



Fraunhofer IIS | Am Wolfsmantel 33 | 91058 Erlangen, Germany

University of Pavia  
Department of Electrical, Computer and  
Biomedical Engineering  
Prof. Piero Malcovati  
Via Ferrata 5  
27100 Pavia  
Italy

Fraunhofer Institute for Integrated Circuits IIS

Management of the Institute  
Prof. Dr. Albert Heuberger (executive)  
Dr. Bernhard Grill  
Prof. Dr. Alexander Martin

Am Wolfsmantel 33  
91058 Erlangen, Germany

Elvira Liandres  
Project Manager  
Department Integrated Circuits and Systems ICS  
Phone + 49 9131 776-4464 | Fax -4499  
elvira.liandres@iis.fraunhofer.de  
www.iis.fraunhofer.de

Erlangen, October 27, 2020

**Offer No. 044/18612/S45**

Dear Professor Malcovati,

In the context of the EURO PRACTICE IC service (a project funded by the European Commission) and, as far as not otherwise regulated in this offer (Annex A), based on the enclosed »General Terms and Conditions for Research and Development contracted to Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V., Version 2002/II« (Annex B), we offer:

**Subject/Task/Time schedule/Costs**

Engineering service including design rule check (DRC) and design submission to the semiconductor foundry

MPW production in 65 nm C35B4C3 technology on MPW-Run 7496 of October 19, 2020,  
incl. delivery of 100 samples

Project name:	LYRA_BE_20	
Chip area:	16.46 mm <sup>2</sup>	
Price per mm <sup>2</sup> :	580.00 € plus VAT, if applicable	
MPW production costs (incl. delivery of 50 ICs):	16.46 mm <sup>2</sup> x 580.00 €/mm <sup>2</sup> =	9,546.80 € plus VAT, if applicable
MPW costs for one extra wafer:		2,360.00 € plus VAT, if applicable
Packaging in CPGA120 Packaging costs for 10 packaged ICs à 108.00 € =		1,080.00 € plus VAT, if applicable
Setup costs:		200.00 € plus VAT, if applicable
Total costs for 100 samples:		13,186.80 € plus VAT, if applicable

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V., München  
Executive Board  
Prof. Dr.-Ing. habil. Prof. E. h. Dr.-Ing. E. h. mult. Dr. h. c. Dr. h. c. Reimund Neugebauer, President  
Prof. Dr. rer. publ. ass. iur. Alexander Kurz  
Dipl.-Kfm. Andreas Meuer  
Prof. Dr. rer. nat. habil. Ralf B. Wehrspohn

Cheques and transfers payable to:  
Deutsche Bank, München  
Account 752193300 BLZ 700 700 10  
IBAN DE86 7007 0010 0752 1933 00  
BIC (SWIFT-Code) DEUTDEMM  
V.A.T. Ident No. DE129515865  
Tax Number 143/215/20392

Expected delivery date: approx. February 2021

All indicated expected delivery times are standard delivery times, based on the fabrication runtime of third party vendors. Fraunhofer-Gesellschaft and the MPW Center shall make reasonable efforts to deliver on time. However, notwithstanding the foregoing, neither the MPW Center nor Fraunhofer-Gesellschaft shall be held liable for any delays or failures to meet delivery dates.

**Payment plan**

100 % payment due at delivery of the IC samples

**Cancellation fee**

A cancellation fee amounting up to 100% of the MPW costs is applicable upon cancelling the registration after the cancellation deadline or failing to submit a DRC-clean GDS before the tapeout deadline.

**Conditions of payment**

All prices given do not include applicable value added taxes. All prices are binding and should be transferred to Fraunhofer-Gesellschaft's account number named in invoice.

The Client bears all Italian direct (withholding tax of Fraunhofer-Gesellschaft, etc.) and indirect (value added taxes, etc.) taxes and dues caused by the performance of the contract, irrespective of what party is legally obliged to declare and/or pay taxes or dues. The Client informs Fraunhofer-Gesellschaft about required actions to comply with its duties under public law stated in the previous sentence. So all prices under this contract are understood as free of any Italian direct and indirect taxes.

**COVID-19**

Due to the current situation because of COVID-19 we cannot give binding project terms or deadlines. Start and duration of the work may be delayed. No Party shall be considered to be in breach of this Agreement if it is prevented from fulfilling its obligations by such delay. Accordingly, compensation claims due to delay shall be excluded. Both contracting parties are however entitled to terminate the contract with two weeks' notice if the estimated period of performance for the work is extended by more than three months. Section 13.3 of the enclosed General Terms and Conditions for Research and Development contracted to Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. Version 2002/II shall apply accordingly.

**Changes to contract**

Any changes to the content of the contract made necessary during the course of the project will require a reassessment of the price and are to be agreed upon by the Client and Fraunhofer-Gesellschaft.

**Proposal validity**

This proposal is valid and binding until November 30, 2020.

Best regards,

Dr. Norbert Weber  
Head of Department

Thomas Drischel  
Group Manager

Encl.

