



Ittiam Systems Pvt Ltd

Customer (Licensee): 3GPP SA WG4  
Quote: IVAS Codec, Float to Fix Conversion  
Date: 11 May 2023

SI No	Deliverables	Scope of work	Pricing (USD)
1	IVAS codec (Encoder, Decoder and Renderer)	<p>1) Development of fixed point module using ETSI intrinsic model for the existing C model of IVAS codec.  2) Develop a unit test for a logical block for IVAS module and work on the corresponding module for precision, testing and validation ( if the module owner doesn't have a unit test)  3) Modules where precision can't be met, sync up with modules owners (Stakeholders ) with ViSQOL/PEAQ data  4) Fixed-point conversion of EVS modules would be done by referring to/modifying existing fixed-point code.</p> <p><b>Assumptions</b>  1) Customer to share the latest version of ETSI intrinsic  2) Customer to define conformance criteria for fixed-point implementation</p>	373,333

**Terms and Conditions**

1	This quote is valid for 30 days from the date it is presented
2	Subject to Ittiam Licensing Agreement and Ittiam Conditions of sale
3	License for Ittiam deliverables is valid for Single program
4	Pricing does not include any taxes. All local, national and international taxes and applicable withholding taxes to be borne by Licensee

**Licensee's Responsibility**

- 1 Share the latest ETSI fixed point intrinsic C model
- 2 Share test vectors necessary for testing logical modules/IVAS Code base
- 3 Share available/existing unit test for logical modules
- 4 Modules where the precision of fixed point is difficult to meet, guide Ittiam team with dB difference acceptable using data provided with ViSQOL/PEAQ
- 5 Define conformance criteria for fixed-point implementation

**Delivery Timeline** (Indicative. Can be further aligned based on customer's program timelines):

Milestone	Deliverable/Description	Timeline
	Signing of Agreement	<b>T0</b>
<b>R1</b>	Fixed point C model delivery of Decoder and Renderer	<b>T1=T0 +4months</b>
<b>R2</b>	Fixed point C model delivery of Encoder	<b>T2 = T0 + 6 Months</b>