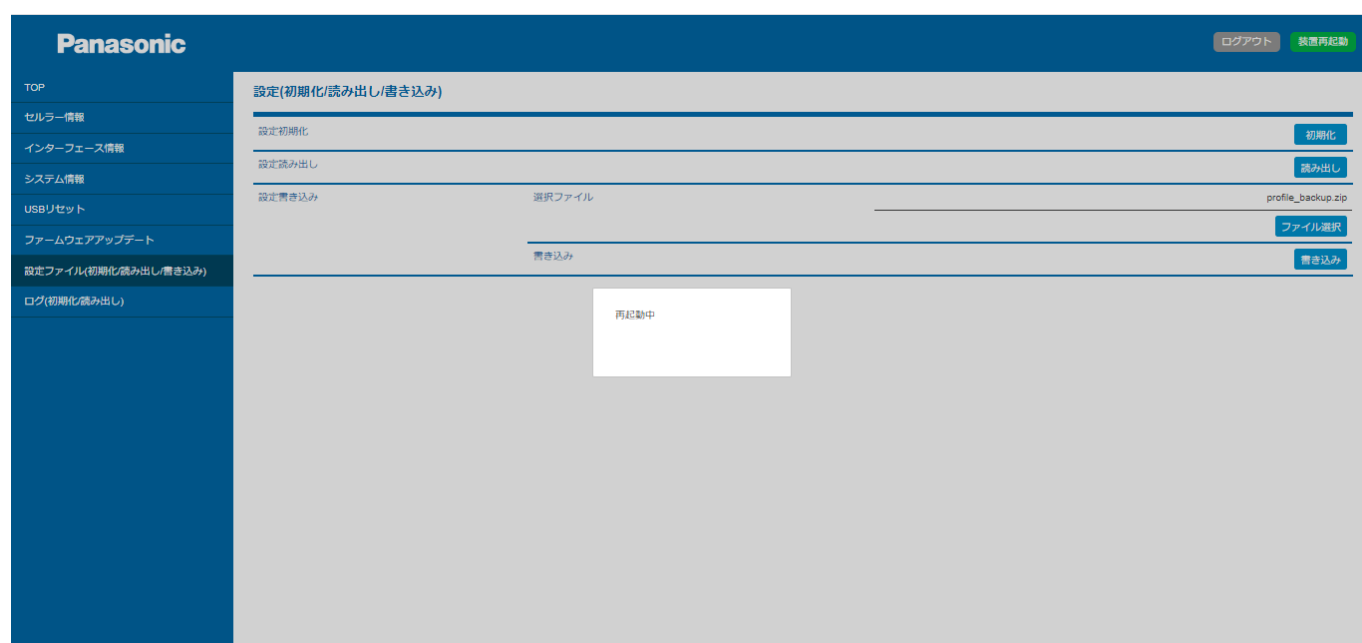


図 4.8-12 書き込み後再起動

## 4.9 ログ（初期化／読み出し）画面

ログ情報の初期化と読み出しを行うことができます。本画面の操作は、管理ユーザーのみ可能となっています。

手順1 TOP画面のメニューから、[ログ（初期化／読み出し）] をクリックします。

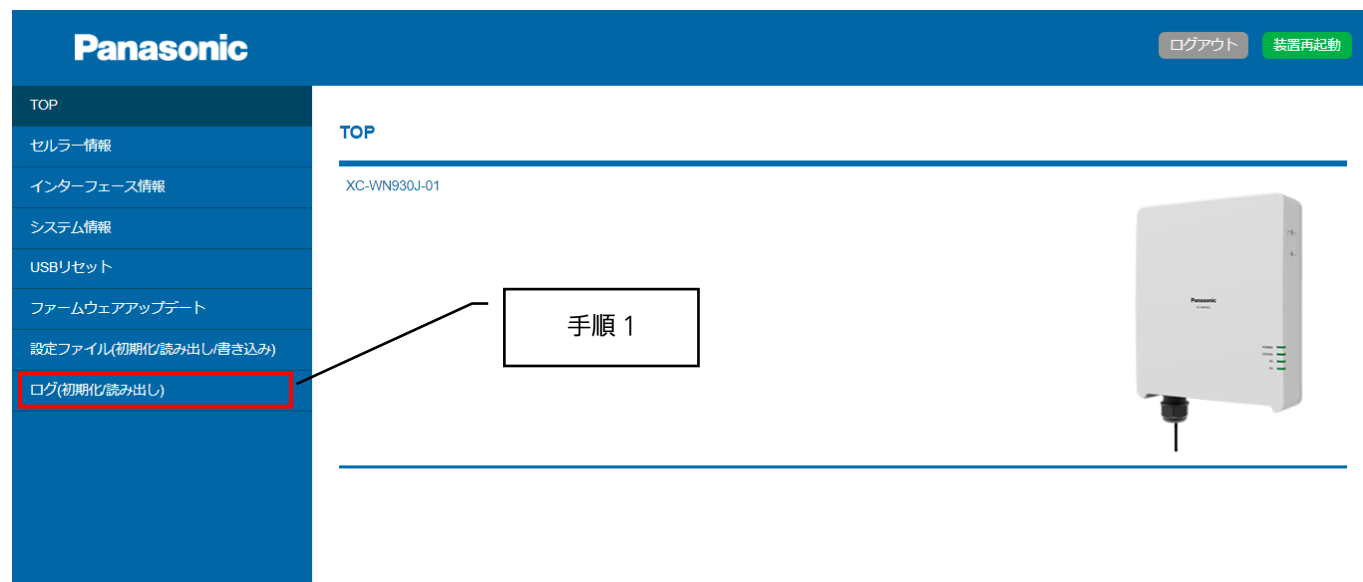


図 4.9-1 メイン画面（ログ（初期化／読み出し））メニュー

以下のログ（初期化／読み出し）画面が表示されます。

