Poly G7500 Review

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Enjoy the review.

Intro

First off, a big thank you to Andy, Richard and Neil at Poly for the loan of the G7500. They are in short supply and I appreciate the amount of time you allowed me to evaluate the unit. Next time Guys, how about supplying the power cable and batteries? Invoice is in the post…

BIG CAVEAT - The unit tested was running DEV firmware. A lot of the issues and limitations I encountered are highly likely to be addressed in the final release of the firmware.

At the time of testing this was one of only two units available in the UK, so we were incredibly lucky to get hold of this so early on.

I hope to be able to revisit this evaluation with access to a refreshed unit running the latest firmware (hint hint).

Summary

It's quite interesting being able to review a physical unit rather than yet another cloud-based service. SaaS video seems to be all the rage these days, but there are some things that only a real codec can do properly

In Poly's defence of the G7500, there are things that only hardware-based systems can do, for example, the G7500 includes a feature called

- NoiseBlock and Acoustic Fencing that minimize audio distractions such as background noise and side conversations in the room that distract VC meetings.
- Easy content sharing
- Greater network and security control

With the cloud services in mind, Poly integrated the G7500 with support for any cloud-based video platform or ecosystem such as Zoom, Cisco Webex, GoToMeeting, (Microsoft Teams and Skype for Business through Poly's RealConnect Service).

Poly's latest unit is probably their best to date. Perhaps not as ground-breaking as when the Group Series were launched 7 years ago, but a big step forward from what those units had to offer. The entire user interface has been simplified and is much quicker to navigate around for an end user. Although there is no 4K video right now, 4K content sharing works like a dream on supported devices – more of that later.

The lack of native Skype or MS Teams support may be an issue to some but given the number of cloud-based interop services out there it's not the big problem it could have been. Personally, I like the 'back to basics' type approach – it removes some of the licensing headache, exposing user directories in shared rooms and so on.

The promise and delivery of IP based peripherals is very exciting – starting with the microphone. There are some limitations, but it's a great start.

From the perspective of a techy, the engineering pages are finally logically laid out – options and settings are much, much easier to find. The web interface is well laid out and responsive.

Alas, the sleek aluminium housing has gone – for the main unit and remote control. More annoying, the USB rechargeable battery pack from the remote has been replaced with 2 x generic batteries. That was such a nice feature and a real step back as far as I'm concerned but understandable as it is now a lot harder to globally ship lithium batteries thanks to exploding Samsung phones and Boeing Dreamliners. And now Apple MacBooks as well!

Overall, very impressed with the unit – even though it looks as if they borrowed the designer from the Tandberg Edge series or the Sony Playstation 2.

Supplied Release Notes

I think it would be prudent to share the current release notes right up front, as these could have a major impact on any potential deployment.

Feature Differences with RealPresence Group Series

The following Poly RealPresence Group Series features and products are unavailable with your G7500 system:

- Legacy Poly RealPresence Touch not supported– ***I am sure additional control options will come in the future***
- No current Poly Trio integration – ***this is something Poly need to get integrated as it worked well***
- Skype for Business registration Note: Microsoft calling features and interoperability require a Cloud Video interop service (CVI) like Poly RealConnect service which is included free of charge with the G7500
- Dynamic provisioning with RealPresence Resource Manager
- Centralized monitoring with PDMS-E or RealPresence Resource Manager
- Hosting conference calls on the system (internal MCU)
- UC APL certification
- USB and Bluetooth headsets
- Recording meetings with Poly RealPresence Media Suite
- 720p resolution (G7500 systems support only 4K and 1080p resolutions) – ***time to upgrade that aging monitor!*** **Interestingly, 720P calls are still supported, and I heard a rumour that HD Ready screens (720p) are still supported.**
- Sharing content with the Poly People+Content IP application (use the Poly Content App instead)
- Sharing Content with RealPresence Desktop for Windows or Mac You can't share content to a system using the Poly RealPresence Desktop for Windows or Mac application. ***I guess this will come as Poly release a future update to RealPresence Desktop***
- USB Keyboards You can't use a USB keyboard with your system. ***I was able to use a wireless air mouse and Logitech wireless keyboard without issue….?***

So, some surprises in the list – some of which should have had a higher profile. As mentioned before, some of these may be addressed in later firmware updates.

Poly – any chance of some updates/visibility of a roadmap on these?

The biggest surprise is no Skype for Business mode anymore. And no mention of support for Teams natively. It's back to SIP/H323 for the time being. There are rumours that this may change in the very near future.

Trio integration needs to be added, I would assume this will come in a future software release as it's combination that works surprisingly well and well promoted by Poly. A shame this isn't currently supported, especially with the limit on what microphones are supported right now.

Now to the unboxing

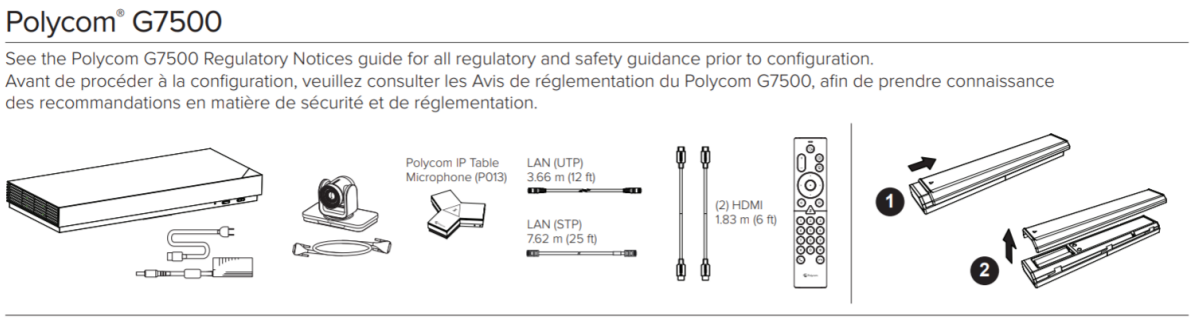
As mentioned above, I was supplied with engineering sample running DEV firmware, so the final shipping box and content may differ from what I received.

I was supplied with a G7500 and an Eagle Eye 4x zoom camera and IP microphone.

I know this can be a ritual for some people, but believe me, with nothing more than brown cardboard and a few sheets of paper, this unboxing process isn't going to rock anyone's boat. Boring Brown Boxes.

Upon opening the box revealed a box of cables, a box for the camera and underneath was the codex and remote in a foam tray.

As ever, the cable boxes has a good selection of cables including HDCI camera, 2 x network, 1 x HDMI, power and so on. Remote control looks somewhat different to the earlier Group Series unit – more on that later. And a power supply.



As mentioned above, at the bottom of the box was the actual codec. Now, I had seen one of these before under NDA, but for anyone ordering one of these and unboxing for the first time, you may be in for a bit of a shock.

