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## TERMS AND CONDITIONS OF TECHNICAL SUPPORT SERVICES FOR FURUKAWA EQUIPMENT AND SOFTWARE

### **Presentation:**

These Terms and Conditions apply to the Technical Support Services provided by **Furukawa Electric LatAm S.A.**, a private legal entity, duly registered under CNPJ No. 51.775.690/0001-91, headquartered at Rua Hasdrubal Bellegard, No. 820, Cidade Industrial de Curitiba, in the municipality of Curitiba, State of Paraná, Brazil, as well as its branches and subsidiaries and describes the rights and obligations of the customer and Furukawa for full service of said services. T&C covers the equipment and software product lines marketed by Furukawa Electric LatAm S.A. and its distribution channels.

These T&C apply to Egypt, Ghana, Indonesia, Kenya, Maldives Island, Morocco, Nigeria, Qatar, Republic of South Africa, Saudi Arabia, Spain, Thailand, Turkey and United Arab Emirates territory.

### **Definitions:**

**T&C:** Terms and Conditions applicable to the technical support services described in this document.

**FURUKAWA:** FURUKAWA ELECTRIC LATAM S.A., its subsidiaries or affiliates.

**Furukawa products:** Products sold by **FURUKAWA**, directly or through its distribution channels.

**SSC:** Support & Service Center – structure composed of professionals, means and equipment for Furukawa customer support.

**Furukawa Support Portal:** located at <https://www.furukawalatam.com/en-us/technical-support> is part of the **SSC** and allows opening of tickets, consultation of frequently asked questions (FAQ), technical notes, manuals and firmware updates. Its availability is predominantly 24/7/365 except for periods of scheduled or rare shutdowns for maintenance or due to technical problems.

**Technical Support Mode:** types of technical support services provided or sold by **FURUKAWA** for its product lines.

**Support Requester:** professional directly responsible for opening the ticket and facilitating the support service, hired directly or at the service of the end customer so designated. It is the contact for the SSC support professional.

**Ticket:** Ticket with associated unique number and an issue reported by the Support Requester. The number is automatically generated by the ticket control system and should be used as a reference whenever there is customer interaction with the SSC. The ticket will contain the history of the service including communications, documents sent and others. The tickets will only be accepted and considered when carried out through the means and conditions described below.

**SLA:** Service Level Agreement set by **FURUKAWA**.

**TN:** Technical Note – technical document for detailing the problem or specific characteristic.

**Start-up:** First activation of Furukawa equipment or system, regardless of the rest of the network.

**Firmware:** Set of operating instructions programmed directly into the hardware of an electronic equipment.

**Firewall:** A network security device that monitors incoming and outgoing network traffic and decides to allow or block specific traffic according to a defined set of security rules.

**VoIP:** Voice over Internet Protocol, is a technology that allows voice transmission over IP.

**Serial Number:** Unique number that identifies the equipment.

**Trial:** evaluation, test.

**Try-and-buy:** sales mode where the customer tests the equipment or System for a determined time and opts for its purchase at the end, if it meets its requirements. Requires a unique and specific contract for each customer and proposal.

**On-site:** service and performance in the place where the equipment/system is installed. Additional service mode not covered by the T&C of support.

**DoS:** Denial-of-service attack is an attempt to cause an overload to occur on a common server or computer so that system resources are unavailable to its users.

**Release:** software/firmware version or edition.

**EOL (End of Life) – EOL:** deals with the end of life of a given product, whether it is hardware, service or software.

**EOFS (End of Full Support) – EOFS:** is the final date for support with problem corrections via a new software release, but until the EOSS the customer can still count on support for questions and help with the resolution of any problems.

**EOSS (End of Service & Support) – EOSS:** is the closing date of the product support cycle, but the documentation will continue to be available on Furukawa website.