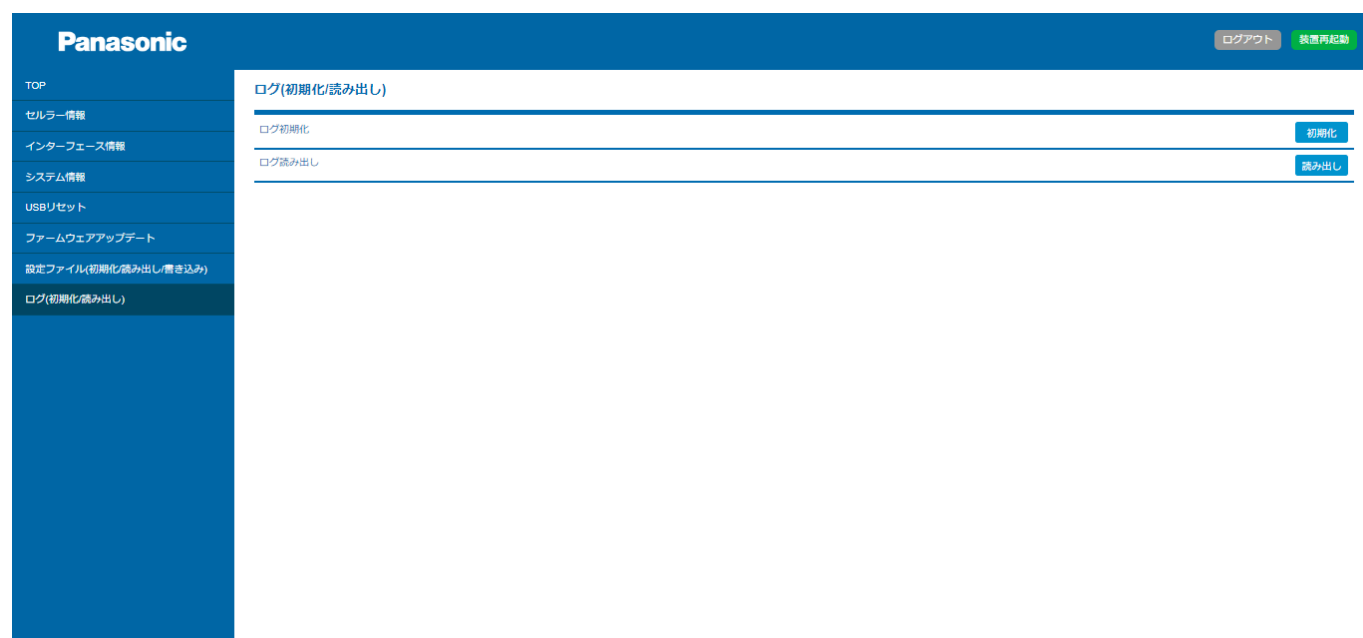


図 4.9-2 ログ（初期化／読み出し）画面

## ◆ログ初期化

本装置に保存されているログを初期化します。

手順 1 図 4.9-2 ログ（初期化/読み出し）画面でログ初期化欄の「初期化」をクリックする。

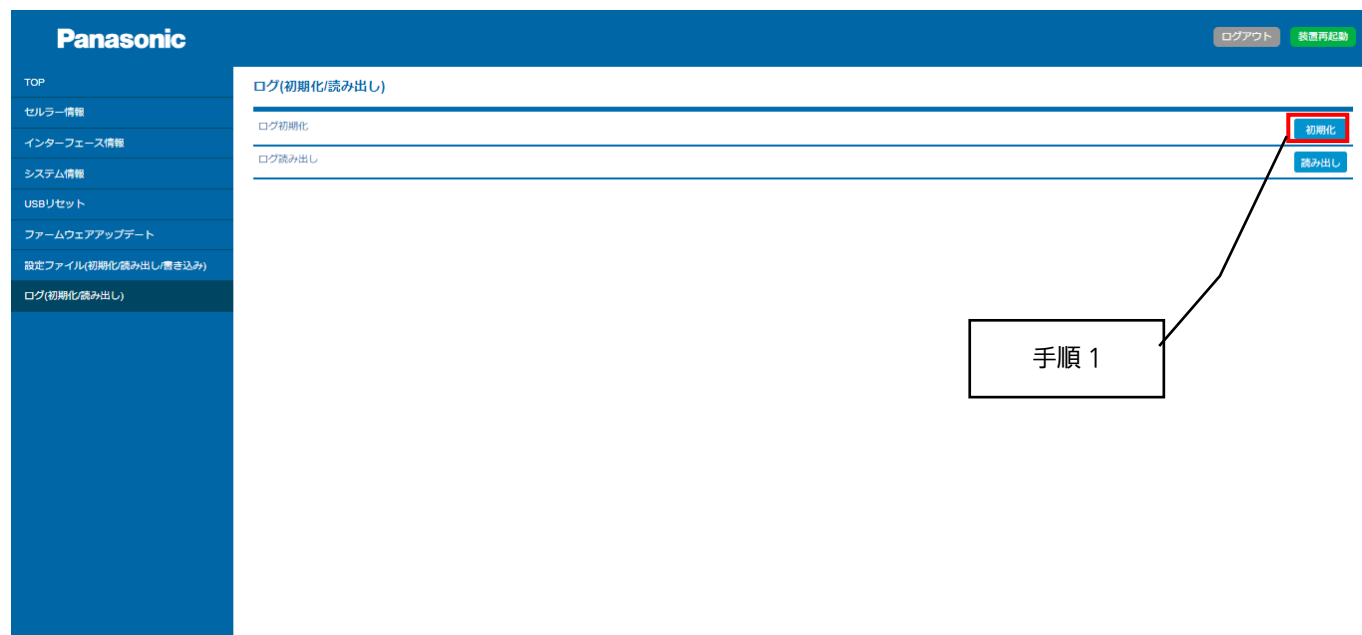


図 4.9-3 ログ初期化（1）

手順 2 確認メッセージが表示されるので、「OK」をクリックします。



図 4.9-4 ログ初期化（2）

