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Global Service & Support
Technical Assistance Center Guide

harmonicinc.com

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Introduction

Dear Valued Customer,

Welcome to Harmonic's growing customer base. In addition to our hardware, software and professional services products, Harmonic offers a variety of Service Level Agreement (SLA) plans. If you have purchased a Harmonic SLA, this guide will help you understand what to expect from Harmonic's technical assistance team:

- **How to contact the Technical Assistance Center (TAC) 24x7**
- **The response your call will receive**
- **How call priorities are established**
- **The case flow process**
- **How your issue will be resolved**
- **How to check the status of outstanding cases**
- **How to escalate a case**
- **How to obtain onsite support**
- **How to renew your Service Level Agreement**

From your initial call to the resolution of your issue, this guide will explain everything you need to know. We encourage you to share it with key Harmonic product support people within your company. Please let us know if you need additional copies or have additional questions.

Harmonic Global Service & Support Team

Overview of the Harmonic Technical Assistance Center (TAC)

What is the TAC?

- The Harmonic TAC is the consolidated single point of contact for all customer support questions and issues. The TAC is geographically dispersed with staff located at key strategic locations worldwide, including Harmonic facilities in United States, England, France, Spain, Israel, India and Singapore.

- While the TAC is geographically dispersed, it operates as a virtually co-located team using both Virtual PBX and One Care Portal system that provides worldwide coverage and a common and interconnected set of service tools and database systems. The TAC operates 24 x 7 and is staffed by Harmonic Technical Support Engineers (TSEs) who provide multi-level technical support, case management, and problem resolution.

- Acting as the focal point for all communication and case escalations, the TAC collaborates with both the mission-critical Harmonic account teams, and key customer contacts. This results in quick resolution of customer technical issues.

- When needed, the cases are escalated to Tier 2 engineers for further troubleshooting and potential product-level issue resolution.

What is the TAC case flow?

- The Harmonic TAC case flow process includes four stages:

  - **Stage 1:** Case Processing Activities
  - **Stage 2:** Technical Assistance Case Activities (Tier 1 & 2)
  - **Stage 3:** Support Escalation Management
  - **Stage 4:** Engineering Resolution
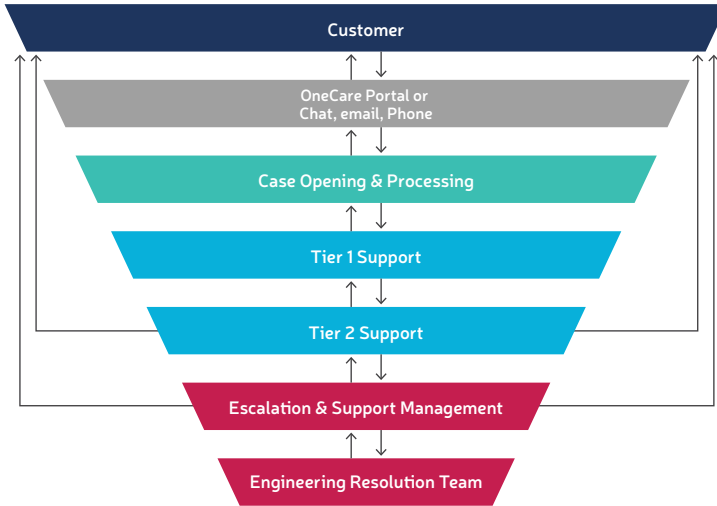
Case Flow Process

TAC Regional Offices

The TAC employs a Follow-The-Sun support model to provide technical support anytime, anywhere, through a single case management and telephony system. Regardless of location or time of day, we will work on your calls or e-mails in one of our global support centers. The Follow-the-Sun model greatly benefits our customers by providing continuous problem resolution and seamless escalation of issues around the clock.