#### **Technical Support Modes and services included:**

- Standard 8x5
  - Applicable to all product lines of equipment and software with current support cycle.
  - Remote service via telephone, remote access software or online meeting platform;
  - Term: limited to the life cycle of the product
  - SSC service regime: Business Hours (from 8:00 a.m. to 5:00 p.m.) from Monday to Friday, except national holidays;
  - Access to the Furukawa Support Portal;
  - The customer has a limit of 5 support tickets per month;
  - SLA (according to **ANNEX I**)
  
- Premium 24x7
  - Applicable exclusively to GPON solution equipment and Management and Monitoring Software with current support cycle.
  - Acquisition made via contract and commercial proposal.
  - Remote service via telephone, remote access software or online meeting platform;
  - Term: The term is informed at the time of activation of the service.
  - The customer has a limit of 20 support tickets per month distributed as follows:
    - 15 tickets during business hours (from 8:00 a.m. to 5:00 p.m. ) from Monday to Friday, except national holidays;
    - 5 tickets at other times (24x7 complement), in this case the service is applicable only to support problems in Furukawa equipment and Software classified as critical or major (according to ANNEX II), support for configuration, migration or equipment management questions are not covered.
    - Tickets that exceed the limit will require approval by the customer for later collection in accordance with the contract.
  - SLA (according to **ANNEX II**)

**Service Levels:**

All services are initiated in N1 and according to the SLA are scaled to N2 and N3 so that they meet the required times.

|           |  |
|-----------|--|
| <b>N1</b> | Support for questions and settings, verification of installation items, remote access to the customer's system for verification and updating of settings, profiles and others. Guidance for searching for documentation;   |
| <b>N2</b> | Evaluation of interventions of other systems and equipment in the operation of Furukawa equipment, search for anomalies in protocols and transmission packages, simulations in the laboratory to search for alternative solutions or error confirmation, localization of flaws in firmware and <i>bugs</i> , reporting and request for correction for development; |
| <b>N3</b> | Evaluation of failures in firmware and hardware, development of new corrective or alternative firmware, testing of new firmware.   |

**Requirements for ALL Support modes:**

1. The Support Requester must have technical capacity, have carried out the appropriate training offered by Furukawa for the platform to be supported and knowledge of the network and equipment that will be submitted to technical support. Untrained persons or those without necessary knowledge may prevent the solution of the problem and the better development of support services.
2. The Support Requester must have in hand invoices, contracts, knowledge of the serial number of the equipment and others proving the possession of the products, validity of the warranty, support and services that have been purchased and/or contracted.
3. The Support Requester must provide means of remote access to the equipment through the Internet and remote access or online meeting software, as well as authorizations, access facilities and unblocking of protection systems and Firewall that may impair the perfect access of the SSC professional.
4. The equipment must be in use in accordance with the environmental, electrical and other conditions required in its technical documentation and good installation practices. The topology and integration with other services must also be in accordance with original approval and design;
  - a. The use of Furukawa equipment with non-approved systems (VoIP, Video, etc.) may depend on development evaluations. Compatibility or solution time will not be guaranteed;
5. The Support Requester must provide topology information, connectivity, services in use, as well as any fact that may be associated with the problem in its network/equipment.
6. The Support Requester must maintain password-based access control policies, Firewall, good practices and others to prevent access to the equipment by malicious or unauthorized agents and be responsible for the same or any damages resulting from its loss or possible invasion by Hacker.
  - a. Furukawa disclaims responsibility in the event of offensive actions from the Internet such as DoS and its variations, disabling Firewall and others that prevent the operation of Furukawa equipment. At **FURUKAWA's** discretion, and if requested by the customer, a professional from SSC can be made available to provide support in restoring the network, as far as Furukawa equipment is concerned, for an additional charge;
  - b. The length of time and volume of attacks via the internet are unpredictable and for this reason the SLA does not apply in these occasions.
7. Furukawa will only provide the services if the applicant can prove that all the above requirements have been met.

