EAS 18433:2026-08 (E)

Quantum Computing - High-Level Programming Language

Contents

Page

European foreword 3
Introduction 4
1 Scope 6
2 Normative references 6
3 Terms and definitions 6
4 High-Level-Programming 6
5 Meta-Model for High-Level Quantum Programming 8
5.1 Basic Infrastructure 8
5.2 Quantum Variables 10
5.3 Quantum Sessions 10
5.4 Quantum Data Types 11
5.5 Quantum Data Structures 12
5.6 Quantum Conditionals 12
5.7 Quantum Loops and Iterators 12
5.8 Quantum Environments 13
5.9 Overall Meta-Model 14
6 Functional requirements 15
7 Conclusions 17
Annex A (informative) **Case Studies** 18
A.1 Quantum Loops – Calculating Sums in Superposition 18
A.2 Grover's Algorithm 18
Bibliography 19