



# Request for R&D Proposals 2022

## Terms & Conditions

# About the Fund



## Objectives

- This matching grant is intended to identify and award R&D projects towards Experimental Research and Development (R&D), creation of innovative products, intellectual properties, knowledge and mastery of GaN technology and E&E complimenting areas for applications in Light-Emitting Diode (LED), Electric Vehicle (EV), System on a Chip (SoC) and Radio Frequency (RF) and others.

## Eligibility

- CREST R&D Grant is open to all applicants. However, once the application is awarded, industry and university must be a CREST member in order to receive the GaN & EV Technology Fund. Find how to be a member at [www.crest.my](http://www.crest.my)

# Basic Terms and Conditions



Experimental R&D	Prototype R&D
<p><b>Basic Criteria</b></p> <ul style="list-style-type: none"> <li>• R&amp;D in GaN and E&amp;E complimenting areas</li> <li>• Research on industrial applications</li> <li>• Entry level TRL 4 to 5, Exit level TRL 5 to 6</li> </ul>	<ul style="list-style-type: none"> <li>• R&amp;D in GaN and E&amp;E complimenting areas</li> <li>• Development of Minimum Viable Product prototyping / services proven in operational environment</li> <li>• Entry level TRL 6 to 7, Exit level TRL 8 to 9</li> </ul>
<p><b>Partnership</b></p> <ul style="list-style-type: none"> <li>• Research project involves at least one company pairing with at least one university.</li> <li>• At least one of the universities and one of the companies involved must be located in Malaysia.</li> </ul>	<ul style="list-style-type: none"> <li>• Development project involves at least one company.</li> <li>• At least one of the companies involved must be located in Malaysia.</li> </ul>
<p><b>Personnel</b></p> <ul style="list-style-type: none"> <li>• Full-time postgraduate student researchers and full-time post-doctorate researchers whose allowance are paid by CREST R&amp;D Grant must be Malaysian citizen.</li> <li>• Students involved in the research project (regardless of whether allowance and tuition fee is paid by CREST Grant) shall not be the project leader.</li> <li>• Project is expected to produce postgraduate student(s) as output.</li> </ul>	<ul style="list-style-type: none"> <li>• Project lead must be from the company.</li> <li>• Resources (engineers, etc.) fully/partially funded by CREST must be Malaysian citizen.</li> </ul>
<p><b>Duration</b></p> <ul style="list-style-type: none"> <li>• Approved funded research duration corresponds to research scope. Maximum approved duration is 24 months.</li> </ul>	

# Technology Readiness Level



TRL 9	System proven in operational environment
TRL 8	System complete and qualified
TRL 7	<b>Integrated pilot system demonstrated</b>
TRL 6	<b>Prototype system verified</b>
TRL 5	<b>Laboratory testing of integrated system</b>
TRL 4	<b>Laboratory testing of prototype component or process</b>
TRL 3	<b>Critical function, proof of concept established</b>
TRL 2	Technology concept and/or application formulated
TRL 1	Basic principles are observed and reported



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Experimental R&D	Prototype R&D
<p><b>Financial</b></p> <ul style="list-style-type: none"> <li>Industry contribution (in cash and/or in kind) must be at least 50% of the total research budget. (Example: If the applicant requests for RM50k budget, the industry / combined must contribute more than RM50k)</li> <li>IP filing cost is covered by CREST. IP will be owned by CREST, with revenue sharing with Company and University.</li> <li>All equipment and software purchased using the CREST R&amp;D Grant shall be owned by CREST.</li> <li>Fund for equipment and software (MATLAB, CST, etc.) shall be retained in and managed by CREST. Software purchased for a project shall be commercial license.</li> </ul>	
<ul style="list-style-type: none"> <li>Disbursement will be released to University only.</li> </ul>	<ul style="list-style-type: none"> <li>Disbursement (except for HR fund) will be retained in CREST to be utilised by Company.</li> <li>Research material (below RM5k) may be purchased by Company first and reimbursed later.</li> </ul>
<ul style="list-style-type: none"> <li><u>Postgraduate Student i-GRASP program</u></li> <li>University shall cover the postgraduate study tuition fees.</li> <li>Company shall contribute to the postgraduate students' allowance (in-cash) per the i-GRASP program.</li> <li>Postgraduate students shall complete his/her study upon completion of project</li> </ul>	