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Region	Telephone Technical Support	E-mail
Americas	+1 888 673 4896 (+1 888 MPEG TWO) or +1 408 490 6477	support@harmonicinc.com
EMEA	+44 1252 555 450	emeasupport@harmonicinc.com
India	+91 120 4983199	apacsupport@harmonicinc.com
Mainland China		chinasupport@harmonicinc.com
Japan	+81 3 5614 0524	japansupport@harmonicinc.com
Asia Pacific - Other Territories	+852 3184 0045 or +65 6542 0050	apacsupport@harmonicinc.com

Support website: support.harmonicinc.com

Service Level Agreements

A variety of Service Level Agreement (SLA) Plans are available
· Please contact Harmonic's Sales or Service Contract representatives for details.

Renewing Service Maintenance Agreements
· Harmonic provides proactive customer notification of service plan expiration
and support renewal. You may also call the TAC and ask for the Service
Operations representative, or call your Harmonic Sales Account Manager to
begin the renewal process. We encourage you to renew your service
agreements before they expire, to avoid interruption of support coverage.

Requesting Assistance

Stage 1: Case Opening Activities

How can I request assistance?
You already have access to OneCare Portal (OneCare Portal is granted to any customer that purchases a video SLA since early 2021) the fastest way to request assistance is to log into OneCare Portal and open a new case. Opening a new case, through OneCare Portal consists of:

1. Entering the serial number of the product
2. Providing a detailed description of the problem as well as its severity.

Once done, please click on "Start Case" button. Your case is now opened, and you can see it in your list of opened cases through OneCare Portal. Your problem in now documented in our Case Management System and a unique case number is assigned to your issue for tracking purposes.

If you do not have access to OneCare Portal, please contact support for assistance through chat/email/Phone. When contacting support other than OneCare Portal, Harmonic support will need below information to validate the SLA :

- Account Name, site and contact information with Call Back Number
- Harmonic product name , serial number & firmware version
- Detailed description of the problem
- Severity of the issue

For your call request, a Customer Support Advocate (CSA) will answer your call and ask you to describe your problem, which will help us prioritize your request and provide you with the best response and resolution. After validation of information and SLA entitlement, CSA will create manual ticket and provide you a CASE number which then will be handed over to the Technical Support Engineer who is best suited to handle your issue. Response time will be based on your service level agreement and severity of the issue. The TSE may require remote VPN connection for the system having the problem.

What happens to my case at Stage 1?

Your problem in now documented in our Case Management System and a unique case number is assigned to your issue for tracking purposes. The severity level determines the path your case will follow to resolution. Our TSE will begin isolating and troubleshooting the problem. You may be asked to provide additional information and documentation, such as logs and diagnostic data.

Who works on my problem?

- The TSE who initially speaks with you will help determine what the issue is and manage it to resolution. Typically, this engineer will be your primary contact for your case. If you have a 24x7 support agreement, you have the option to call or email Harmonic Support at any time and to get or provide an update on the case. If necessary, your issue will also be reviewed and worked on by a Senior TSE.

What tools are used to resolve my problem?

- Your problem is tracked in a case management system which includes a full text knowledgebase. Full details of your case can be found via the OneCare portal. If security at your sites permits it, we can offer a network connection utilizing a VPN technology to further isolate the problem. Our support labs include typical industry computer systems, operating systems, and network platforms, in addition to a full complement of Harmonic products. Our engineers will use a variety of debugging and troubleshooting tools and techniques to isolate and resolve your issue.

What can I expect from the Support Team?

- In most cases, following initial problem determination the TSE will:

  - Create a Plan of Action (POA).

  - Provide instruction and reference the documentation, if applicable.

  - Determine if the problem requires a Service Release, new product, or upgrade.

  - Collect logs, diagnostics, and user environment information necessary to isolate, reproduce, and resolve the problem.

  - Recreate the problem as necessary.

- Request a remote VPN connection for diagnosis. This is a very important tool for Harmonic to troubleshoot a system. A secure remote VPN connection enables the TSE to connect to your systems and diagnose a problem in a matter of minutes.

- Analyze use cases that are pertinent to your problem. Determine if the problem is with a Harmonic product, or another software and/or hardware vendor.

