

6840100 Network Devices  
COMMENTS FROM INDUSTRY REVIEW

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Comments: (10-27-23)

1. The specifications provide for an incompatibility with port speeds for fiber optic links between MFES and MHES. Section 684-2.2.1, Managed Field Ethernet Switch Optical Ports The specification requires that the provider, "Provide an MFES having a minimum of two optical 100 Base FX ports capable of transmitting data at 100 megabits per second unless otherwise show in plans. Section 684-2.3.1, Managed Hub Ethernet Switch Optical Ports The specification requires that a MHES installation will "Provide an MHES having a minimum of six optical Gigabit Ethernet ports capable of transmitting dat a one gigabit per second and 10 gigabits per second unless otherwise shown in the Plans." Should a project MFES with 100 Mb/s FX ports be installed where it is connected directly to a MHES with only 1 and 10 Gb/s ports there will be a compatibility issue. Less experienced integrators could overlook this possibility and installations can occur where the local device hubs will not communicate with the MHES. We would recommend: a. The MFES minimum requirements should be raised to a more industry standard 1000Base-X, 1 Gb/s SFP moving forward. "Provide...of two optical 100Base-FX/1000Base-X ports capable of transmitting data at 100 or 1000 megabits per second as required in order to interface adjacent network devices..." b. The MHES 684-2.3.1 SFP/SFP+ port speed requirement must include 100Mb SFP optic support for backwards compatibility. Rewording, SFP ports should support 100Base-FX, 1000Base-X, and 10GBase-X. This way a MHES installed today will be able to easily connect with like optics in existing 100Base-FX switches installed in previous projects.

**Response: Agree. The draft has been updated to incorporate the recommended edits in 684-2.3.1.**

**Action: Draft updated for clarification and to address comments as noted above.**

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Comments: (11-7-23)

684-2: Are there any DVD on the APL? 684-2: What field devices? Devices anywhere in the field? devices connected to MFES? 684-2.2.1: As specified in the Contract Documents? 684-2.2.1: There is no mention of SFP ports. SFP are mentioned for the MHES and are what the optical ports are. 684-2.3: fast Ethernet is usually a term for 100 Base transmissions not one and ten gigabits. 684-2.3: What field devices? Devices anywhere in the field? devices connected to MHES? 684-2.3.1: 1 and 10 Gigabit is this accurate? 684-2.3.1: Above SFP/SFP+ ports are requested and here GBIC is mentioned. I don't believe GBIC can be used in an SFP port. 684-2 Digital Video Encoder and Decoder: does not transport multiple remote field location. Usually, the DVE encodes on CCTV into one or more streams and these streams can be received at one or more locations. DVDs are defined but a DVE is not. There should be a section on DVE. 684-2.5.3: The DVE on the APL does not have a fiber port network interface. Doesn't DVE and DVD

have RJ45 copper ports also? 684-3: should mention cable management, no excessively long patch cables, pre-manufactured patch cable,

Response: There are no DVD on the APL at this time and hardware decoders are no longer commonly used, but there are legacy requirements that could still be used to list them. The generic term “field devices” has been clarified to indicate connected Ethernet devices. The reference to the Contract Documents is to ensure the device is provided to meet project specific requirements (e.g., per plans or other project requirements). SFPs are allowed, common, and prevalent but there are legacy devices in use and on the APL that provide optical connections without using SFPs. We will consider making SFPs mandatory for MFES in a future revision, but no changes will be introduced at this point during the current update cycle. Agree that the term “Fast Ethernet” should not be used given other requirements for data rates above 100Mbps. The support of 100M/1G/10G connection speeds is accurate and currently available in commercial products. Good catch re: GBIC (different form factor than the desired SFP). The complete video and data transmission system can transport from multiple field locations to multiple monitoring locations. The comments regarding legacy content for DVE and DVD and adding general requirements for cable management that could apply to many different devices and specification sections will be reviewed for possible future revisions but no changes will be introduced at this point during the current update cycle.

Action: Draft updated for clarification and to address comments as noted above.

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