



Q&A: 2wcom MPX webinar

save the pros and kill the cons

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Question	Answers
Can we upgrade existing FMC01 with new compressions mMPX?	Sadly no, the processing power of the FMC01 is not sufficient for μ MPX, sorry.
What is the delay using SRT?	The good think about SRT is that the delay is very minimal. Basically, you setup the decoder and give it a certain amount to delay the output signal. The amount of time you set for delay is the time the decoder has to request lost packets from the encoder. So, the longer you set it up the more secure the transport becomes. If you choose a very low setting, let us say 5ms, this is not enough time for the decoder to request for lost packets. Recommended by SRT is to configure a delay of 2x up to 4x of the total round trip time.
Can method B switching be implemented for RDS?	Yes
Is it possible to replace the RDS signal at the transmitter site if we send MPX signal from a Broadcast processor at the radio station to the transmitter?	That is one of the use cases for the MPX-1g, so yes, it will be possible to replace the RDS signal on the transmitter site.
Is the any measure tool for BS412 in the Decoder? E.g. Bandwidth measure (under 75KHz) and dBr relatet to BS412	No, I don't think so. It's not on the road map right now.
Does the decoder have SNMP for monitoring?	Yes
Does SRT support multicast?	Not yet, but I think there are plans to expand it. There are many open questions on how to balance load and everything. So, SRT right now is a unicast only tool, point-to-point.

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Does the MPX-1g replace the FMC01, or are there features on the FMC01 that the MPX-1g does not have? And are they interoperable?	The MPX-1g is not really a replacement of the FMC01. It can do pretty much the same things and a lot more. However, the replacement of the FMC01 is a different device. It is the MPC-2c, which is in development right now. It is going to be a dual MPX codec. But it cannot do RDS replacement, it is just an MPX codec. I think Berry can provide a datasheet. Berry "Yes, I'll do" Regarding the interoperability. At the moment, this is not given but on the future road map.
About RDS UECP How many DSN and PSN are supported?	16
Morning, do you have any opinion on μ MPX quality at 320kbps vs 576kbps? Thanks	We did some measurements, but I must ask a colleague for the results. Will come back to you.
Is there any absolute output level control in the MPX decoder to ensure deviation does not exceed a certain amount?	An MPX limiting function is currently under development and will be added soon.
Can the Data2 IP interface be used for monitoring only, rather than dual streaming?	Yes of course, you can also use it for monitoring. It does not have to be used for Dual Streaming. And you can configure which signal you want to send out over which IP interface.
Will SRT be available in combination with Dual Streaming?	Good question. At the moment, Haivision is developing a feature that should allow to do so. But the specifications are not totally clear. We are in close contact with the SRT guys and keep you updated.
Do you plan to implement Stream4sure?	No, I do not think so. It is not on the road map right now.
What is the maximum bandwidth of the MPX spectrum? Up to 100 kHz?	No, sampling rate for MPX is 192kHz at the moment. The hardware allows for a slightly higher rate, that would also

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	enable a full 100kHz bandwidth, but it is not on the roadmap as of now.
Is there dual PS on board?	We provide two options for dual power supply. First one is two internal, and second one is two external hot swappable power supplies. Moreover, you can have two 230 Volts or two 48 Volts or mix these both variants.
What about the price?	My colleagues from the sales team would forward an offer to your hands.
Will the webinar be archived? Also, can we get the slides in pdf form?	Yes, you will get a link later for a video of the webinar, to ensure you will be able to watch again at a later date and also pause where you want. I will ask Berry if he can provide a PDF version of the slides for you. I suppose end of this week and latest at the beginning of next week. Best, Anke
Does the equipment contain any mechanical moving parts, e.g. fans?	Yes, two fans.
Your MPX box has an RDS encoder and stereo generator built in? also, can you transport aes192?	Yes.
Can you transport other IP or UDP data with the MPX, like E2X data for HD in USA?	No, sorry, the MPX-1g does not support HD Radio specific data transfers and currently there are no plans to enhance the MPX-1g for HD Radio. But it is an interesting idea, that we might revisit in the future. Thanks.
Is it possible to have a redundant decoder? what is, when your decoder is broken; we need for these cases a 1+1 redundancy.	We are still refining a concept for 1+1, which will most likely be based on monitoring the other device via GPIOs or IP.
Do you think about to implement your system in the transmitter; do you have contact to the producers of transmitters?	Not at the moment.
If pilot or RDS level is too high at the studio will these be too high at the decoder also or does	At the moment, there is no option to do that. If you decide to locally generate