It's plastic.

And it looks a lot like a Tandberg Edge 95, complete with fins on the side. Or a Playstation 2.

Almost retro. Almost.

Long gone is the lovely extruded aluminium casing. But then, let's be honest – most of the time these boxes sit behind a screen, in a rack or a credenza – not on show for all to admire. Though admiring this black plastic box would be a stretch for most people.

Having said all of that, it is the guts of the box we are really interested in, and there is a lot to like in that respect. More on that in a bit.

No rack mount kit is included but I understand one will be available shortly. There are also several mounting holes underneath the unit for other Poly configurations.

With the Group Series 300/500, it was possible to use Velcro tape or pad to secure the codec to the back of the screen as they were compact units. Perhaps not recommended, but it was done. People also used straps across the middle to secure it to the wall. Those options may not be possible with the G7500 as it is slightly larger (though not as heavy as a GS500), so perhaps look for a bracket that attaches to the screen mount – of which there are plenty out there.

So how much bigger is it? Well, rather than just give you the dimensions, here's a shot of…

Group Series 500 (Top)
G7500 (Middle)
Group Series 700 (Bottom)

A good few thousand pounds worth of CODEC's!

So not too much bigger than a GS500.

And for sake of reference, let's look from the back.

My oh my, look at all those lovely ports on the G7500. More than the GS500, but not quite as many as the GS700.

On a quick side note … All three of these codecs gave the same problem in my humble opinion – no USB port on the front for ease of content sharing. It could be that most people may never use this feature or can overcome the rear location of the ports with an extension cable. But why not supply one given the port location? Just annoys me! It's a case of 'Hey, have this great feature, but you'll have to spend more to make it useful'.

In fact, content sharing isn't supported over USB right now.

Nice to see a Kensington lock connector on the back on the left-hand side, though it does seem to be a bit close to the audio connectors. We'll test that shortly.

Of greatest interest is the inclusion of 4 network points on the right, next to the power connector. One is separated and clearly designated the main ethernet port (Gig supported), the other 3 are for peripherals. For those that are not aware, Poly has finally made a start with the transition from proprietary connections to RJ45 and IP based connectivity. This has started with the humble microphone, which also has an RJ45 connection.

At this stage I don't think the mic gets its own IP or anything that advanced, I certainly didn't get any warnings of new devices when I connected it to the codec, but time will tell. It does then beg the question of how it is communicating with the codec, and we will try and dig deeper into that. For now, though, it's nice being able to use standard cabling for when your floor box cover chops off your mic cable. Really? That's never happened to you? Lucky people.

Having said that it can use standard cabling, I haven't tested the maximum length of this. However, I tested the mic using one of those add-on power/LAN port devices that clamp to a desk. I did have issues with this and a POE device, so I expected trouble.

But no, it worked! Impressed.

I’m not sure what the other mic options are at this stage, so further reading required.

In time, other network peripherals will be added. It would be nice to see the roadmap for this, to see if protocols such as Dante will be added for audio, and perhaps even RTMP, VISCA and HDBaseT. Poly, take note.

The thought of being able to buy third-party cameras is interesting; that level of flexibility could really get more people interested in Poly kit.

We’ll test the network points later to see if security features such as being able to disable some/all of the ports are present, as well as VLAN tagging etc.

And on the security side, I’m sure any network team is going to want to know how the mic works, protocols used and so on before they allow it on any production network.

Continuing our journey from the right-hand side of the device we have two HDMI outputs for screens (4K60). Native 4K screen resolution is supported.

Next to the outputs you have one HDMI input (4K30), plus a HDCI port for a camera. A HDCI cable was included with the camera, along with an HDMI cable, so good to go straight out of the box.

Note, HDCP protected content – such as BluRay – is not supported as an input source.

Moving along again we now have a USB-C port and three USB3 ports. We have been advised that the USB-C port is disabled in the current firmware but will try and find out what the plans are. We'll also test the USB ports to see what they support – though, again, in later firmware the new USB Cube cameras may well be supported.

Towards the left end we a weird looking serial port (as per the GS500) for control purposes and 3.5mm audio in and out. And of course, that Kensington lock port.

We did test the Kensington PC & peripheral lock as it comes with the small adaptors that fit into the hole and are then rotated, presenting a hole for the cable to go through. These worked well.

In terms of what is missing from the GS500, the VGA input has gone. So long. Farewell. Good night. And that proprietary mic connector. Hoorah. In terms of extra – higher resolution support on HDMI, one extra USB and 4 network points. Not a bad trade for that VGA connector. Time to get those old laptop users upgraded. The whole content sharing side of things has been addressed big-time. More to follow.

In summary, a nice step up from the GS500 in terms of connectivity.

Connecting things

Everything is neatly labelled. As mentioned before, all cables are included in the box to get you up and running.

The camera connection needs a firm touch at each end, but aside from that no issues. How do I know it needs a firm touch? Well, the first time I connected it the camera powered on

and did its merry camera dance thing that they do, but it gave me no video. On one setup screen it was showing the type of camera connected, but on the diags it had a red light next to it. Having checked the connections, it was all systems go. We'll come on to the other screens later.

It would have been great to have been able to test the Sound Control Technologies RC4-E4P camera extension module at this stage, but I didn't have one to hand. As the G7500 shipped with an Eagle Eye IV, I don't see any issues with compatibility.

Would have been nice for some way to secure the cables in place. We all know what happens to kit in a room if our beloved users can get to it – they start playing and unplugging things. A cover at the back that could be locked down in some way.

Alternatively, how about a docking station to connect to? This docking station has all the connectors and the codec just slides into that. Nice. But I'm just dreaming… Look at the back of a Lacie 2Big USB 3 drive; they have all the ports and a nice cover that goes over. Poly – take note.