## ◆ログ読み出し

本装置に保存されているログ情報をファイルに出力します。

手順1 図 4.9-2 ログ（初期化/読み出し）画面の「ログ読み出し」欄にある「読み出し」をクリックします。

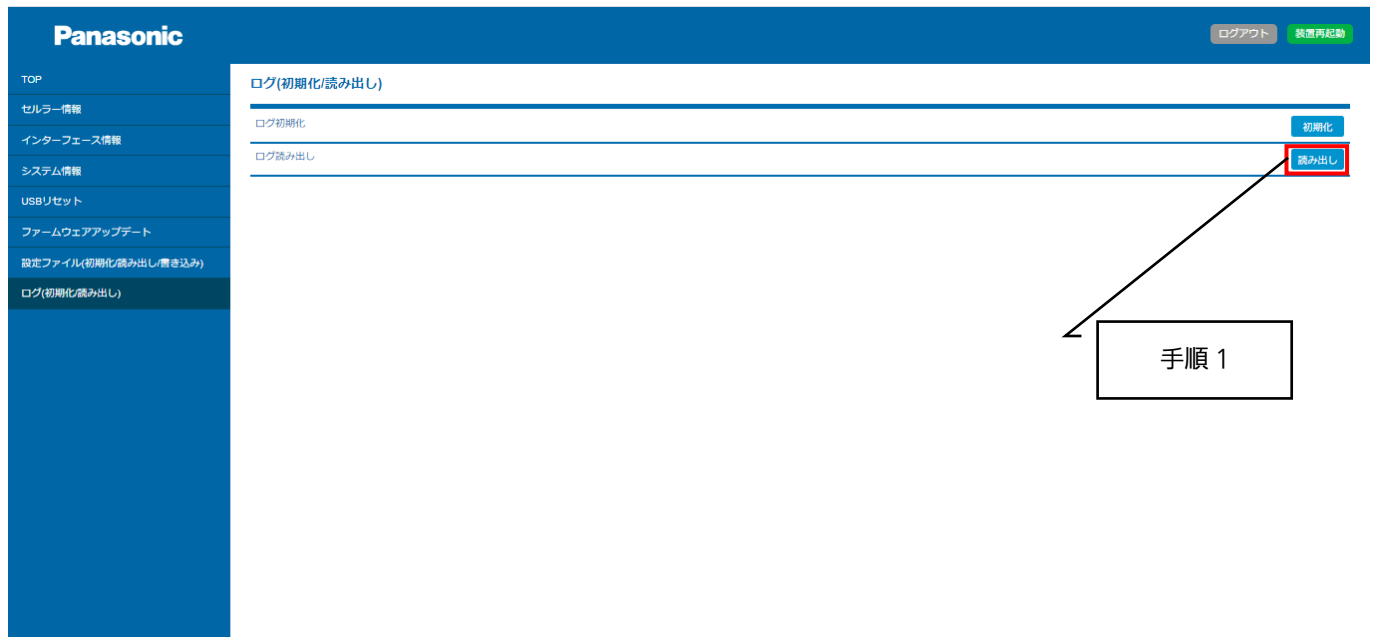


図 4.9-5 ログ読み出し（1）

手順2 ファイルの操作を選択するメッセージが表示されるので、[保存] または [名前を付けて保存] をクリックします。(メッセージの表示はブラウザの設定によります)ファイル名の初期値は、log.zip です。