Annex A: »Modifications to Fraunhofer General Terms and Conditions applicable to this project«

Annex B: »General Terms and Conditions for Research and Development contracted to Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e.V., Version 2002/II«

**Annex A: Modifications to Fraunhofer General Terms and Conditions applicable to this project**

**Section 7 of the enclosed General Terms and Conditions is replaced by the following provisions:**

**7. Liability, Product Liability**

- 7.1 Fraunhofer-Gesellschaft shall be responsible for applying scientific care and for complying with accepted scientific standards but not for actually achieving the research and development goal.
- 7.2 The liability of Fraunhofer-Gesellschaft, its legal representatives and agents in the case of violation of obligations and tort shall be limited to intent and gross negligence. In cases of gross negligence liability shall further be limited to direct, foreseeable and contractually typical damages and in total to the amount payable to Fraunhofer-Gesellschaft by Client under this contract. Except for in cases of intent Fraunhofer-Gesellschaft, its legal representatives and agents shall not be liable for indirect or consequential damages, e.g. loss of profits.
- 7.3 **Specific Provisions for Critical Use and Risk Products**  
As Fraunhofer-Gesellschaft and MPW Center are bound to specific liability regulations with the semiconductor foundry in respect to Critical Use and Risk Products Fraunhofer-Gesellschaft and MPW Center are obliged to set forth substantially similar limitations in this contract.

“Risk Product” means a result manufactured by the semiconductor foundry that has not yet been qualified by Fraunhofer-Gesellschaft, MPW-Center or Client, but that Fraunhofer-Gesellschaft, MPW Center or Client may purchase in commercial quantities.

Client declares and warrants that the result is not designed or intended for use in (a) any Medical Device, defined below, (b) any nuclear systems or facilities, (c) any air traffic control device, application or system, (d) any weapons device, application or system or (e) any other mission critical application in which failure of the result or Risk Product could create a situation where death, bodily injury or catastrophic property damage could occur (each a “Critical Use”). “Medical Device” means any machine or tool (a) intended for surgical implant into the human body, (b) intended to support or sustain human life, or (c) where such machine or tool’s malfunction or failure to perform as expected may result in injury or death to the patient.

Neither Fraunhofer, MPW Center nor Foundry will be liable to Client for any losses, damages, liabilities, costs or expenses incurred or arising or resulting from any Critical Use of a result or Risk Product.

Client will defend and indemnify Fraunhofer-Gesellschaft, MPW Center and Foundry and its Affiliates its officers, directors, employees and subcontractors and from and against any claim, suit, demand or action (including all losses, liabilities, damages, settlements and attorney’s fees and expenses) which arises out of, involves or relates to a Critical Use or Risk Product.

If Client is not End-Customer, Client declares and warrants to agree with its End Customer(s) regulations as strict as here which exclude Critical Use and that exclude liability of Fraunhofer, MPW-Center and Foundry as set forth above. “End Customer” means a third party that is not an Affiliate of and is otherwise unaffiliated with Client, to whom Client may deliver the result.

7.4 Should Fraunhofer-Gesellschaft neither fulfil the performance as agreed upon nor do so at the time due nor in the manner agreed upon, then the client may only demand compensation in lieu of performance if the client has unsuccessfully set an appropriate deadline for the performance by Fraunhofer-Gesellschaft including the statement that it would otherwise reject acceptance of the performance after the passing of that deadline.

7.5 Neither Fraunhofer-Gesellschaft nor MPW-Center shall be liable in case the MPW-Center declines to manufacture MPWs due to deviations from Design Rules. Client expressly recognizes that the MPW Center and Fraunhofer-Gesellschaft services cannot and do not guarantee nor hold out the prospect of correct working of designs manufactured on MPW runs.

The fact that the MPW Center has performed Design Rule Checks on Client generated designs does not mean that the MPW Center or Fraunhofer-Gesellschaft guarantee nor hold out the prospect of correct working of the designs. It is solely Client's responsibility to ensure correct working of the designs.

The MPW Center merely states that prototypes are taken from wafers that meet the standard quality level of the selected third party vendor(s) and have passed the standard third party vendor wafer parametric tests. Fraunhofer-Gesellschaft shall not be responsible or liable for the use of the wafers delivered under this contract to Client nor for damages caused by it.

7.6 Client is aware that in an individual case the results may bear a risk of product liability. Client will take out reasonable insurance against such risk. Notwithstanding the foregoing, Client shall indemnify Fraunhofer from any and all third-party claims based on product liability.

**In addition to the General Terms and Conditions the following provisions shall apply:**

**Delivery terms**

Place of performance for Fraunhofer-Gesellschaft shall be the place of business of the Fraunhofer-Institutes involved. In case of delivery of objects "CPT < Via Ferrata 5, 27100, Pavia, Italy>" Incoterms® 2020 shall apply. As far as not otherwise agreed in writing Client shall provide transport insurance at his own expense.

**Security of electronic data transmission**

For the communication with our Clients sometimes we use unencoded electronic data transmission. We cannot guarantee the security of the data transmission. On your request, we offer PGP- or S/MIME-encoding.

**Place of jurisdiction**

The parties agree that the exclusive place of jurisdiction shall be Munich, Germany.

**Export**

Where fulfilment of contractual obligations of Fraunhofer-Gesellschaft requires a permit due to national, European, United States or international foreign trade law regulations, including an embargo (and/or other sanctions), contractual performance will be subject to authorization by the competent authority; in case the authorization is not granted, there shall be no breach of contract or contractual obligation on Fraunhofer-Gesellschaft's part. The same applies if fulfilment of the contract should be prohibited due to the regulations cited.

Any damage compensation obligation due to delays or obstructions to performance in view of national, European, United States or international foreign trade law regulations, including an embargo (and/or other sanctions) is expressly barred. The same applies to other claims (such as repayment or guarantee claims, which are due to advance payment bonds, etc.).

If the Client is entitled under the contractual provisions in any specific case to award licenses to the research and development results for use outside of Germany as well, the Client shall comply with any applicable German, European, United States or international foreign trade law regulations, including an embargo (and/or other sanctions).

-----  
We assign Fraunhofer IIS with the performance of this offer No.: 044/18612/S45

Pavia, \_\_\_\_\_

\_\_\_\_\_  
University of Pavia