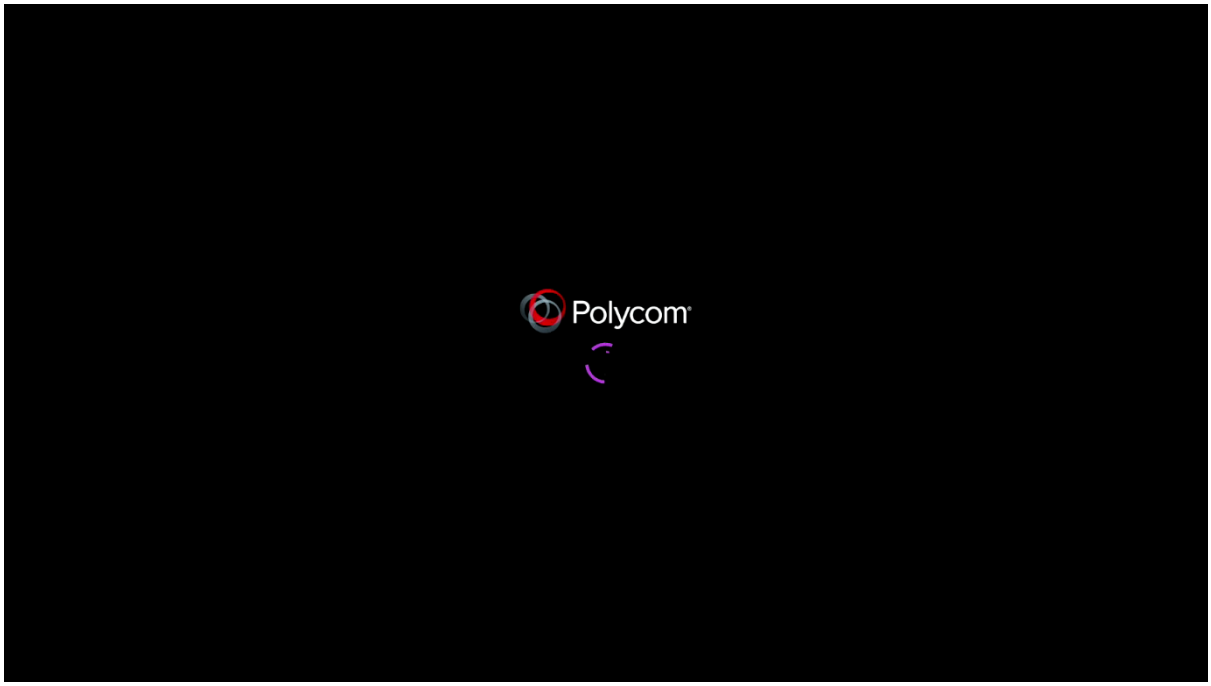
Initial power up

There is a tiny power switch on the front of the device. Nice touch. Also, a button with the Bluetooth symbol and a tiny reset hole. That's it for the front, aside from the lovely LED at an angle of the top of the case. With everything hooked up we plug in the power.

Note - the power switch wasn't working on this unit. Connecting the power started up the unit.

I'd like to say the unit whirrs into action, but it doesn't sound like there are any fans inside. Which makes me think how is that plastic going to cope as any kind of heatsink compared to the GS500. Time will tell.

Get a flashing white light on the mic pod, and then on the codec. Nothing on the screen. The camera dance happens. After several seconds, we see a Poly logo on the screen and an animated circle underneath.

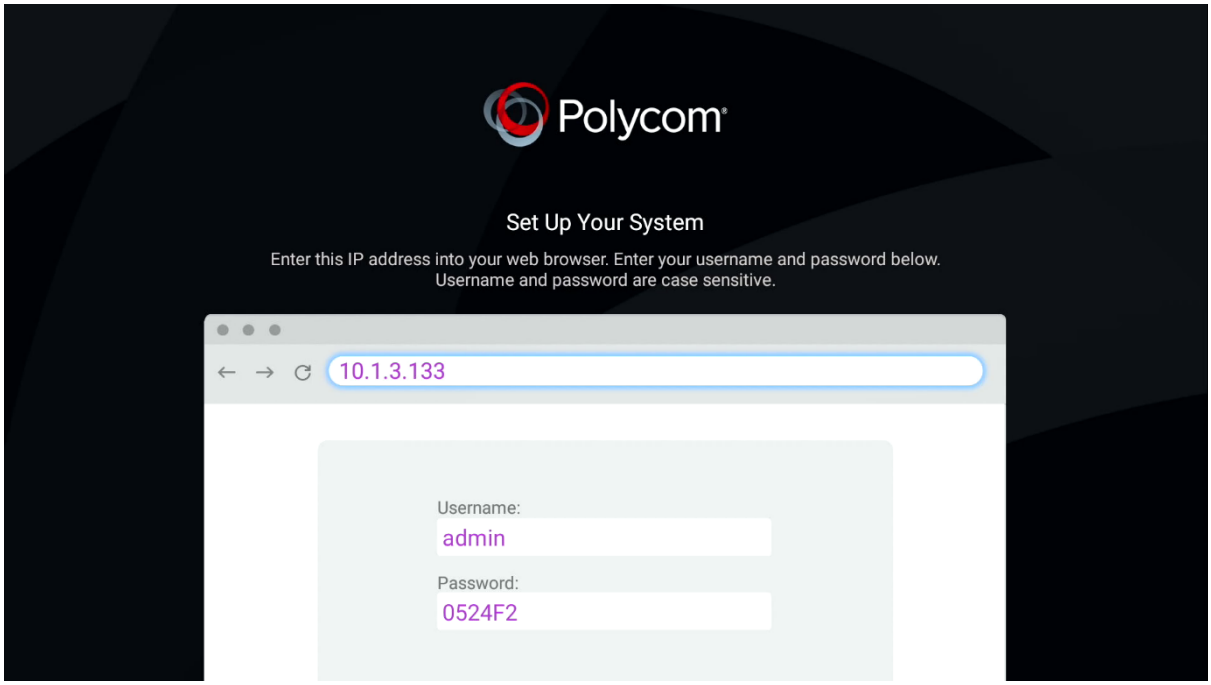


This is the initial setup time, so may take a bit longer than normal.

It was 3.45 before we saw anything on the screen

4 mins before the system screen came up

And 6 mins 25 before the web setup screen appeared



Follow the onscreen instructions and connect using your browser. Note, at this stage multiple logins are supported… And the login name and password ARE case sensitive.

As you can see from the previous screen, the unit picked up an IP address – via DHCP. As I didn't disable DHCP on my network, I'm not able to show what happens to the unit without a DHCP server – but it could be an issue. Additional tasks may be required to get this running on such a network.