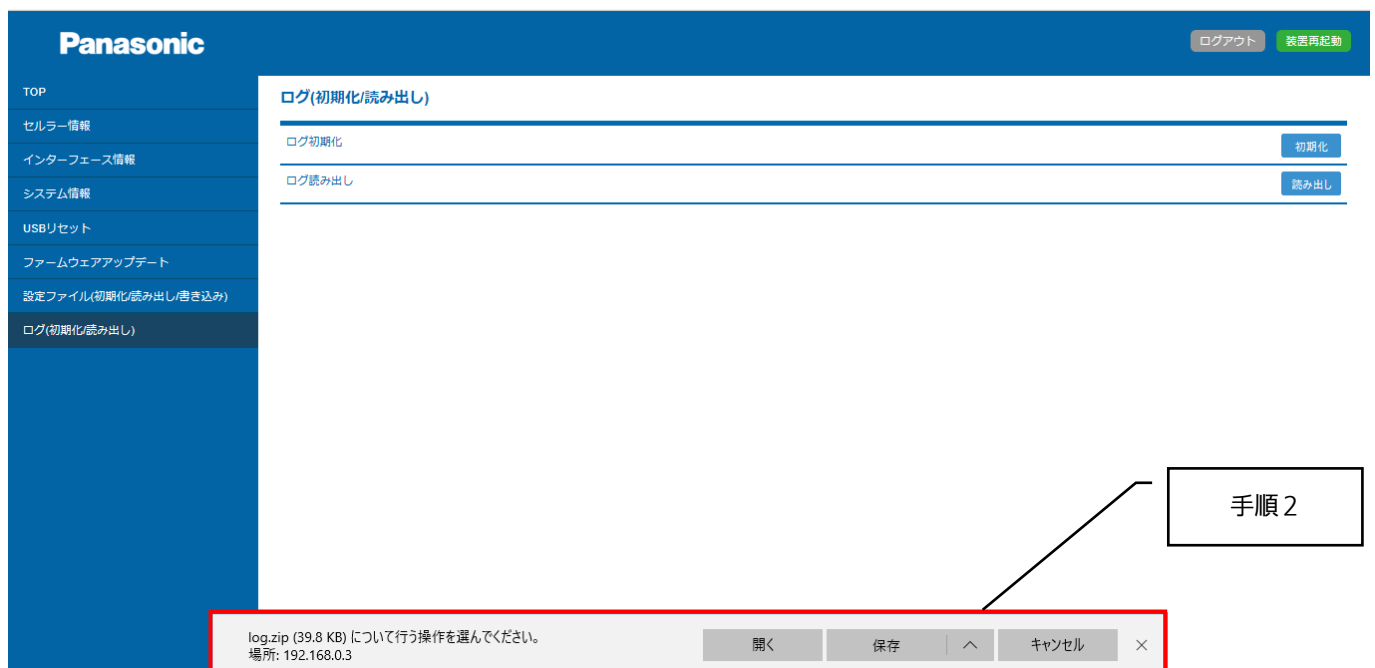


図 4.9-6 ログ読み出し（2）

手順3 「名前を付けて保存」をクリックした場合は、保存先とファイル名を設定する画面が表示されます。希望するディレクトリ・ファイル名を指定して、「保存」をクリックします。

読み出し処理が完了すると画面下部にメッセージが表示されますので、操作を選択してください。

The screenshot shows the Panasonic web interface. On the left is a blue sidebar with a menu. The main content area is titled 'ログ(初期化/読み出し)' (Log (Initialization/Loading)). It contains two rows: 'ログ初期化' (Log Initialization) with a '初期化' (Initialize) button, and 'ログ読み出し' (Log Loading) with a '読み出し' (Load) button. At the bottom of the page, a red-bordered box highlights a message: 'log.zip のダウンロードが完了しました。' (log.zip download completed). To the right of the message are four buttons: '開く' (Open), 'フォルダーを開く' (Open folder), 'ダウンロードの表示' (Show download), and a close button '×'. A label '手順3' (Step 3) in a box has an arrow pointing to the red-bordered message box.

Panasonic

ログアウト 装置再起動

TOP

セルラー情報

インターフェース情報

システム情報

USBリセット

ファームウェアアップデート

設定ファイル(初期化/読み出し/書き込み)

ログ(初期化/読み出し)

ログ(初期化/読み出し)

ログ初期化

初期化

ログ読み出し

読み出し

手順3

log.zip のダウンロードが完了しました。

開く

フォルダーを開く

ダウンロードの表示

×

図 4.9-7 ログ読み出し（3）

# 第5章 保守

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本装置の保守機能（設定ファイル管理、ファームウェアアップデート、ログ機能、装置再起動など）について、説明します。

## 5.1 設定ファイルの管理

---

本章では設定ファイルに関する CLI による操作について説明します。GUI の操作については「4.8 設定（初期化／読み出し／書き込み）画面」を参照してください。

CLI によるファイルの転送には、SFTP サーバが必要です。対象装置と同じネットワーク内に、SFTP サーバをご用意ください。

### 5.1.1 設定ファイルの読み出し

#### 操作手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 CLI のプロンプトが表示されたら、以下の書式に従って設定ファイル読み出しコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。

読み出しファイルのファイル名は、「profile\_backup.zip」など内容がわかるものとしてください。

```
CLI> sftp config_put user password 192.168.1.100 profile_backup.zip
```