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Experimental R&D	Prototype R&D
<p><b>Non i-GRASP</b></p> <ul style="list-style-type: none"> <li>• Post-Doctorate : RM6,500/month for maximum of 2 years to be covered by CREST.</li> </ul>	<ul style="list-style-type: none"> <li>• CREST contributes to the salary of the engineering resources up to RM3,000 per month for the duration of the project, up to a maximum of 3 resources.</li> </ul>
<p><b>Other spending items</b></p> <ul style="list-style-type: none"> <li>• Reasonable travel from university to company and vice versa.</li> </ul>	<ul style="list-style-type: none"> <li>• Product certification (max. RM30k)</li> <li>• Reasonable cost for clinical trials / market test</li> </ul>
<p><b>Non-eligible spending items</b></p> <ul style="list-style-type: none"> <li>• Consultation fee</li> <li>• Publication fee</li> <li>• Legal fee</li> <li>• Conference travel and fee</li> <li>• Training fee</li> <li>• Office/lab rental</li> <li>• Office administration supplies</li> <li>• Clinical trials</li> </ul>	<ul style="list-style-type: none"> <li>• Consultation fee</li> <li>• Publication fee</li> <li>• Legal fee</li> <li>• Conference travel and fee</li> <li>• Training fee</li> <li>• Office/lab rental</li> <li>• Office administration supplies</li> </ul>

# Grant Acceptance Documents

Experimental R&D	PDF
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Prior to project commencement</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Research Grant Agreement</li> <li><input type="checkbox"/> Declaration Letters</li> </ul> </li> <li><input type="checkbox"/> <b>During project execution</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> i-GRASP Agreement</li> <li><input type="checkbox"/> Commercial Contract</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Prior to project commencement</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Research Grant Agreement</li> <li><input type="checkbox"/> Declaration Letters</li> <li><input type="checkbox"/> Commercial Term Sheet</li> </ul> </li> <li><input type="checkbox"/> <b>During project commencement</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Commercial Contract</li> </ul> </li> </ul>



# Obligations



Experimental R&D	Prototype R&D
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Progress update (as frequent as every 1 month)</b> <ul style="list-style-type: none"> <li>• Monthly progress update via virtual meeting.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Progress update (every 1 month)</b> <ul style="list-style-type: none"> <li>• Monthly progress update via virtual meeting.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Report and review (every 3 months)</b> <ul style="list-style-type: none"> <li>▪ Quarterly progress and financial report submission</li> <li>▪ The report shall be accompanied by supporting documentation for each expense and University Bursary statement as evidence.</li> <li>▪ Technical report should be provided in presentation slide format and signed by all parties as evidence agreed.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Report and review (every 3 months)</b> <ul style="list-style-type: none"> <li>▪ Progress and financial report submission every quarter.</li> <li>▪ The report shall be accompanied by supporting documentation for each expense bank account statement as evidence.</li> <li>▪ Technical report should be provided in presentation slide format and signed by all parties as evidence agreed.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Project review and audit</b> <ul style="list-style-type: none"> <li>• Face to face meeting / Site visit (Before release the 2<sup>nd</sup> disbursement or as required)</li> <li>• Subsequent project review every quarterly before the release of the next disbursement (Face to face meeting).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> <b>Project review and audit</b> <ul style="list-style-type: none"> <li>• Face to face meeting or Site visit (Before release the 2<sup>nd</sup> disbursement or as required)</li> <li>• Subsequent project review every quarter before the release of the next disbursement (Face to face meeting).</li> <li>• Monthly progress update via online meeting or face to face.</li> </ul> </li> </ul>