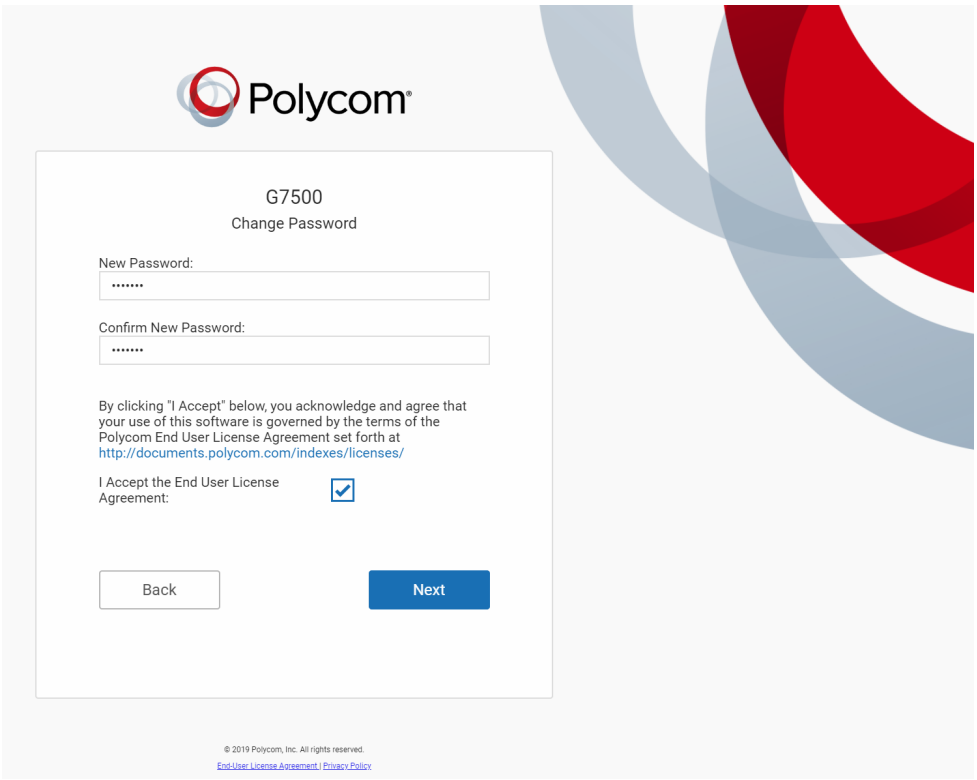
For me, the next most important step was to get the remote connected. Now, I've already mentioned my disappointment that the case of the unit is plastic. Well, so is the remote. Not only that, gone is the lovely USB rechargeable pack, replaced with a couple of generic batteries. Ouch, Poly. That hurts.

The new remote is Bluetooth and needs to be paired. Just follow the onscreen instructions from the correct menu – and remember to press the mute button on the remote for 7 seconds

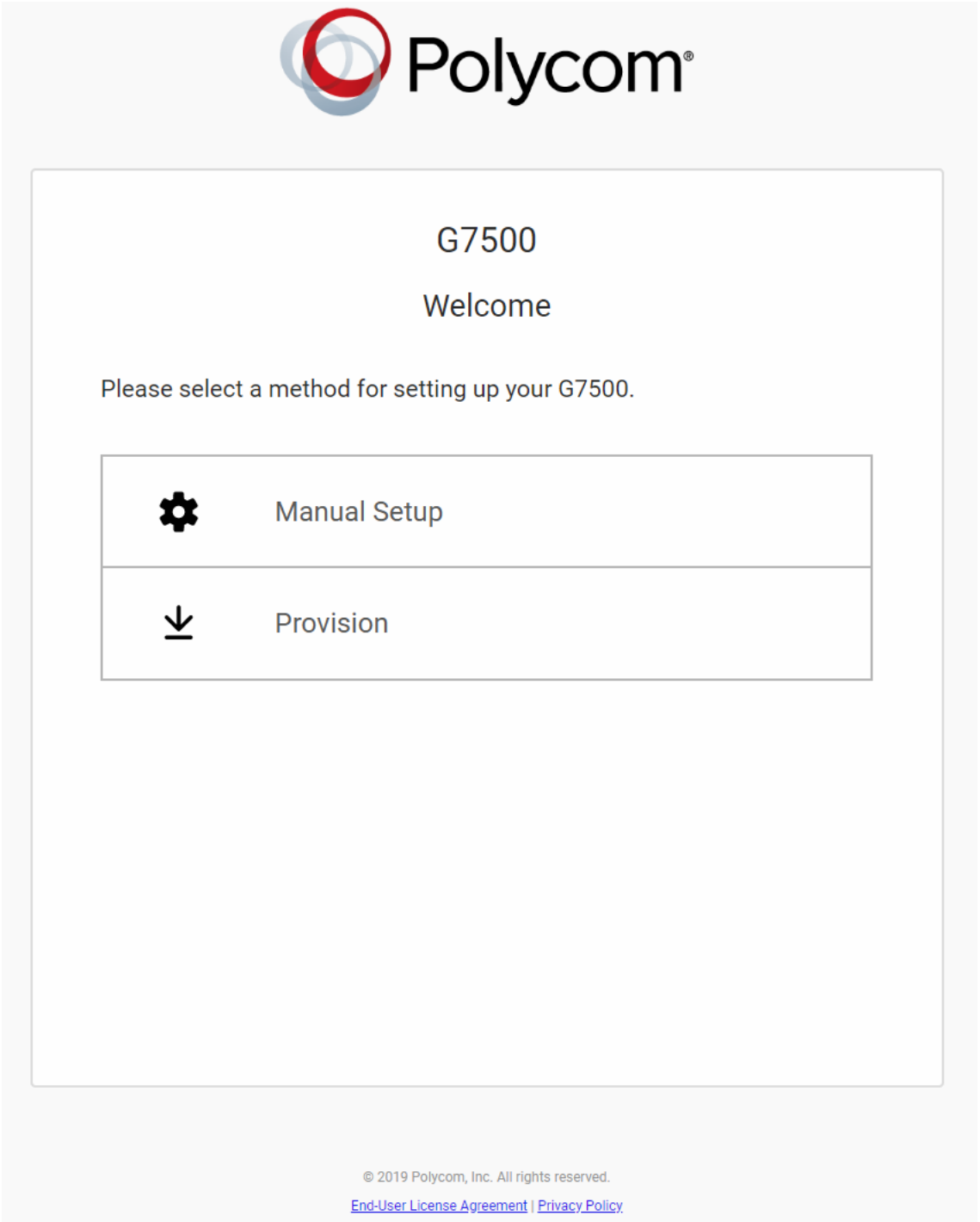
Interestingly, there is a 'speak' button on the remote, much like an Amazon fire or Sky Q Remote. After trying to hold a conversation with the unit for a few minutes it looks like it's not implemented in the DEV version of the firmware loaded on this unit. Could be a very useful feature when it works. I'm sure this will be a security concern for some – but as it's 'push to talk' rather than continuously listening, perhaps less so.

Web Interface

The web interface is a big step-up up from earlier versions. Much easier to navigate through and options are now in logical locations.