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**Requirements for the 24x7 Premium Support mode:**

1. All requirements presented in the previous item;
2. Contract valid for Premium service 24x7;

**Conditions for provision of Technical Support:**

1. Technical Support will be offered according to the contracted mode as defined in this procedure and other pertinent documents, and SSC professionals will not be able to offer the Support Requester more services than foreseen in its mode/contract.
2. Technical Support is restricted to problems related to Furukawa products and systems. Once it is verified by FURUKAWA that the problem of malfunction arises from other connected equipment, misuse, incorrect installation, non-compliance with technical recommendations or applications and services that are not from Furukawa products and systems, the service must be terminated;
  - a. All activation of Technical Support, even if it is found to be due to a problem unrelated to Furukawa's products and systems, will be computed and subtracted from the maximum number of tickets according to the contracted support mode;
  - b. Furukawa Technical Support will not perform customer network operation functions such as profile swapping, subscriber addition and others that are not related to Furukawa equipment or system problems. Such network operations must be performed by the end customer's professionals or by a third party contracted by them. Tickets of this nature will be closed by Furukawa;
3. Each subject must be dealt with in a unique ticket. If another independent problem is observed or brought up during the solution of a ticket, another ticket must be opened and treated independently.
4. Problems arising from specification and design failures, incompatibility with topologies, systems and services where technical specifications, approvals or previous recommendations were not observed cannot be met by the SSC either. Furukawa will make its best effort by forwarding requests for changes, compatibility and others to the areas of application, products and development without commitment to comply with the SLA (when applicable);
5. Technical Support will not make any changes, configuration or any action on equipment from other manufacturers. When necessary, the evaluation of integration, compatibility and connectivity configurations between Furukawa equipment and another manufacturer will require the local or remote cooperation of a certified professional to act jointly with the SSC Furukawa professional, who may separately invoice said verification;
6. Technical Support Services do not include on-site support. Local services may be purchased separately for specific projects or facilities;
7. Technical Support may not be provided for equipment with malfunctions, altered, modified or even adapted in whole or in part;
8. Technical Support may not be provided for problems due to accident, improper transportation, negligence or misuse, alteration, modification or attempt to improve the product, improper installation environment, use of supplies or materials that do not meet the specifications, use of the product for purposes other than those for which the product was designed, for any problems caused by the negligence, abuse or misapplication of the end user;
9. Technical Support may not be provided for third-party devices (hardware, software, cabling infrastructure) or problems associated with such elements, as well as those that can be physically installed as SFPs and others;
10. When the 24x7 Premium Support is contracted, the customer will receive by e-mail the contract code, which will be used to contact via toll-free application, a copy of the contract, and the link to the latest version of this document.

11. Customers who are participating in Furukawa's programs for the development of new products, tests, *trials*, approvals, PoC (proofs of concept), try-and-buy, prototypes and the like will be subject to specific terms and conditions for their case, this document not being applicable.
12. In case of need to replace equipment, the Technical Support will indicate the procedure and the responsibility for execution will be the customer's, unless they separately acquire an on-site service (see item 6).
13. The Standard 8x5 and Premium 24x7 support modes do not provide for the supply of spare parts.
14. Equipment and systems that are in the process of installation, start-up, commissioning, expansion, addition of services and others outside of normal operation may not be subjected to SLA due to the unpredictability of external interfering factors inherent to these occasions.
15. Furukawa will only provide the services if the applicant can prove that all the above requirements have been met.

### **Conditions for closing the ticket**

1. The ticket is terminated upon receipt of written authorization from the requester.  
If Furukawa does not receive this confirmation within 30 days after request via the ticket management system by the SSC team, the ticket will be closed automatically.
2. If during the support the customer goes more than 30 days without interaction with the ticket, it will be closed automatically.
3. After closing a ticket it is not possible to open it, it will be necessary to open a new request by the customer.

### **Finished life cycle equipment**

1. Furukawa makes available on its website (<https://marketing.furukawatam.com/eol/en/>) the Life Cycle policy of its equipment and software. Along with the policy is a list of already discontinued products and the duration of support milestones.
  - a. EOFS: indicates how long the customer will still have access to field identified bug fixes via a new SW version. Improvements and new implementations are not carried out after the product's end-of-life announcement.
  - b. EOSS: indicates the date on which the product support is completely over. As of this date, support for this product is no longer available and the terms and conditions presented in this document no longer apply.
  - c. Between the end of EOFS and the end of EOSS, versions applicable to the product in question will no longer be released.