↑ 設定ファイル読み出しコマンドを入力します。

上記「手順2」実行後、SFTP サーバのカレントディレクトリに設定したフォルダにファイルが格納されます。設定ファイルのパラメータと有効な設定値の一覧を表 5.1-1 に示します。

表 5.1-1 設定ファイルの有効な設定値

パラメータ	設定ファイル中のシンボル名	有効な設定値
RAT	WWAN_PREF	"lte"/"nr5g_lte"
APN 名	MANUAL_APN.name	62 文字以内の文字列
APN PDP タイプ	MANUAL_APN.PDN	"ipv4"/"ipv4v6"
APN ユーザー名	MANUAL_APN.username	127 文字以内の文字列
APN パスワード	MANUAL_APN.password	127 文字以内の文字列
APN 認証タイプ	MANUAL_APN.auth	"none"/"pap"/"chap"/"auto "
5G 状態 LED 点滅パターン 設定	FLASH_PERIOD	-1 以上 3600000 以下の整数値
	FLASH_CYCLE	1 以上 10000 以下の整数値
	LIGHT_OFF_PERIOD	1 以上 1000 以下の整数値
	LIGHT_ON_PERIOD	1 以上 1000 以下の整数値
	N4_LIGHT_OFF_COUNT N3_LIGHT_OFF_COUNT N2_LIGHT_OFF_COUNT N1_LIGHT_OFF_COUNT N0_LIGHT_OFF_COUNT	0 以上 4 以下の整数値
4G 用レベル表示しきい値	RSRP_LTE_4 RSRP_LTE_3 RSRP_LTE_2 RSRP_LTE_1	-1 以下の整数値
	RSRQ_LTE_4 RSRQ_LTE_3 RSRQ_LTE_2 RSRQ_LTE_1	-1 以下の整数値
5G 用レベル表示しきい値	RSRP_NR_4 RSRP_NR_3 RSRP_NR_2 RSRP_NR_1	-1 以下の整数値
	RSRQ_NR_4 RSRQ_NR_3 RSRQ_NR_2 RSRQ_NR_1	-1 以下の整数値
イーサネットワーク設定	LAN_DHCP_IP	IP アドレスの書式に従った文字列
	LAN_DHCP_SUBNET	サブネットマスクの書式に従った文字列
	LAN_DHCP_DEFAULT_GATEWAY	IP アドレスの書式に従った文字列
NAT タイプ設定	NAT_TYPE	"symmetric"/"cone"
ポートマッピング有効設定	ENABLE_PORT_FORWARDING	0/1

ポートマッピングプロトコル設定	PORT_FORWARDING_LIST.Rowid1 ~Rowid10>'Protocol':	"tcp"/"udp"/"tcpudp"/"icmp"/"none"
ポートマッピング IP アドレス	PORT_FORWARDING_LIST.Rowid1 ~Rowid10>'HostIP':	IP アドレスの書式に従った文字列
ポートマッピングポートナンバー	PORT_FORWARDING_LIST.Rowid1 ~Rowid10>'HostPort':	0 以上 65535 以下の整数値
DHCP サーバアクセス有効	ENABLE_LAN_DHCP	0/1
DHCP アドレスリース時間	LAN_DHCP_LEASE_TIME	60 以上 86400 以下の整数値
DHCP アドレス範囲	LAN_DHCP_IP_START	IP アドレスの書式に従った文字列
	LAN_DHCP_IP_END	IP アドレスの書式に従った文字列
リンクパススルー有効設定	ENABLE_LINK_PASSTHROUGH	0/1
リンクパススルー遅延時間	LINK_PASSTHROUGH_DELAY	0 以上 60 以下の整数値
SSH ポート番号	SSH_ACCESS_PORT	0 以上 65535 以下の整数値
TR-069 有効設定	TR069_enable	0/1
ACS URL	ACS_URL	127 文字以内の文字列
TR-069 定期通信設定	PeriodicInformEnable	0/1
TR-069 定期通信間隔	PeriodicInformInterval	1 以上 86400 以下の整数値
HTTPS ポート番号	HTTPS_ACCESS_PORT	0 以上 65535 以下の整数値
SFTP ポート番号	SFTP_CONNECT_PORT	0 以上 65535 以下の整数値
LAN 側ホスト名	LAN_HOST_NAME	32 文字以内の文字列



### 5.1.2 設定ファイルの書き込み

#### 操作手順

- 手順1 書き込みたい設定ファイルを SFTP サーバのカレントディレクトリに配置します。  
以下の例では、設定ファイル名を「profile\_restore.zip」としています。
- 手順2 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。  
※接続については「2.7 CLI コンソールの接続」を参照してください。  
※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。
- 手順3 CLI のプロンプトが表示されたら、以下の書式に従って設定ファイル書き込みコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。  
実行中、本装置が自動で再起動します。

```
CLI> sftp config_get user password 192.168.1.100 profile_restore.zip
```

↑ 設定ファイル書き込みコマンドを入力します。

- 手順4 実施結果が OK であることを確認します。

```
CLI> sftp config_get user password 192.168.1.100 profile_restore.zip
```

```
OK ← 正常に終了すると、OK が表示されます。
```

```
CLI>
```

### 5.1.3 設定初期化

#### 操作手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 CLI のプロンプトが表示されたら、設定ファイル初期化コマンドを入力/実行します。

```
CLI> initial config
```