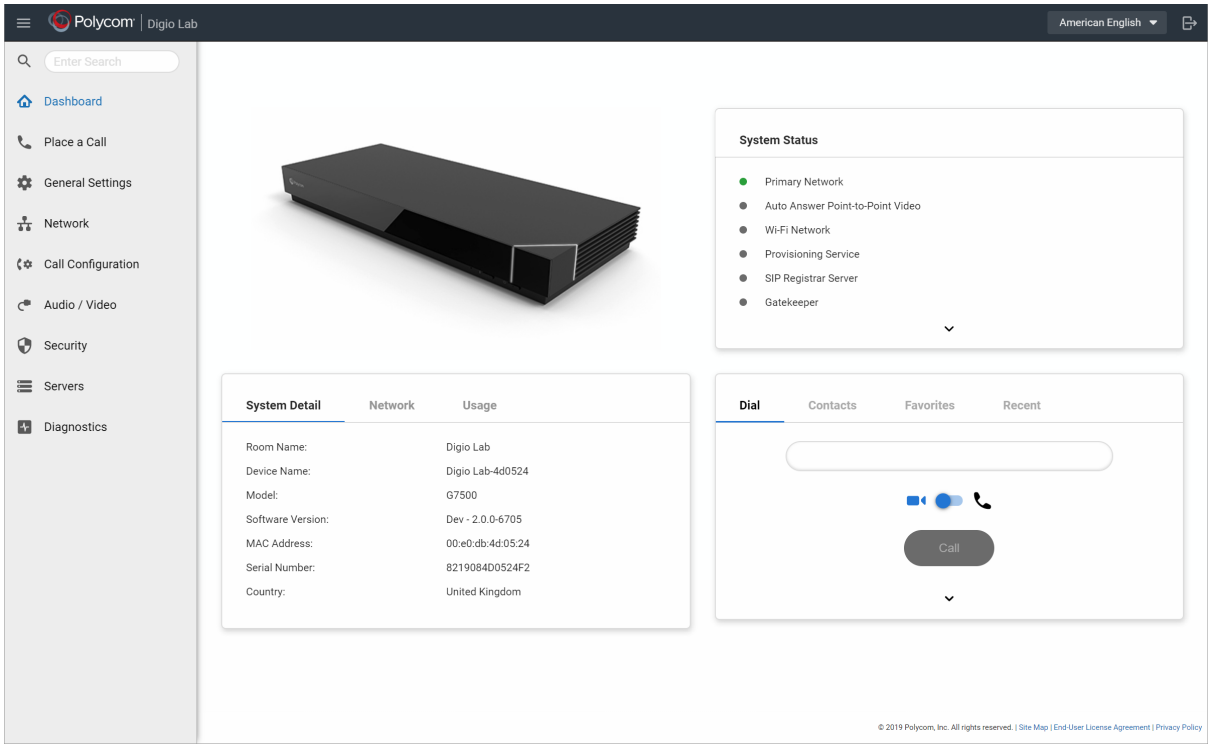


A minor bug – when you need to scroll down to see some of the options and then selecting another item, you may find that the screen has remained scrolled down for the new option. Bit of a pain, but nothing major.



I selected manual setup.

There are a few other screens to go through and then to hit the main device screen.



One glaring omission in my humble opinion – and something that is present on most video phones – is the ability to disable or apply a level of security to the network ports. Currently there are no options for this – no VLAN tagging or anything similar; no disable option. Any security team are going to have a field day on this, and it could even result in devices not being accepted – too much of a security risk.

Now, it could be that the absence of this is perhaps only Poly devices can be plugged in. Having connected a laptop over ethernet it didn't pick up an IP address, so maybe there is intelligence built in. This needs to be confirmed.

Once initial setup was completed, I decided to do a restart.

Power up time for normal use is much shorter than the initial setup. Once powered on, the mic is flashing after about 30 seconds.

Initial Poly logo on screen after 45 seconds (this could be a bit of an annoyance if you didn't know it took this long)

Home screen after 1 min 42 seconds.

And the mic has settled down and the error icon has gone by 2 mins 20 seconds.
Not the fastest in the world, but I'm sure this will improve over time as code gets optimised.

Power consumption runs at about 15w in standby and 30ish when active.

About the home screen, it's now very easy to upload a new image as the backdrop, at varying resolutions up to 4k. very nice.

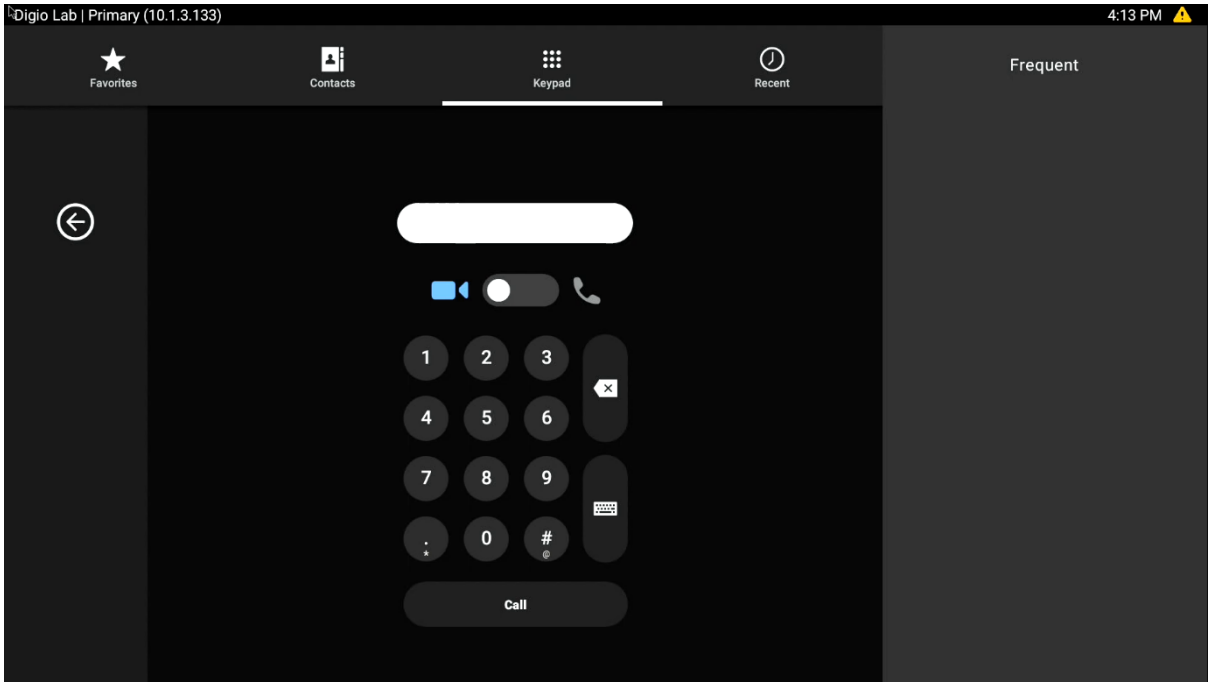
In addition, some tweaks were required to my display to ensure the whole image fitted on the screen – but I was using an inline capture device to get images of the display.

After setup, I had to have a play with the microphone with the RJ45 connection. And, it IS really an IP device! My monitoring software detected it when I connected it to a port on one of my switches. The mic sat there flashing a nice shade of blue…and 30 mins later still the same. The screen was showing a yellow warning symbol to indicate there was a problem. It would appear that you can only connect the mic to the internal hub at this time. This could be a major deciding factor for some people, but remember, I am running DEV firmware.