# Obligations



Experimental R&D	Prototype R&D
<input type="checkbox"/> Other documents as required by CREST (Final report, Impact Information Report, Project Outcome Report, Business/Commercialisation plan, etc.)	
<input type="checkbox"/> Project funded by GaN & EV Technology Fund must not share any of its deliverables to meet other grant obligation.	
<input type="checkbox"/> Each approved research project is obligated to meet stated deliverable (output) obligation. Output of postgraduate students must be Malaysian only <input type="checkbox"/> Recommended Outputs - Publication in journal <ul style="list-style-type: none"> <li>• 1 publication per MSc student researcher</li> <li>• 3 publications per year per funded post-doctorate researcher</li> </ul> <input type="checkbox"/> Filling of intellectual property <ul style="list-style-type: none"> <li>• Invention Disclosure to CREST for IP filing purpose.</li> </ul>	<input type="checkbox"/> Each approved project is obligated to meet stated deliverable (output) obligation. <ul style="list-style-type: none"> <li>• <b>MVP prototype with agreed specification.</b></li> <li>• <b>Service creation with potential partner engaged.</b></li> </ul> <input type="checkbox"/> Filling of intellectual property <ul style="list-style-type: none"> <li>• Invention Disclosure to CREST for IP filing purpose.</li> </ul>



# Industry Graduate Research Assistant Scholarship Programme (**i-GRASP**)

Applicable for Experimental R&D



## i-GRASP (Detailed contribution)

Postgraduate	Monthly allowance payment for PhD and MSc (max. 2 years)			Contribution by University	Maximum period of funding (months)
	Maximum contribution by CREST	Maximum contribution by Company	Fixed amount of Allowance		
PhD	RM3,500.00	RM800.00	<b>RM4,300.00</b>	<b>Tuition fees</b>	36
MSc	RM2,500.00	RM500.00	<b>RM3,000.00</b>		24

Postgraduate	Minimum criteria
<b>PhD</b>	CGPA of <b>3.00</b> and above for Bachelor's degree in the relevant and related field.
<b>MSc</b>	CGPA of <b>3.00</b> and above for Bachelor's degree in the relevant and related field.

### IMPORTANT NOTE:

PhD students enrolled in the experimental R&D projects must complete his/her study during the project completion

## UK System to GPA Conversion



In the case where the University adopts UK System, the table below will be applicable

<b>GPA</b>	<b>UK module marks</b>	<b>UK degree classification</b>
<b>4</b>	70+	First class honours
<b>3.7</b>	65-69	Upper-second class honours
<b>3.3</b>	60-64	Upper-second class honours
<b>3</b>	55-59	Lower-second class honours
<b>2.7</b>	50-54	Lower-second class honours
<b>2.3</b>	45-49	Third class honours
<b>2</b>	40-44	Third class honours
<b>1</b>	35-39	Ordinary/Unclassified
<b>0</b>	Below 35	Ordinary/Unclassified

## Postgraduate Candidate

A non-employee postgraduate candidate must fulfill the criteria below:

- (a) Completed his/her Bachelor's degree in the relevant and related field;
- (b) Is a registered full-time post-graduate student working on the Project;
- (c) Is not attached to any organisation as an employee;
- (d) Is a Malaysian; and
- (e) Is recommended by the University and the Company of the Project.

## Application procedure

- Prospective candidate is required to submit - **Academic Transcript, CV, Letter of acceptance as post graduate student, Recommendation Letters from University and Company in CREST project**
- Application shall be submitted once the Research Grant Agreement is executed
- Successful applicant is required to enter into an agreement (i-GRASP Agreement) with CREST, the University and the Company

## Payment procedure

- i-GRASP recipient will be paid through CREST R&D grant allocated at the allowances and study fee category
- i-GRASP recipient will be paid starting from the effective date of Research Grant Agreement or the effective date of postgraduate candidature (whichever is later)

## Payment procedure

- i-GRASP recipient will be paid through CREST R&D grant allocated at the allowances and study fee category
- i-GRASP recipient will be paid starting from the effective date of Research Grant Agreement or the effective date of postgraduate candidature (whichever is later)

## Service Obligation Bond

- i-GRASP recipient is bonded to CREST
- The service obligation bonded period shall be equivalent to the duration of the recipient's postgraduate study
- i-GRASP includes student service obligation bond to CREST which will be released to the Company or University upon request.
- In the event if there is request from the Company or the University, CREST shall transfer the bond to the requesting party. In the case where both Company and University do not require the service of the postgraduate, CREST shall have the right to nullify the Service Obligation Bond.