- Determine if the problem requires a Service Release, new product or upgrade. A Field Issue (FI) report may be opened with Harmonic Engineering to help resolve the problem.

- If a Harmonic part has failed, our Logistics team will send a replacement part through our RMA process.

RMA process

If a failed unit has been identified, an RMA ticket number will be generated, with the support case associated with the problem. We will require the product serial number & model/Part Number (if available), firmware version, the failure description, your shipping address and your site contact information.

Once this information has been obtained, we will generate an RMA ticket. RMA Method will be either Advance Exchange, Part Exchange or Repair- Return based on the model and warranty / SLA of product serial number.

- For advance exchange RMAs, our Operations team will ship the unit to your location. The turnaround time will be based on your service level agreement / warranty (See service levels for delivery times). Once you have replaced the failed unit with the replacement unit, you are required to return the unit within 30 days.

- For part exchange RMAs, the part will be shipped to your location. The turnaround time will be based on your service level agreement / warranty (See service levels for delivery times). Once you have replaced the faulty part with the replacement part, you are required to return the unit within 30 days.

- For repair RMAs, you will be required to first ship your faulty unit back to Harmonic provided address for repair. Once your unit(s) are received, our Operations team will repair the unit(s) and get them shipped back to you within 30 to 45 days.

Severity levels

- Severity levels define the type of a failure of a system or software application that is not functioning as designed.

How are severity levels defined?

- Using the following definitions, you are encouraged to determine and communicate the severity level of your problem to the TAC. If, after calling our Support Center, you find it necessary to change levels, please call the Center again.

SEVERITY ONE	
Critical	The product(s) or any part thereof is inoperative, or performance of the product is so degraded that normal operations are prevented almost entirely; instability in the operation of one or more channels is causing intermittent on-air disturbances, and the outage could not be solved by switching to redundancy resources. Without limiting the generality of the foregoing, examples of Severity Level One include the cessation of operation of one or more channels resulting in any of the following on-air disturbances:

- unintentional black video or silence to air
- unintentional video and/or audio distortion
- unintentional video not synchronized to house reference
- unintentional viewer-noticeable lip-sync problems
- access to critical data is unavailable as a result of issues in the product(s) causing an impact to normal operations

SEVERITY TWO	
High Impact	Performance of the product is so degraded that substantial disruption to normal business operations is occurring, or the problem is threatening to cause a critical system failure. Without limiting the generality of the foregoing, examples of a Severity Level Two issues include the operation of one or more channels on redundancy equipment, or all redundancy resources being exhausted, or data access and transfer times are so high that normal business operations are prevented.

SEVERITY THREE

Minor Impact

The product or any part thereof is experiencing errors or problems that have no impact on normal operations. Without limiting the generality of the foregoing, an example of a Severity Level Three issue is the Product being affected by minor problems such as a faulty redundant power supply in the backup video server while the server is still actively running using the main power supply.

SEVERITY FOUR

Customer Inquiries

Minor problems, conditions, or documentation errors which are easily avoided or circumvented by the customer. Requests for new features defined as new functionality in existing product are also classified as Severity Level Four.

Note: *Problems are separated into several severity levels depending upon the availability of the system and the overall impact to business performance. If there is ever a uncertainty about the severity of a given situation, you will make the final determination.*

What response times can I expect?

- Response time is determined based on your SLA agreement and the severity of your issue.

- When contacting the TAC, you have the option to leave a voice message. Should you choose this option, please clearly state your name, phone number, company, case severity and a brief description of your issue or problem. You can expect a return phone call from the next available CSA with a case number. A qualified TSE will return your call shortly.

What If I have a Production System Down/Black on Air/On-air disturbance?

- When calling, please state that you have a "Production System Down / Black on Air / On Air Disturbance." You will either receive immediate attention or an immediate returned call from the next available TSE. **Please never rely on email alone for any 'system down' or critical on-air disturbance issues.**

  – Please call the TAC in these situations.