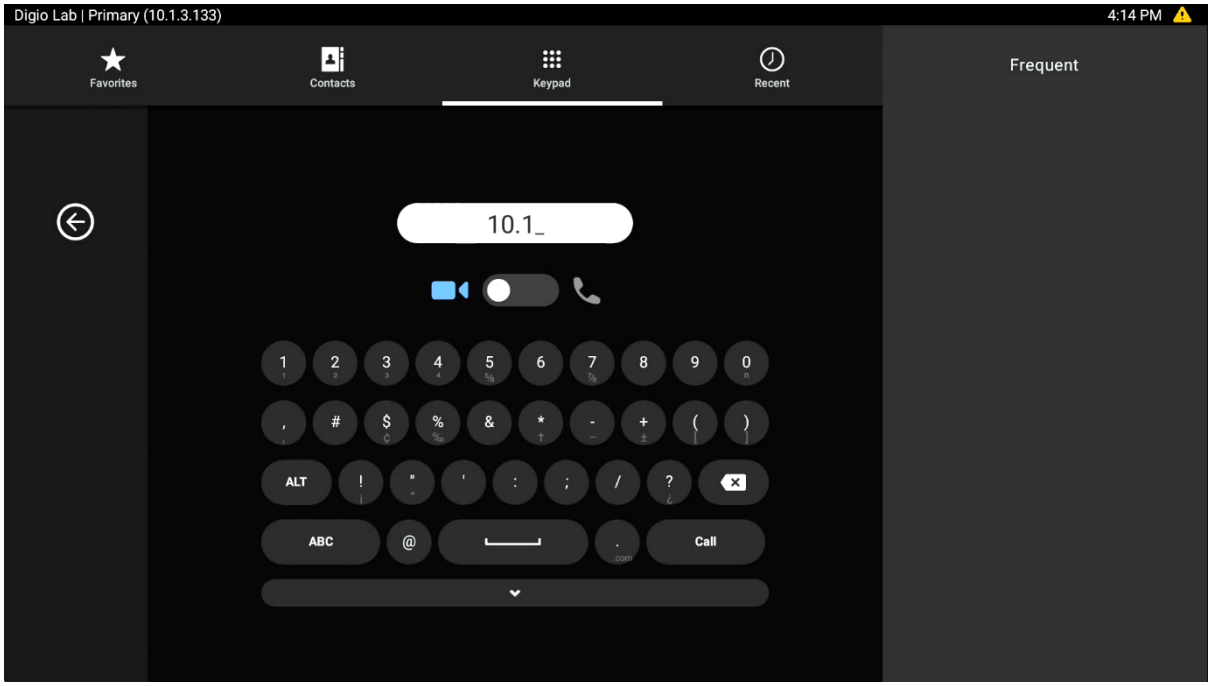
I also wanted to test the USB ports, so I plugged in an air mouse with a built-in keyboard. The codec sounded a little ding, and then the device was working! Amazing. It also worked fine with a Logitech wireless keyboard/trackpad using the Unify receiver.

Also wanted to see if content could be shared over USB but can't see any way of accessing it right now. Perhaps a wasted opportunity? Or viewed as a potential security risk by enterprises?

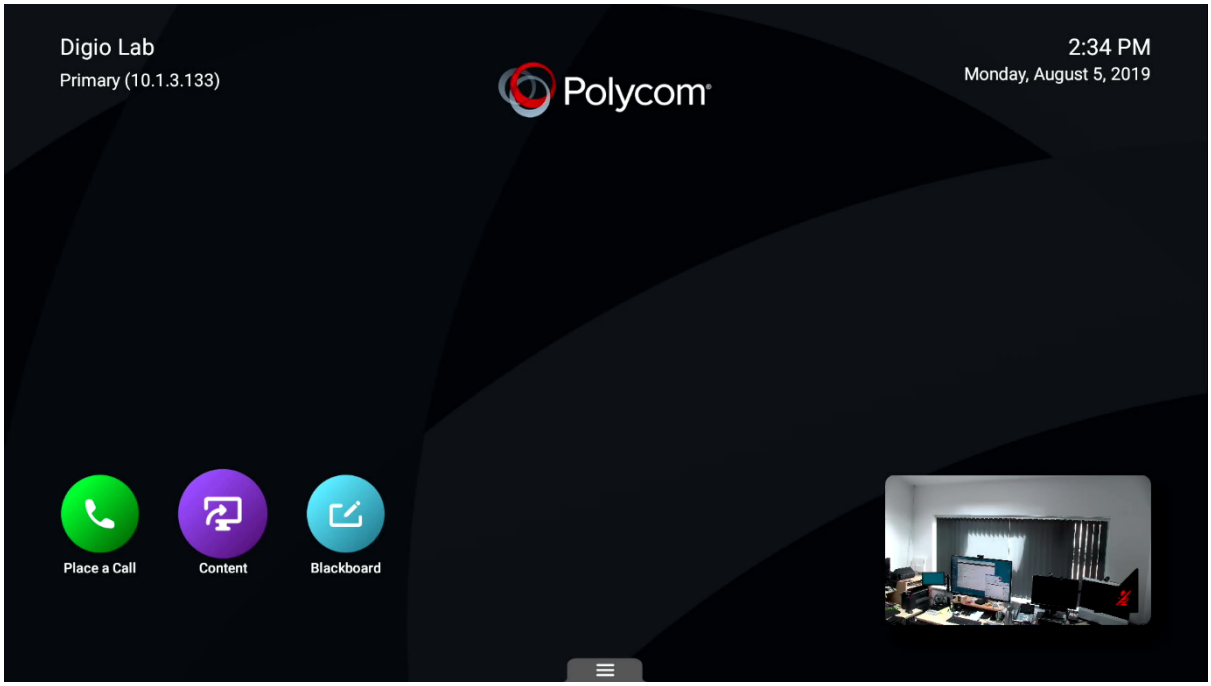
The onscreen keyboard is much easier to use on this device; you can switch between numbers and letters quite easily and select the type of call as well. A very good level of flexibility for control.