### **Jurisdiction and applicable law**

1. To resolve any disagreements arising from these Terms and Conditions of Technical Support, the parties hereby elect the Forum of Curitiba, State of Paraná, Brazil and the Brazilian Legislation to govern it.

**ANNEX I: SLA (SERVICE-LEVEL AGREEMENT) OF THE STANDARD 8X5 SERVICE:**

| SLA                | Response          | Restore           | Solution  |
|--------------------|-------------------|-------------------|---|
| <b>Critical</b>    | 8 working hours   | 16h working hours | If necessary, emergency Firmware release or next planned Firmware release |
| <b>Major</b>       | 12 working hours  | 24 working hours  | If necessary, next planned Firmware release                               |
| <b>Minor</b>       | 16h working hours | 32 working hours  | If necessary, planned Firmware release                                    |
| <b>Informative</b> | 24 working hours  | -                 | -   |

NOTE: Release of new firmware will only occur for products with their life cycle still active or that have already had their EOL announced but the full support period (EOFS) is still in force during which no improvements and new features are implemented, but corrections will be made.

| Severity of Ticket |   | Action          |   |
|--------------------|---|-----------------|---|
| <b>Critical</b>    | Unavailability, total mass shutdown of the network and/or equipment for high priority applications, great impact on services. Requires immediate corrective action. | <b>Response</b> | Time resulting from the notification of the problem to the Furukawa SSC and first analysis, determination of severity and referral to the appropriate personnel for restoration/solution. |
| <b>Major</b>       | Partial unavailability or intermittency of the network and/or equipment for important applications, impact on services. It usually has a workaround.                | <b>Restore</b>  | Time until service is restored by workaround or temporary solution.   |
| <b>Minor</b>       | Network and/or equipment intermittence in low priority applications, low impact on services. They are generally tolerable during use of the services.               | <b>Solution</b> | Time until permanent resolution and closure of the case.  |
| <b>Informative</b> | Requests for documents, references and various information, without impact on services.   |                 |   |

1. The goal of meeting the SLA times is 90%.
2. The severity rating of the occurrence will be assigned by Furukawa support after the customer describes the situation.

**ANNEX II: SLA (SERVICE-LEVEL AGREEMENT) OF PREMIUM SERVICE 24X7:**

| SLA                | Response          | Restoration      | Solution  |
|--------------------|-------------------|------------------|---|
| <b>Critical</b>    | 1 hour 30 minutes | 8 hours          | If necessary, emergency Firmware release or next planned Firmware release |
| <b>Major</b>       | 6 hours           | 16 hours         | If necessary, next planned Firmware release                               |
| <b>Minor</b>       | 9 hours           | 24 working hours | If necessary, planned Firmware release                                    |
| <b>Informative</b> | 12 hours          | -                | -   |

NOTE: Release of new firmware will only occur for products with their life cycle still active or that have already had their EOL announced but the full support period (EOFS) is still in force during which no improvements and new features are implemented, but corrections will be made.

| Severity of Ticket |   | Action          |  |
|--------------------|---|-----------------|--|
| <b>Critical</b>    | Unavailability, total or partial shutdown of the network and/or equipment for high priority applications, great impact on services. Requires immediate corrective action. | <b>Response</b> | Time resulting from the notification of the problem to the Furukawa SSC and first diagnosis, determination of severity and referral to the appropriate personnel for resolution. |
| <b>Major</b>       | Partial unavailability or intermittency of the network and/or equipment for important applications, impact on services. It usually has a workaround.                      | <b>Restore</b>  | Time until service restoration by alternative or temporary workaround solution.  |
| <b>Minor</b>       | Network and/or equipment intermittence in low priority applications, low impact on services. They are generally tolerable during use of the services.                     | <b>Solution</b> | Time until permanent resolution and closure of the case.   |
| <b>Informative</b> | Requests for documents, references and various information, without impact on services.   |                 |  |

1. The goal of meeting the SLA times is 90%.
2. The severity rating of the occurrence will be assigned by Furukawa support after the customer describes the situation.

**ANNEX III: MEANS OF CONTACT WITH TECHNICAL SUPPORT - SSC**

Website: [www.furukawatam.com](http://www.furukawatam.com)