

TECHNICAL SPECIAL PROVISION

FOR

Managed Field Ethernet Switch
(MFES):

Financial Project ID:
435443-1-52-01

The official record of this Technical Special Provision is the electronic file signed and sealed under Rule 61G 15-23.003, F.A.C.

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Pages: 1-3

T684 Managed Field Ethernet Switch (MFES)

T684-1 Description: Provide a MFES that is powered by cabinet power supply and provides Power-over-Ethernet (POE) connections. The MFES shall be compatible with FDOT network protocols.

T684-1.2 MFES Device Details: The device shall be 19” rack mountable. The device shall occupy no more than one rack unit. The device shall operate between 0°C and 45°C (32°F and 110°F). The device shall operate between 5% and 95% relative humidity, non-condensing.

T684-1.3 Networking Standards: The device shall comply with all applicable IEEE networking standards for Ethernet communications, including but not limited to:

- IEEE 802.1D-2004 standard for media access control (MAC) bridges used with the rapid spanning tree protocol (RSTP).
- IEEE 802.1p standard for mapping to priority queue and quality of service (QOS).
- IEEE 802.1Q-2005 standard for virtual local area network (VLAN) bridges.
- IEEE 802.1w standard for rapid spanning tree protocol (RSTP).
- IEEE 802.1X standard for port-based network access control (PNAC).
- IEEE 802.3 standard for local area network (LAN) and metropolitan area network (MAN) access and physical layer specifications. (10BASE-T).
- IEEE 802.3ab standard for gigabit Ethernet over copper (1000BASE-T).
- IEEE 802.3ad standard regarding dynamic and static link aggregation.
- IEEE 802.3af standard regarding POE.
- IEEE 802.3at standard regarding Power-over-Ethernet plus (POE+).
- IEEE 802.3u supplement standard regarding 100Base TX/100Base FX.
- IEEE 802.3x standard regarding flow control with full duplex operation.
- IEEE 802.3z standard regarding gigabit Ethernet (1000BASE-SX/TX).

T684-1.4 Optical Ports: The device shall provide a minimum of two optical 100Base FX ports capable of transmitting data at one gigabit per second. The optical port shall operate at distances of up to 70 km.

T684-1.5 Copper Ports: The device shall provide a minimum of twelve 10/100/1000 Mbps copper ports and two copper 10/100/1000 Mbps uplink ports. All copper ports shall be Type RJ-45.

T684-1.6 Electrical Specifications: The MFES device shall operate between 100V and 240V, and use no more than 1.8 amps.

T684-2 Warranty: The MFES shall include a five year warranty for all component parts. The Contractor shall not purchase the equipment prior to the issuance of Notice to Proceed. The Contractor shall assign to the Department the above manufacturer's or other seller's warranties that come with those products, material or supplies. Assignment of such warranties shall be effective on the date of Final Acceptance. To the extent that any of such warranties do not extend to subsequent purchasers or owners or such warranties contain a limitation on assignment, the Contractor agrees that the Contractor purchased the products, materials, and supplies, on behalf of the Department with the intent that the Department be the original end user of the product and intended recipient of any warranties. All documents associated with or describing any such warranties shall be delivered to the Department along with the other project final acceptance documents and shall be deemed to be a part of the required final acceptance documentation. Contractor shall not take any action or fail to act in any way which voids any such warranties.

T684-3 Method of Measurement:

The quantity to be paid for shall be the Contract unit price for each MFES device, furnished and installed, placement, testing of all materials and equipment, and for all tools, labor, equipment, hardware, operational software packages and firmware, supplies, support, personnel training, shop drawings, warranty documentation, and incidentals necessary to complete the work.

T684-4 Basis of Payment:

Price and payment will be full compensation for all work specified in the Technical Special Provision.

Payment will be made under:

Item No. 684-1-1 Managed Field Ethernet Switch – Furnish & Install