And this

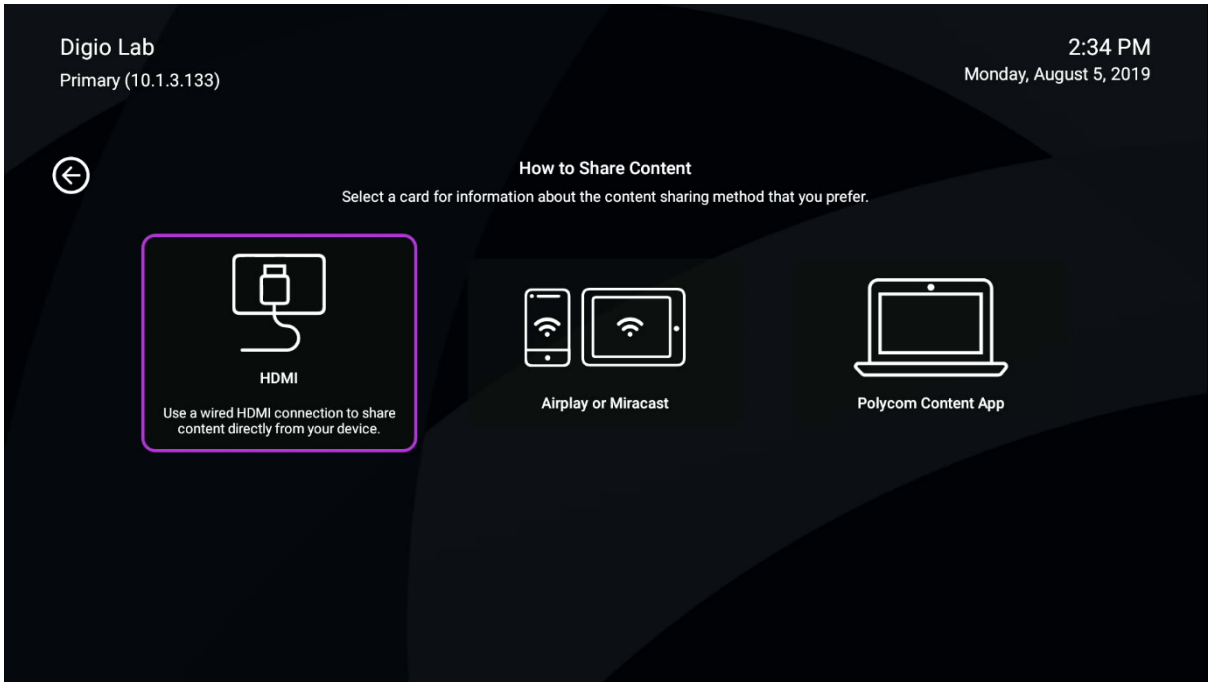


Various options are available using the on-screen menus – you can obviously delve much deeper using the web interface. As mentioned at the beginning, the touch panel control device is not supported with this codec.



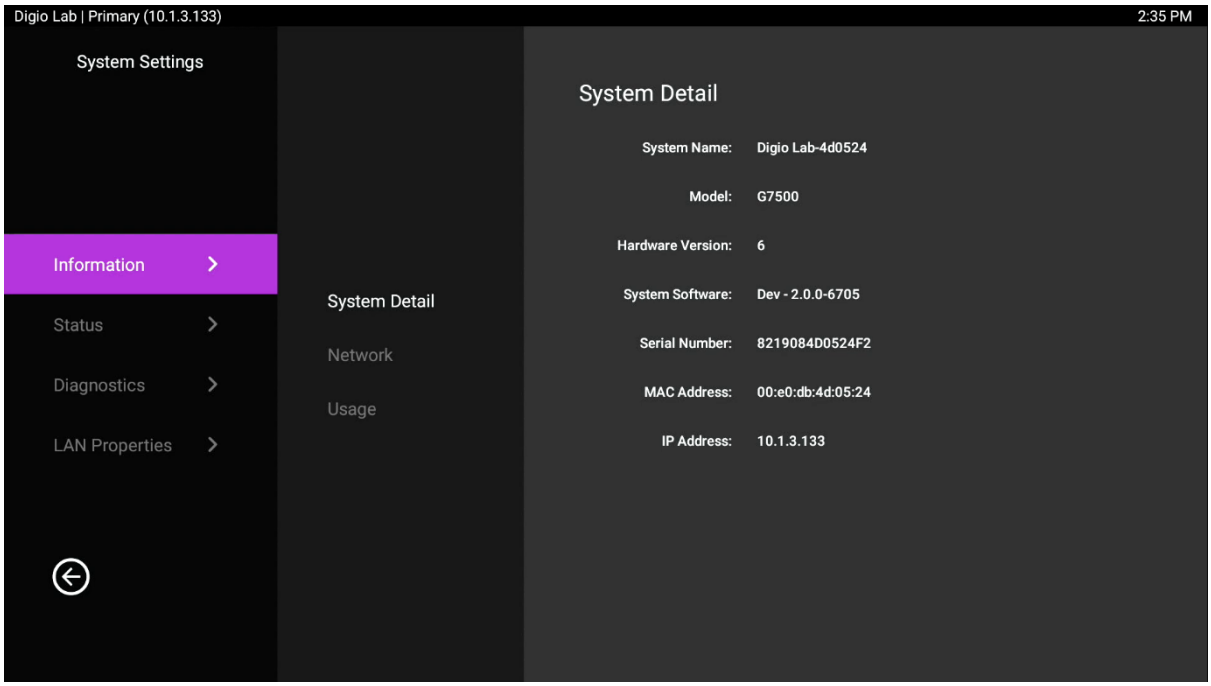
In use

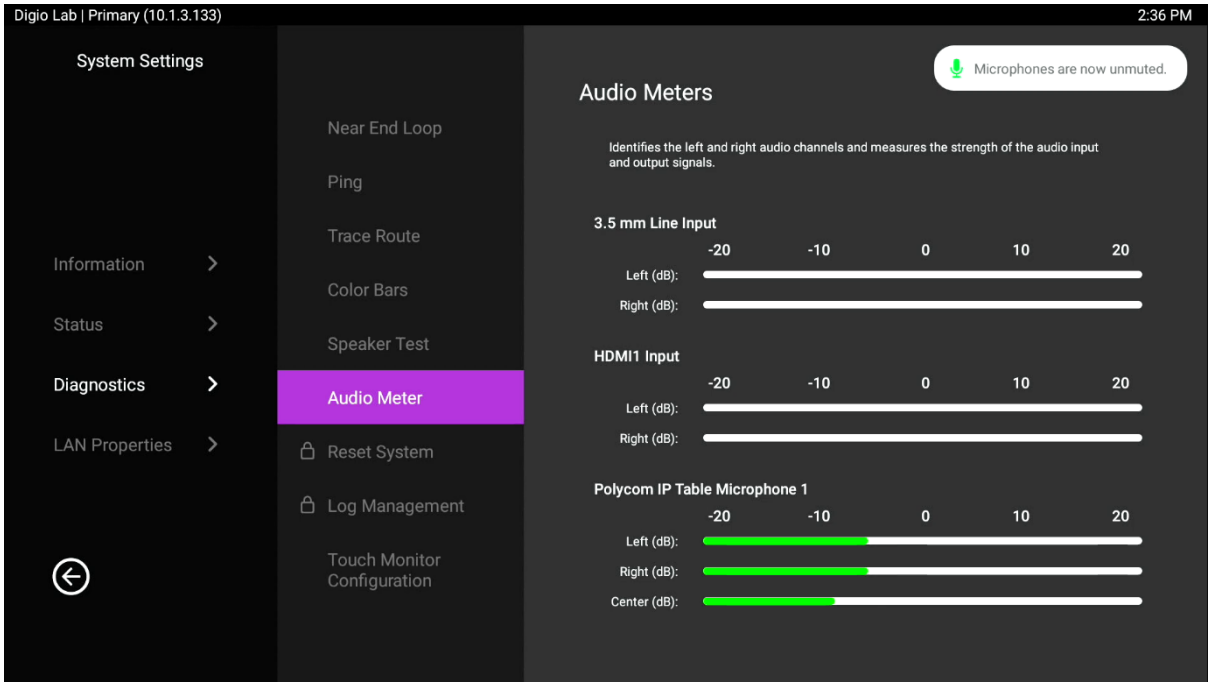
Placing a call is just as easy as it is with the GS series. Just remember, no native Skype or MS Teams. Poly does have an interop service and there are other flavours out there as well from providers like Kinly.



