Ireland: Astronomical and optical instruments
Procurement of a High-Precision Optical Ground Station (OGS) Telescope Unit for Uplink and Satellite Tracking

Contract or concession notice – standard regime

1 *Buyer*

1.1 *Buyer*

Official name: Mbryonics Ltd
Legal type of the buyer: Organisation awarding a contract subsidised by a regional authority
Activity of the contracting authority: Economic affairs

2 *Procedure*

2.1 *Procedure*

Title: Procurement of a High-Precision Optical Ground Station (OGS) Telescope Unit for Uplink and Satellite Tracking
Description: The Contracting Authority is seeking tenders for the procurement of a High-Precision Optical Ground Station (OGS) Telescope Unit for Uplink and Satellite Tracking. This procurement is being undertaken as part of Phase 2 of Ireland's QCI project (TransEuroOGS), co-funded by the European Commission Connecting Europe Facility (CEF) and the Irish Department of Culture, Communications, and Sport. The successful tenderer will be required to design, manufacture, and deliver a turnkey telescope unit encompassing the mount, optics, and control software, complying with strict technical and spatial constraints. Key Technical Requirements: Optical Configuration: Ritchey-Chretien (RC) optical design, f/10 to f/12 system, with a clear aperture of at least 700 mm. Low central obstruction is required (30 percent or lower diameter linear obstruction preferred, maximum allowable 34 percent or lower). Optical Coatings and Power Handling: Broad-spectrum reflectivity covering both visible wavelengths and the 1550 nm C-Band NIR telecommunication spectrum, biased for optimal performance at 1550 nm. Reflectance at 1550 nm must be at least 95 percent (protected gold or equivalent high-efficiency NIR coating acceptable). The secondary mirror (M2) and main aperture must handle a high-power launch beam of maximum 40W continuous wave at 1550 nm across the aperture or annulus (power density less than 3300 W per square metre on the primary mirror). Focusing Path and Clear Aperture: Must feature at least one Nasmyth focus port (more preferred). The Nasmyth focus path must be completely free of refracting optical elements (100 percent reflective optics only, with removable optics as an allowable deviation). Clear aperture path through the Nasmyth axis must be at least 60 mm diameter to support downstream Adaptive Optics relay systems. Mount and Dynamic Tracking Specifications: Alt-Azimuth Direct-Drive or equivalent performance mount with low-latency tracking dynamics supporting Low Earth Orbit (LEO) satellite tracking, including high-elevation passes over Zenith. Minimum Azimuth Slew Rate must be at least 5 degrees per second (faster preferred). Pointing and tracking accuracy must be less than 8 to 10 arcsec RMS during dynamic LEO passes. Fastest tracking rate must exceed 1 degree per second with fine range control below this speed. Envelope and Enclosure Compatibility: Total vertical height must not exceed 3000 mm from the base to ensure dome clearance. Maximum radial swing clearance envelope must be at most 1470 mm. The axis of elevation pivot height must ensure clearance at all pointing directions, with the pivot axis positioned no more than 155 mm below the centre of the clearance envelope (or at the centre or higher). Full CAD models and opto-mechanical layout files are mandatory upon contract award. Software, Control Interface and API: Native integration with standard open-source astronomical communication protocols (INDI / INDIGO) or ASCOM / ALPACA frameworks. Open, fully documented network API adaptable to HTTP/REST or WebSocket interfaces for automated robotic control, telemetry, and scriptable trajectory loading. Ethernet data interface and DC power supply preferred. Delivery Constraint: Unit delivery must be completed within 3 to 4 months maximum from contract signature. Please refer to the detailed Technical Specification document for full technical specifications, compliance matrices, and contractual terms.

Procedure identifier: 64c6ab40-4d5b-4368-81a1-2af499cef3cd
Type of procedure: Open
The procedure is accelerated: *no*

2.1.1 *Purpose*
Main nature of the contract: Supplies
Main classification (cpv): 38630000 Astronomical and optical instruments

2.1.2 *Place of performance*
Country subdivision (NUTS): West (IE042)
Country: Ireland

2.1.3 *Value*
Estimated value excluding VAT: 420 000 *Euro*

2.1.4 *General information*
Legal basis:
Directive 2014/24/EU

2.1.6 *Grounds for exclusion*
Sources of grounds for exclusion: European Single Procurement Document (ESPD)

