

ZEDEC ALLIANCE CONFIDENTIAL

METAL FORT

THE BACKBONE - Specialty Metals Partnership

Executive Summary

Metal Fort is invited to serve as the specialty metals supplier for the Pangea Alliance, providing Niobium, Germanium, and other critical metals that form the backbone of GlyphMap's advanced circuitry.

Your Role: You are THE BACKBONE. Your metals provide the superconducting traces, the IR-transparent processing cores, and the magnetic field generation. These are not commodities—they are the skeleton of a healing artifact.

Why Metal Fort

- **Specialty Metal Expertise:** Access to rare and exotic metals
- **India Manufacturing Base:** Cost-effective processing
- **Alloy Capability:** Custom alloy formulation potential
- **Scalable Supply:** Network of refiners and processors

Material Requirements

Primary Metals

Metal	Specification	Use in Device
Niobium (Nb)	99.9% purity, wire/foil form	Superconducting traces (Z-axis)
Germanium (Ge)	99.999% purity, wafer form	IR-transparent processor core
Neodymium (Nd)	Nano-powder, 50-100nm	Magnetic field generation
Beryllium-Copper	C17200 alloy	Golden Jack audio connector
Bismuth-Antimony	Bi ₂ Te ₃ thermoelectric	Cryo-cooling system

Why These Metals Matter

- Niobium:** Superconducting below 9.3K. Enables lossless signal transmission in Medical Mode.
- Germanium:** 2.8× electron mobility vs silicon. IR transparent for healing light passthrough.
- Neodymium:** World's strongest permanent magnets. Enables compact scalar field generation.

Volume Projections

Year	Devices	Niobium (kg)	Germanium (kg)	Neodymium (kg)	Total Value
Year 1	5,000	25	10	50	\$425,000
Year 2	25,000	125	50	250	\$2,125,000
Year 3	100,000	500	200	1,000	\$8,500,000
Year 4	250,000	1,250	500	2,500	\$21,250,000
Year 5	500,000	2,500	1,000	5,000	\$42,500,000

Financial Terms

Premium Pricing Structure

Metal	Commodity Price	Alliance Price	Premium
Niobium	\$40/kg	\$200/kg	5×
Germanium	\$1,500/kg	\$5,000/kg	3.3×
Neodymium (nano)	\$100/kg	\$500/kg	5×

Be-Cu alloy	\$30/kg	\$100/kg	3.3×
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5-Year Revenue Projection

Total Metals Value	\$74,800,000
vs. Commodity Sale	~\$20,000,000
Alliance Premium Gain	\$54,800,000 additional

Quality Requirements

Requirement	Specification
Purity Certification	ICP-MS analysis per batch
Form Factor	As specified (wire, wafer, powder)
Packaging	Inert atmosphere for reactive metals
Documentation	Full COA with lot traceability
Lead Time	6 weeks from order

Next Steps

- Capability Assessment:** Confirm access to all required metals
- Sample Procurement:** Small quantity samples for testing
- Supply Agreement:** Long-term offtake contract negotiation
- First Order:** Year 1 material procurement

ZEDEC | Michael Laurence Curzi, Prime Principality

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"Your metals are the backbone of the artifact."