↑ 設定ファイル初期化コマンドを入力します。

手順3 初期化を実行して良いかの確認ポップアップが表示されるので、“y” を入力して実行します。

```
CLI> initial config
```

```
“Are you sure?(y/n) : y
```

↑ “y” は「初期化させる」、「n」は「初期化させない」となります。

手順4 「手順3」実行後、本装置が自動で再起動するので、処理が完了するのを待ちます。

再起動後、パスワード設定は初期化されているので、管理ユーザー、一般ユーザーともパスワードの変更が再度、必要となります。

## 5.2 ファームウェアアップデート

本装置のファームウェアアップデートを行う方法として、CLI コンソールを使用する方法を説明します。

GUI による操作は、「4.7 ファームウェアアップデート画面」を参照してください。

CLI によるファームウェアの転送には、SFTP サーバが必要です。対象装置と同じネットワーク内に、SFTP サーバをご用意ください。

### 操作手順

- 手順 1 当社 HP からダウンロードしたファームウェアの zip ファイルを解凍して、SFTP サーバのカレントディレクトリに配置します。
- 手順 2 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。  
※接続については「2.7 CLI コンソールの接続」を参照してください。  
※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。
- 手順 3 CLI のプロンプトが表示されたら、以下の書式に従ってファームウェアアップデートコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。  
ファームウェアアップデート中は、状態 LED が燈点滅となります。

```
CLI> sftp fwup user password 192.168.1.100 v07.03.204820_37b3ec0_e.bin
```

↑ ファームウェアアップデートコマンドを入力します。

- 手順 4 ファームウェアアップデート後、本装置が再起動します。  
状態 LED が緑点灯になりましたら、起動が完了となります。

注意 本装置内のバージョンより古いバージョンのファームウェアへの更新はエラーとなり、実施できません。本装置内のバージョンより新しいバージョンのファイルをご用意ください。

現在のファームウェアのバージョンを確認するには、ソフトウェアバージョン確認コマンドを使います。

```
CLI> show status sw_version ← ファームウェアバージョン確認コマンドを入力/実行します。
```

```
v07.03.204820_37b3ec0
```

```
CLI>
```

上記の例では、ファームウェアバージョンは「v07.03.204820\_37b3ec0」です。

## 5.3 ログの管理

---

本装置では、本装置内に蓄積された syslog の読み出しや初期化を行うことが可能です。本章では CLI による操作について説明します。GUI 操作は「4.9 ログ（初期化/読み出し）画面」を参照してください。CLI によるログファイルの転送には、SFTP サーバが必要です。対象装置と同じネットワーク内に、SFTP サーバをご用意ください。

### 5.3.1 ログの読み出し

#### 操作手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 CLI のプロンプトが表示されたら、以下の書式に従ってログ読み出しコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。

```
CLI> sftp log user password 192.168.1.100 log.backup
```

↑ ログ読み出しコマンドを入力します。

上記「手順2」実施後、SFTP サーバのカレントディレクトリに設定したフォルダにファイルが格納されます。

### 5.3.2 ログの初期化

#### 操作手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 CLI のプロンプトが表示されたら、ログ初期化コマンドを入力/実行します。

```
CLI> initial log
```

↑ 初期化コマンドを入力します。

手順3 確認メッセージ表示後、“y”を入力して実行します。

```
CLI> initial log
```

```
“Are you sure?(y/n) : y
```

↑ ” y” は「初期化させる」、” n” は「初期化させない」となります。

## 5.4 証明書ファイルの管理

本章では別途ご購入の NMS(Network Management system)と SSL 通信を行うための CA 証明書のインポート/エクスポートの操作について説明します。本操作は CLI でのみサポートしており、GUI でのサポートはしていません。

CLI によるファイルの転送には、SFTP サーバが必要です。対象装置と同じネットワーク内に、SFTP サーバをご用意ください。

### 5.4.1 証明書ファイルのインポート

#### 操作手順

手順 1 インポートする証明書ファイルを SFTP サーバのカレントディレクトリに配置します。  
以下の例では、設定ファイル名を「ca.crt」としています。

手順 2 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。  
※接続については「2.7 CLI コンソールの接続」を参照してください。  
※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順 3 CLI のプロンプトが表示されたら、以下の書式に従って証明書ファイルインポートコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。

```
CLI> sftp certificate_get user password 192.168.1.100 ca.crt
```

↑ 証明書ファイル書き込みコマンドを入力します。

手順 4 実施結果が OK であることを確認します。

```
CLI> sftp certificate_get user password 192.168.1.100 ca.crt
```

OK ← 正常に終了すると、OK が表示されます。

```
CLI>
```

## 5.4.2 証明書ファイルのエクスポート

### 操作手順

手順1 本装置とコンソール用パソコンを接続して、管理ユーザーでログインします。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順2 CLI のプロンプトが表示されたら、以下の書式に従って証明書ファイルエクスポートコマンドを入力/実行します。書式の詳細はコマンドリファレンスを参照してください。

ファイル名は、「ca\_backup.crt」など内容がわかるものとしてください。

```
CLI> sftp certificate_put user password 192.168.1.100 ca_backup.crt
```

