DKG LABS
Innovation Takes Off

Custom IR Grid

PO #1 – Hardware Procurement

Payment Terms: 100% Advance Payment upon acceptance.

Item Description	Qty	Unit Cost	Total Cost
850 nm Laser Diode (Collimated)	40	₹580	₹23,200
PIN Photodiode (BPW34 or equivalent)	40	₹50	₹2,000
Collimation Lens / Molded Aspheric	40	₹250	₹10,000
IR Bandpass Filter (850 nm)	40	₹500	₹20,000
TIA + Comparator Components	40 sets	₹665	₹26,600
Laser Driver Circuit Components	40 sets	₹415	₹16,600
FPGA Development Board (iCE40 or equivalent)	2	₹2,490	₹4,980
Custom PCB Fabrication & Assembly	Lot	—	₹2,24,500
SMA / Diagnostic Cables (RG-174 assemblies)	40	₹498	₹19,920
Power Supply Unit (12 V / 60 W)	1	₹1,195	₹1,195
Mechanical Enclosures	Lot	—	₹49,980

	Frame / Rails / Mounting Hardware	Lot	—	₹49,980
	Safety Goggles (850 nm OD-rated)	4	₹2,500	₹10,000
RG7 cable 174	Laser Interlocks, Key Switch, Warning Labels	Lot	—	₹39,980
	Misc. Spares, Adhesives, Cabling, Connectors	Lot	—	₹24,900

Hardware Subtotal: ₹5,73,835 (Rupees Five Lakh Seventy-Three Thousand Eight Hundred Thirty-Five Only)

PO #2 –Rentals & Labour Services

Rental & Logistics Payment Terms: 100% Advance Payment upon PO acceptance.

Labour Payment Terms: 40% Advance, 30% Mid-Project, 30% Upon Final Delivery.

Service / Rental Description	Qty / Duration	Total Cost
Engineering Labour – Hardware Engineers FPGA/Firmware engineers (8 weeks)	2+3	₹9,60,000
Certified Ballistic Acrylic/Glass Window (1×1 m)	1	By client
Range Rental & Live-Fire Safety Setup (4–5 days)	Lot	By Client
Laser Safety Certification, SOP & Compliance Docs	Lot	₹50,000
Oscilloscope Rental (≥200 MHz, 1 week)	1 week	₹45,000
Function Generator & Bench PSU Rental	1 week	₹15,000

High-Speed Photodiode Test Jig Rental	1 week	₹20,000
Project Management & Technical Documentation	Lot	₹50,000

Services & Rentals Subtotal: ₹9,80,000 (Rupees Nine Lakhs Eighty Thousand Only)

Project Plan – Laser IR Field Kit (40-Beam) – Week-wise

(Delay in procurement may shift timelines +-1 week)

Week	Task Description	Key Deliverables
Week 1	Project kickoff, requirements freeze, procurement initiation	Signed-off requirements doc, final BOM, purchase orders placed
Week 2	Mechanical design finalization & start (frame, mounts, enclosures)	Fabrication drawings, frame and enclosure build start
Week 3	Electronics AFE design (TIA, comparators), PCB layout, laser driver design	Schematics, PCB layout files, Gerber release
Week 4	PCB fabrication & component sourcing, FPGA firmware architecture	PCBs in production, FPGA design block diagram
Week 5	Assembly of AFE boards, laser driver boards, FPGA dev setup	Assembled PCBs, FPGA dev board programmed with test firmware
Week 6	Integration of optics (lenses, filters) and alignment jigs, initial electronics test	Optical subassemblies aligned, basic detection tests completed
Week 7	Full X-axis + Y-axis integration, firmware debugging, indoor validation	Functional dual-axis detection indoors

Week 8	Safety system integration (interlocks, goggles, SOPs), pre-range test	Safety certification readiness, dry-run test results
Week 9	Live-fire range testing, calibration, performance tuning	Range test report, calibrated system
Week 10	Final acceptance testing, documentation, client handover	Final system delivery, user manuals, test data package