２に規定する電波を用いた無線通信機能を含む設備のうち、無線LAN、携帯電話、ラジコン等、技術基準適合証明等（電波法第３章の２。以下「技適」という。）の対象となる無線設備については、技適の取得を証明する資料、例えば機材納入までに技適マークの表示部分の写真、あるいは技適の証明番号等を提出できる体制が構築されていること。

⑫　当機構において、いわゆる情報通信セキュリティに関する安全性を確保するため、納入予定となる機器等については予めに機器等リスト、部品構成等（CPU、メモリ等の製品名等）及びソフトウェアの構成（SBOM：Software Bill of Material）のリスト等に関する資料を提出し、当機構がサプライチェーン・リスクに係る懸念が払拭されないと判断した場合には、代替品選定やリスク低減対策等、当機構と迅速かつ密接に連携し提案の見直しを図る体制が構築されていること。

２　資料及びコメントの提供方法　上記１⑵の物品に関する一般的な参考資料及び同⑸の要求要件等に関するコメント並びに提供可能なライブラリーに関する資料等の提供を招請する。

⑴　資料等の提供期限　令和８年11月25日17時00分まで必着のこと。

⑵　提出先　〒184―8795 東京都小金井市貫井北町４－２－１　情報通信研究機構ネットワーク研究所ワイヤレスネットワーク研究センター　宇宙通信システム研究室　宗正　康　電話042―327―6497

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３　説明書の交付　本公表に基づき応募する供給者に対して導入説明書を交付する。

⑴　交付期間　令和８年10月16日から令和８年11月25日まで。

⑵　交付場所　情報通信研究機構ホームページの調達情報よりダウンロードして入手すること。

４　説明会の開催　開催しない。

５　その他　この導入計画の詳細は導入説明書による。なお、本公表内容は予定であり、変更することがあり得る。

6　Summary

⑴　Classification of the products to be procured : 15, 28

⑵　Nature and quantity of the products to be purchased : Purchase of Satellite-to-Ground Optical Communications Modem Equipment, 2 sets

⑶　Type of the procurement : Purchase

⑷　Basic requirements of the procurement :

①　The equipment shall be installable within a 40cm optical ground station owned by NICT. Environmental conditions for installation will be specified in the specifications to be published at a later date

②　For reception from an optical communications terminal installed on a satellite, the equipment shall connect via optical-fiber connectors or equivalent interfaces to a fine-acquisition and tracking receive optical system to be separately prepared by NICT. It shall convert the optical signal into an electrical signal, perform demodulation and decoding, and transmit payload data to an external network using the specified protocol and format.

③　For transmission to an optical communications terminal installed on a satellite, the equipment shall connect via optical-fiber connectors to a high-power amplifier or a fine-acquisition and tracking transmit optical system to be separately prepared by NICT. It shall encode and modulate data received from an external network, convert the data into an optical signal, and transmit it

④　The equipment shall support data communications using optical waves in the 1.5μm wavelength band between an optical communications terminal installed on a satellite orbiting at an altitude of approximately 500 to 1,000km with an orbital inclination of approximately 40 to 50 degrees, and an optical ground station installed in Japan

⑤　The modem shall support bidirectional communications compliant with the requirements of “Optical Communications Terminal (OCT) Standard Version 3.1.0” established by the Space Development Agency (SDA) under the United States Department of the Air Force (hereinafter referred to as the “SDA OCT Standard”)

⑥　The proposer shall demonstrate that the modem can communicate bidirectionally with a spaceborne optical communications terminal that meets the requirements of SDA OCT Standard Version 3.0 or later and has flight heritage. Ground-based development or test models may be included. The proposer shall also demonstrate that a ground-based or satellite-to-ground communications test has been conducted, or is scheduled to be conducted, by the end of FY2026

⑦　Before installation at NICT optical ground stations, and no later than the end of FY2027, the supplier shall be able to provide the information and support required for compatibility testing with an engineering-model modem used for ground testing of a spaceborne modem. Such testing may include modem-to-modem data communications and protocol verification and is expected to be performed at a facility designated by NICT in Japan, assumed to be in the greater Tokyo area

⑧　In addition to the standard described in Item 5 above, the equipment shall offer future extensibility toward standards proposed by the Consultative Committee for Space Data Systems (CCSDS) and standards such as ESTOL (ESA Specifications for Terabit／sec Optical Links) proposed by the European Space Agency (ESA)

⑨　In satellite-to-ground optical communications, deep fading of the optical communications signal, of 10dB or more, is expected during low-elevation-angle segments, generally at 30 degrees or below. The modem developer, manufacturer, or supplier shall have researchers or engineers with suitable technical expertise who can communicate effectively with NICT personnel regarding technical countermeasures against such deep fading phenomena

⑩　The equipment shall provide functions for measuring and evaluating various aspects of optical communications quality during communication with a spaceborne optical communications terminal

⑪　To enable NICT to verify compliance with applicable Japanese laws and regulations, the supplier shall maintain a system for promptly consulting with NICT personnel after contract award if approvals, permits, notifications, or equivalent procedures are or may be required for the delivery of goods or facilities under the specifications, pursuant to the Radio Act (Act No. 131 of 1950), the Electrical Appliances and Materials Safety Act (Act No. 234 of 1961), and other applicable laws, regulations, and ordinances. In particular, for equipment containing high-frequency generating sections that constitutes high-frequency utilization equipment specified in the items of Article 100, paragraph (1) of the Radio Act, or for equipment with radio communications functions using radio waves as specified in Article 4―2 of the Radio Act, including wireless LAN, mobile telephone, and radio-control functions subject to technical regulations conformity certification or equivalent certification under Chapter III-2 of the Radio Act (hereinafter referred to as “Giteki”), the supplier shall be able to submit evidence of certification. Such evidence may include, by the time of delivery, a photograph showing the Giteki mark on the equipment or the applicable certification number