There is also support for the blackboard application and a touch screen. Content on this can be saved or erased after each session.

Deeper down on the on-screen menus are some useful options – such as System Detail and various tools for testing the display and audio.





What is interesting is that the call rate seems locked to 6Mbit, which may seem a lot – but not really once you consider that most business DSL connections have an upload rate in excess of that.

Calls at 6Mbits are fantastic, cannot fault them. But can't help thinking lifting that restriction and perhaps reducing the compression a little would give just that bit more.

No issues with call stability so far. Had internal calls up and running for more than 24 hours (though there is an 8-hour default limit in place). Calls over my business broadband connection to a colleague were up and running for over 6 hours.
And using it like that is quite interesting – it becomes an extension of the workplace; you can turn around and talk to a colleague as if they were in the same room. The ritual of setting up a VC call should not exist – it should just work, and I'm pleased to say the G7500 does that, and very well.

It's also now much easier to change screen layouts than before – very useful if you are using multiple screens.

I was able to get a call running with two video participants and one audio (over IP). No multi-site capability enabled.

I also hosted a three-way video call on a Grandstream device. All devices played well together.

And just to make sure, tested with a cloud-based service as well. Again, no issues encountered.

In fact, every device or service I called worked without any issues.

That's until I started sharing content.

Content Sharing

I plugged in laptop via HDMI when the system was idle and not connected to a call. The display went full screen showing my laptop content. I then placed a call to an aging Cisco EX90. Call connected. Attempted to share content, the display on the EX90 changed to show a smaller video window, and right where the content should be was a blank space.

Reset everything and tried again. The same.

Tried a different laptop/ The same.

So, let's try the reverse. Laptop connected to EX90, share content – and – it works. Something not quite right here. Let's try another device. Again.

iPad Pro, Airplay connection. The same – no content going to EX90. A bug perhaps?

OK, so an EX90 is getting on a bit. Let's try with something less ancient.

Tried again with a DX80 – still no content sharing.

Hmmmm. Not happy.

Final variation. Connected using Miracast from another PC to the G7500. Connected a call, attempted to share content. Shows on G7500, not on DX80.

Weird.

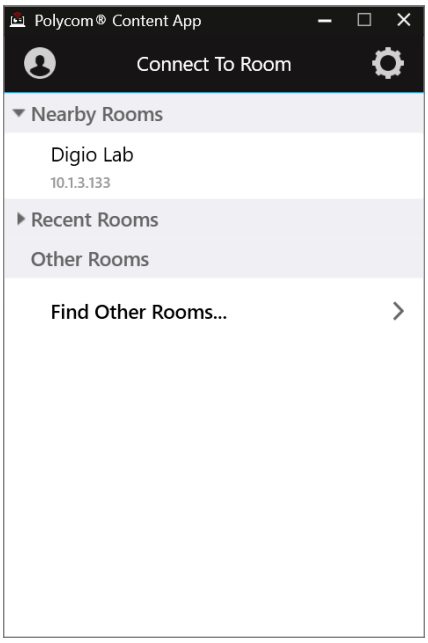
I will remind everyone that this device is running DEV firmware. So maybe not time to panic just yet. Obviously not able to properly test 4k content sharing from HDMI in. But it did happily support 4k content.

In addition, both the EX90 and DX80 are probably a version or two behind the latest software versions available from Cisco. Even so, having to upgrade everything else to support a new device is a pain – though not uncommon in the world of IT.

I did share content from my desktop PC using the Poly Content App. That quickly found the G7500 and shared content in glorious 4k without any issues, even when not in a call which is quite nice.

The following pic is an example from the Poly Content App in glorious 4K. The picture does not do the actual image quality justice; I didn't have an inline 4K HDMI capture device – so here's a picture of the screen instead taken from my iPhone.

One caveat - it didn't share audio. That could have been down to a local issue, but worth testing again once I get hold of the unit with a final software release.



On the subject of Miracast, there are some other issues that I encountered which are a pain but do make total sense.

When connected just to my Wi-Fi network, the Miracast connection worked like a dream; the laptop or desktop could see the G7500 and connected happily.

As soon as I fired up my VPN connection, it could still see the G7500, but refused to connect. This may not sound like a major issue – don't use a VPN, but certain corporate users have a VPN connection as standard to ensure that high levels of security are maintained.

This would mean they could not share content wirelessly with the G7500. In all honesty the same is true with the Poly Pano device – which is basically what's built-in to the G7500.

And possibly true of other Wi-Fi based devices.

Having this built in can really make a difference. Not having to buy devices that require dongles for sharing can hugely simplify matters.

I will say that the audio was a bit choppy. Again, could be the engineering device I have, and I would love to test a final version to check.

Fine with Poly sharing app – but doesn't seem to support audio. 4k content is stunning. Alas, I do not have a 4k capture device to be able to show you – so a picture will have to suffice.

Final thoughts

That's pretty much everything covered. Setup is easy and we have the start of IP devices being connected. Audio and Video quality are top notch, as one would expect. Lots of questions remain unanswered, and I will follow up.

Content sharing seems a bit unstable right now.

Screen layout makes it much easier to use.

Admin menus are logically laid out and makes sense.

On the subject of the admin menus, there is an option to enable CEC control – which I forgot to take a shot of. It didn't seem to make any difference – the screen did not magically wake up when the codec came out of standby. Just waiting for that software update!

At one point I unplugged the device I had been using to capture the actual display shots; when I connected HDMI back in to the codec the screen did not sync. Not uncommon, but annoying. It needed a reboot.

As I'm sure you can imagine, there are a plethora of admin screens - most of which are not in this document. I did, however, take a substantial number of shots and have dropped these into another document.

It really is a great unit – much easier to use, much easier to configure. 4K content is excellent, and perhaps it will only be a matter of time before we see a 4K video upgrade.

Most of the issues I encountered are probably down to the DEV firmware loaded ono this device – it was one of only 2 units that Poly in the UK had access to. If there is a chance to test again with a final version, I'll update this document. I'll also potentially have to update other kit in the lab as well.

Poly – can I have it back now? Please?