Stage 2: Evaluating & Resolving the Problem

What happens to my case at Stage 2?

- If your problem is determined in Stage 1 to require additional resources, or the escalation threshold has elapsed, your case will be reviewed at Stage 2 by a technical escalation point. This escalation engineer and TSE will jointly develop a plan to troubleshoot the problem. The TSE will continue to manage your case and provide you with a single point of contact for any updates. If the problem is still not resolved after exhausting all remote troubleshooting, the Product Specialist may request that a Field Service Engineer (FSE) be sent on-site to help diagnose and resolve the problem.

Stage 3: Escalation of an Open Case

How can I escalate my problem?
- During the resolution process, contact the TAC if you want to check on the status of your outstanding case, or if you would like to escalate your concerns. The TSE can escalate your case to the next level. Should you feel your case has not been given the correct priority/escalation, you can contact one of the following TAC Managers:

Senior Manager, Americas TAC

David Jacobs	Office: +1 503 372 7341 david.jacobs@harmonicinc.com

Manager, APAC TAC

Junaid Saiyad	Office: +91 85274 46375 junaid.saiyad@harmonicinc.com

Senior Manager, EMEA TAC

Tony Koc	Office: +34 965023205 tony.koc@harmonicinc.com

Director, Global Appliance TAC

Gurpal Kaher	Office: +65 6671 1467 gurpal.kaher@harmonicinc.com

Vice President, SaaS Delivery and Global Technical Support

Andrew O'Dell	Office: +44 1252 555 470 andrew.odell@harmonicinc.com

How will my escalated issue be managed?
- The Harmonic Global Services Team reviews cases on a daily and weekly basis.

Stage 4: Resolution Support Team

How is Engineering engaged if required?

- If at any time engineering resources are required to solve a problem, the TSE will engage the appropriate Development Engineer to participate in the resolution of the problem. If a defect is identified, a fix may be generated as a hotfix, or included in the next Service Release (SR). For urgent issues, Harmonic engineering organization is available on-call 24 x 7. Harmonic Engineering works closely with Support management to assess, prioritize, and bring to closure escalated customer problems. Prioritization of cases escalated to Harmonic Engineering resources is as follows:

Hot	Used for Severity One and Severity Two cases, when it is of the utmost importance that the problem be resolved immediately. Generally only used for customers who are in production and whose system is down or severely impaired. Implies that solving this task should be prioritized over all other tasks.
Warm	This priority is used for cases in which the issue prevents the customer from performing a task that is very important to their business process or impacts the progress of their implementation project. Customer has access to all data, yet an analysis of a diagnostic or other advanced development tools are required to identify the reason of the problem.
Cold	This priority is used for cases where the issue prevents the customer from performing an important but noncritical task. An example might be a request to have a diagnostic read for a non-urgent issue or question on how to resolve a difficult issue.

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Regional Field Service and Escalation

- In addition to our Worldwide Technical Assistance Center, Harmonic's regional Service Directors manage a global team of FSEs currently serving customers in six continents and 110 countries. These field service teams augment the TAC and provide on-site support when and where required, helping to investigate, troubleshoot and resolve technical issues.

Harmonic maintains regional field service centers for the Americas, APAC and EMEA regions, each with a dedicated team of engineers.

EMEA Video Services and Customer Success

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Glossary of Key Terms and Definitions

ACD
Automated Call Distribution System, which enables the Harmonic Technical Assistance Center to respond to and route calls to the appropriate Technical Support Engineer to work on product issues or questions.

Case Flow Process
Indicates the process of a case from initial contact through the different stages to case resolution.

Case Number – xxxxxxx
Support call tracking number assigned to a support call for reporting and status information.

CSA
Customer Support Advocate, responsible for logging customer issues, generating RMAs and managing escalation.

Customer Support Contacts
The person(s) selected by the customer to contact the Harmonic Technical Assistance Center. You may designate selected individuals, depending on the level of their support contract, and can change the contact names at any time by providing written notice to the TAC. Customer support contacts need to be trained and knowledgeable on Harmonic technologies and industry standard protocols.