↑ 証明書ファイルエクスポートコマンドを入力します。

上記「手順2」実行後、SFTP サーバのカレントディレクトリに設定したフォルダにファイルが格納されます。

## 5.5 本装置の再起動

本装置の再起動を行います。再起動方法は 3 種類あります。

表 5.5-1 再起動の種類

再起動方法	必要な権限	リセット後の動作
リセットスイッチ（短押し 2 秒）	なし	リセット（ソフト再起動）
リセットスイッチ（長押し 10 秒）	なし	リセット（ハード強制再起動）
CLI コマンド実行	管理ユーザー	リセット（ソフト再起動）
GUI 画面操作（「4.2」参照）	管理ユーザー、一般ユーザー	リセット（ソフト再起動）

操作手順

### ◆リセットスイッチの短押し／長押し

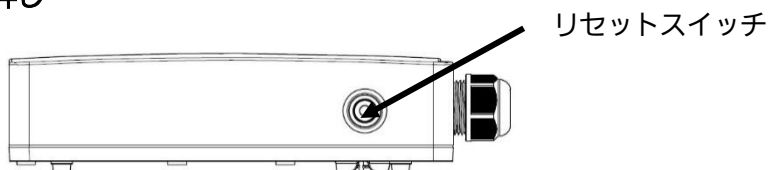


図 5.5-1 左側面図

### ◆CLI コマンド入力による再起動

コンソール接続が完了している前提で説明します。

※接続については「2.7 CLI コンソールの接続」を参照してください。

※ログインについては「2.8 CLI コンソールのログイン・ログアウト」を参照してください。

手順 1 CLI のコマンドプロンプトが表示されたら、本装置の再起動コマンドを入力／実行します。

```
CLI> reboot
```

↑ 再起動コマンドを入力します。

手順 2 確認メッセージ表示後、“y” を入力して実行します。

```
CLI> reboot
```

```
“Are you sure?(y/n) : y
```

↑ ” y ” は「再起動させる」、「n ” は「再起動させない」となります。

上記「手順 2」実施後、本装置が再起動します。



## 5.6 本装置の初期化

本装置が持つ各種情報の初期化を行います。初期化方法は3種類あります。

表 5.6-1 初期化の種類

初期化方法	初期化される情報
INIT スイッチ押下（長押し 5 秒）	設定データが初期化されます
CLI コマンド実行（「5.1.3」参照）	設定データが初期化されます
GUI 画面操作（「4.8」参照）	設定データが初期化されます

※初期化を行った場合、元の状態に戻せなくなりますので、バックアップを取得するなど十分注意して行ってください。

### 操作手順

#### ◆INIT スイッチでの設定初期化

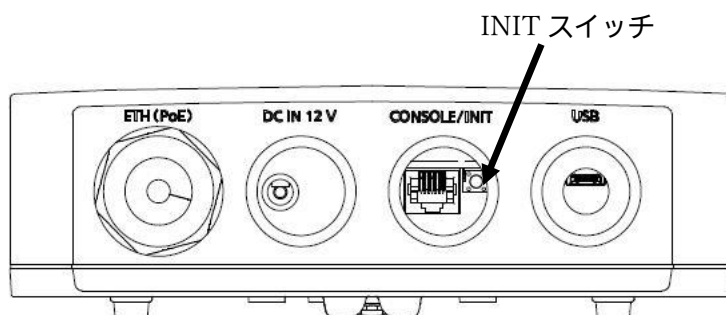


図 5.6-1 背面図

- 手順 1 INIT スイッチを押下し続けてください（長押し約 5 秒）  
（※静電気を除去してから作業してください）
- 手順 2 状態 LED の消灯を確認したら、INIT スイッチを離してください。本装置の起動が開始し、状態 LED が緑点滅(低速)を開始します。
- 手順 3 状態 LED が緑点灯(SIM 挿入時)あるいは緑点滅(高速)(SIM 未挿入時)になりましたら初期化された状態で起動が完了します。

## 5.7 設定初期値一覧

表 5.7-1 初期設定値一覧

パラメータ	初期値
RAT	4G/5G(EN-DC)
APN	APN : 空欄 APN 認証タイプ : none APN ユーザー名 : 空欄 APN パスワード : 空欄 APN PDP タイプ : ipv4
5G 状態 LED 点滅パターン設定	[period] : 600000、[cycle] : 2000、[light_off] : 125、 [light_on] : 125、[N4] : 0、[N3] : 0、[N2] : 1、[N1] : 1、 [N0] : 2
4G 用レベル表示しきい値	P_LTE_4:-113、P_LTE_3:-118、P_LTE_2:-123、P_LTE_1:- 128、Q_LTE_4:-12、Q_LTE_3:-14、Q_LTE_2:-17、 Q_LTE_1:-19
5G 用レベル表示しきい値	P_NR_4:-113、P_NR_3:-118、P_NR_2:-123、P_NR_1:- 128、Q_NR_4:-12、Q_NR_3:-14、Q_NR_2:-17、Q_NR_1:- 19
イーサネットワーク設定	IP アドレス:192.168.0.3 サブネットマスク:255.255.255.0 デフォルトゲートウェイ:空欄
NAT タイプ設定	Symmetric
ポートマッピング有効設定	オフ
ポートマッピングプロトコル設定	空欄
ポートマッピング IP アドレス	空欄
ポートマッピングポートナンバー	空欄
DHCP サーバアクセス有効	オン
DHCP アドレスリース時間	86400 秒 (24 時間)
DHCP アドレス範囲	192.168.0.10~192.168.0.254
リンクパススルー有効設定	オフ
リンクパススルー遅延時間	3 秒
SSH ポート番号	58729
HTTPS ポート番号	58730
TR-069 有効設定	オフ
ACS URL	空欄
ACS ユーザー名	空欄
ACS パスワード	空欄
TR-069 定期通信設定	オフ
TR-069 定期通信間隔	60 秒
SFTP ポート番号	58731
一般ユーザー名	normal
一般ユーザーパスワード	Normal1234
管理ユーザー名	admin
管理ユーザーパスワード	Admin1234