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<p>The decoder have fixed RDS and pilot levels? This is to avoid incorrect deviations in the transmitters.</p>	<p>the MPX, then of course you can change the levels, but if it is simply forwarding a complete MPX, that signal will not be altered.</p>
<p>Can I use μMPX and 2wcom compression and fully linear MPX in one transmission network and be still able to synchronize everything? Because on some TX sites only weak DSL lines are available whilst other TXes are reachable via fibre or STL 5GHz?</p>	<p>For the last two options the answer would be yes. We still have to investigate, whether we can also align μMPX to the other formats, as we cannot directly influence μMPX decoding and hence synchronization. μMPX does however have a special transmission mode to at least align μMPX decoders to each other.</p>
<p>As the IP transportation is obviously done via UDP, I might run into problems when using a backup stream via 4G/LTE, as the LTE Endpoints are not reachable via the public internet. Is there any way to reverse penetrate the firewall from the TX site to the Studio to get the MPX Signal or do I need a VPN connection and if yes, is MPX-1g working well over VPN?</p>	<p>Was directly answered via Email by Joost.</p>
<p>Delaying one stream by x milliseconds does it imply to have 2 separate IP connections to the TX or can it be done over one IP connection?</p>	<p>You simply delay the output of the second stream, but it does not matter if it is using the same IP connection as the other one or has its own.</p>
<p>As StereoTools has an integrated μMPX Encoder, can I use only your Decoder on the TX site?</p>	<p>That should be possible, yes.</p>
<p>How reliable is the IP transportation over VPN connections when I use a back-up line via LTE`/4G?</p>	<p>Was directly answered via Email by Joost.</p>
<p>Is the device with μMPX already on the market?</p>	<p>Almost</p>
<p>Can I use decoder only for decoding Omnia 9 μMPX output?</p>	<p>μMPX is standardized, so any μMPX decoder should be able to interoperate with any μMPX encoder</p>

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From Slide 8, when using MPX over IP, what protection is there for Deviation Overshoots, as the traditional method the processor would do this.	An MPX limiter function to prevent that is currently under development for the MPX-1g.
Slide 11, You talk about saving equipment on the transmitter sites, however circuit costs can go up for distribution. Also, what about hardware redundancy. As the diagrams you show were single ended, so if the MPX over IP fails, everything is off. Whereas traditional methods would have redundancy.	Hardware redundancy can be built up for MPX over IP, too. Moreover, if IP fails the MPX solution offers backup via satellite. Hence you have both, hardware, and source redundancy.
Slide 15 μ MPX, this would appear to be proprietary coding, will this result in a licencing issue, or ongoing OpEx using this method?	The license fee for μ MPX is a one-time fee that is already paid for during purchase.
Can μ MPX be used for Analogue SFN's, and if the processor was not at the studio but at a TX site, is there a way to synchronise the Parent TX site, with the Child sites using the same frequency. Clearly if the processor is at the studio this is fine.	Yes
Can we program static RDS message on MPX decoder?	Yes
Sorry, I missed part of the webinar, so you may have answered this already. How good is the protection against excessive (modulation) level in the event of packet loss?	Based on the concepts already in use in the FMC01, the MPX-1g will most likely use the same method of muting into and out of data gaps.
Some radios use local programs, how to switch to a local program on transmitter site?	Each MPX-1g can be setup to replace an RDS signal in an MPX signal, thus, each MPX-1g can be setup to output a local RDS signal specific to that radio station and location of transmitter-site.
Some radios use very high audio level, so there is a risk of overshooting with μ MPX or not	This might be an issue, that we will have to look further into. Thanks for bringing it to our attention.