Distribution and Delivery (D&D)
Refers to legacy Harmonic products (including Scopus).

Field Issue – FI-xxx
Engineering escalation tracking number assigned to a support case for reporting and status information.

FSE
Field Service Engineer, responsible for solving technical issues at a customer site.

Hotfix Release
Uncontrolled release of an emergency bug fix for a specific customer problem that resolves a defect in a product.

Major Release
Addition of a function or major feature to firmware, designated sequentially by Harmonic in the leading number position. Major releases do not include new products for which Harmonic charges a separate fee, upgrades to such new products, or releases with substantial new functionality.

Minor Release
Addition of a minor function or feature to firmware, or any change made by Harmonic to licensed software which improves its performance, including all patches and bug fixes made to the programs since the last previous release designated sequentially by Harmonic.

OneCare Portal
OneCare Portal is the web interface for the customer to open and track cases, access new release notes, software releases and product documentation and more. It is an essential tool to get any support on the video products that are covered by a SLA and under warranty.

Production and Playout (P&P)
Refers to legacy Omneon and Rhozet products.

Resolution or Solution
The point at which the problem is considered fixed. In the case of a product malfunction (defect), a resolution/solution could be a future maintenance release in which the best efforts have been used to resolve the problem so that it conforms to product specifications. A permanent solution not involving a product malfunction (defect) is a solution in which the customer agrees the problem has been resolved.

Service Release
The addition of all emergency bug fixes made to the firmware since the previous maintenance release.

SLA
Service Level Agreement

TSE
Technical Support Engineer, responsible for solving issues in the support center.

Workaround
A temporary or functional solution to a problem.

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Technical Assistance Center Guide

Harmonic Offices

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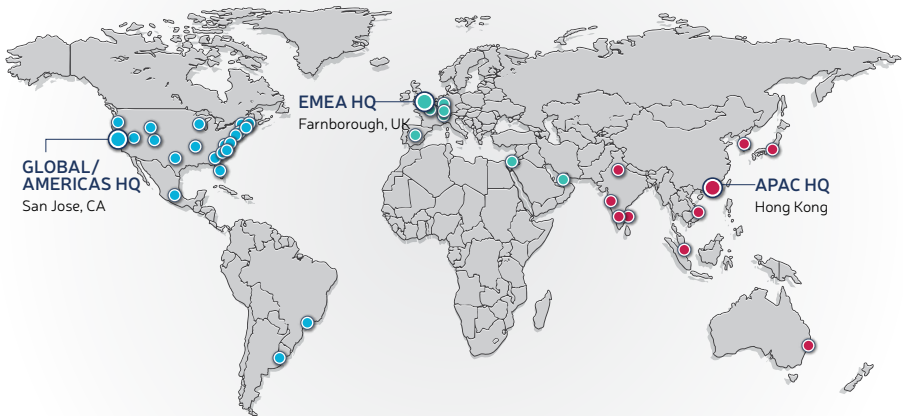+1 408 542 2500 outside the U.S.

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AMERICAS		EMEA	APAC
San Jose, CA	Florida	**UK (Farnborough)**	**Hong Kong**
Oregon	North Carolina	France (Paris & Cesson-Sévigné)	Singapore
Nevada	New Jersey	Germany (Weisbaden)	Vietnam
New York	Massachusetts	Israel (Caesarea, Rosh Ha'ayin)	Australia (Sydney)
Wisconsin	Missouri	Italy (Milan)	South Korea (Seoul)
Georgia	Wyoming	Netherlands (Amsterdam)	Japan (Tokyo)
Maryland	Virginia	Spain (Madrid)	India (Mumbai & Delhi)
New Hampshire	South Carolina	Switzerland (Fribourg)	
Rhode Island	Argentina (Buenos Aires)	UAE (Dubai)	
Colorado	Mexico (Mexico City)		
Texas	Brazil (Sao Paulo)		