# 第6章 設置角度の調整

本章では本装置を設置する際の設置角度の調整方法を説明します。設置方法の詳細については取扱説明書(工事編)を参照してください。

## 手順 1 接続 RAT(Radio Access Technology)の確認

本体に SIM が正しく挿入され、本体設定を正しく行った状態で電源を投入すると本装置は自動的にセルラー網への接続を行います。セルラー網に接続したら接続 RAT を本体 LED あるいは GUI にて確認することができます。

表 6-1 接続 RAT の確認方法

4G 状態 LED	5G 状態 LED	GUI セルラー情報画面/在圏情報/RAT	接続 RAT
緑点灯	消灯	4G	4G 接続
緑点灯	白点灯	4G(5G area)	4G 接続(5G 接続可能エリア)
緑点灯	緑点灯	4G+5G(Sub6)	4G+5G(Sub6)で接続
緑点灯	青点灯	4G+5G(mmW)	4G+5G(ミリ波)で接続

接続 RAT が 4G あるいは 4G+5G(Sub6)の場合は対応アンテナが無指向のため設置角度の調整は不要です。接続 RAT が 4G+5G(ミリ波)の場合は 5G(ミリ波)用のアンテナに指向性があるため、受信強度が最大となるように設置角度を調整します。

## 手順 2 設置角度調整

GUI のセルラー情報画面/受信レベルの 5G 側のアイコンを確認し、レベルが最大となるよう左右および上下の角度を調整します。



図 6-1 5G 受信レベルアイコン

本体 LED でも受信レベルを確認することができます。電源投入から一定時間 5G 状態 LED が受信レベルに応じて点滅します。デフォルト設定では以下の点滅パターンとなっています。

表 6-2 5G 状態 LED 点滅パターン(デフォルト設定)

5G 受信レベル	点滅パターン(ミリ波接続時のみ)
レベル 4 (バー5 本)	常時点灯
レベル 3 (バー4 本)	常時点灯
レベル 2 (バー3 本)	2 秒周期で 1 回消灯(電源投入から 10 分間)
レベル 1 (バー2 本)	2 秒周期で 1 回消灯(電源投入から 10 分間)
レベル 0 (バー1 本)	2 秒周期で 2 回消灯(電源投入から 10 分間)

接続する通信事業者によっては 5G 接続を維持する時間が短い可能性があります。その場合はデータ通信を行うなどの方法で 5G 接続を維持することを確認しながら角度調整を行ってください。

# 第7章 こんなときには

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表 7-1 こんなときには

症状		点検	対処方法
電源 LED が点灯しない		Ethernet ケーブルが外れていませんか？	PoE インジェクタと本装置 ETH(PoE)ポートとの接続を確認してください。
		PoE インジェクタと電源コードが外れていませんか？	PoE インジェクタと電源コードを正しく接続してください。 また、IEEE802.3at(PoE+)に準拠した PoE インジェクタかを確認してください。
		AC アダプターがはずれていませんか？	AC アダプターへの給電、および AC アダプターと本装置の接続を確認してください。
状態 LED が赤点灯している		本体内部が熱くなっている可能性があります。	電源を切り、しばらくたってから電源を再投入してください。
状態 LED が緑点滅している		SIM カードが挿入されていません	SIM カードを挿入してください。
通信ができない	データの送受信ができない	SIM カードは挿入されていますか？	SIM カードを挿入してください。
		APN は設定されていますか？	APN を正しく設定してください。
		Ethernet ケーブルが外れていませんか？	Ethernet ケーブルを正しく接続してください。
		Ethernet ケーブルが断線していませんか？	Ethernet ケーブルの通電を確認するか、ケーブルを替えて接続してください。
		USB ケーブルが外れていませんか？(USB を使用している場合)	USB ケーブルを正しく接続してください。
		基地局からの受信信号レベルが低下していませんか？	障害物を取り除くか、本装置の設置場所を変えてください。
その他	コンソールからログインできない	パソコンと本装置を接続するケーブルが外れていませんか？	ケーブルを正しく接続してください。
		パソコンの設定、および通信ソフトの設定は正しいですか？	本書にしたがい、設定を行ってください。
		ユーザー名、パスワードは正しいですか？	正しいユーザー名、パスワードにて再度ログインを行ってください。

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If you have contributed but are missing here, please let us know!

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