5 *Lot*

5.1 *Lot*: LOT-0001
Title: Procurement of a High-Precision Optical Ground Station (OGS) Telescope Unit for Uplink and Satellite Tracking
Description: The Contracting Authority is seeking tenders for the procurement of a High-Precision Optical Ground Station (OGS) Telescope Unit for Uplink and Satellite Tracking. This procurement is being undertaken as part of Phase 2 of Ireland's QCI project (TransEuroOGS), co-funded by the European Commission Connecting Europe Facility (CEF) and the Irish Department of Culture, Communications, and Sport. The successful tenderer will be required to design, manufacture, and deliver a turnkey telescope unit encompassing the mount, optics, and control software, complying with strict technical and spatial constraints. Key Technical Requirements: Optical Configuration: Ritchey-Chretien (RC) optical design, f/10 to f/12 system, with a clear aperture of at least 700 mm. Low central obstruction is required (30 percent or lower diameter linear obstruction preferred, maximum allowable 34 percent or lower). Optical Coatings and Power Handling: Broad-spectrum reflectivity covering both visible wavelengths and the 1550 nm C-Band NIR telecommunication spectrum, biased for optimal performance at 1550 nm. Reflectance at 1550 nm must be at least 95 percent (protected gold or equivalent high-efficiency NIR coating acceptable). The secondary mirror (M2) and main aperture must handle a high-power launch beam of maximum 40W continuous wave at 1550 nm across the aperture or annulus (power density less than 3300 W per square metre on the primary mirror). Focusing Path and Clear Aperture: Must feature at least one Nasmyth focus port (more preferred). The Nasmyth focus path must be completely free of refracting optical elements (100 percent reflective optics only, with removable optics as an allowable deviation). Clear aperture path through the Nasmyth axis must be at least 60 mm diameter to support downstream Adaptive Optics relay systems. Mount and Dynamic Tracking Specifications: Alt-Azimuth Direct-Drive or equivalent performance mount with low-latency tracking dynamics supporting Low Earth Orbit (LEO) satellite tracking, including high-elevation passes over Zenith. Minimum Azimuth Slew Rate must be at least 5 degrees per second (faster preferred). Pointing and tracking accuracy must be less than 8 to 10 arcsec RMS during dynamic LEO passes. Fastest tracking rate must exceed 1 degree per second with fine range control below this speed. Envelope and Enclosure Compatibility: Total vertical height must not exceed 3000 mm from the base to ensure dome clearance. Maximum radial swing clearance envelope must be at most 1470 mm. The axis of elevation pivot height must ensure clearance at all pointing directions, with the pivot axis positioned no more than 155 mm below the centre of the

clearance envelope (or at the centre or higher). Full CAD models and opto-mechanical layout files are mandatory upon contract award. Software, Control Interface and API: Native integration with standard open-source astronomical communication protocols (INDI / INDIGO) or ASCOM / ALPACA frameworks. Open, fully documented network API adaptable to HTTP/REST or WebSocket interfaces for automated robotic control, telemetry, and scriptable trajectory loading. Ethernet data interface and DC power supply preferred. Delivery Constraint: Unit delivery must be completed within 3 to 4 months maximum from contract signature. Please refer to the detailed Technical Specification document for full technical specifications, compliance matrices, and contractual terms.
Internal identifier: 0

5.1.1 *Purpose*

Main nature of the contract: Supplies
Main classification (cpv): 38630000 Astronomical and optical instruments

5.1.2 *Place of performance*

Country subdivision (NUTS): West (IE042)
Country: Ireland
Additional information:

5.1.2 *Place of performance*

Postal address: Mbryonics Ltd, Photon 1 (Unit 7), IDA Business Park, Dangan, Galway, Ireland
Town: Galway
Postcode: H91P2DK
Country subdivision (NUTS): South-West (IE053)
Country: Ireland
Additional information:

5.1.3 *Estimated duration*

Duration: 6 *Month*

5.1.5 *Value*

Estimated value excluding VAT: 500 000 *Euro*

5.1.6 *General information*

Reserved participation: Participation is not reserved.
Procurement Project fully or partially financed with EU Funds.
Information about European Union funds
EU funds programme: Connecting Europe Facility (CEF) (2021/2027)
Further details of EU funds: TransEuroOGS
The procurement is covered by the Government Procurement Agreement (GPA): *yes*

5.1.7 *Strategic procurement*

Aim of strategic procurement: Innovative purchase
Description: This procurement acquires a specialized, highly innovative Optical Ground Station (OGS) telescope unit required for satellite-based Quantum Key Distribution (QKD) under the European Union EuroQCI initiative and the TransEuroOGS project. The subject matter represents an innovative supply because it incorporates advanced technical and architectural capabilities that exceed conventional astronomical instrumentation: Novel Optical and Power Handling: The system requires custom broad-spectrum optical coatings optimized at 1550 nm with reflectance of at least 95 percent, capable of withstanding high-power continuous-wave laser launch beams of up to 40W across the aperture for quantum and classical uplinks without thermal degradation. Advanced Space-to-Ground Interface: It incorporates an unvignetted, completely reflective Nasmyth focus path (free of refracting glass optics) specifically engineered to interface directly with downstream Adaptive Optics systems and quantum photon receivers. High-Dynamic Satellite Tracking: The mount features direct-drive mechanics engineered for Low

Earth Orbit (LEO) satellite tracking across Zenith passes, achieving slew rates of at least 5 degrees per second and dynamic tracking pointing accuracy of 8 to 10 arcseconds RMS or better. Open Robotic Control Architecture: The control system incorporates open network communication protocols and programmable APIs to integrate automated satellite tracking, real-time telemetry, and synchronization with European quantum satellite missions, notably Eagle-1. This innovative equipment directly supports the deployment and cross-border validation of Europe's sovereign quantum communication infrastructure.

Innovation procurement: The procured works, supplies or services involve research and development activities.

5.1.9 *Selection criteria*

Sources of selection criteria: European Single Procurement Document (ESPD)

5.1.11 *Procurement documents*

Languages in which the procurement documents are officially available: English

Languages in which the procurement documents (or their parts) are unofficially available: English

Deadline for requesting additional information: 20/11/2026 12:00 +00:00

Address of the procurement documents: https://www.etenders.gov.ie/epps/cft/listContractDocuments.do?resourceId=9410053

5.1.12 *Terms of procurement*

Terms of submission:

Electronic submission: Required

Address for submission: https://www.etenders.gov.ie/epps/cft/viewTenders.do?resourceId=9410053

Languages in which tenders or requests to participate may be submitted: English

Electronic catalogue: Not allowed

Tenderers may submit more than one tender: Not allowed

Deadline for receipt of tenders: 04/12/2026 12:00 +00:00

Duration during which the tender must remain valid: 90 *Day*

Information about public opening:

Opening date: 04/12/2026 12:30 +00:00

Place: https://www.etenders.gov.ie/epps/cft/prepareViewCfTWS.do?resourceId=9410053

Terms of contract:

The execution of the contract must be performed within the framework of sheltered employment programmes: No

Electronic invoicing: Not allowed

Electronic ordering will be used: *no*

Electronic payment will be used: *no*

5.1.15 *Techniques*

Framework agreement:

No framework agreement

Information about the dynamic purchasing system:

No dynamic purchase system

5.1.16 *Further information, mediation and review*

Review organisation: The High Court of Ireland

Organisation providing offline access to the procurement documents: Mbryonics Ltd

Organisation providing more information on the review procedures: The High Court of Ireland

Organisation receiving requests to participate: Mbryonics Ltd

Organisation processing tenders: Mbryonics Ltd

8 *Organisations*

8.1 ORG-0001

Official name: Mbryonics Ltd
Registration number: 546589
Postal address: IDA Business Park, Dangan, Galway
Town: Galway
Postcode: H91RWF1
Country subdivision (NUTS): West (IE042)
Country: Ireland
Email: purchasing@mbryonics.com
Telephone: 091413778
Internet address: https://mbryonics.com/
Buyer profile: https://www.etenders.gov.ie
Roles of this organisation:
Buyer
Organisation providing offline access to the procurement documents
Organisation receiving requests to participate
Organisation processing tenders

8.1 ORG-0002

Official name: The High Court of Ireland
Registration number: The High Court of Ireland
Department: The High Court of Ireland
Postal address: Four Courts, Inns Quay, Dublin 7
Town: Dublin
Postcode: D07 WDX8
Country subdivision (NUTS): Dublin (IE061)
Country: Ireland
Email: HighCourtCentralOffice@courts.ie
Telephone: +353 1 8886000
Roles of this organisation:
Review organisation
Organisation providing more information on the review procedures

8.1 ORG-0003

Official name: European Dynamics S.A.
Registration number: 002024901000
Department: European Dynamics S.A.
Town: Athens
Postcode: 15125
Country subdivision (NUTS): Βόρειος Τομέας Αθηνών (EL301)
Country: Greece
Email: eproc-esender@eurodyn.com
Telephone: +30 2108094500
Roles of this organisation:
TED eSender

Notice information

Notice identifier/version: cb4f9ffe-27dc-4d1d-98e4-3665a7825440 - 01

Form type: Competition
Notice type: Contract or concession notice – standard regime
Notice dispatch date: 04/11/2026 11:39 +00:00
Languages in which this notice is officially available: English